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Design as Profession, 1945–80

In the post-war decades industrial design in the Netherlands shifted from its relatively marginal, idealistic and artistic status into an important economic and social instrument. On the factory floor, draughtsmen, model-makers and engineers made way for professionally trained industrial designers. Independent industrial designers and design companies also managed to acquire a strong position in the cultural and economic realm. Complementing them, a small but active group of traditional Arts and Crafts practitioners, potters, weavers, textile printers and jewellery-makers carried on working as usual in their own studios and workshops. Industrial activity doubled between 1948 and 1962, productivity reaching a peak in the 1960s that has never been equalled since.[1] The government stimulated this development as best it could, though its priority was to create jobs.

An increasing number of manufacturers in this period began to see design as a vital link in their product development process and made it an important part of their policy. Sometimes this stemmed from idealistic convictions, but to an increasing degree it was driven by economic, or purely commercial, motives. Design education profited from this surge of interest and expanded quite substantially, resulting in a growing number of qualified professional industrial designers. These new designers were no longer solely interested in domestic objects and interior decoration; their field was extending from the simplest of domestic articles to agricultural equipment, medical apparatus, street lamps and railway carriages. Advertising and corporate identity took off in a big way too and provided plenty of work for the many new graphic design companies. By the 1980s design was firmly established. Spread over five museums, the exhibition *Holland in Vorm* (Dutch

Emil Truijen and Rob Parry, double pillar box, 1956–60.

Design) in 1987 featured design from the post-war years. The catalogue is an exceptionally rich source of the history of this flourishing discipline in the Netherlands in the third quarter of the twentieth century.[2] This chapter focuses on the design policy of the period, looking at how the business community, designers, government and educational institutions created the necessary conditions to redesign the Netherlands. In addition to the inescapable discussions on style, and the social or artistic calibre of the design, one of the most pressing questions in this period was how the designers' services could be most efficiently deployed.

The Government's Role and Designers' Initiatives

Straight after the war initiatives to promote modern design policy originated in designers' circles rather than via the state, and in a few cases came from private firms. In March 1945, two months before the liberation, a summary of a detailed report by the designers Paul Schuitema and Piet Zwart and the economist Jan Bouman appeared in the underground paper *De Vrije Kunstenaar* (The Free Artist).[3] This set out concrete plans for an industrial procedure that would be suitable for producing domestic objects once the war was over. Their report contained the first serious plan, written by experts, for the introduction of industrial design in the Netherlands. These three considered design to be an important and fully fledged discipline of national economic import, capable of a wide-reaching social impact. After the war they sent their report to the government, proposing that in the new structure it would be responsible for the coordination of the social, economic, technical and aesthetic aspects of design. This also held for future industrial design courses, which in the report's terminology was referred to as 'design engineering'. Here too they had interesting recommendations for the authorities, including the advice that design should be taught at technical schools as well as in art academies.

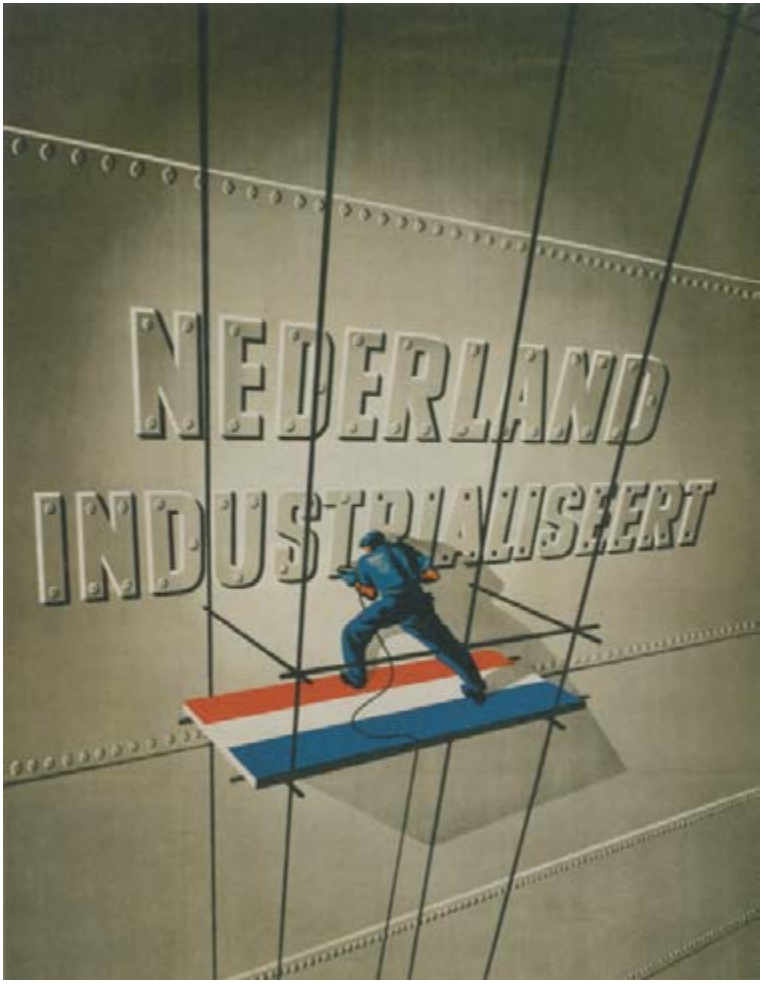
In response to this report, in 1945 the government immediately installed a Committee for Industrial Design, but this aroused little enthusiasm among the business community. Manufacturers seemed to be terrified of the idea of compulsory measures being imposed and were equally worried about artists becoming too influential. But Zwart, Schuitema and Bouman were not satisfied either: only one designer, Willem Gispen, was asked to join the Committee.

After Karel Sanders established the Aesthetic Advice Office in 1948, very slowly the Dutch government began to show some real interest in design on pragmatic grounds. Although industrial production was getting back into its

stride, the deficit in the balance of payments meant that far more would have to be exported in future. On reflection, they decided that design really did seem to be able to make a contribution. That is why, after all, a central Industrial Design Foundation (Stichting Industriële Vormgeving) was set up at the end of 1949 on the initiative of Sanders and the three most important employers' organizations, reluctantly supported by the Ministry of Education, Arts and Sciences and the Ministry of Economic Affairs. The existing association of entrepreneurs, the Bond voor Kunst in Industrie (BKI), amalgamated with the new organization in July 1950 and a national Instituut voor Industriële Vormgeving (IIV) became a reality.[4]

The BKI had celebrated its twenty-fifth anniversary in 1949 with a large exhibition in the Stedelijk Museum in Amsterdam titled *Goed maar mooi* (Not just Good but Good-looking). Here it became clear that the BKI entrepreneurs were working with renewed dedication. The exhibition was no longer about art and industry going hand in hand as such, or about artistic decorative objects, but about industrial design in the modern sense of the word. In addition to furniture and decorative products for the living room, there were also electrical appliances on show, from radios and gramophones to sewing machines and vacuum cleaners.

Once again, on Sanders's initiative the industrial designers joined forces in 1952 to form the Circle of Industrial Designers (Kring Industriële Ontwerpers, KIO). Most product designers did not feel at home in the GKf, that is if they were allowed to join it at all, since the federation had a tough entry policy: new members were strictly vetted by a selection committee. The GKf, whose official name was the Society of Practitioners of Applied Arts (Vereniging van Beoefenaars der Gebonden Kunsten), had all kinds of members from widely varied backgrounds, including many graphic designers and craftsmen still working in a traditional way. On the other hand, the left-wing character of the organization, the prominent part some of its members had played in the Resistance and its focus on Amsterdam made it exclusive at the same time. In 1948 a number of graphic designers, mostly from Rotterdam and The Hague, who were keen to work more commercially established the Society of Advertisement Designers and Illustrators (Vereniging van Reclameontwerpers en Illustratoren, VRI). Machiel Wilmink, who had already founded the professional journal *De Reclame* before the war, was their first chairman.[5] From inside the GKf another professional organization was established in 1959, the Netherlands Industrial Designers Federation (Nidf), but this 'group of seven' was not very influential, although those involved included renowned designers like Willem Gispen and Piet Zwart.



Wladimir Flem, poster proclaiming 'The Netherlands are Industrializing', c. 1948.

The IIV

The words 'Increased purchasing power through industrial design' appear on the front of a brochure designed by Karel Suyling and printed for the IIV[6] in 1952, and it goes on to say: 'if a product looks better it sells better'. The board thought it knew exactly what fell into the category 'better': 'Good design demands: the highest level of functionality, a dependable structure [and] an attractive appearance . . . By improving these three characteristics the Dutch product is bound to command a strong position when compared to its foreign competitor.' They included an alphabetical list of more than fifty products, from earthenware, glassware and radio sets to refrigerators,

Karel Suyling, brochure for the IIV, 1952.

sports articles and washing machines, demonstrating the range of designers' skills to enterprises that were still in the dark about what they had to offer and how broad this type of professional expertise was. 'Once you realize that the assistance of an industrial designer is as important for your company as that of your economist, your technical engineer, your sales manager or your lawyer, you can approach the IIV, an organization working in this new field in the Netherlands.'

The IIV considered mediation to be its most important task. Its aim was to bring firms into contact with suitable designers and to this end it built up a comprehensive documentation system providing information on each designer's past projects and specialities. The Institute played an important role in the 1950s and '60s, seeing itself as stimulating 'brisk and free traffic' between industrial firms and designers. Its enthusiasm proved infectious, bringing together designers and firms, and organizing informative meetings and excursions, while readily passing on its knowledge and experience to government, industry and industrial design courses through policy memoranda, brochures and informative exhibitions. The variety of congresses and symposia the IIV organized made a major contribution too.[7] Foreign celebrities were brought to the Netherlands to give lectures and the IIV members exchanged their expertise and know-how with foreign sister organizations. Under this flag, the IIV invited speakers like Henry Dreyfuss and Walter Dorwin Teague from the USA. From 1952 onwards they published the *Maandbericht* (Monthly News; later the *IV-Nieuws*, 'Industrial Design News'), a newsletter in which manufacturers and designers were kept informed of all new developments.

Theo Ruth (Wagemans & Van Tuinen (Artifort), Maastricht), 'Congo' Easy Chair 1001, 1952.

The exhibitions, which followed one another in rapid succession, reached an ever growing public. They were organized in the IIV's own premises on the Rokin (from 1954 on the Herengracht), but they also took the form of special presentations at trade fairs, where they featured a specific segment of the market, such as furnishing fabrics, electrical appliances and kitchens. The IIV also held exhibitions in which they collaborated with foreign organizations, as well as mounting displays for specific firms. Auping, Artifort, Philips, Sikkens, Mosa and Stokvis, for instance, were given the opportunity to show their new designs, and even

Dick Simonis (Gero), stainless-steel coffee-service, 1959.

the Dutch branches of Olivetti and Braun were invited to take part in these presentations.

One of the first events to show that the effort put in by the IIV was actually paying off was the Triennale in Milan in 1954. The Institute coordinated the Dutch entry and saw to it – with extra support from the Ministry of Education, Arts and Sciences – that some thirty firms took part. A few Dutch designs that were later to become famous were first presented at this event. It was here that the public would become acquainted with the ingenious Revoltstoel, made by De Cirkel and designed by the young Friso Kramer, son of the Amsterdam School architect Piet Kramer.[8] For the first time, instead of round tubes Kramer used U-shaped steel tubes, which were not just cheaper but could be used in a more varied way, allowing for more creativity in the design. It was in Milan that Wagemans & Van Tuinen (Artifort) from Maastricht showed the extraordinary Congostoel designed by Theo Ruth. Among the Triennale winners were the Leerdam glassworks, for their Gildeglas designed by Copier, and Gero from Zeist for their cutlery and stainless-steel pans by Dick Simonis. The potteries, which had been duty-bound immediately after the war to devote a considerable quantity of their raw materials to the production of standard consumer durables, had extraordinary success with their newest designs. The important and long-established Sphinx and Mosa factories presented attractive services by Pierre Daems and Edmond Bellefroid. The smaller firms Fris and Sint Maarten Porcelein won high praise for their pottery designed for everyday use by Wim de Vries and Han Knaap.[9]

To everyone's amazement, the economic returns from this event proved to be high. It would appear that the Dutch had become so accustomed to regarding this sort of exhibition as primarily a cultural affair that they were almost surprised to find that orders had been placed by foreign buyers.

In 1956 the IIV participated in an exhibition in the Stedelijk Museum in Amsterdam. Most of the exhibition, which had the unambiguous title *Industrial Design*, consisted of a presentation of German design, coordinated by Wilhelm Wagenfeld, and Italian design, organized by Marco Zanuso. In addition the IIV filled three small galleries with a display in which information was given on industrial design as part of a company's production process. The Revoltstoel by Friso Kramer and earthenware by Edmond Bellefroid served as models.

Wim de Vries (Fris, Edam), 'Edam' tea service, 1949–52.

Another successful publicity stunt was the tour of a number of factories and design companies that the IIV organized in 1956 for a large group of Dutch journalists. This resulted in scores of newspaper articles with headlines such as 'Industrial design, a weapon to be deployed on the free market'.[10] These articles also boasted about the great technical advances being made in Dutch industry and the 'substantial scientific investigations' conducted by Dutch designers.

In 1957 the IIV joined the International Council of Societies of Industrial Design (ICSID). Two years later, at the first congress of this international organization in Stockholm, one of the Netherlands' representatives was L. C. Kalff, who had been designer-in-chief for Philips for many years. In his speech to the congress Kalff typified Dutch design as 'reliable, simple and inexpensive'. Despite this characterization, which was neither spectacular nor original, the speaker was highly commended. The 'serious Dutchmen' were held in great respect, as could be read in the report on the congress in the IIV's monthly review *Maandbericht*.[11]

At the second ICSID conference in 1961 in Venice the current state of the art of design was displayed in two hundred photographs of new products from sixteen different countries. As well as once again showing cutlery by Gero designed by Dick Simonis, and glasses from Leerdam by Andries Copier, the Netherlands displayed advanced technical products such as a fertilizer distributor by Wim Rietveld, Gerrit Rietveld's son, an amperemeter by J. Wouda, a tramcar by Friso Kramer and Jaap Penraat, a sun lamp from Philips and even an aeroplane, the famous Fokker F27 Friendship designed by H. C. van Meerten.

The cheerful public façade of the IIV concealed many conflicts behind the scenes in which money played the crucial role. One problem was that the government had been living under the illusion that the Institute would become financially independent in the short to medium term, and that its contribution to the IIV's funding could then be considerably lowered. This proved not to be the case. In practice the commercial firms associated with the Institute were not always happy with the idealistic advice they were given. The ongoing criticism levelled by the IIV often left firms feeling patronized and discredited, with the impression that the IIV's criticism was more to blame for curbing their economic prosperity than for stimulating it. Of course, government subsidy had never been granted to the Institute with this scenario in mind. It had been motivated by the need to advance industrial activity, working on the assumption that design was a stimulating instrument, not just to be supported as an end in itself. The government had no intention of frustrating industry by

A room at the *Industrial Design* exhibition at the Stedelijk Museum, Amsterdam, showing the Revolt chair by Friso Kramer, 1956.

Vorm ('Design') brochure, published by the IIV and the Sikkens firm, printed on the occasion of the ICSID conference in Venice, 1961, including designs by W. Rietveld en J. Penraat (tramcar, 1958), Daf (tanker, 1959) and C. de Vries (steel desk, 1960).

supporting the IIV's strict design norms and for this reason it reduced its contribution to the budget.

The conflicts, the financial problems and the various reorganizations, accompanied by an equal number of resulting policy changes, led in 1961 to a structural change of course. A new, independent national Industrial Design Council (Raad voor Industriële Vormgeving) sprang to life, with representatives from industry, commerce, consumers, industrial designers and education. This 30-member strong Council had to operate and promote design across a far broader front than the IIV had ever done. The Council had two executive bodies at its disposal, the existing IIV, which continued to help the more than two hundred affiliated firms to find suitable designers, and a new institution yet to be established, the Industrial Design Centre (Centrum voor Industriële Vormgeving, CIV), which would liaise with consumers and the retail trade. In this Centre they planned to organize frequently changing presentations of well-designed Dutch industrial products. A Selection Committee, consisting of figures who enjoyed the trust of all parties concerned, would select these products on the basis of the Council's established norms and guidelines. In this way they thought they could take a more independent and objective stance. The British Council of Design was taken as a model, although at the official installation of the Council it was observed, somewhat wryly, that the British organization received approximately two hundred times more financial support than its Dutch counterpart.[12]

Off to America

In the 1950s America was the great ideal for Dutch entrepreneurs and consumers, particularly as far as modern design was concerned. Even the Ministry of Economic Affairs had recognized soon after the war that industrial design, as practised in the United States, could play an important part in stimulating the economy. This led to a ministerial Committee for Increased Productivity, in close consultation with the director of the IIV, Karel Sanders, putting together a select group of designers in 1953. The chosen few were allowed to familiarize themselves with the American situation in some depth, at the Dutch government's expense. In addition to Sanders, the happy few included Wim Gilles, René Smeets, Jaap Penraat, Karel Suyling and the journalist Rein Blijstra.[13]

Until then Wim Gilles had been a designer at the metalwork factory of Diepenbrock & Reigers in Ulft (DRU) in the east of the country.[14] This firm was a model for many factories that had only just taken their first serious steps in the field of design. Although it had been started in the eighteenth century as an iron foundry based on traditional craftsmanship, its first steam engine was installed in Ulft in the mid-nineteenth century and the firm had grown to more than 600 workers at the start of the twentieth century. From far back in the company's history new models for garden benches, letterboxes and enamel pans had been 'moulded' by a small group of model-makers. The firm's success was based on this long-standing tradition, together with a close eye on the products being produced by its competitors.

In 1948 the director of the DRU, J.A. Ingen Housz, took the initiative to alter radically the design process in his factory. To implement this he took on the young mechanical engineer Wim Gilles, who subsequently used his own judgement to introduce a modern design methodology based on market research and a self-developed system of product analysis.[15] After this Gilles thought up a new design methodology involving a logical, well-reasoned protocol. This 'mathematical organization of form' would mean that the outer appearance of the product would no longer be determined by the subjective, artistic preference of an individual, but would be the result of an objective, verifiable, more or less scientific process.

One of the results of Wim Gilles's innovative ideas first saw the light of day in 1954: a whistling tea kettle made from enamelled steel plate. The revolutionary materialization of the kettle, which was to become a famous design, was described in 1955 in the new *Technical Winkler Prins Encyclopedia* as a typical, practical example of a modern, process-based approach to

industrial design, demonstrating the attention paid to technical detail and its functionality. The fact that they selected an ordinary kettle, rather than a more traditional object like a chair, a vase or a carpet, reveals a great deal about contemporary thought regarding design developments in the Netherlands.

Wim Gilles (DRU), enamelled sheet-iron kettle, 1954

René Smeets, who was also invited to join the study tour of America, had become director of the new industrial arts school in Eindhoven in 1950.[16] The idea was that he would concentrate mainly on design education. Before he became director in Eindhoven, Smeets had worked for a few years as a self-taught designer at the ceramic factory Russel-Tiglia in Limburg and had also served as an officer in the army. The evening class in industrial design at the school in Eindhoven was meant to spur on industry in the Brabant region. Unlike industrial-design teachers between the wars, such as Piet Zwart, Gerard Kiljan and Mart Stam, who in their courses propagated collaboration with industry for idealistic reasons, Smeets was mainly inspired by pragmatic considerations. To his way of thinking, the economy and the needs of the Brabant enterprises were the main concerns, and it is no coincidence that Louis Kalff, the designer-in-chief at Philips, was involved in the creation of the school. Firms mostly required 'attractive'-looking articles, which a large number of people would love to own, so increasing the turnover. 'Attractive' to Smeets did not mean in the first place 'sober and honest', but rather 'beautified' or even 'decorated'.

Freelance designers were represented in the America group by Jaap Penraat and Karel Suyling.[17] Penraat had been trained during the war years by Mart Stam and Johan Niegeman at the IVKNO in Amsterdam. The fact that Penraat had also spent those years forging papers and identity cards to successfully smuggle more than four hundred Jews out of the Netherlands only came to light years later. Towards the end of his life this Dutch Schindler was internationally decorated for his act of heroism. At the time of the American tour Penraat was already one of the most progressive Dutch designers, interested in technique and user-friendliness and in the development of entirely new technical products. One of these was a new tramcar that he designed with Friso Kramer, but he was also one of the first in the Netherlands to introduce the open kitchen. He emigrated to America in 1958, so obviously the country must have made a good impression on him during the tour.

Karel Suyling was self-taught. He worked mainly as an advertisement and packaging designer and dedicated himself to the emancipation of his discipline. From 1955 to 1970 he designed many advertisements, including those promoting Citroën in the Netherlands.[18]

The designers travelled around North America for six weeks, visiting design courses in Boston, Cleveland, Chicago, Illinois, Cincinnati and New York. They also looked in on fifteen design companies, including the large offices of Henry Dreyfuss, Walter Dorwin Teague and Raymond Loewy, and the large design departments at Kodak and General Motors. The world the Dutch designers entered was totally different from the one they were used to back home. Not only were such large offices unknown phenomena in the Netherlands, but the group was also impressed by the professional, business-like character of the American offices and envious of their commercial success. In the United States design had been a completely accepted and respected link in the production process for many years, whereas in the Netherlands it was unknown on such a large scale. Such phenomena as consumer research, product analysis and product presentation were also new for the Dutch visitors, at least when taking into consideration the professional manner in which it was organized in America. Moreover, the industrial designer proved to be involved in the whole process, from the formulation of the design commission to the presentation of the new article to the consumer. The Dutch group viewed the highly regarded, versatile, well-trained and commercially driven American designers with a certain amount of jealousy.

However, the Dutchmen did not fail to notice that all the American success stories had their drawbacks. They were particularly critical of the fact

A Dutch delegation of designers visiting the design office of the Eastman Kodak Company, Rochester, New York, during its study tour in 1953. From left to right: K. Sanders, R. Smeets, T. G. Clement (of Kodak), K. Suyling, W. Gilles, J. Penraat, Robertson, R. Blijstra, unnamed Kodak employee.

that in the United States too much attention was paid to things that people back home considered unimportant, or would even have condemned, such as superficial styling and the slavish following of trends – something still detested in the Netherlands. They were also undecided about the new phenomenon called marketing. On the one hand they really saw the commercial benefits it brought, but on the other they felt that yielding to consumer demands conflicted with upholding an 'objective' view of good form, which still completely governed Dutch thinking about design.

When they returned to the Netherlands each participant wrote a report on his experiences. Jaap Penraat and Karel Suyling concentrated on the position of the freelancer in America; Wim Gilles and Karel Sanders analysed the relationship between industry and designer; and René Smeets wrote his report on his experiences in American design education.

Two years later, under the auspices of the IIV, three Dutchmen were invited to join an international party of enthusiasts on a tour of America: G.C.J. Schoemaker, director of Inventum, a factory making electrical appliances, and the designers Wim Rietveld and J. Wouda.[19] They were introduced to a relatively new branch of the design profession during their trip, the 'medical advice officer', an area of work that some American designers already appeared to be engaged in. This was the Dutch design world's first introduction to the new discipline later to become known as 'ergonomics'.

New Training Courses

Well-trained, contemporary designers, a prerequisite for implementing a goal-orientated, modern design policy, were still scarce shortly after the war. In the design schools – then still usually called Arts and Crafts schools – the traditional crafts were still the main focus. There were only a couple of exceptions, including the Academy in The Hague where, under Cor Alons's management, a department of Interior Design and a department of Advertising, under the supervision of Gerard Kiljan, had both been in operation since 1934, and where something resembling a modern approach to industrial design was in evidence.[20]

The other exception was the New Art School (Nieuwe Kunstschool) in Amsterdam, also founded in 1934 by the former Bauhaus teacher Paul Citroen; but this course did not survive the war.[21] Those who had taught at this progressive, private, non-subsidized school included the architect Alexander Bodon, graphic designer Hajo Rose, weaver Käthe Schmidt and photographer Paul Guermonprez, the last three of whom were former

Bauhaus pupils. Research on colours, materials and structures were the main educational themes, modelled on the *Vorkurs* established by Johannes Itten at the Bauhaus. One of their first pupils was Benno Premsela, who was later to become an influential interior designer and one of the foremost authorities on Dutch design.

From the early 1940s Mart Stam and Johan Niegeman tried to modernize the approach to education at the Instituut voor Kunstnijverheidsonderwijs (IVKNO) in Amsterdam.[22] They taught their students to focus their attention on people's needs and to tackle design commissions in an analytical and systematic way. They condemned the sort of educational approach based on the artist's ego and which focused on artistic-minded expression. In their eyes artisanal design was outdated, although they did still concentrate mainly on traditional interior design.

Changing course proved to be easier said than done. A disillusioned Mart Stam had already left by 1947 and Niegeman could not manage to put together a syllabus that fell in line with modern industrial society. Disenchanted, he left in 1955. Nevertheless, a number of very promising designers had graduated under his inspiring supervision: his pupils Friso Kramer, Jaap Penraat, Kho Liang Ie and Coen de Vries unquestionably numbered among the most progressive industrial artists in the Netherlands in the 1950s. It was not until 1960 that, in addition to the department of Interior Design, a fully fledged department of Industrial Design was set up in Amsterdam under W. J. Jaarsveld.

The study tour of America in 1953 stimulated a few important reforms in the educational programme at the Eindhoven college. René Smeets incorporated his findings in the syllabus for an entirely new daytime Industrial Design course, which started up in 1955 and ran parallel to the evening course. This was indeed the first specialized School of Design in Europe. In the curriculum the main focus was on intensive collaboration with industry. After a general foundation year, the five-year course had three specialization profiles: product design, publicity and product presentation, and textiles. The fourth year was set aside for internships so students could gain hands-on experience with professionals in the workplace. The promising Wim Gilles was taken on as a teacher by Smeets; he rose to the position of director from 1970 to 1973.

The Hague Academy of Fine Art had started a 'weekend course' on industrial design in 1950, partly at the request of the Ministry of Economic Affairs. This course was meant for people already working in the field, such as young adults who had completed Technical School and were attached to a firm as a structural engineer. It was for this reason that the lessons were

given on Friday afternoons and Saturdays. In addition to the traditional, creative design subjects, they also taught new subjects related to the new study of ergonomics, product analysis and visual communication. Gerard Kiljan became the course coordinator. Apart from his teaching, this designer executed several commissions of his own: he was, for example, responsible for the design of the Bakelite telephone (1955), produced in hundreds of thousands by the firm Heemaf in Hengelo. In these post-war years he also designed Joy lemonade bottles, including the labels, in an attempt by the Hilversum soft-drink manufacturer Koster to compete with Coca-Cola.[23]

G. Kiljan (Wed. Thijssens & Zn/Joy) three bottles with labels, 1948 and 1960.

A group of prominent designers, including Cor Alons, Willem Gispen and Gerrit Rietveld, were brought in to teach on the new course in The Hague. They also asked the young Kho Liang Ie and Friso Kramer, both of whom had only just graduated from the IVKNO in Amsterdam, to teach there. The first graduates from The Hague included Joop Istha, J.C. Berkheij, Joop van Osnabrugge and Wim Rietveld. Joop Istha developed into a versatile designer of home and technical appliances and boasted a large international network. From 1975 to 1990 he was professor at Delft Technical University. Johannes Berkheij specialized in medical equipment and for a few years ran a design company with Joop Istha. One of his successes was the cylindrical gas heater (1968) designed for the firm Etna in Breda. Joop van Osnabrugge also became a versatile designer of consumer products, including electrical appliances, kitchens and stoves. Finally, as well as designing chairs and lamps, Wim Rietveld turned his attention to technical devices, agricultural equipment, lorries and trains.[24]

Meanwhile, the Dutch government was pressing for the creation of an industrial design course at a higher, more scientific level. Delft Technical University seemed the obvious place for it, an idea that was supported by leading designers who had already presented a case for such an institution before the war and who had done their best to professionalize their discipline. The most well-known champions were Mart Stam, Wil Sandberg and the glass designer Andries Copier. But back in Delft they were still not interested in the idea. The projected new department would have to be set up by staff from the departments of Architecture and Mechanical Engineering,

but at the time they could see no point in establishing a course for 'semi-artists'. In the Architecture department Professor M. J. Granpré Molière still held sway, a traditionalist who was highly critical of modern industrial mass production. It was only when the architects J. H. van den Broek and F. A. Eschauzier became professors in Delft that the tide turned, and even then it was to take until 1964 before the first two students in Delft could begin studying industrial design. G. J. van der Grinten, who had done all the preparatory work in Delft over the years, including stressing the economic importance of such a course, was to become the first Extraordinary Professor of Industrial Design in the Netherlands.[25] In comparison to the design courses given at industrial design schools, the new course in Delft was focused more on technique, on subjects relating to man and society, and on design methodology.

Design Policy in the Factories

The young industrial designers who had been trained in Amsterdam, Eindhoven, The Hague and later Delft were able to find work easily due to the flourishing economy and the fact that industrial design as a field was becoming increasingly regarded in the 1950s and '60s. They obtained commissions quite easily or found part-time jobs as designers for a few days a week. Those commissioning their work came from a wide range of sectors as a growing number of manufacturers came to realize that it was in their own interest to pay more attention to design. The demand for designers was often greater than the supply.

The evolving electrical household appliances sector in particular provided a great deal of employment.[26] It was in this sector that the products of a fully developed design policy came to the fore. The vacuum cleaners and irons that could be found in most households were in dire need of replacement and consumers were also starting to show an interest in coffee grinders, hair driers, mixers, electric cookers, sewing machines, refrigerators and fully automatic washing machines. The enormous increase in wages and the abolition of luxury tax in 1955 gave sales of these attractive items a boost: between 1957 and 1964, for example, the number of families owning an electric washing machine increased from 31 to 83 per cent, while those with black-and-white televisions increased from 8 to 68 per cent.[27]

The foremost symbol of progress was the modern kitchen, equipped with the newest home appliances. The popular Polygon Newsreel commentary, shown at the beginning of every cinema programme, reported on the American kitchen in 1954, 'the kitchen of the future', in which, at the touch

of a button, a housewife could prepare a delicious meal with the greatest of ease. Those in the audience who dreamed of such a kitchen could view something similar for real in 1957 at the exhibition titled *Het Atoom* (The Atom) in Amsterdam. This exhibition, and a handful of national demonstrations of comparable ambition, combined economic information and industrial propaganda with entertainment. The largest and most impressive display was staged under the name *E55* in Rotterdam. The main theme in this case was the resurrection of this seaport town, which had been razed to the ground during the war.

The most familiar names among more than two hundred factories in the Netherlands that were making electrical home appliances in the 1950s and '60s are Philips, Van der Heem (under the brand name Erres), Inventum, Indola, Holland Electro, Daalderop and Ruton. This is where most of the design activity was taking place. Their design policy gradually changed during these years from one of pragmatism, mixed with a considerable amount of idealism, if not downright paternalism, to a purely commercial policy based on market research.

The Royal Electrical Appliances Factory Inventum in Bilthoven, established in 1908 as Inventa, had already produced great numbers of electrical irons, hot plates and electric heaters even before the First World War. The Amsterdam Municipal Electricity Company, which was then engaged in competitive warfare with the Municipal Gas Company, had a policy of promoting the sale of electrical appliances to stimulate the use of electricity. As a result of this campaign, by 1916 there were already more than 15,000 electric irons in everyday use there and by around 1920 Amsterdam was the 'most electrified city' in the world. Far more thought, however, was given to the technical innovations applied to these products than to their design, for on the whole it was products made by large foreign companies, such as the German firm AEG, that set the standard. The design idiom used for the modern models in the range was international commercial Art Deco.[28]

Only one designer from Inventum's pre-war years has been recognized, Arie W. Verbeek from Rotterdam, who designed a minimalist electric heater in 1929 that went into production in 1932. This handsome appliance has found a place in the design collections of various museums. Verbeek was one of the first designers with a firm belief in the need for this new discipline to be applied to industrial mass-produced articles in the Netherlands.

After the war the management at Inventum began to start thinking in a more contemporary and structural way about design. Their electric heaters were subsequently modernized by Wim Rietveld. The first result of his study tour of America (accompanied by the director of the firm Schoemakers) was

Arie Verbeek (Inventum, Bilthoven), electric heater, 1929.

that the factory stopped playing safe by simply extending the range of products. Instead, it reduced the core collection and made it available in more than one colour. In this way the production process could be organized far more efficiently and cheaply, reducing the price of the appliance and increasing turnover. Marketing was introduced only after Rietveld left Inventum. This involved recording consumers' current needs and assessing their future expectations. On the basis of the results of this study it seemed advisable to

expand the range of products on sale. What in essence had been a paternalistic outlook towards design, and a great faith in a rational approach to good form, was now slowly but surely being abandoned. The management plumped for a more commercial design policy that would allow them to react more quickly to shifts in fashion and lifestyle trends. Market segmentation became a household word. The new strategy was accompanied by a much more dynamic advertising policy. Designer Joop van Osnabrugge proved to be willing to go along with this method of work, which was much more lucrative from a business viewpoint.

Philips in Eindhoven had already felt the need to consider product design at an earlier stage to bring it into line with company policy. In the mid-1920s, in addition to light bulbs, the firm began to produce radio sets.[29] Unlike electrical home appliances, radios were products that were more likely to be given pride of place in the living room, which meant that more care had to be taken about the way they looked. In 1925 Louis Kalff took over as head of Philips's own advertising studio. In those years this department was also responsible for the 'aesthetic supervision' of new products, as well as designing posters, packing and stands at home exhibitions. In 1926 Kalff designed the first shell-shaped Bakelite loudspeaker, available in several colours, which could enhance a living room in the same way as a work of art. The first radio case followed in 1927. Kalff was put in charge of the new 'Artistic Design Team' in 1930, consisting of a small international group of designers exclusively engaged in product design. The number of radio models was soon enlarged and production increased at a fast rate: by 1932 a million Philips radios had already been sold.

Philips started to think about other products as well. In those days radios were typically seasonal articles, so the search was on for alternative Bakelite products that could be sold all year round and not just in the autumn and winter. Soapboxes, sewing cases and even toilet seats proved to fit the bill, but the electric shaver, developed by the engineer A. Horowitz, was the greatest hit, despite grave initial misgivings on the part of the Philips Management Board. The Philishave, the first electrical dry shaver with rotating blades (still in its original form with one shaving head), was presented to the public in 1939 at the Utrecht Spring Trade Fair.[30] After the war the Philishave appeared in a streamlined version, made from a white, Bakelite-related synthetic material. The design acquired the nickname *Eitje* (Small Egg). During the war years a second rotating head was added and since 1966 the Philishave has been manufactured with three shaving heads.

After the war the design team at Philips was replaced by the new department called 'Appliance Design'. In choosing this name they wanted

Advertisement for the Philishave dry-shaving method, 1939.

to stress Philips's intention to produce an ever increasing number of electrical appliances. After the shavers, radios and record players, the range of products was enhanced with portable radios, vacuum cleaners, televisions, coffee grinders, irons, sun lamps, spin dryers and all sorts of professional appliances.

Rein Veersema was one of this new department's most successful designers. This status meant that he was greatly appreciated by the management, but also led to differences of opinion with Kalff. In 1956 Veersema was put in charge of the design office and design policy was structurally modernized. It was his aim to give the totally divergent forms of all the various Philips products one 'face': the 'Philips family' look. What by then had become a large international enterprise had to be given a corporate image. Moreover, Veersema introduced ergonomics as a fully fledged part of the design process. A more methodical and interdisciplinary design policy was gradually developed at Philips, in emulation of the shining example of the rival German company Braun, where Dieter Rams was at the helm from 1960, and of the design vision of the Hochschule in Ulm, where the goal was to create timeless design. Unfortunately, Veersema's policy was only partially successful and the firm certainly did not achieve the desired commercial results. Veersema was succeeded in 1965 by the Norwegian Knut Yran, who had more commercial insight and was far less convinced of the universal validity of the design rules propagated in Ulm. It was not his ambition to make timeless designs: he was more interested in making products for the future, while also being a great admirer of commercial American design. Yran introduced a new design system at Philips, consisting of a clearly defined design-track, running from project briefing right up to final delivery of the packed product to the retailer. In this way the uniformity of design of Philips products was considerably strengthened by an ever expanding and ever more important Philips design office, known as the Concern Industrial Design Centre (CIDC). In 1981 Bob Blaich took Yran's place, while he in turn stepped down in 1991 to make way for Stefano Marzano. Thus for decades Philips design policy was delineated by foreign designers, not by Dutch.

In the course of the 1960s this increasingly large and powerful firm, originally based in Eindhoven, swallowed up all the other Dutch firms operating in the electrical appliances market. One of the last to be taken over by Philips was Van der Heem. After the war important work was still being carried out there by the designer Piet van der Scheer and later by Joop Istha. From the start Van der Scheer was willing to take into account the wishes of the sales department as well as those of the technical engineering department. In the 1950s and early 1960s Van der Heem was inspired by American advertising methods and went even further by experimenting with the most advanced marketing methods. But, at the same time, it continued to believe in the benefits of good design. In its slow but sure efforts to ensure that good design would become generally accepted, it analysed consumer behaviour, and modern sociological theories on top-down dynamics for innovation were translated into commercial strategies. In spite of all that, Van der Heem lost its independence in 1969 and the Erres brand name was to become Philips's second trademark.

Modernization in the Furniture Sector

Like the producers of electrical home appliances, the furniture industry profited from the great demand for replacements after the war and the explosive growth in prosperity.[31] At first everything this branch of trade produced was sold quite effortlessly, even if no attention was paid to design. This period of booming business, however, also meant that the factories devoted far too little time and effort to modernization. The hundreds of generally small family firms were satisfied with their profit margins and neglected to invest enough of their earnings in the renewal of extremely antiquated machinery – just as little time and money was spent on marketing. A 1968 study examining the state of affairs in the furniture industry, commissioned by the Dutch Economic Institute (Nederlands Economisch Instituut), concluded that the situation had scarcely altered in thirty years. Not surprisingly, when trade fell off it proved to be fatal. The sector could not stand up to foreign competition, which was able to supply the goods faster and make products more suited to the demand. For that matter the demand was still mainly for traditional, classic models in a style that those in progressive circles denigrated as *halpoten* ('legs-on-balls') style or *old finnish* (a Dutch corruption of the English word 'old-fashioned').

In the 1950s and '60s there were really only three factories that pursued a modern, interesting design policy for consumer furniture: 't Spectrum,

Martin Visser ('t Spectrum, Bergeyk), 'Riethoven' metal and rattan chair, 1959.

UMS-Pastoe and Wagemans & Van Tuinen, later called Artifort. 't Spectrum in Bergeyk was started during the war as a daughter company of the weaving mill De Ploeg.[32] It was very idealistic, just like its parent company, and the employees had a large say in company affairs and a share in the profits. The purpose was to make timeless designs that everyone could afford. For a few years post-war material shortages restricted them to making small pieces of furniture and domestic objects, but by the mid-1950s 't Spectrum had progressed to larger items. The firm's preference for good but sober design had changed little over the years. In the new statutes that the factory drew up in 1957 they included a clause stating that the furniture had to comply with the 'demands of good taste'; in other words, it should be timeless, functional, affordable and reliable. The use of natural, traditional materials, and a design idiom associated with Scandinavian furniture, contributed to this image. It is not surprising that furniture from 't Spectrum was extremely popular in Goed Wonen circles. From the outset the firm collaborated intensively with professional designers. Martin Visser, who transferred from De

Bijenkorf to 't Spectrum in 1954, was the most familiar and the most productive, working in the modernist style demanded by the management board.

As time went on 't Spectrum design became more refined and elegant. From about 1970 the firm accepted more variation in form and material. The consumer's increasing demand for more luxury and comfort, and for domestic objects to fit their social status, was not ignored. Even 't Spectrum, however, could not escape the consequences of an economic crisis. The decline in purchasing power, growing competition from cheaper foreign furniture and the change in popular taste resulted in the firm being wound up in 1974. The enterprise was, however, to be continued in a different form. In 1988 Spectrum Furniture (Spectrum-Meubelen) was established, a firm that to this day markets furniture that is exceptionally contemporary in its design.

In the 1930s the Utrechtse Machinale Stoel- en Meubelfabriek (UMS), founded in 1913, was one of the firms that had introduced modern furniture into its range, mainly for commercial reasons.[33] Cees Braakman, son of the works manager, was already their most important designer. From 1945 UMS had to be rebuilt virtually from scratch after being badly hit during the war, providing them with an opportunity to focus exclusively on contemporary design. Inspired by American working methods and the design of Charles and Ray Eames, Braakman brought a totally new line onto the market under the brand name Pastoe. Much of the firm's products were made of plywood, sculpted into the desired shape using an advanced technique called high-frequency compression. Although the basis for this modern Pastoe design policy was not in line with the principles propagated by the Goed Wonen Foundation in all respects, their spokesman nevertheless praised the Pastoe storage cabinets in the periodical *Goed Wonen*.

Wagemans & Van Tuinen in Maastricht had been making furniture since the 1920s, but it was not until the 1950s that the firm became well

Brochure for *Berkenmeubelen* (birch-wood furniture) presenting designs by Cees Braakman (UMS/Pastoe, Utrecht), 1951.

known for its modern design products under the brand name Artifort.[34] Unlike 't Spectrum and UMS, Wagemans & Van Tuinen reached an international market with the Artifort brand. The firm's first success outside the Netherlands came when a chair by the industrial designer Theo Ruth was shown at the Triennale in Milan in 1954. A completely new design policy was introduced when Kho Liang Ie was taken on as a consultant. Kho, born in the Dutch East Indies and of Chinese ancestry, had been trained by Johan Niegeman at the IVKNO as a furniture designer and interior designer. After completing his studies he began his career as a public relations official and organizer of exhibitions on interior design for the Goed Wonen Foundation. For a while he also edited the periodical *Goed Wonen*. In the mid-1950s he entered into an alliance for some years with the graphic designer Wim Crouwel, after which his international career as a furniture designer expanded enormously.

Thanks to the design policy outlined by Kho, within a few years Wagemans & Van Tuinen became one of the leading modern furniture factories in Europe. The most important reason for this success was that Kho started the tradition of collaboration with foreign designers. On his initiative the French designer Pierre Paulin was appointed to the Artifort design team in 1959. The British designer Geoffrey Harcourt followed in 1962. Artifort's colourful, organically shaped 'sit-sculptures' were totally different in character from the strictly functional furniture made by 't Spectrum and Pastoe, making Dutch critics cautious in their judgement. But it was Artifont's elegant, 'trendy' and fashionable furniture that slotted so well into the international market.

The Dutch furniture industry went through a very rough period in the 1970s. The sector was starting to pay the price for its past preference for short-term profits. Only the factories that had concentrated in time on modern furniture, and had also renewed their production and product-development methods, managed to survive the onslaught. The rest were wiped out by foreign competition. It was not until the early 1980s that the Dutch furniture industry managed to recover. In addition to Pastoe and Artifort, firms like Castelijn, Montis, Gelderland and Rohé brought updated furniture onto the market from young designers like Pierre Mazairac, Karel Boonzaaijer, Gerard van den Berg, Gijs Bakker, Axel Enthoven and Aldo van den Nieuwelaar. The furniture on display in the exhibition *Dutch Furniture 1980–1983* in the Rotterdam Bouwcentrum heralded a new heyday for the industry. The firms just mentioned combined forces when it came to presentation and marketing activities, using the Dutch Design Centre in Utrecht as their forum.[35]

A few Dutch factories continued to enjoy success in the field of office furniture.[36] Gispen, Ahrend, De Cirkel, Oda and Staalmeubel BV are the most important names, but a great many more enterprises were active in this sector. Gispen amalgamated with Staalmeubel BV in 1966; De Cirkel and Oda became a part of Ahrend in 1967. The post-war economic revival, expansion and large-scale reorganization of clerical work eventually gave this sector an enormous boost in the 1950 and '60s. Clerical staff doubled in number and the surface area of offices grew up to the mid-1970s by a staggering factor of three. Furthermore, in those years 'open-plan' office design was introduced, resulting in a demand for new furniture of a quite different nature, such as desks and cupboards that could be connected up in different ways so that the large open workrooms could be shared in a flexible way.

In the 1950s Gispen increasingly concentrated on office furniture.[37] This reputable factory, moved to Culemborg in 1935, was forced to do without Willem Gispen, its director and designer-in-chief, after 1949. He felt that his factory obligations left him too little time for his own creativity. However, this certainly did not mean that interest in design disappeared at Gispen's. The firm's most important designers over the next two decades were Wim Rietveld and then Anton Cordemeyer. Both were given plenty of opportunity at Gispen's to experiment with new techniques and materials. Rietveld introduced compressed laminated wood in combination with metal components secured by rubber discs, a fastening technique developed by Eames. Together with his father Gerrit Rietveld, in 1957 he developed for Gispen the Mondial desk chair, which had a folded-metal support and a seat made of synthetic material.[38] In the following year,

Wim Rietveld (De Cirkel), 'Piramide' adjustable hall chairs, 1960, as illustrated in Nico Verhoeven, *Doelmatigheid van industriële vormgeving*, 1962 (IIV brochure).

Designer in action at the Océ van der Grinten design studio, Venlo, 1982.

with his successor Anton Cordemeyer, he developed the first synthetic bucket-chair in the Netherlands, a design that well suited an office seating area without looking out of place in a home interior.

Willem Gispen founded the furniture firm Kembo in 1953, selling his new designs for office and school furniture as well as for living-room furniture, with typically organic shapes and displaying clear Scandinavian, and later also Italian, influence. They were produced in several different factories.

In the 1950s and '60s Ahrend, which had already produced office furniture before the Second World War, had the most ambitious design policy of them all.[39] The firm's most important designers were Friso Kramer and, once again, Wim Rietveld. The products Ahrend brought onto the market during those years were actually manufactured by De Cirkel. A particularly pioneering and successful example was Friso Kramer's Revoltstoel, which is still in production today. For many people the methodical and innovative way in which this chair was planned and developed acted as a model for how industrial design should be incorporated in a factory's total policy. The Revoltstoel was followed by the Resultstoel and by various designs for school furniture, desks and drawing tables. The director of De Cirkel, Jan Schröfer, commissioned Wim Rietveld to design the Piramidestoel, a variation on the Mondial chair he had earlier made for Gispen. In 1972 Friso Kramer developed his successful Mehes system for Ahrend, a brand name created by the acronym for 'mobility, efficiency, humanization, environment and standardization', the keywords reiterating the essence of well-designed office furniture.

In addition to furniture, there was explosive growth in demand for new business machines and office requisites. Océ van der Grinten in Venlo developed into a flourishing firm producing photocopiers, whose success was partly due to the clever design of these machines. Louis Lucker, who graduated in 1963 from the Eindhoven Industrial Design Academy, became the first designer to be given a permanent job on their staff. Scores of others were to follow. The design department at Océ soon became one of the largest design offices in the Netherlands. These technical machines, designed with great care and attention to ergonomic principles, have won international awards on many occasions.[40]

Directors with Ambition

Not all the highlights in Dutch industrial design in the 1950s and '60s were the result of a conscious policy. A few success stories, like Daf and Tomado, were more the outcome of a special nose for business, or possibly the result of a handful of factory managers' romantic ambitions.

In the mid-1950s Hub van Doorne and his brother Wim, who had been director of Van Doorne's Automobielfabriek (Daf) since the 1930s, realized a long-cherished boyhood dream.[41] They succeeded in making the first truly Dutch passenger car since the loss of the famous Dutch Spijker in the 1920s. Daf's lorry production lines had been successful since before the Second World War. The triumph of this new small car, however, was not so much based on its unusual design as on important technical innovations made possible by Hub van Doorne's 'variomatic', a revolutionary automatic gear-change system. Jan van der Brugghen, structural engineer at Daf, took care of the technical innovations and Wim van den Brink, originally an aeronautical engineer, designed the bodywork. The result was a typically Dutch car: sober looking, functional, easy to operate and without any fussy, unnecessary styling features – no chrome strips or luxurious accessories. The most unusual element was the raised headlights on the low bonnet.

The presentation of the first Daf 600 at the annual automobile show in the RAI in Amsterdam in 1958 was a sensational event. Thousands of visitors attended, including the international press, and 4,000 cars were sold straight off. Yet despite its undeniable success with the customers, Daf was all too soon to gain the hackneyed image of being a 'silly little car' for women and old-age pensioners. As years went by the simple design was adapted to try and improve its unexciting image, while also adjusting quite a lot of the technical specifications. In 1961 the more luxurious Daffodil made its entry on the market and in 1966 the Italian designer Giovanni Michelotti was hired to modernize the car, ultimately to no avail: in the mid-1970s Daf was taken over by the Swedish firm Volvo. Nevertheless, in Born, Limburg, cars were still being designed by the Dutch: Volvo's present chief designer in Gothenburg, Fedde Talsma, was educated at Delft Technical University and has divided his time between Sweden and the Netherlands for more than twenty years.

Just like the 'silly little Dafs', articles produced by the firm Tomado have become icons of the period.[42] Many 'baby-boomers' can remember the bookshelves that cheered up their bedrooms in their teenage years. The simple, black steel-wire shelf supports could be attached to the wall with a screwdriver with relative ease, and once in place the metal shelves (in the

A row of Dafs on the assembly line at Eindhoven, *c.* 1960.

colour scheme of your choice) could simply be clicked on. Tomado (an acronym for Van der Tocht's Mass articles Dordrecht), was established in 1923 by Jan and Wim van der Togt and started life as a factory for simple household articles made of steel wire. The early concern the brothers held regarding the functionality of their products was demonstrated in 1933 when they developed a new practical dish-drainer in close collaboration with the Nederlandse Vereniging voor Huisvrouwen (Netherlands Union of Housewives). The firm's heyday came after the war, when Tomado met an enormous need by quickly bringing onto the market dish drying-racks, colanders, bookends and other household products. These included bottle-lickers (to get the last remnants out of glass yoghurt bottles), soap-whisks (round perforated-metal soap-holders with handles for whisking around left-over bits of soap in water) and jam pot-holders (used to hold jam pots when filling them from a pan of hot jam), articles that would puzzle consumers today, who are no longer so thrifty, or perhaps so domesticated. The almost frivolous design of the light and modern-looking wirework undoubtedly stimulated sales. Nevertheless, it was recommended by the reliable organization Goed Wonen. Tomado became a household name for all practical-minded housewives. In the late 1950s the firm started to provide some of its products with a thick synthetic coating;

the Tomado dish-drainer then became a Tomestic dish-drainer. Unfortunately, this factory did not survive either: in 1971 it was taken over by the Belgian firm Bekaert and is presently owned by Metaltex, based in the Czech Republic.

Plastic's triumphal onward march had started early in the Netherlands.[43] Bakelite had been introduced for household goods back in the 1930s in the form of radio cases and gramophones, but soon lemon squeezers, ashtrays, soapboxes, insulating grip-handles, door handles and toilet seats made from this modern material also came onto the market. In the 1950s new synthetic materials were introduced, encouraging an unusually large number of Dutch firms to start actively experimenting. Initially the still inadequate knowledge available on the new material and its processing techniques, combined with the pressure to produce as much and as quickly as possible, led to poor quality and did not contribute to well thought-out design. Nonetheless, plastic's advance was well under way. After trying thermosetting plastic, which proved in practice to be a difficult material to work with, as the 1950s progressed they moved on to using soft thermoplastics. Moreover, injection moulding was introduced as a manufacturing technique in addition to compression. Here too America paved the way. The expensive moulds necessary to manufacture synthetic objects were often obtained second-hand from America or Germany – a procedure that inevitably did not stimulate well-considered or progressive design policy.

Following the increasing market for household goods, electrical home appliances and toys, the demand for plastic camping articles also grew throughout the 1960s. Eventually synthetic materials would be accepted everywhere: in the living room, at the office and in the world of leisure and

Andries Copier (Van Nifterik, Putten), parts of a plastic (melamine) dinner service for KLM, 1946.

entertainment. Ashtrays, wastepaper baskets, lamps, clocks, typewriters, radios, long-playing records, advertising and packing materials, glasses, disposable cups and much more were all made of plastic and sold well.

Of the scores of plastics processing firms founded in the 1950s only a few proved to be viable after adopting a successful and progressive design policy. One such is Mepal, which has been based in Lochem since the beginning of the 1960s and merged with the Danish firm Rosti in 1993. In 1963 the management initiated a test project and contracted a group of well-known designers, among them Piet Zwart, Coen and Wim de Vries, Charles Jongejans and Dick Simonis, to develop a new range of storage boxes.[44] Tiger and Curver were two other Dutch companies making high-quality synthetic household products that had been meticulously designed.

New Design Companies

It was gradually becoming clear that designers could make an important contribution to a company's economic prosperity. As the prestige of Dutch designers rose they were able to establish professional design companies modelled on famous American companies such as Loewy, Teague and Dreyfuss, which they had come to know through journals, international congresses and, in a few cases, from personal visits or internships. Emile Truÿen, for example, trained in the early 1950s at the Interior Design department of The Hague Art Academy. After completing his studies he went to the United States, where he took up a post teaching at the Pratt Institute in New York. Once back in the Netherlands, Truijen began an association with Rob Parry, whom he had known since his time in The Hague and who had recently been working for Gerrit Rietveld.[45]

The economic recovery in this period provided the two with many commissions, including one from the PTT (Dutch Post Office) for the twin letterbox (1957) that was later to become so familiar. They produced an ergonomically acceptable design made partially from plastic, notable for its attractive bevel-edged contours and an ingenious system for keeping local and national mail separate. The result was so good that the box remained in continuous service right up to the end of the century. Truijen and Parry, however, had already gone their separate ways in 1958.

Truÿen's next move was to set up the design company Tel Design in The Hague with Jan Lucassen in 1962 (the name is derived from the initial letters of Truijen en Lucassen).[46] In 1961 Lucassen had been one of the first to graduate from the new Industrial Design Academy in Eindhoven, where Truijen was teaching at the time. Tel Design aimed to cover all design

Studio Dumbar for the Ministries of Justice and Home Affairs, police car livery, 1993.

disciplines and all lines of work, and the two designers' ambition was to work in the commercial way Truijen had become familiar with during his stay in America. When Tel Design was commissioned to design a new house style for the NS (Dutch National Railways) in 1967, they took on the graphic designer Gert Dumbar as a third partner. Dumbar had been trained at the Royal College of Art in London and, with his flair for visual communication, was able to give a refreshing new lease of life to Tel Design. The firm in its original form closed in 1976, but the partners carried on working independently as they went their separate ways: Emile Truijen became a professor at Delft Technical University in 1977 and Gert Dumbar established Studio Dumbar, which remains active to this day. As well as its designs for the Dutch National Railways, Tel Design carried out pioneering work for the new discipline of public relations and for house styles. Studio Dumbar has become well known both in the Netherlands and abroad for many inventive logos and publicity campaigns, such as those created for the V&D department store, the ECI book club, the sometimes ridiculed livery of Dutch police cars, and the recently announced commission to supply a uniform house style for all departments of the Dutch national government.[47]

The founders of Total Design at their new design studio in Amsterdam.

Another new company, the Associatie voor Total Design BV, was established in 1963 by Wim Crouwel, Benno Wissing, Friso Kramer and the brothers Paul and Dick Schwarz.[48] Their aim was to offer services on every facet of design, from stamps to exhibitions. With a prestigious office address on the Herengracht in Amsterdam, they recruited 'junior designers', such as Ben Bos, appointed business managers (namely the Schwarz brothers) and engaged clerical staff. Total Design presented itself as an international, professional and modern organization that was not modelled on the commercial American design companies, but on such studios in Great Britain as Fletcher Forbes Gill and on some of individual designers in Germany and Switzerland with whom they were in touch. Furthermore, the humanist design philosophy taught at the Hochschule für Gestaltung in Ulm was very important for their method of work. At Total Design they worked in a business-like, professional way, with Paul Schwarz as accounts manager maintaining contact with the clients. At the company's offices the commissions were dealt with by separate design teams, and this rational division of work enabled them to be handled as efficiently as possible. Preferably they designed along rational and established lines on the basis of a rigorous grid.

Wim Crouwel had trained as a painter at the Groningen Academy of Art, but started his career in 1952 designing exhibition stands. His introduction to Swiss typography in these years was decisive for the further course of his career. The clarity and the logic of functionalism from the 1920s and Swiss typography, which continued to build on this tradition, was an continuing source of inspiration. In 1956 Crouwel worked for a while with the interior designer Kho Liang Ie. One of their joint design projects involved planning stands for the exhibition *Het Atoom* (1957) in Amsterdam, one of the optimistic post-war reconstruction events (see above). They were also responsible for a series of arresting exhibition stands, notable for their austere, subdued, minimalist design, commissioned from such firms as Auping, De Bijenkorf and Linoleum Krommenie.

When Total Design was set up in 1963 Benno Wissing already had an adventurous career behind him.[49] He trained to become an artist at the Rotterdam Academy of Art. After the war, lured by the attraction of communism, he stayed for a while in Yugoslavia and Czechoslovakia. He showed his

social commitment in 1946 by becoming involved in Groep R (Group R), an artists' organization that put collaboration first and aimed at abolishing art with a capital A. He supported himself by designing stands and décors and doing graphic work, making close to a hundred posters and catalogues for Boijmans Van Beuningen Museum in Rotterdam. In Wissing's unrelenting need to encourage a more anonymous form of 'visual communication', his most important sources of inspiration were El Lissitzky and Moholy-Nagy, as well as the Dutch designers Zwart and Schuitema. Corporate photography books, a popular medium in those years, were a good example of this visual form of communication. In this genre Wissing designed books such as *100 jaar Grasso* (100 Years of Grasso, 1958), in which he visualized the hundred years of history through which this 's-Hertogenbosch engineering factory had been active using a wide range of typographical resources, complemented by contemporary photographs by Violette Cornelius.[50]

The third partner in Total Design was Friso Kramer. Unlike Crouwel and Wissing, Kramer was involved exclusively in product design and never in graphic design. Just like his associates, however, he supported the principles of functionalism and rational and analytic design methods. The three designers of Total Design each brought their commissions and clients to the new joint company. Wissing continued to design the print work for the Boijmans Van Beuningen Museum, Crouwel did the same for the Van Abbe Museum in Eindhoven and for the Stedelijk Museum in Amsterdam, whilst Kramer brought his order portfolio for Ahrend into the alliance. Within a few years the wide-ranging mode of operation that Total Design had initially envisaged had already proved unrealistic. Designing industrial products, Friso Kramer's speciality, did not take off as well as he had predicted within the confines of the company and, somewhat disappointed, he left it in 1968. Benno Wissing soldiered on until 1972, but became increasingly irritated by the hierarchic way in which the company was organized and the resulting compartmentalization of responsibility.

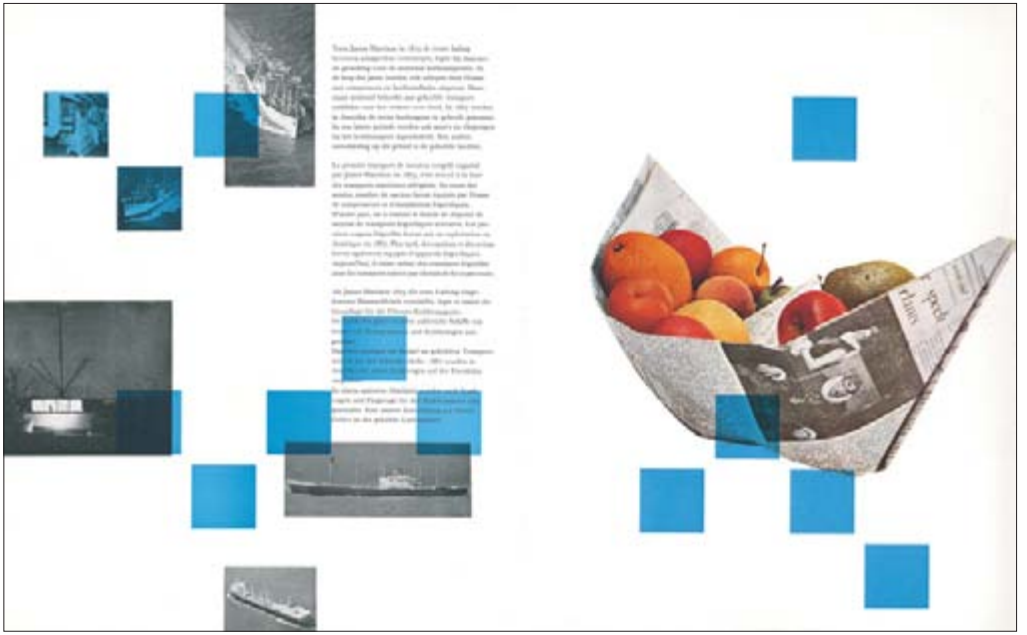
The main stable factor at Total Design continued to be Wim Crouwel, who developed into the 'face' of the company. His commitment, pragmatic, professional attitude and social skills – not least the ease with which he was able to communicate with his clients – ensured that Total Design continued to exist, albeit in an ever changing structure. The company changed its name to Total Identity in 2000. At its height the studio had forty members of staff. Permanent staff, in addition to Crouwel, included Ben Bos, Daphne Duijvelshoff and Jolijn van de Wouw.[51] Other well-known designers, such as Paul Mijksenaar, Jurriaan Schrofer and Anthon Beeke, were attached to Total Design for shorter periods of time.[52]

Their first major client was the Coal Trade Association (Steenkolen Handels Vereniging, SHV), which asked Total Design to develop a house style for them, as well as a distinctive logo for PAM domestic fuel oil, petrol and liquid gas, which the SHV was launching on the market. The result of these commissions, which were mainly worked on by Benno Wissing, was a coherent programme of carefully designed logos, letter headings, packaging materials, annual report layouts and calendars, including the lettering on the goods trains that transported the oil and the total look of PAM petrol stations.

Randstad, a temporary employment agency, approached Total Design in 1967 when the agency was still fairly new. Not only did Randstad want a completely new house style, but they also asked the designers to think about how the organization's image could be improved. At the time, temporary employment agencies were considered to be employers without a great deal of social conscience, and they met with widespread disapproval. This commission was carried out entirely by Ben Bos, the most important part of it being the logotype, which was closely related to the revolutionary New Alphabet produced at the time by Wim Crouwel.[53] The combination of the logotype and the style of the letters used for the name Randstad was so well chosen that it is still in use 40 years later, and has not dated at all. This project was followed by logos for the Rabobank, the Rotterdam Ahoy hall complex, De Gruyter supermarket, Makro Cash & Carry, Het Spectrum and Kluwer publishers, the National Investment Bank, the Dutch Municipal Building Fund, the Holland Festival and many more.

Both Total Design and Tel Design are quite rightly associated with the modern house-style concept. The differences between the two were sometimes barely visible, but on the whole Total Design's work was more austere and minimalist, Tel's more expressive. The house styles of what were at the time two of the Netherlands' best-known supermarket chains, namely De Gruyter's, designed by Total Design (Ben Bos), and Simon de Wit's, designed by Tel (Frans van Mourik), nicely illustrate the difference between the two.[54]

In the past some organizations had tried to bring a certain uniformity to their company's printed materials by means of a specific logotype or a distinguishing graphic style. Two examples, both discussed earlier, were Jacob Jongert's printing work for Van Nelle's coffee, tea and tobacco factory and Paul Schuitema's work for Van Berkel's patent office. As far back as the seventeenth century the VOC (Dutch East Indies Trading Company) had used its own logotype. Nonetheless, Tel and Total Design, and the many new Dutch graphic design companies that were to follow in their footsteps



A double page in Benno Wissing, *100 jaar Grasso*, 's-Hertogenbosch (1958), with photographs of Violette Cornelius.

Marijke de Ley
(Studio Premsela Vonk
for Van Besouw, Goirle),
samples of the cotton
strap-carpet of 1970.

Tel Design, three posters for Simon de Wit, 1970.

Total Design, design and final result for De Gruyter soup packaging, 1971.

in the 1960s and '70s, broadened the concept of house style to embrace the phenomenon of corporate identity, or corporate image.[55]

A large, but different sort of design company was Premsela Vonk's design studio in Amsterdam. Benno Premsela and Jan Vonk had regularly worked together since 1956 and, straight after Premsela left De Bijenkorf department store in 1963, the two of them set up a joint company.[56] In contrast to Total Design and Tel, this studio did not concentrate primarily on graphic design, but rather on interior design with a special interest in textiles.

At first the commissions were for exhibition show houses and their interiors. Between 1963 and 1969 they attended to a large share of the presentations in the Industrial Design Centre (Centrum Industriële Vormgeving) in the Beurs in Amsterdam. Together they also supplied a new 'look' for the furniture factory Pastoe, by designing modern, contemporary catalogues (with photographic work by Jan Versnel), showrooms and exhibition stands.

Benno Premsela's work for the carpet factory Van Besouw in Goirle began in 1967 after the firm's director Jan Mes had been introduced to Premsela through the IIV. The regular visits Premsela made to Goirle were the preface to an upheaval in the existing traditional world of carpets. Premsela questioned everything: not just the designs, colours, materials and techniques, but also the way advertisements were made, the way they presented their products at home fairs and in the shops, the role of the consumer and, not least, the call for major investment. Thanks to Benno Premsela, from then onwards Van Besouw's carpet factory considered modernization to be a social obligation.

For the Premsela Vonk studio staff designing was synonymous with product development, which entailed giving advice on an enterprise's commercial policy. The designs for Van Besouw were characterized by their simplicity, a certain air of timelessness and high quality. The cotton bouclé carpet developed by Marijke de Ley in 1970 was a pioneering product. A second major change in this field was thought up by Diek Zweegman, who devised a system by which flax could be worked in with cotton. Another designer from the Premsela Vonk studio, José de Pauw, was awarded the Kho Liang Ie prize in 1980 for her furnishing fabrics for Vescom, Auping and the German firm Gerns & Gahler. In 1988 Premsela Vonk merged with the graphic design studio BSR in The Hague and a few years later BSR Premsela Vonk changed its name to Eden.[57]

Benno Premsela's influence was far-reaching, not only as a designer but also as a critical member of a wide-ranging selection of advisory committees; these governed almost all fields of cultural life in the Netherlands from

the 1960s to the '90s. It was no accident that Benno Premsela's nickname was 'the Pope of Art', fulfilling the same function as F. J. van Royen and H. P. Bremmer had done before the war. His name lives on today in the Premsela Foundation, the national organization for design and fashion.[58]

Quangos

For many commercial establishments, restyling printed matter and using a new modern logo was an effective way of attracting custom. The Dutch authorities and many quangos followed suit, the most important being the State Printing Office (Staatsdrukkerij) and the State Publishing Office (Sdu).[59] Straight after the war, under the supervision of P. Knuttel, an optimistic decision was taken to make everything printed by the government readable and pleasing to the eye. J. F. van Royen's heartfelt condemnation of all state printing matter as 'ugly', reiterated three times in 1912, was about to be remedied at last. The Staatsdrukkerij appointed a design team of their own for this purpose, which at its height had a staff of twenty. Between 1955 and 1988 prominent roles in this team were played by Ton van Riel, Karel Treebus, Gertjan Leuvelink, Jelle van den Toorn Vrijthoff and Irma Boom. In 1976 Hein van Haaren became director and also head of the Design department at the Sdu. The firm had developed into an organization that young designers were keen to work for and where experimentation was encouraged. Sometimes, however, the Sdu's role was restricted to implementing the designs made by independent designers or studios. Through the years commissions were granted to Piet van Trigt, Jurriaan Schrofer, Gerard Wernars, Pieter Brattinga, Rob Schröder, Lies Ros and Esther Noyons, to mention just a few. Type designers like Gerard Unger and Bram de Does also worked regularly for the Sdu, but on occasions they also brought in large companies like Total Design, Tel and BRS.[60] In 1988, however, the Sdu was privatized, and from then on the various public bodies were allowed to place their orders with the company of their choice.

Quangos often commissioned work from large well-known design companies as well. Tel and Total Design made designs for Schiphol airport, the Dutch National Railways, the Bank of the Netherlands, urban transport companies, the National Broadcasting Foundation, the Ministry of Waterways and Public Works, and the PTT (the National Post and Telegraph and Telephone Company). All these large projects had an enormous influence on visual culture in the Netherlands. As a result, the hundreds of powerful, clear, and usually simple, graphic designs that came into circulation from the 1970s onwards were familiar, even in the remotest parts of the

country. They are responsible for the widespread view shared by many foreigners that the whole of the Netherlands has been supplied with well-thought-out design.

With the advent of jet airliners in the early 1960s, and the enormous increase in air travel brought about by burgeoning tourism, the construction of a new and modern national airport became an inevitability. The interior and furniture designer Kho Liang Ie was asked to take care of the interior of the complex of buildings to be designed by the architect M. Duintjer, while Benno Wissing of Total Design was employed for the signposting. This would be a gigantic and ambitious commission. Kho enlarged his own company by employing the interior designers Nel Verschuuren and Tinus van de Kerkhof.

Kho and Wissing did not rush headlong into the assignment. Instead, by way of preparation, they made a study tour of other large airports. Based on these experiences they decided that creating a restful environment should be given top priority. Travellers were often tense, uncertain about where to go and in a hurry, so a simply designed, orderly space could do a great deal to improve their frame of mind. Hence a tranquil, light colour scheme was chosen for Schiphol. Only the signs designed to lead travellers in the right direction were permitted to have a bright, contrasting colour. The walls were covered with white wall-tiles produced by the firm Mosa in Maastricht and sheets of white Formica supplied by various Dutch firms. The white lamellated ceiling was a variation on the ceiling that Kho had developed earlier with Gerrit Rietveld for the Industrial Design Centre in the Beurs in Amsterdam. In the spacious lounges they placed simple, sharply outlined but comfortable lounge chairs and couches made by Artifort, rounded off with small tables, wastepaper baskets, large plant containers and telephone booths. The check-out counters were also redesigned. Arie Jansma designed a simple concept for the shops in the waiting area in the form of cubes that could be rearranged at will.

Signposting as a separate discipline was then still in its infancy. Benno Wissing developed a system whereby large yellow signs, hung high above the heads of the travellers, indicated the main directions. All were produced in large simple letters, in both English and Dutch. Secondary information was given on smaller green signs. No pictograms were used, other than arrows.

At the opening in 1967 the result proved very satisfactory. In an international framework, Schiphol was considered to be one of the most beautifully designed airports in the world: 'Schiphol puts passengers first', wrote the British trade journal *Design* in just one of the positive reactions.[61] Since then, of course, the airport has been partially modernized and extended several

Benno Wissing (Total Design), signage at Schiphol Airport, 1967.

times, for example, by Jan Benthem from Benthem Crouwel Architects. Even after Kho's death in 1975 the company Kho Liang Ie Associates was involved in these adaptations. In the mid-1990s Bureau Mijksenaar adapted Benno Wissing's original signposting and finally added to it a series of pictograms. The basic idea and the characteristic ambience of Kho and Wissing's design, however, seem to have been preserved.

Not only airline passengers arriving at Schiphol become directly acquainted with the Dutch government's internationally famous policy of stimulating design in public spaces. Those travelling through the

Netherlands by train or car – or even by bike – are welcomed by several eye-catching design projects also initiated by the government.

Between 1937 and 1995 the Dutch Railways (NS), which originated after a merger between several private railway companies, was entirely financed and directed by the Dutch state. In the course of the 1960s it became clear that the NS would have to change its old-fashioned, official image if it were to have any chance of competing with the steady increase in car traffic. A modern house style was needed to give it a new, more contemporary character to rejuvenate the organization and make it more dynamic.

Tel Design was commissioned to do the job in 1967. They thought up a new colour for the trains, a logo, a new lay-out for the railway timetable and even new signposts for the stations, including a series of pictograms. It had the desired effect. The modern, powerful logo designed by Gert Dumbar, showing a combined double arrow pointing in two directions, is still in use today and does not look at all outdated. The new colour for the passenger trains, for which, to everyone's surprise and to some people's indignation, he chose a warm chrome yellow, is still also considered to have been an excellent choice. With this fresh, original colour, the Netherlands wanted to make a clear statement and impress the international rail transport community. For many it is still a treat to see these yellow trains, preferably under a blue sky, travelling through the flat green landscape. The new railway timetable format was worked on by Gertjan Leuvelink, who like Dumbar had come to strengthen the Tel Design team in 1967. The NS's own design department run by Siep Wijsenbeek concentrated in this period mainly on the modernization of the rolling stock and the interiors.

The changes made to the railway had a considerable impact, as a national railway company touches on everyone's lives, young or old, rich or poor. It was undoubtedly very significant for the position of the discipline in the Netherlands that the corporate policy of a large, nationwide organization like the NS should provide so much scope for modern design.

Those who travel by car, rather than train, are confronted with signs installed by the ANWB (Dutch Touring Club), the national equivalent of the Automobile Association.[62] They provide the sorely needed clarity to deal with the complicated, overcrowded Dutch road network, even though the role Dutch designers played on the roads was less pronounced than on the railways.

The first signs produced by the ANWB, which was founded in 1883, were installed as early as 1894. The ANWB, then a private organization, devised and funded everything itself since the Dutch government did not see any point in providing such a service at the time. It was not until 1966 that the

ANWB introduced the same type of lettering on all the large blue direction indicators on the motorways – the first attempt at uniformity in almost 70 years. The font chosen was an adaptation of that also used along American highways. Once it was adopted, graphic designers in the Netherlands were up in arms.[63] Formally speaking, they objected because they thought the signs were not easy to read, but in fact the true reason was that they would rather have seen the commission go to a Dutch designer. A 'lettering committee' from the GKf complained officially about them but to no avail, and the signs remained a thorn in the flesh of many Dutch graphic designers. In 1975 a Signposting Conference was organized at Delft Technical University, where designers, traffic experts and signpost-makers discussed the ANWB signs. But once again the graphic designers' complaints were not generally sustained. It was to take until 1994 before the design company NPK Industrial Design was commissioned to alter the ANWB signs. For the letters they called upon the help of the most prominent type designer in the Netherlands, Gerard Unger. Working on the basis of new insights on legibility, and not deviating too much from the old letter type, he finally adjusted the much criticized signs in such a way that they could also be computer-generated.

Those travelling by bike through the Netherlands are served by the special smaller ANWB signs, on which the destination is written in red. The traditional ANWB 'mushroom' road markers are also still in use. These direction indicators were designed back in 1919 by an architect named J.H.W. Leliman and are still popular in the Netherlands. Since then these low, angular concrete signposts, painted white with metal caps, have risen in number to a total of 5,000 spread over the whole of the Netherlands. Recently they have started to be replaced with a similar, but lighter, design made from synthetic material. The traditional design has proven to be so popular that it was recently nominated in a competition held to select the Best Dutch Design Product. Its popularity undoubtedly owes much to feelings of nostalgia.

Dutch Money and the PTT

Until the introduction of the Euro in 2002 Dutch money had a high profile all over the world.[64] Since the war great care has been taken in the design of banknotes and coins. Paper money is printed by Joh. Enschedé & Zonen in Haarlem. The final responsibility for its distribution rests with the president of the Netherlands Bank. Coins are struck by the Netherlands Mint in Utrecht, accountable to the Minister of Finance. New designs for both coins and notes were created by the winners of contests.

G. J. Leuvelink (Tel Design), Dutch Railways timetable, 1972–3.

R.D.E. Oxenaar and J. J. Kruit (De Nederlandse Bank), 50 guilder bank note, 1982.

W. J. Rozendaal drew the first new Dutch banknote shortly after 1945. The design was not very spectacular for the time and the final result was even less satisfactory due to various technical problems experienced in the printing process. J. F. (Eppo) Doeve was then selected in 1950 from a group of five designers to make a completely new series featuring well-known Dutch historical figures. In order to avoid printing problems, this time his sketches were completely worked out by the Joh. Enschedé staff. The result was that these notes remained fairly traditional. It was not until the graphic designer R.D.E. (Ootje) Oxenaar was commissioned to design a new series in the 1960s that this policy was reversed. He was recommended to the Netherlands Bank by Karel Schuurman, who at the time was the PTT's Aesthetic Adviser and already knew Oxenaar from his postage stamp designs. His series of notes with highly stylized historical portraits, executed in bright colours, of the country's 'Hall of Fame' was extremely refreshing. However, this series was to be followed in the 1980s by an even more talked-about sequel, the revolutionary, colourful notes to the value of 50, 100 and 250 guilders with illustrations of a sunflower, a snipe and a lighthouse. Hans Kruit also contributed to the design of this series. The traditional portrait was abandoned for the first time. Over the years Oxenaar had acquired a great deal of knowledge about the extremely specialized printing process used to manufacture banknotes. This 'secret weapon' enabled him to induce the staff at Joh. Enschedé to execute practically all his stylistic and technical innovations. This was a considerable feat considering

NPK industrial design/ Gerard Unger, ANWB signage, 1994–7.

the innumerable safety regulations that the Netherlands Bank had to comply with, which by that time had grown into a thick wad of specifications. The series was completed between 1988 and 1997 by three equally distinct designs by the designer Jaap Drupsteen. Thus designing banknotes had grown to be a great deal more than just supplying a new picture. It had become part of a democratic and professional process, whereby Oxenaar and Drupsteen had been successful in reserving sufficient space for creativity and humour despite all the technical obstacles and safety regulations. Although these achievements were admired in other European countries, there are unfortunately few signs of this erudition on the new Euro notes.

Type designer Gerard Unger at work, 2007.

No fewer than nine designers were allowed to compete in the 1980 contest for the new Dutch coin design. The chosen design was not by a graphic designer, but by an industrial and jewellery designer, Bruno Ninaber van Eyben.[65] His coins had a distinctly modern look about them, combining a highly stylized portrait of Queen Beatrix with an abstract motif that denoted the value of the coin. The coins themselves were simple, original and well thought out, even though the system denoting the value of the coin was not easy to fathom. The letters and the numbers on the coins were then made more legible with the help of the type designer Gerard Unger. These coins too were replaced in 2002 by the far less spectacular Euro coins.

The influential role played by the PTT as commissioner of the most wide-ranging designs, from postage stamps up to post offices, has already been sketched meticulously in numerous publications.[66] Much of the Netherlands' high reputation in the field of design is based on this work. The book *Design is geen vrijblijvende zaak: Organisatie, imago en context van de ptt-vormgeving tussen 1906 en 2002* (Design is not a Non-committal Business: Organization, Image and Context of PTT Design between 1906 and 2002), published in 2006, not only runs through all the facets of this 'success story' once again, but also scrutinizes them critically. The end result is that a number of persistent myths clinging to this historical account have now been called into question. One myth that has been unmasked is that, in the author's view, Jean François van Royen, the man who is usually mentioned in the same breath as pre-war PTT design policy, did not in fact delineate a distinct PTT design policy at all. His main aim is alleged to have been to

implement a socially minded policy for the benefit of the artists. What mattered most to Van Royen was ensuring that commissions were distributed honestly and generously and designers were provided with a source of income in what for many of them was a difficult period. His own preferences were not the crucial factor. Moreover, Van Royen allowed others to advise him at great length, mainly listening to the artist Willem van Konijnenburg and the art critic, and later curator of the Kröller Müller Museum, A.M.W.J. Hammacher.

Van Royen died in 1942 in Camp Amersfoort, where he had been imprisoned by the Germans on the grounds of his alleged involvement in a campaign against the Kultuurkamer (see chapter Three). After the war his work was taken over by the Department of Aesthetic Design (Dienst Esthetische Vormgeving, DEV), run in succession by Willem Frederik Gouwe, Christiaan de Moor, Karel Schuurman, Hein van Haaren, Ootje Oxenaar and Marie Helène Cornips. This department was not just an important commissioner of work, but also showed itself to be a powerful player in design culture in a broader sense. The DEV acted as a mediator when commissions for the PTT were being handed out, but it also advised other institutions including, as mentioned above, the Netherlands Bank. Furthermore, the department played a role in design education and adjudicated at design competitions. It also determined which artists should be brought in to make decorative artwork in, or close to, new post offices and other PTT buildings. In 1951 the Netherlands government put into operation the 1% Regulation, specifying that one per cent of the building costs for Government buildings had to be spent on art. In those years the DEV also built up its own art collection.

Among the various commissions distributed by the DEV, those for new postage stamps were always the favourite, and the most prestigious. Postage stamps were the PTT's and the Netherlands' visiting card. Chris de Moor, aesthetic adviser from 1951 to 1963, was so fascinated by postage stamps that he wrote a book about them in 1960. In it he discussed the twelve commandments governing postage stamp design – twelve aesthetic, technical and practical tips and rules to be observed when designing stamps.

In addition to the standard stamps (the definitive series) showing the cost of postage in numerals, which were in continuous use for years on end, special new series were produced regularly. The children's stamps (which cost a little more than the postage due, so that the extra money could go to a children's charity), the summer stamps (with a summer theme for holiday postcards) and the various commemorative series were annually recurring projects. From the 1930s onwards these started to function as a

sort of mini-poster, the stamps together forming a composition measuring at the most 8 square centimetres on which, within the specified technical and functional limits, the PTT gave graphic designers a free rein to exhibit their creativity and originality.

The first post-war definitive stamp was made by Jan van Krimpen, the typographer who worked for the printer Johan Enschedé & Zonen. It was a quiet, classical, ornamental execution of this commission. In 1976 Wim Crouwel designed the second post-war definitive series. In his design he tried to make a stamp that was modern but also as neutral as possible. This design was based on his favourite working method as well, omitting all references to tradition, penmanship or even emotion. The issue of this stamp, about the same time as the publication of the telephone book that Crouwel and his staff at Total Design had created, met with strong opposition. Critics did not share the view that the designs were modern and functional but condemned them for being uninteresting and paltry. The last thing they would have called them was neutral. In the next chapter we shall look in greater detail at the consternation this design caused. For that matter, just as much fuss was made in 1981 about the stamp with the queen's head on it drawn by artist Peter Struycken, and with lettering by Gerard Unger. With the aid of computer technology, which was then still in its infancy, Strucken abstracted Queen Beatrix's portrait using only separate round dots; the result failed to win everyone's favour.

By 1970 the PTT had developed into such a complicated organization that the management decided to rejuvenate its image totally. A large-scale PTT house-style operation headed by Ootje Oxenaar was initiated. The two major rivals at the time, Total Design and Tel Design, were asked to submit plans. In the end, thanks to Hein van Haaren's mediation, they opted for a unique joint project involving both renowned design teams. Both had their proposals ready in 1978, but it took until 1981 before everything had been adopted throughout the organization. Brochures, postage stamps, books of stamps, diaries, telephone books, work wear, company vehicles – everything and everyone was supplied with the new logo, in the new colours with the new lettering. In 1988 Studio Dumbar was commissioned to revise the house style of the newly privatized KPN (Royal Netherlands Post), successor to the PTT.

In the following year the DEV was transformed into the Art and Design Department. There was a storm of protest from the art world in 2002 when the KPN closed down this department. It was a sign that in the meantime the KPN had become completely business-like and commercial. This brought to an end a long tradition of design idealism: the cultural and social role of this former state enterprise's design department seemed to be played out.

Most other Dutch companies had already been forced to revise their design policies in the 1970s for economic reasons. For ordinary commercial firms, their unswerving belief in the great cultural, social and economic significance of industrial design was at an end. The 1970s saw the advent of renewed discussion on the benefits of design and the social position of the designer. Room was created for an entirely new interpretation of the discipline and the role of its practitioners.

4 Design as Profession, 1945–80

1 For introductions to economic and industrial developments in the Netherlands between 1945 and about 1975, see C.J.M. Schuyt and E. Taverne, *1950 Welvaart in zwart wit* (The Hague, 2000); J. W. Schot et al., *Techniek in Nederland in de twintigste eeuw* (Zutphen, 2003), part VI: *Stad, bouw, industriële ontwikkeling* and part VII: *Techniek en modernisering. Balans van de twintigste eeuw*; J. P. Smits, H. de Jong and B. van Ark, *Three Phases of Dutch Economic Growth and Technological Change, 1815–1997* [Groningen Growth and Development Centre, University of Groningen] (1999); Jan Luiten van Zanden, *Een klein land in de 20ste eeuw: Economische geschiedenis van Nederland, 1914–1995* (Groningen, 1997). For industrial design related to social-economic developments in this period, see Reyer Kras, *Nederlands Fabrikaat: Industriële vormgeving* [Teleac] (Utrecht and Bussem, 1997), pp. 164–91.

2 Gert Staal and Hester Wolters, eds, *Holland in Vorm: Dutch Design, 1945–1987* (The Hague, 1987). This book was published on the occasion of a series of exhibitions in the Stedelijk Museum (Amsterdam), Museum Boijmans Van Beuningen (Rotterdam), Centraal Museum (Utrecht), Gemeentemuseum (Arnhem) and the Gemeentemuseum (The Hague). See also André Koch, ed., *Ludiek Sensueel en Dynamisch: Nederlandse jeugdcultuur en vormgeving in de jaren zestig* (Schiedam, 2002); Bert Vreeken, *Vormgeving na '60; van Pop-Art tot Postmodern,* exh. cat., Gemeentemuseum, The Hague (1987).

3 J. Bouman, P. Schuitema and P. Zwart, *Rapport inzake de richtlijnen en mogelijkheden eener technisch-kunstzinnig verantwoorde industrieele productie van gebruiksvoorwerpen op basis eener sociaal economisch verantwoorde productie* (The Hague, 1944). Few copies of the report were produced.

4 Renny Ramakers, *Tussen kunstnijverheid en industriële vormgeving: De Nederlandse Bond voor Kunst in Industrie* (Utrecht, 1985), pp 81–92; F. Huygen, 'Vechten tegen de bierkaai: De promotie van industriële vormgeving via instituten en overheid', in *Holland in Vorm*, pp. 76–86.

5 Titus Yocarini, *Vak in beweging,* VANK, GKf, VRI, GVN, BNO (Eindhoven, 1992). On the GKf, see also Mirelle Thijssen, *Het Bedrijfsfotoboek, 1945–1965* (Rotterdam, 2002), pp. 111–19.

6 For the history of the Board, the Institute and the Centre of Industrial Design, see the issues of the *Maandbericht* and its successor *IV-Nieuws*, together with the several brochures that were published by the IIV: Nico Verhoeven, *Doelmatigheid van Industriële Vormgeving* (1962), and Nico Verhoeven, *Raad, Instituut en Centrum voor Industriële Vormgeving* (1966).

7 Members of the IIV visited the 1951 congress of the Council of Industrial Design in London. This resulted in the publishing of the brochure *Industriële vormgeving als factor van bedrijfsvoering* (Amsterdam, 1951).

8 R. Bullhorst and R. Eggink, *Friso Kramer: Industrieel ontwerper* (Rotterdam, 1991).

9 Staal and Wolters, *Holland in Vorm*, pp. 144–7, 174; Rosalie van Egmond, *Gero, zilver voor het volk* (Rotterdam, 2002); N. Tummers and L. Strijards, eds, *Edmond Bellefroid: de wisselwerking tussen vrije kunst en design* [Bellefroid Symposium] (Maastricht, 1994); Anna Sterk, *St Maarten Porcelein*, exh. cat., Het Kruithuis, 's-Hertogenbosch (1988); Anna Sterk, *N.V. Keramische industrie Fris, Edam, 1947–1969*, exh. cat., Princessehof, Leeuwarden (1985).

10 See *Maandbericht IV* (1956) p. 97.

11 See *Maandbericht IIV*, December 1959. Peter van Dam, *Ir. Louis C. Kalff 1897–1976: Het artistieke geweten van Philips* (Eindhoven, 2006).

12 See *Maandbericht IV* (1961/2), pp. 2–6.

13 *Industriële vormgeving in Amerika: Rapport studiegroep industrie: With a Summary in English* (The Hague, 1954); Timo de Rijk, 'Een grand tour naar de Nieuwe Wereld: "Geobsedeerd door locomotieven, sex, gebakken biefstukjes en snelheid"', in R. Baarsen et al., *Het Nederlandse binnenhuis gaat zich te buiten: Internationale invloeden op de Nederlandse wooncultuur* (Leiden, 2007), pp. 369–86.

14 Strangely enough, no monograph on Wim Gilles has been written to date. His archives are kept in the Museum Boijmans Van Beuningen in Rotterdam. For Gilles, see Timo de Rijk, ed., *Designers in Nederland: een eeuw productvormgeving* (Amsterdam and Gent, 2003), p. 152; Thimo te Duits, ed., *The Origin of Things*, exh. cat., Museum Boijmans Van Beuningen, Rotterdam (2002), pp. 108–15, 126–34.

15 W. Gilles, *De produktanalyse*, Industriële Vormgeving in kort bestek, IIV (Amsterdam, 1957).

16 J. van den Heuvel, 'De opleidingen', in Staal and Wolters, *Holland in Vorm*, pp. 180–94; N. L. Prak, *Geschiedenis van het ontwerponderwijs* (De Bilt, 1979), pp. 136–7.

17 De Rijk, 'Een grand tour naar de Nieuwe Wereld'; J. Penraat, *Hoe wilt u wonen: wenken voor nieuwe inrichting* (Amsterdam, 1957).

18 Fred Vermeulen, 'Karel Suyling, portret van een allround ontwerper', *Items*, 5 (1992), pp. 44–50; Jurriaan Schrofer and Frederique Huygen, *100 Citroën-advertenties van Karel Suyling* (Rotterdam, 1987).

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5 Design for Debate, 1960s to the Present

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