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## THE CRAFTS IN INDUSTRIAL SOCIETY: IDEALS AND POLICY IN THE NETHERLANDS, 1890-1930\*

by

*Dick van Lente*

### *1. Introduction*

Until recently, economic development in Western countries has generally been described as a process of which a key element is the gradual replacement of craft production by large-scale industry, manufacturing standardized products for large markets. Drawing on classical theorists such as Adam Smith and Karl Marx, both economists and economic historians have assumed that large-scale, mechanized production would inevitably displace craft production simply because it was so much more efficient. Recently, however, this view has come under attack, for several reasons.<sup>1</sup> In spite of what liberal and Marxist theories have predicted, small firms still play an important role in advanced economies and many of them are anything but backward technologically.<sup>2</sup> Some economists even claim that the era of highly mechanized mass production is now passing and that we are at the beginning of a new phase in which small-scale production, using advanced, flexible, multipurpose machinery (computers, robots), will be much more important.<sup>3</sup> Historians have contributed to this discussion by, for example, pointing out that the successful development of French industry took the form of the modernization of craft firms and that even in the mother country of industrialization, Great Britain, small firms were much more important than has usually been allowed for.<sup>4</sup> In an important article, Charles Sabel and Jonathan Zeitlin have presented a catalogue of industrial districts in France, Germany and Britain where small firms operated successfully thanks to the use of flexible machinery, which enabled them to produce a great variety of products for a highly differentiated market. All kinds of social institutions protected these industries from the vicissitudes of the market and stimulated continuous innovation in production processes.<sup>5</sup>

It is not the first time that the theory of the inevitable rise of mass production and the equally inevitable decline of the crafts has been challenged. Around

1900 a debate took place in several Western European countries which was in some ways strikingly similar to the present discussion. Then, as now, it was argued that, in fact, although some craft firms were disappearing, others were not; that the decline was in many cases not inevitable and that it was certainly undesirable; and that modern technology – at that time, small machinery running on gas, petrol or electricity – would enable small firms to compete successfully. These ideas were turned into public policy in countries like Germany, Austria, Belgium and the Netherlands.<sup>6</sup> It seems to be one of the rare cases in which technical development was not seen as moving inexorably in one direction and in which it was believed that by stimulating a particular kind of technical development, in this case the spread of small machinery, certain socially desirable goals could be achieved: a society with a large crafts sector. Such a society would be much more harmonious and stable than a thoroughly industrialized one, which would be torn by class conflict.

In this article, I want to explore these ideas and policies in the Netherlands. First, I shall outline the development of the crafts in the Netherlands. Next, the debate on the future of the crafts and the emergence of a movement to support them will be discussed. Finally, I shall describe the development of a public policy to support craft firms and the activities of the government agencies which had to carry out that policy.

For the sake of clarity, my use of the term ‘crafts’ should be explained at the outset.<sup>7</sup> I shall define a craft firm as a small production unit in which:

- a) the owner works alone or with only a few employees;
- b) production takes place using tools and sometimes non-automatic (not necessarily simple) machinery, i.e., machines which can be seen as extensions of the skills of the craftsman, which do not impose a rigid rhythm of work and which can be used for different operations (sewing machines, electric drills and general-purpose lathes are examples, as against the “rigid” machines of mass production, such as automatic weaving machines, which turn out great quantities of uniform products);
- c) there is hardly any division of labour and therefore the craftsman is proficient in many skills;
- d) products are made to order, usually on a one-off basis or in very small batches. This definition implies that domestic labour, which was characterized by an intensive division of labour and low skill levels, is excluded. Also excluded is small-scale industry, i.e. the production of series of uniform products in small production units. As was the case in the debate in the period under consideration, I would stress, therefore, not the scale of firms but the quality of work and the relation of the producer to the market. The new crafts which arose at the end of the nineteenth century, such as bicycle and motor mechanics, electricians, plumbers and so on, differed from the older crafts mainly in the fact that they did not make new products but installed and repaired mass-produced ones. In other respects – technical

proficiency, small-scale, multipurpose technology, direct relations with customers and so on – they were very similar to the older crafts.

## *2. Crafts in the Netherlands*

Very little has been written, unfortunately, about the development of the crafts in the Netherlands, in contrast to countries like England, Germany and France, where this has become a popular subject in recent years. Generally, however, the same tendencies which have been noted elsewhere can also be observed in the Netherlands.<sup>8</sup> In the middle of the nineteenth century the major part of the Dutch working population was employed in agriculture (44%) or in commercial, transport or service occupations (29%). Only about a quarter of the working population was engaged in some kind of industry, most of which consisted of very small firms. Although there were some big enterprises, such as textile, papermaking and beet sugar factories, industrialization on a large scale started only after the Great Depression, that is, during the eighteen-nineties. The craft industries profited greatly from the economic expansion which took place after 1850 and which lasted far into the 1870s. Agriculture especially flourished at this time, and since most craftsmen worked for the farmers they shared in the increase in their wealth. It is estimated that between 1850 and 1860 the number of people employed in the crafts rose by about 25%, while the population grew by about 8%.<sup>9</sup> Consequently, the agricultural crisis which started to affect the Dutch economy after 1878 also hit the craft industries severely. Some compensation could be found in the cities, which started to grow from about 1865 and expanded particularly rapidly during the 1880s (partly as a result of the agricultural depression). However, from this time on the craft industries were confronted with increasing problems, which in many cases could not be overcome.

In the first place, many people who had lost their jobs in the countryside started small businesses in the cities, causing cut-throat competition with the already existing firms. The building trades, for instance, were undermined by the spread of speculative building during these years. Uniform blocks of houses were built on the outskirts of towns like Amsterdam and Rotterdam by builders who often subcontracted parts of the work to small specialized firms employing barely skilled workers.<sup>10</sup> Tailoring and shoemaking had already become predominantly sweated trades by around 1850. In some areas, blacksmiths, goldsmiths and silversmiths worked under similar conditions during the first quarter of this century.<sup>11</sup> Especially after 1890, craftsmen also had to compete with mass-produced goods, which first reached the cities but, as a consequence of the expansion of the railways after 1860 and of local tramways after 1880, also became available in the villages (shoes and iron stoves, for instance).

As in other countries, craftsmen in some trades adapted successfully, such as saddlemakers who turned to the production of suitcases and coppersmiths who found work in the installation of gas and water networks, while new trades, such as electricians and motor mechanics, appeared. From the 1890s on, small machinery was increasingly applied in craft industries. Electric motors especially became very popular after 1900, when electricity networks were laid on in the larger towns<sup>12</sup> and all kinds of electrical machinery became available. The number of electric motors in industrial firms increased from 1,879 in 1904 to 220,582 in 1930.<sup>13</sup> Many small firms, such as bakeries, printers, cabinetmakers and small metalworking firms, owed their survival to a large extent to this new machinery.<sup>14</sup>

Statistical material on the development of the crafts is scarce and defective in terms of comparability and, because of the great variety of craft industries and their responses to economic modernization, it is often misleading. However, the general trend seems to be a rapid decline between 1890 and 1910, which slowed down thereafter.<sup>15</sup>

### *3. The debate on the future of the crafts and the emergence of a policy to support them*

The idea that the growth of large-scale industry would gradually displace the crafts was generally accepted as a matter of course by Dutch economists and politicians in the nineteenth century. Since the beginning of the seventeenth century industry had flourished in the Netherlands. It consisted mostly of craft firms but, especially in the western provinces, there were also relatively large, mechanized firms which processed wood, sugar, rice, coffee and so on for the export trade, mainly using windmills as their power source. After about 1750 these industries began to decline, and the Napoleonic wars, which cut the country off from international trade, were fatal for many of them.<sup>16</sup> In the leading journals it was argued time and again that only if entrepreneurs would follow the example of Britain and invest in modern machinery could new life be breathed into Dutch industry. Already in 1820 (when the Netherlands was still united with Belgium, where the first industrial areas on the continent were located) the influential economist H.W. Tydeman argued that the advantages of cheap mass production compared with small-scale industry were so great that the latter would inevitably disappear. Because cheap products would create larger markets for themselves, there would eventually be plenty of employment in the factories for craftsmen who had been thrown out of work. Besides, there was no choice: if the Netherlands did not want to see its markets flooded with factory goods from elsewhere, it had better mechanize production as soon as possible.<sup>17</sup> Half a century later, the left-wing liberal politician H. Goeman Borgesius was equally convinced that the crafts would necessarily disappear as a consequence of the superiority of the factory.<sup>18</sup> But he believed, like

Tydeman, that large-scale mechanization would eventually benefit everyone and he also believed that the social problems which industrialism entailed could be overcome by means of social legislation.<sup>19</sup> These two writers are fairly representative of the general way of thinking among liberal economists and politicians, who dominated social thought during most of the nineteenth century.

Socialist leaders of all kinds (from the anarchist Domela Nieuwenhuis to social democrats such as Wibaut and Schaper) shared this optimism. Following the lead of German social democrats such as Kautsky, they believed that industry would create tremendous wealth, from which eventually the workers would profit too. In their vision of the coming socialist society, there was no place for small craft firms. The revisionist argument that the crafts were not about to disappear did not have much influence in the Netherlands.<sup>20</sup> The much admired socialist leader and poetess Henriette Roland Holst, for example, criticized William Morris, 'who had never heard in the drone of machinery the possibilities of a higher social order'.<sup>21</sup> 'Giant firms' would dominate the future economy, she wrote.<sup>22</sup>

This consensus between socialism and liberalism concerning the desirability and eventual inevitability of large-scale mechanization and the decline of small-scale industry went practically unchallenged during most of the nineteenth century. Unlike other countries, such as Germany and Austria, there were no strong craft movements. Many trade organizations were started during the 1880s, but they were hardly active politically.<sup>23</sup> When a lower middle class movement sprang up shortly after 1900, several years after this had happened in Belgium, France and Germany, it was entirely dominated by shopkeepers, small industry playing an increasingly marginal role. However, towards the end of the nineteenth century the dominant view came under criticism from some liberal intellectuals and, especially, from Roman Catholic leaders.

To the liberal critics of large-scale industry the problem of the crafts was part of the 'social question', the problem of the place of the working-classes in society. This became a major topic of public discussion with the appearance at the end of the 1860s of the first working men's associations, which started to demand higher wages and better working conditions. During the depression of the 1880s, when there was much unemployment and poverty, a radical socialist movement, which had until then been inconspicuous, spread rapidly among urban and agricultural workers, creating fears of an impending revolution among the ruling classes. These liberal critics developed a rather original view of the problem, which was certainly not in line with the dominant currents in liberalism at that time. Their most important spokesman was the headmaster of the vocational school in The Hague, Hessel Luis Boersma (1846-1904).

Boersma thought that the social question could only be solved by creating a strong craft industry which could compete with large-scale industry. For

the production of some goods, mass production would be inevitable. But this should be kept to a minimum, leaving as much room as possible for craft production. The main problem of large-scale industry was not so much the use of machinery as the degradation of work due to the division of labour. When efficiency becomes the first commandment of industry, Boersma wrote, both the quality of labour and the quality of the products deteriorate. Society becomes flooded with ugly industrial products and social relations become dominated by class antagonism. Only a strong crafts sector fed by a constant flow of well educated young craftsmen from the vocational schools would be able to save the workers from 'a machine-like way of life and work, which kills both mind and soul'.<sup>24</sup> It would enable those workers to improve their situation by individual effort and turn them away from the collective actions of trade unions and socialist parties.

In order to achieve their aims, Boersma and others advocated three kinds of policy. First, technical education should be improved and made available to all workers. From 1861 on, many vocational schools were set up in the Netherlands. They attracted an increasing number of pupils, who easily found good jobs after completing their education. Boersma tried to keep his own school abreast of the advance of technology by starting new courses for electricians, gas fitters, motor mechanics and so forth. As I have said, he was not opposed to the introduction of modern machinery as such. On the contrary, he favoured new techniques which relieved the worker of dull and heavy work and enhanced his versatility and independence. He and others therefore argued, secondly, that the government should assist craftsmen by keeping them informed about the latest machinery and helping them to finance innovations in their workshops. They often cited the example of Austria, where such government institutions already existed at the end of the nineteenth century.<sup>25</sup> Thirdly, the public should be taught to appreciate quality goods and to prefer well-made craft products to mass-produced articles. This was the main goal of a museum for applied art which was set up in Haarlem in 1877. In short, if a large market could be created for craft products by educating the public and improving craft production itself, there would be no need for the expansion of large-scale industry, and the quality of work, of the products and of social relations – in short, the quality of society – could be improved.

The main forum for people like Boersma was the Society for the Promotion of Industry (*Nederlandsche Maatschappij ter bevordering van Nijverheid*), an organization similar to the German *Gewerbevereine*, whose membership included businessmen, industrialists, engineers, civil servants and lawyers and which sought to stimulate the Dutch economy by publishing articles on new techniques in its journal, addressing the government on subjects such as the building of railways, land reclamation and social legislation and starting vocational schools. Since it counted among its members heads of the largest Dutch firms as well as prominent politicians

and officials, it was a rather influential organization. From the 1870s on the Society started to publish a series of articles about new machinery for small firms.<sup>26</sup> Different types of small machinery were discussed, with tables specifying use of fuel and efficiency. In 1907 it organized an exhibition of small machines in Amsterdam, together with a conference on the future of the crafts, both of which were a great success. Besides small machinery, the exhibition had stands at which several countries, including Belgium and some German states, presented their governments' programmes for stimulating small-scale industry.<sup>27</sup>

Two years later the Society together with the National League of Retailers and Craftsmen (the *Nederlandsche Middenstandsbond*) published a report which was sent to parliament and which advised the government to appoint industrial consultants in several parts of the country to provide small enterprises with information about new technology and advice on the organization of their business. This plan was gradually carried out. One consultant was appointed in 1910; two more were appointed in 1913. These men became the spearhead of the efforts to support the craft industries. In the next section we shall analyze their activities and the ideas behind them, but first we have to look at another group that became an important supporter of the *Mittelstand* (as the Germans called it): the Christian democrats.

Christian democratic parties and organizations had their origin in two movements for religious emancipation, one neo-Calvinist, the other Roman Catholic. Neo-Calvinists were mainly people in the lower middle classes (small shopkeepers and craftsmen, skilled workers, small farmers) who were dissatisfied with the dominant role of liberalism in politics and society, including in the formally Calvinist Dutch Reformed Church. They resented appointments of latitudinarian ministers and they fought for government subsidies for their denominational schools. Under the charismatic leadership of the Amsterdam church minister Abraham Kuyper (1837-1920) they evolved from a religious pressure group into a powerful political party with its own views on the problems of Dutch society and the kind of future society to be striven for. The Roman Catholics (who were spread to a greater extent over the different strata of Dutch society but who were also more heavily represented among the urban lower middle classes and the farmers) had been a minority subjected to discrimination until 1796 when, during the French occupation, they received equal rights with other religious groups. Thereafter, they tried to turn this formal emancipation into real emancipation; in other words, to undo the effects of centuries of discrimination. Like the Calvinists, their first efforts were directed at religious issues: the organization of their church and government subsidies for their schools. In 1888 the Christian democrats won their first electoral victory against the divided liberals and conservatives and formed the first Catholic-Protestant cabinet. From then on, they were a powerful force in Dutch politics.



The fate of the *Mittelstand* (or lower middle classes) was much discussed in Christian democratic circles, not only in the Netherlands, but also elsewhere. Especially after 1897, when a new electoral law enfranchised them, the 'problem of the lower middle classes' became urgent for Roman Catholics and neo-Calvinists. They argued that the "social question" had been regarded too exclusively as the problem of the industrial workers, whereas the future of the lower middle classes was at least as important. Master artisans were threatened by large-scale industry, while shopkeepers were threatened, on the one hand, by department stores and, on the other, by cooperative retail shops set up by the labour movement. The disappearance of this class would make the Marxist prediction of a society split up into two hostile classes come true. Farmers, shopkeepers and craftsmen were therefore hailed as the backbone of society: they combined capital and labour, preserved the sacred values of industriousness, sobriety and piety, and were the living proof of the possibility open to everyone to become an independent entrepreneur.<sup>28</sup>

Roman Catholics especially were greatly concerned about the craft industries. Although they recognized that the crafts were threatened by large-scale industry, they stressed that their disappearance was not only undesirable but also unnecessary. In reply to liberal and socialist politicians and writers, they quoted German revisionist socialists such as Eduard Bernstein, who had demonstrated on the basis of the industrial censuses of 1882 and 1895 that large firms develop alongside, and by no means always at the expense of, small ones.<sup>29</sup> The middle classes, they wrote, are threatened but not doomed, and they can better their situation considerably by improving the way they manage their businesses, introducing modern machinery and forming cooperative societies and trade associations modelled on the old guilds. After 1902, Roman Catholic priests were very active in founding such trade associations and credit banks for small entrepreneurs (the banks received government support from 1908 on).<sup>30</sup> As for technical innovations, they had great expectations of the introduction of electricity and the application of electrical machinery, which would, they argued, lead to an increasing number of small industrial firms, as it had already done elsewhere.<sup>31</sup> As the Catholic trade paper the *Hanzebode* put it: 'Steam power has driven the people into the factories, the electric current will drive them out again, into their own workshops. Such a decentralization of industry will prove to be the best way to end the social abuses which attend industrial production in our times'.<sup>32</sup>

In 1901 the neo-Calvinist leader Kuyper became prime minister of a cabinet dominated by orthodox Protestants and Roman Catholics. One of his first acts was to send a representative to the international conference of the lower middle classes in Namur in Belgium. After the next conference, which was held in Amsterdam in September 1902, the *Nederlandsche Middenstandsbond* (League of Retailers and Craftsmen) was founded. This

became the main political pressure group for retailers and, to a lesser degree, craftsmen. Under Kuyper's government a parliamentary commission was set up to study the situation of the lower middle classes and advise the government on measures to be taken. It was also a Christian democratic cabinet which appointed the industrial consultants. In short, it was due to Roman Catholic and orthodox Protestant politicians that the ideas which had been developed in the Society for the Promotion of Industry were put into practice.

#### *4. Work and ideology of the industrial consultants*

We shall now take a closer look at how and why the Dutch government tried to help the craft industries. As we have seen, this work was entrusted to the government agency of industrial consultants, which, after some years of preparation, really started to operate in 1913.<sup>33</sup> There were three industrial consultants, all of them engineers, who worked regionally, each covering about one third of the country. They were assisted by a National Laboratory of Industry, also headed by an engineer, which collected information about new machinery and apparatus, provided addresses of producers and suppliers of this equipment, organized exhibitions and ran tests of machinery at the request of the consultants or individual firms. The laboratory was set up in close cooperation with the Polytechnic in Delft (the only one in the Netherlands). It was located in the Polytechnic's department of mechanical engineering, and three of its professors served actively on its advisory board. From 1917 on, the agency was enlarged. In 1917 and 1918 each consultant was given an advisor, who was to concern himself especially with matters of organization and cooperation. One assistant was appointed with the specific task of helping entrepreneurs to economize on fuel. In 1917, 1919 and 1920 another three assistants were appointed to provide assistance to blacksmiths, wagonmakers and producers of wooden clogs respectively. In January 1920 a chemical and an electrical engineer were added. In addition, there were 17 offices, spread over the country, which were to help small entrepreneurs improve their financial administration.<sup>34</sup> Finally, there were state-subsidized laboratories for several branches of industry, such as the leather and shoe industry, flour mills and bakeries and the rubber industry. These, however, mainly served the needs of the larger firms.<sup>35</sup>

The work of the agency was based upon the assumption that many small firms perished quite unnecessarily because they failed to introduce adequate modern machinery and accounting. It was therefore the business of the agency to help craftsmen modernize their firms in these respects.<sup>36</sup> In 1914 the task of the industrial consultants was extended to include the stimulation of *all* industry, though very large firms were always referred to private consultants.<sup>37</sup> This enlargement of their task meant, however, that the

consultants spent much of their time, not with the really small firms, but with medium-sized firms.

The work of the industrial consultants and the laboratory for industry consisted mainly in answering questions from firms on all kinds of technical and organizational matters.<sup>38</sup> The number of these consultations, which were free of charge, grew from 465 in 1913 and 1914 to 1,100 in 1920 and stabilized around 1,000 during the 1920s and 1930s.<sup>39</sup> The enquiries related to such things as how to start cooperatives for purchasing raw materials, what kind of machines or apparatus to buy and addresses of firms from which the equipment could be bought. The consultants also studied the feasibility of starting new branches of industry in the Netherlands for which a market appeared to exist (e.g. the production for the Dutch East Indies of agricultural implements, which were largely imported from foreign countries). Most of the requests for information came, not from craft firms, but from somewhat larger firms operating on much more than a local market. Many of the activities which the industrial consultants organized on their own initiative benefited the same group.<sup>40</sup> Questions came, for instance, from a dairy factory, a briquette factory, a producer of pig's wash (working with a steam engine, drying apparatus and so on), a polder committee (about a new pumping engine) and a factory for cane furniture and baskets. The last example is typical. Cane products were sold on an international market which was dominated by the highly mechanized German industry. If Dutch firms were to compete on this market, according to the agency, they would have to invest in modern machinery.<sup>41</sup>

The demonstrations which were organized by the National Laboratory show the same tendency.<sup>42</sup> For example, the demonstrations of acetylene and electric welding, in 1918 and 1921, attracted not so much blacksmiths as representatives of larger engineering and shipbuilding firms. And when the National Laboratory demonstrated paint spraying machines it was even admitted that their introduction would be detrimental to the craft of the painters. This method, it was pointed out, was much faster than the traditional way of painting; expensive brushes would become superfluous and special skills were not necessary, which meant that personnel costs could be cut by 80-90%.<sup>43</sup>

Another interesting case is that of small factories producing electrical appliances which had sprung up during the war (when gas and coal were in short supply and electrification was speeded up). One of the consultants wrote in March 1920 that standardization should be pushed, because only in this way would small firms be able to start producing large series, which was essential for their survival in an increasingly competitive international market.<sup>44</sup> Another example is that of a small machine-building firm which made simple machinery for ships and mills. According to the report, it was a true craft firm, where the master worked at the lathe together with his men. Although they worked very hard, the firm was constantly in debt. The

industrial consultant suggested that they should stop producing single machines and only make series of at least six. The time needed for each step in the production process should be calculated and brought down to a minimum 'by modern means'. Work should be planned a few weeks ahead and every worker should receive detailed instructions on a card. Thanks to this scientific management type of approach the firm's prospects were now much better, the report concluded.<sup>45</sup>

In short, the industrial consultants certainly did not embrace the kind of 'small is beautiful'- doctrine which Boersma had expounded twenty years before. Moreover, they were quite explicit about this. They wanted it to be known that they did not work only for small firms but also for larger firms,<sup>46</sup> and in their meetings with the head of the Department of Trade at the Ministry of Agriculture, Industry and Trade, this was never a point of discussion. In their publications, the consultants stressed one aspect of their original programme: the possibilities for craft firms to develop into medium-sized or even large industrial enterprises by means of the introduction of advanced machinery and production methods. Small firms could, for instance, specialize in producing parts which were subsequently used in mass production. As an example, an ironmonger's shop was cited which had successfully started the production of door handles and now employed 80 men.<sup>47</sup> In their opinion the importance of a large number of small firms lay, not so much in the intrinsic worth of craft production, but in the availability of a fund of small firms, of which the strongest could grow into advanced, internationally competitive enterprises.<sup>48</sup>

On the other hand, the industrial consultants and the National Laboratory did carry out programmes that were intended to save some old crafts which, at least when seen from the present perspective, were destined to disappear. The first of these was a project for blacksmiths, which we shall now look at in more detail.<sup>49</sup> In January 1917 an assistant was appointed to the engineer of the National Laboratory in Delft whose task would be to help blacksmiths, especially those in the countryside, to modernize their smithies. The assistant had been a blacksmith himself and had subsequently become a teacher at a vocational school. Blacksmiths were chosen because there were a great many of them and because they often worked in isolated places and were therefore ill informed of the latest machinery and techniques. Most of them were poorly equipped and poorly skilled. The blacksmiths were among the best organized craftsmen. About half of them belonged to the League of Master Blacksmiths (Bond voor Smedenpatroons), which dated from 1903.<sup>50</sup> This organization published an excellent trade journal,<sup>51</sup> offering much technical information. From 1907 on it tried to organize courses for blacksmiths, and during the war it was the only organization to urge the government to appoint a technical consultant especially for their trade.<sup>52</sup> A programme for this group of craftsmen therefore seemed to have a better chance of success than one for any other group.

Unlike the German *Gewerbeförderungsdienst*, which organized courses of six to eight weeks in model smithies in some large towns for which a fee was charged, the Dutch service offered its courses free. Theoretical lessons were given in village schools in the evenings and practical advice was given to each smith personally in his smithy. The assistant started his work in the northern province of Groningen, where there were many blacksmiths who worked for the farmers. He travelled from village to village, lecturing and visiting blacksmiths, and reached between 50% and 85% of them. He found that the equipment and working methods in most of these smithies were indeed lamentable, but that the blacksmiths were very eager to learn, especially about acetylene welding and metal cutting, technical drawing and bookkeeping. Some of them even followed the assistant to the next village in order to hear a lecture again. The report ended with the remark that unless more assistants were appointed it would take dozens of years to reach all Dutch blacksmiths (let alone other crafts).

This plea was heeded. A second and third assistant were appointed in 1919 and 1920 to work in other parts of the country in a similar manner. The assistants stressed good bookkeeping and mechanization and often seem to have encouraged blacksmiths to transform their smithies into small factories for mass production. The National Laboratory even designed some simple tools which were clearly meant to help them effect this transition, such as a device for making angle irons and one for making pipes.<sup>53</sup> Many blacksmiths were already producing large series of simple products, such as hinges, for bigger firms (shipyards, construction companies) anyway<sup>54</sup>; they could only gain by mechanizing this kind of production.

The results of these efforts are hard to assess. Generally speaking, blacksmiths continued to lose ground to mass production, even though some new areas of activity were opened up, such as the construction of waterworks, central heating and the building of greenhouses.<sup>55</sup> Their number declined both absolutely and relative to the population.<sup>56</sup> Electrical machinery was, however, introduced on a large scale — in this respect the consultants were successful — especially by somewhat larger firms.<sup>57</sup>

During the 1920s similar projects were carried out for, among others, wagonmakers, clogmakers, plumbers, shoemakers and cabinetmakers. In general, these projects show the same tendencies. I shall discuss only two examples: wagonmakers and clogmakers. Wagonmakers traditionally made all kinds of wooden coaches and farm carts. Like most trades, theirs was characterized by overcrowding and severe competition, from which, for instance, the farmers who made use of their services profited mercilessly.<sup>58</sup> After the First World War a new market opened up for this trade: the production of coachwork for motor buses and lorries (from the beginning, passenger cars were imported, the only exception being the beautiful *Spijker*, which succumbed to foreign competition in 1925<sup>59</sup>). In 1923 there was even a boom in bus travel, and all kinds of odd vehicles appeared on the roads.<sup>60</sup>

Many wagonmakers therefore started to build bodies on imported chassis, Ford and Chevrolet being especially popular. At first all coachwork was done in wood, with only some iron reinforcements, but gradually the number of iron parts increased and by the end of the thirties wood had virtually disappeared from the workshops. Supported by the trade journal, the industrial consultant for the wagon industry (appointed in 1921) encouraged this transition. Like the consultant for the blacksmiths, he held lectures and gave individual advice. In addition, he made dozens of drawings of different kinds of coachwork, which were published in the trade journal, secured free stands for wagonmakers at exhibitions, took them to car factories to see the latest models, designed a course on coachbuilding for a vocational school and, as in all trades, tried to get the craftsmen to do some bookkeeping.<sup>61</sup>

Another group of wagonmakers continued to produce farm carts. The consultant helped them to improve their models and introduce innovations such as iron wheels and pneumatic tyres.<sup>62</sup> However, most requests for information concerned the construction of bodies for motor vehicles, and both the consultant and the trade journal stressed that only this branch of the trade had a chance of survival: traditional wagon-making was a dying craft.<sup>63</sup> Consequently, the consultant increasingly focused his efforts on coachbuilding.<sup>64</sup>

No statistics are available on the number of wagonmakers who made the transition to coachwork for motor vehicles,<sup>65</sup> the number who remained in the wooden farm cart business or the number who had to close shop. Nor do we know how exactly the transition from wood to iron was made in the coachwork firms. Traditionally, most wagonmakers had their ironwork (such as iron bands around the wheels) done by a blacksmith, though the larger firms had their own smithies. It seems that successful bus and lorry builders gradually fired their old wagonmakers and employed more and more ironworkers, electricians and the like.<sup>66</sup> Mass-produced lorries and buses were, of course, increasingly imported from elsewhere, especially after the Second World War. Many coachbuilders probably turned, therefore, to repairing factory-produced vehicles.<sup>67</sup> Nevertheless, at the international automobile exhibition in Amsterdam in 1938 there were still 21 Dutch producers, presenting their buses and lorries.<sup>68</sup>

The case of wooden clogs was rather different. The problem here was not diminishing or changing demand but severe competition, especially from Belgium. The strategy of the consultants was therefore to help clogmakers improve the quality of their products (especially the inside of the clog, for which they designed models that were distributed among producers) and to stimulate sales by means of advertising, exhibitions and exploring possibilities on the international market. The superior quality of Dutch clogs was proved by having Dutch schoolchildren wear Dutch and Belgian clogs until they wore out. It was demonstrated that the Dutch clogs lasted 339

days, the Belgian clogs only 198. According to a report in 1929, these efforts had some success: both the quality and the sales of clogs were improving.<sup>69</sup>

The efforts of the Department of Industry and Trade were very modest when compared to the much larger programmes of the German and Austrian governments. However, considering the prevailing government policy of minimal interference in the economy, the amount of energy spent on the craft industries is still remarkable. Though the government intervened massively and effectively in the economy during the First World War, creating several agencies for the regulation and support of trade and industry, most of this apparatus was dismantled as soon as the war was over.<sup>70</sup> The programmes for the crafts which had been started in 1913 also profited from government intervention during the war. However, in spite of cuts in the budget during the economic recession in 1922, the government maintained most of its programmes for the craft industries all through the twenties and thirties, up to the present day. During the 1920s expenditure for these programmes took up between seven and nine percent of the government budget for trade and industry; they were clearly one of the main concerns of the Department of Agriculture, Industry and Trade.<sup>71</sup>

Why did the government take so much trouble to help crafts, such as those of the blacksmiths, clogmakers and wagonmakers, which in retrospect seemed bound to disappear? The first part of the answer is that the prospects for these crafts certainly did not look hopeless to the politicians and officials involved. The agencies supported sectors which were in trouble, but only if they had a chance of survival. When, for instance, a programme was considered to help small-scale breweries, the preliminary report concluded that this would only make sense if the prospects for small-scale breweries improved.<sup>72</sup> Paradoxically the growth of mass production created new possibilities for small industrial firms. Large firms, the consultants noted, increasingly limited the range of their products to those which could be produced in large series, leaving batch production to smaller firms. The custom-built buses and lorries of the 1920s and 1930s, built on American chassis, are a good example of this. The greatest problem for small firms was therefore not competition from large firms (problems of markets and prices were discussed surprisingly little, clogs being an exception); rather, the main problems were, first, competition between the small producers themselves, who were often exploited by merchants who supplied them with raw materials and sold their products (blacksmiths, goldsmiths and silversmiths, shoemakers, small farmers producing butter for the international market) and, second, technical backwardness and reluctance to modernize.<sup>73</sup>

The first problem could be tackled in several ways. To start with, setting up a firm could be made conditional on qualifications recognized by the state and on solvency, as it was, for instance, in Germany. During the recession of the early 1920s this solution was hotly debated, but the argument of freedom of enterprise won out.<sup>74</sup> Not until the 1930s was the debate revived, and this

time a law was passed (1937) which specified the conditions for setting up a new firm.<sup>75</sup> Another solution was cooperation, which would make small producers less dependent on merchants. In the case of the small farmers, this had worked admirably, and during the first ten years of the agency the industrial consultants made great efforts to get craftsmen to start cooperatives for the purchase of raw materials, the sale of products and production. These efforts largely failed because of mutual distrust among craftsmen.<sup>76</sup> Consequently, the main thrust of their activities became the modernization of small firms. Technical and managerial backwardness, they stated again and again, were the reason that so many craftsmen perished quite unnecessarily: small firms could often produce as efficiently as large ones, if only entrepreneurs were well educated and knew how to put to use, for instance, electrical machinery, of which a great variety was now available.<sup>77</sup> Arguments for the importance of small-scale industry did not change much during the nineteen-twenties. New and vital industrial enterprises were expected to grow out of small firms. They were also very important as a source of employment, given a situation in which the population was growing by about 1.5% every year, whereas employment in the larger industrial firms was declining as a consequence of the rationalization of production made inevitable by international competition.<sup>78</sup>

### *5. Conclusion*

At the end of the nineteenth century the consensus, rooted in classical political economy and Marxism, regarding the inevitable rise of mass production at the expense of the craft industries was challenged by some liberal intellectuals, revisionist socialists and Christian democrats (especially Roman Catholics). They argued that the decline of the crafts was real in some sectors but not in others, and that as a general tendency it was neither necessary nor desirable. With some government support the craft industries would be able to modernize and remain an important part of the national economy. A strong middle class would be the backbone of society: it would prevent the division of the nation into two hostile classes, would guarantee the survival of bourgeois Christian morals and so on. Some of these writers were very hostile to industrialization, which they thought would lead to class war unless the government intervened. Others, especially liberals, valued small-scale firms because the best of them would be able to grow into strong, large enterprises.

These ideas resulted in a policy to support the crafts, mainly by helping them to modernize their workshops. The problems with which these firms and their government consultants had to contend were, in fact, not so much competition from large-scale industry as competition among the craft firms themselves and technical backwardness. The government agencies therefore



tried to initiate cooperation between craft firms and to help them introduce modern machinery. They did not want to preserve the crafts in their traditional form, and they were certainly not hostile to large-scale industry. In fact, they embraced the liberal view that the craft sector was a kind of nursery for medium-sized and large industrial firms. The overall effect of these efforts is hard to assess because of a lack of data. It is clear, for example, that after the Second World War blacksmiths and wagonmakers all but disappeared, but we do not know how many of them had by that time transformed their workshops into small metalworking factories, gas and water installation firms, bus and lorry building firms, service stations and so on.

When compared to those of countries such as Germany and Austria, the Dutch efforts at *Mittelstandspolitik* were modest indeed. In Germany, for example, after the *Gewerbeordnung* of 1881 there were officially recognized trade associations to which the state delegated important powers, such as the organization of an extensive apprenticeship system, including examinations for the titles of journeyman and master. In 1897 a law was passed which even made it possible to create compulsory guilds (*Zwangsinnungen*) to which any craftsman in a certain region had to belong if the majority of his colleagues had decided to form one. At the end of the nineteenth century most German states had large government agencies for the promotion of the crafts which organized permanent exhibitions of all kinds of modern small machinery, information offices, technical libraries and lectures and courses in many different trades.<sup>79</sup> Austria, where most crafts were organized in guilds in the full traditional sense (including strict control over entrance into the trade and vocational training), had similar but even more impressive institutions.<sup>80</sup>

Although Dutch industry around 1900 still consisted mainly of small firms, there existed in this country no industrial areas characterized by technically advanced craft firms and highly self-confident artisans such as described by Sabel, Zeitlin and Boch.<sup>81</sup> Craft organizations were not very numerous; their membership comprised only a small proportion of the craftsmen and they had very little involvement in politics. Consequently, the efforts of the government to support the crafts had only a weak basis in the crafts themselves, though some artisans, such as blacksmiths and wagonmakers, proved to be susceptible to technical and organizational modernization when offered the opportunity. In addition, and again unlike Germany and Austria, economic policy in the Netherlands was decidedly *laissez-faire*. To be sure, there were some Christian democratic politicians who favoured the kind of corporate organization prevalent in the German states. But these ideas were sharply rejected by the liberals and did not enjoy universal support in Christian democratic circles either.<sup>82</sup> This became manifest, as we have seen, in the debate in the early 1920s on proposals to regulate the establishment of new firms.

Dutch *Mittelstandspolitik* was therefore a rather pragmatic, liberal affair which, after the initial phase, lost the momentum of a craft ideology as put forward by a man like Boersma. What the agency of industrial consultants envisioned was not an economy in which craft production would predominate, but rather one in which new small firms would be created all the time, firms using advanced machinery, some of which would develop into medium-sized or large firms.

## NOTES

- \* This article is an elaborated version of a paper presented at the annual conference of the Society for the History of Technology in Sacramento, California, in October 1989.
1. Ch. Sabel & J. Zeitlin, 'Historical alternatives to mass production; Politics, markets and technology in nineteenth-century industrialization' *Past and Present* 108 (1985) 133-176; G. Crossick, 'The petite bourgeoisie in nineteenth-century Europe; Problems and research' *Historische Zeitschrift* (1986) [Sonderheft 15] 235 ff.; J. Breuilly, 'Artisan economy, artisan politics, artisan ideology; The artisan contribution to the nineteenth-century European labour movement', in: C. Emsley & J. Walvin, eds, *Artisans, peasants and proletarians* (London 1985) 194-198.
  2. Sabel & Zeitlin, 'Historical alternatives', 137-138.
  3. E.g., T. Huppes, *Een nieuw ambachtelijk elan; Arbeid en management in het informatietijdperk* (Leiden 1985).
  4. R. Samuel, 'Workshop of the world; Steam power and hand technology in mid-Victorian Britain', *History Workshop* (1977) 6-72.
  5. Sabel & Zeitlin, 'Historical alternatives'. See also: A. Noll, 'Wirtschaftliche und soziale Entwicklung des Handwerks in der zweiten Phase der Industrialisierung', in: W. Rüegg & O. Neuloh, eds, *Zur soziologischen Theorie und Analyse des 19. und 20. Jahrhunderts* (Göttingen 1971) 193-212; J. Ehmer, 'Oekonomischer und sozialer Strukturwandel im Wiener Handwerk', in: U. Engelhardt, ed., *Handwerker in der Industrialisierung* (Stuttgart 1984); R. Boch, *Handwerker-sozialisten gegen Fabrikgesellschaft* (Göttingen 1985); S. Volkov, *The rise of popular antimodernism in Germany; The urban master artisans 1873-1896* (Princeton 1978). Overviews of recent scholarship on the development of the crafts in several European countries are the articles by Conze, Kaufhold, Ehmer and Heumos in: Engelhardt, *Handwerker*, and G. Crossick & G. Haupt, eds, *Shopkeepers and master artisans in nineteenth-century Europe* (London 1984).
  6. Overviews of these movements, which, however, pay little attention to the aspect of technology, are: Volkov, *The rise of popular antimodernism*; Crossick, 'The petite bourgeoisie' 269-276; Ph. Nord, 'Les mouvements de petits propriétaires et la politique (des années 1880 à la première guerre mondiale)' *Revue Historique* 275 (1986) 407-433.
  7. Conze in Engelhardt, *Handwerker*, 14-15; Heumos in Engelhardt, *Handwerker*, 166; Crossick, 'The petite bourgeoisie', 231-235.

8. See in particular: *Verslag van het onderzoek naar den toestand van den handeldrijvenden en industrielen middenstand in Nederland* (Amsterdam 1918); O. Pyfferoen, *La petite bourgeoisie aux Pays-Bas* (Brussels 1902); J.A. de Jonge, *De industrialisatie in Nederland tussen 1850 en 1914* (Amsterdam 1968, Nijmegen 1976) 25-26, 265-267, 231-233; J.L. van Zanden, *De industrialisatie van Amsterdam 1825-1914* (Bergen 1987) 43-44, 59-62, 66-70.
9. De Jonge, *De industrialisatie*, 427, note 27.
10. *De toestand der werklieden in de bouwbedrijven te Amsterdam* (Amsterdam 1898); *Enquete, gehouden door de staatscommissie, benoemd krachtens de wet van 19 januari 1890* (The Hague 1890-1894), interview with H.L. Boersma, 218-221.
11. National Archives at The Hague (hereafter ARA): Archief Economische Zaken, Afdeling Handel en Nijverheid, vol. F 4528, Meeting of the industrial consultants with the head of the Department of Trade, 1 May 1914.
12. H. Baudet, *Een vertrouwde wereld* (Amsterdam 1986) 17-24.
13. Van Zanden, *De industrialisatie*, 68-69; H. Knippenberg *et al.*, 'Modernisering van de Nederlandse nijverheid in regionaal perspectief, 1900-1930' *Jaarboek voor de Geschiedenis van Bedrijf en Techniek* 5 (1988) 393-396.
14. Cf. *Verslagen en Mededeelingen van de Afdeling Handel van het Departement van Landbouw, Nijverheid en Handel* (1929) vol. IV, 9.
15. H.J. Scheffer, 'Ontwikkeling van de ambachts- en fabrieksnijverheid in Nederland', *Economisch-Statistische berichten* (1942) 544-545. The first systematic collection of statistics concerning the craft industries dates from just after the Second World War. See A.W. Luyckx, *Het ambacht* (Tilburg 1952) 38-39.
16. R.T. Griffiths, 'Ambacht en nijverheid in de noordelijke Nederlanden 1770-1844', in: *Algemene Geschiedenis der Nederlanden X* (Haarlem 1981) 219-229.
17. H.W. Tydeman, *Verhandeling ter beantwoording der vraag: welke zijn de grenzen van het nut en de schade, welke door het gebruik van werktuigen in de fabrieken van ons vaderland, etc.* (s.l. s.a. [1820]), 39-40, 59-61. The discussion on modern technology in the Netherlands is dealt with in detail in: D. van Lente, *Techniek en ideologie; Opvattingen over de maatschappelijke betekenis van technische vernieuwingen in Nederland, 1850-1920* (Groningen 1988).
18. H. Goeman Borgesius, 'Stoommachines en volkswelvaart', *Vragen des Tijds* (1876) I, 1-37.
19. *Ibidem*, 24-37.
20. E. Hueting *et al.*, *Troelstra en het model van de nieuwe staat* (Assen 1980), 40; E.H. Kossmann, *The Low Countries 1780-1940* (Oxford 1978) 512.
21. *De nieuwe tijd* (1897/98) 198.
22. *De nieuwe tijd* (1904) 436.
23. Pyfferoen, *La petite bourgeoisie*, 12-13.
24. H.L. Boersma, *Het ambacht* (The Hague 1902) I, 46.
25. *Ibidem*, 21-26.
26. E.g., *Tijdschrift der Nederlandsche Maatschappij ter bevordering van Nijverheid* (1863) 120-142; (1872) 273-285; (1876) 356-360; (1880) 23-25, 42-50; (1883) 295-296; (1887) 357-364; (1888) 1-13, 42-53, 65-69, 99-104, 289-291; (1894) 288-289.
27. *Verslagen en Mededeelingen van de Afdeling Handel* (1913) vol. III, 8.
28. E.g., B.P. Aalberse in: *Katholiek Sociaal Weekblad* (1905) 289-291; A. Kuyper in *De Standaard* 24 June 1892.

29. E.g., *Katholiek Sociaal Weekblad* (1905) 289-291; (1906) 414-415.
30. A. Kellenaers, *Handboek voor den middenstand* (Haarlem 1919) 24-26, 60-61.
31. *Katholiek Sociaal Weekblad* (1903) 408.
32. *Hanzebode*, 15 October 1919.
33. Overviews of the work of the industrial consultants and other government agencies for the stimulation of small industry are to be found in their yearly reports, published in the *Verslagen en Mededeelingen van de Afdeling Handel van het Ministerie van Landbouw, Nijverheid en Handel*, which appeared from 1907 on.
34. This had to do with government aid to credit banks for small business, started on a large scale at the beginning of the war. See A. Ingenool, *Vijfentwintig jaren middenstandsbeweging; Gedenboek van den Nederlandschen Middenstandsbond* (s.l. 1927).
35. ARA: Archief Economische Zaken, Afdeling Handel en Nijverheid, vol. F4532.
36. *Verslagen en Mededeelingen van de Afdeling Handel* (1913) vol. III, 3-4.
37. *Verslagen en Mededeelingen van de Afdeling Handel* (1928) vol. II, 10.
38. Besides this, the consultants assisted, among other things, with the propagation abroad of Dutch products, the organization of industrial exhibitions and the publication of annual surveys of Dutch industry. See for overviews the yearly reports mentioned earlier (note 33). More detailed accounts are in: ARA: Archives of the Department of Trade of the Ministry of Agriculture, Industry and Trade, vol. F4527, F4528; Archive of the Middenstandsraad, vol. 52.
39. Yearly reports (see note 33). After 1921, consultations had to be paid for, except by small entrepreneurs who really could not afford it. See *Verslagen en Mededeelingen van de Afdeling Handel* (1924) vol. I, 7-8.
40. See for instance the industrial consultant Steketee at the meeting of the head of the Department of Trade and the industrial consultants; ARA: Archief Economische Zaken, Afdeling Nijverheid en Handel, vol. F4528, 15 June 1915..
41. ARA: Archief Economische Zaken, Afdeling Handel en Nijverheid, vol. F4527, reports of the industrial consultants.
42. The following examples are from: ARA: Archief Economische Zaken, Afdeling Handel en Nijverheid, vol. F4527.
43. ARA: Archief Economische Zaken, Afdeling Handel en Nijverheid, vol. F4527, Report of the demonstration of paint spraying machines, 17 and 18 June 1920.
44. ARA: Archief Economische Zaken, Afdeling Handel en Nijverheid, vol. F4528, Letter of the industrial consultant Begemann to head of the Dept. of Trade, 19 March 1920.
45. ARA: Archief Economische Zaken, Middenstandsraad, vol. 52. In the early thirties, the industrial consultants carried out time-and-motion studies in laundries, silversmithies and small shoe factories and tailor shops. See *Tien jaren bedrijfsonderzoek in het belang van den middenstand; Het Economisch Instituut voor den Middenstand 1931-1940* (The Hague 1941) 141-145.
46. E.g., ARA: Archief Economische Zaken, vol. F4528, Letter of the industrial consultants to the head of the Department of Trade, 30 December 1918.
47. *Tijdschrift der Maatschappij van Nijverheid* (1916) 249.
48. *Tijdschrift der Maatschappij van Nijverheid* (1912) 367; (1914) 417-419; (1916) 249-255; (1918) 89-92.
49. The blacksmiths' project has been studied by: Michiel Koorenhof, 'De kleine nijverheid in Nederland, 1900-1940' (unpublished Master's thesis, Erasmus

- University of Rotterdam 1989) 39-50. In addition, I have used the programme for the assistant of the National Laboratory, 10 April 1917, and the report of 4 October 1918, both in: ARA: Archief Ministerie van Economische Zaken, Afdeling Nijverheid en Handel, vol. F4527.
50. *Gedenkboek van den Bond van Smedenpatroons* (Utrecht 1928)
  51. The *Vakblad voor smeden* started to appear in 1908; from 1910 onwards it was called *Orgaan voor smedenpatroons*. Only some copies have been preserved, in: ARA: Archief Ministerie van Economische Zaken, Afdeling Nijverheid en Handel, vol. F4540, and at the International Institute of Social History in Amsterdam.
  52. *Gedenkboek van den Bond*, 59, 61.
  53. *Verslagen en Mededeelingen van de Afdeling Handel* (1927) vol. II, 23; (1928) vol. II, 37.
  54. Koorenhof, 'De kleine nijverheid', 43, 44.
  55. *Verslagen en Mededeelingen van de Afdeling Handel* (1929) vol. IV, 33; Koorenhof, 'De kleine nijverheid', 46.
  56. It can be estimated that in 1912 there were about 8,000 blacksmiths, that is, one for every nine inhabitants, whereas in 1930 there were 6,907, one for every fourteen inhabitants. See Koorenhof, 'De kleine nijverheid', 48.
  57. *Ibidem*, 49.
  58. H.G. Fokkens, *Het wagenmakersbedrijf in Friesland* (Arnhem 1967); J.F. Heybroek, C.R. Mönnich, *De Leidse wagenmaker; Een bedrijf in beeld* (Zutphen 1981); *De Rijtuig-, wagen en carrosseriebouw* 7/1 (15 May 1924) 3-4; very informative is the trade journal *De rijtuigbouw*, which started in 1912 (later called *De rijtuig-, wagen- en carrosseriebouw*). Unfortunately, only a few copies have been preserved, some in: ARA: Archives of the Ministerie van Economische Zaken, Rijksnijverheidslaboratorium, vol. 25, nr. 4, and some at the International Institute for Social History in Amsterdam.
  59. H.A.M. van Asten, 'De Spijker van de weg gereden' *Economisch en Sociaal-Historisch Jaarboek* 33 (1970) 67-118.
  60. *Verslagen en Mededeelingen van de Afdeling Handel* (1924) vol. I, 48.
  61. *Verslagen en Mededeelingen van de Afdeling Handel* (1924) vol. I, 47, and following years; ARA: Archief Economische Zaken, Rijksnijverheidslaboratorium, vol. 25, nr. 4.
  62. *Ibidem*, in particular letters of 10 May 1932, 14 June 1932, 22 June 1932, 2 March 1933; yearly report on 1938.
  63. *E.g.*, *De Rijtuig- en wagenbouw* 5 (1922) I, 9.
  64. ARA: Archief Economische Zaken, Rijksnijverheidslaboratorium, vol. 25, nr. 4, report on 1935.
  65. Two success stories are: *50 jaar Verheul* (s.l. s.a. [1950]) and *In dienst van vuil- en vuurbestrijding. Gedenkboek ... J. Geesink en zoon* (s.l. s.a. [1950]).
  66. *E.g.*, *50 jaar Verheul*, 22-26.
  67. See *De rijtuig-, wagen- en carrosseriebouw* 13 (15 October 1930) and many articles on repairing factory-made vehicles which appeared in this trade journal after 1930.
  68. *De rijtuig-, wagen- en carrosseriebouw* 20 (20 February 1938) VIII, 117.
  69. *Verslagen en Mededeelingen van de Afdeling Handel* (1928) vol. II, 38-42, (1929) vol. IV, 16, 34-38; *Verslag der werkzaamheden van den Middenstandsraad* (1929) 108.

70. F.A.G. Keesing, *De conjuncturele ontwikkeling van Nederland en de evolutie van de economische overheidspolitiek 1918-1939* (Utrecht/Antwerp 1947; Nijmegen 1978) 64-65, 146; W.S.P. Fortuyn, 'Staat en sociaal-economische politiek in de twintigste eeuw' in F.L. van Holthoorn, ed., *De Nederlandse samenleving sinds 1815* (Assen 1985) 284, 286-290.
71. *Handelingen der Staten-Generaal 1919/20*, Appendix A II, ch. X; *1925/26*, Appendix A II, ch. X; *1929/30*, Appendix A II, ch. X.
72. *Verslagen en Mededeelingen van de Afdeling Handel* (1926) vol. III, 8-9.
73. *Verslagen en Mededeelingen van de Afdeling Handel* (1929) vol. IV, 9-10. *Tijdschrift der Maatschappij van Nijverheid* (1916) 249; *Verslag der werkzaamheden van den Middenstandsraad over het jaar 1920*, 115-118.
74. *Verslag van den Middenstandsraad over 1920*, 115-118; *Verslag van den Middenstandsraad over 1922*, 40-44.
75. Keesing, *De conjuncturele ontwikkeling*, 292.
76. ARA: Archief Economische Zaken, Afdeling Nijverheid en Handel, vol. F4528, Meeting of the industrial consultants with the head of the Department of Trade, 15 June 1915; *Verslag der werkzaamheden van den Middenstandsraad over het jaar 1922*, 110; *Tijdschrift der Maatschappij van Nijverheid* (1918) 89-92.
77. ARA: Archief Economische Zaken, Middenstandsraad, vol. 52, nr. LII.
78. ARA: Archief Economische Zaken, Middenstandsraad, vol. 52, nr. LII.
79. Volkov, *The rise of popular antimodernism*, 247, 273-274, 296; R.P.J. Tutein Nolthenius, *Middenstandskernen* (Amsterdam 1907) 17-51, 192-212.
80. J.S. Meuwsen & J. Nouwens, 'Middenstandsorganisatie en -cooperatie in Oostenrijk-Hongarije', *Verslagen en Mededeelingen van de Afdeling Handel* (1910) 1.
81. See note 5 above.
82. Van Lente, *Techniek en ideologie*, 117-118, 120.