Summary

The house of 1. Ideology and theory in the Netherlands' design education

A topical question on the role of theory in design education

As in international design education, the Dutch courses for fashion, graphic and product design – situated within Dutch art education – are largely characterized by practical workplace education. These courses frequently employ the educational principle of *learning by doing*, whereby students are intensively coached by teachers in the workplace, studio or design studio. The theoretical knowledge provided is usually limited to theory subjects such as art and cultural history, lecture programmes and courses in support of the practical skills. The relatively high degree of dedicated theory and discourse in these courses raises the question of whether there is a dedicated *body of knowledge* that can be taught. Students are familiarized with design ideas and theories of the past, but these are generally regarded as period-specific ideological conceptions or dogmatic beliefs. Is the value of these theoretical insights purely historical, or do they constitute part of the necessary baggage for designers in the twenty-first century?

This question has acquired contemporary relevance. The labour-intensive workplace model, in which theory played a subordinate role, has been under pressure for some time already due to a changing educational system. The bachelor–master structure, which has been pivotal to the structure of European higher education since the Bologna Declaration of 1999, calls for a heavier theoretical component of the HBO (Higher Vocational Education) master, partly to enable promotion to WO (Science Education) masters. Moreover, the current technology-oriented knowledge economy requires designers with an investigative approach who are able to collaborate with specialists from other disciplines in complex assignment situations and partnerships. This working context calls for designers to have a solid theoretical foundation. The single-mindedness of specialization in design in the workplace is no longer sufficient. Furthermore, the knowledge economy demands that colleges are no longer purely educational institutions, but also knowledge centres that engage in applied research (University of Applied Sciences). All this has increased the focus on the role of theory in the current art education and forces the Dutch art academies to consider the theoretical education of their students.

The current debate on the position of theory in art education frequently reverts to the tradition of the academies for fine arts, and refers much less to the nineteenth-century applied arts education that constitutes the main basis for the current Dutch art education. In 2012, the number of students enrolled in design courses (bachelor and master full time) was approximately 6700, compared with approx. 2000 students for the courses in autonomous visual art. A glance at the twentieth-century curricula of design courses reveals that the theory subjects featured on the timetable are not readily associated with art education, such as grammar of form, advertising, marketing and design methodology. Have these theory subjects lost their relevance for design education in the twenty-first century?

Summary

Theoretical framework and hypothesis

An important theoretical framework for this research is the artist typology with which art sociologist Jacob van der Tas obtained his doctorate in 1990. He distinguishes three types of artist, based on the relationship that an artist (designer, architect) has with his audience: *dependent* (the artisan), *distanced* (the bohemian) and *professional* (the professional artist). Each type is characterized by a dominant form of domain knowledge (*body of knowledge*); the artisan uses mainly instrumental knowledge (focused on technical skills), the bohemian's knowledge is mainly of a metaphysical nature (not verifiable through perception) and the professional artist prefers to use a form of discursive (factual and normative) knowledge. Van der Tas connects these artist types to different characteristics of art education. The artisan is trained with a visual ability that is *objectively symbolic* and thereby consistent with the prevailing opinions of clients and the public. The workplace is the hub of his training, where he learns the skills to express the objective visual language. The bohemian's visual language is also *subjectively symbolic* and entirely dependent on the personal, artistic talent and individual expression. For him, the workplace is a free space in which he can discover his own style, independent of the immediate requirements of clients and the public. The visual ability of the professional artist is *intersubjective symbolic*, which means that a group of professionals can interpret its meaning. The workplace is not the hub of the training, but is there in the service of a problem-oriented support.

Based on this theoretical framework, the following hypothesis is examined: *Dutch art academies, which since the emergence of (applied) art education have focused expressly on training the professional artist type, have used and/or developed forms of theory that are relevant for the current and future design education.*

The hypothesis is tested against a number of sub-questions that determined the structure of the research. The main questions were:

- Which artist types were preferably trained where (at which art academies and design courses) and when (between 1921 and the present)?
- Is there a plausible relationship between the 'dominant' artist type (that was preferably trained at a specific art academy / design course) and the quality and quantity of the theoretical training in that academy / course?
- Which forms of knowledge and theory were applied or developed at the surveyed academies / design courses?
- Which forms of knowledge and theory are relevant to contemporary design education?

It was possible to examine these questions partly on the basis of the already written history of Dutch (applied) art education. This did not apply to the period after 1960, which had been studied only fragmentarily or from a very limited perspective. This research seeks to fill the gap. The study aims to contribute to a better understanding of visual art education in the Netherlands in general and the significance of theory in design education in particular.

The research into the ideology and theory in Dutch design education focuses on the courses that fall within the domain of graphic design (incl. advertising art, illustration, photographic design, typography, visual communication), product design (incl. jewellery, industrial design) and fashion design (incl. textiles, weaving, fashion illustration and fashion design). These courses were examined for the period from 1921 (the year in which the new law for applied arts education came into force) to the present day, at the art academies of Amsterdam, Arnhem, Breda, The Hague, Eindhoven, Maastricht, Rotterdam and Utrecht. Where relevant, information about the academies of Den Bosch, Enschede, Groningen and Tilburg has been added.

The research building: The house of 1

The structure of the research is based on the layout of an art academy building. After the introduction (part I), in the entrance hall, the theoretical and historical framework of the research is described (part II). The three artist types and the various forms of theory are examined in the boardroom (part III), classrooms and workspaces (part IV).

The research in the boardrooms is thematically based on six important rifts, which are partly related to a specific era, and partly to the similar ambitions of several art academies at different periods.

Chapter III.1 discusses the rift that occurred in 1983 when a large number of technical colleges – including the art academies – were forced to merge into a few dozen colleges. Although this involved a large-scale, politically imposed policy implementation, the choices made by the art academy directors cannot be regarded as separate from their views on art education and on training a particular type of artist.

In chapter III.2 a rift is outlined that became visible at different moments in the history of art education, but which remained linked thematically, namely the training of artists at denominational art academies. Even before 1945, a discussion was taking place about the desire to establish a catholic school for the (applied) arts. A discussion that was continued after the war and resulted in the only formally recognized catholic applied arts school in the Netherlands: the Academie voor Beeldende Kunsten St. Joost in Breda. Due to the desire to also establish a protestant art academy in the mid-sixties (which opened in Kampen in 1978), a discussion took place that was similar to that which preceded the establishment of St. Joost, namely about what the specific knowledge and skills of protestant artists should be.

Chapter III.3 focuses on a thematic rift, which also occurred at different times and places. The reference that the Bauhaus and its ideology of designing for the masses exerted on the Dutch design education. The academies in The Hague and Amsterdam were already acquainted with the knowledge of the innovative German design education in the late nineteen twenties and thirties, via former teachers and former students of the Bauhaus. After the war, the Bauhaus ideas formed an important basis for the educational structure of the art academies of Arnhem and Enschede.

Chapter III.4 examines the various attempts to create new educational programmes for industrial designers within the art academies of education. The discussion about the role of industrial design in applied arts education was expressly related to the type of artist that they wished to train. After 1945, the post-war reconstruction years demanded a different type of designer, a designer whose thinking and actions were based not on handicraft, but on the modern, industrialized production processes. To some extent, this desire was consistent with the educational ideas of the Bauhaus. However, influenced by the *industrial design* in the United States, a type of designer developed that was inspired less by the strongly socialistic ideas of the Bauhaus and more by the pragmatic and commercial approach of American industrial designers and design agencies.

Chapter III.5 is devoted entirely to the academy in The Hague, which appointed a new director in 1957 who would remain in this post for 25 years.

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Both the arrival and departure of this director mark a rift. In 1957, the academy expressly distanced itself from the autonomous ideology, which was found to be too dogmatic. And in 1983 a stand was taken against the announced operation of 'Scaling up, Task division and Concentration' (STC) which were the intended results of the politically desired mergers. Familiar with the traditions of the (catholic) (applied) arts education, the Bauhaus education and the training of industrial designers, throughout his long directorship this director would have to deal with the democratization processes and the prelude to the STC operation. The boardroom in The Hague shows how all these developments have affected the ideas about education and training.

Chapter III.6 focuses on the democratization processes that undermined the position of many academy directors. Students were given a greater say in the content of the education, and the academy practice of consulting all fronts in art education also involved tearing down the walls between boardrooms and classrooms. Students had an expressly different view of the desired type of artist. They disassociated themselves particularly from an overly dependent type and were in favour of the autonomous, visual artist type. At some art academies, such as in Breda and Eindhoven, this led to fierce confrontations, of which the directors were the victims. In both academies it took years before a balance was struck between the original aims of the fifties and sixties and the demands of the students: a vision of art education that focused more on the individual and on self-expression. However, at some art academies, such as the Gerrit Rietveld Academy in Amsterdam and the AKI in Enschede, in the late sixties there was already fertile ground for a more individualistic design education that leant towards the autonomous arts.

The chapters in part III are alternated with interludes in which one or more academy buildings are shown and described, where the architectural ideas are metaphorical for the dominant artist type.

While part III focuses on the policy level, with an analysis of the generally formulated educational objectives and curricula, in part IV the ideas of the specific courses regarding the type of artist to be trained and the training philosophy deemed desirable theoretical knowledge are described on the basis of specific curricula and the everyday educational practice of the separate design courses. The introduction (part I-1) is a theoretical analysis of the different types of classrooms at art academies and training workplaces. These classrooms represent the various types of designers and the specific forms of knowledge and theory. Thus, the masterclass is typical for the distanced type, the craft workplace for the dependent type, the drawing, design and research lab for the professional type, the studio is used by both the dependent and professional types, and the theory classroom can represent all three types. Then, for the design disciplines graphic design (chapter IV.1), product design (chapter IV.2) and fashion design (chapter IV.3), a description is given of the most characteristic teaching locations for the art academies surveyed and of which forms of theory were taught therein.

In part V the accent is on the theories that were – often implicitly – used in the design classroom. For the theory classrooms, the most important changes in the traditional theory subjects of art history and philosophy are briefly highlighted. In addition, the educational theory directly relevant to design education is discussed. Although instrumental expertise is inextricably linked to the design process, here it is not examined as an independent field. When the educational theory is dominated by practical skills and technical knowledge, in most cases it concerns an art academy or design course with an intention to train dependent designers.

Dominant artist types in the boardrooms

On the basis of annual reports, policy documents and public statements made by directors, broadly speaking four periods can be distinguished, in which the training of one particular type of artist was dominant: 1921–1950, 1950–1968, 1968–1983 and 1983–2012.

In most applied arts schools, the dependent artist type was dominant between 1921 and 1950. During this period, plans were being drawn up for new art schools or these were actually founded; among others this involved schools with a catholic identity, such as the applied arts schools in Tilburg and Maastricht and the Jan van Eyck Academy. Despite the fact that the applied arts school in Maastricht was never formally reformed to a catholic academy, the denominational ideology was certainly present there. To a large extent, this determined the desire of the directorate to train dependent artists that could be employed (particularly after the war) in the renovation of religious art and architecture. The origins of the catholic applied arts school in Breda shows that the directorate emphatically rejected a free academy for distanced bohemians. But the dependent type was also dominant at the non-denominational art schools during this period, sometimes with a few distanced traits. The fact that for the first time in applied arts education, workplaces based on the example of the English Arts & Crafts movement were introduced, above all indicates conservative, romantic values. In theory, the workshops were an instrument to provide the future designers practical preparation for their profession. In practice, they proved to function mainly as preservers of a crafts-based production method that was under threat from the rapidly increasing industrialization. In that respect, in this period there were few ideological differences between the more denominationally-oriented school in Maastricht, led by director Jef Scheffers (1935–1971) and the non-denominational applied arts school of Amsterdam led by director Johan Smits (1924–1939) and that of Arnhem during the directorship of Gerard van Leeuwen (1922–1956).

Exceptions in this period were the academy in Amsterdam during the directorship of Mart Stam (1939–1948) and in The Hague under director Jan Plantenga (1928–1942), who were influenced by the German educational reforms between 1900 and ca. 1930 and focused on the professional artist type. Instead of training artisanal, dependent artists, these directors propagated the education of progressive 'form engineers' with knowledge of the latest materials and techniques, who were intended to design objects for the industrialized society and working environment for the new mass population. In this context, the discussion took place on the importance of artisanal production versus industrial production. Since the industrialization, handicraft was only still in its infancy, and a return to handicraft practices was of little importance to the individual, artistic qualities of the artisan. But a designer who wanted to cater to the general public had to cast off the subjectively-oriented artistic practice and commit themselves to an objective, democratic industrial design. The above all rational, modernist education ideology had a strong utopian character and its supporters had little regard for the individual interests of clients and consumers. This meant that the professional type also acquired distanced traits. The pre-war period can be characterized as a discussion in the boardrooms about training the dependent (distanced type (applied artists) or the professional (distanced) type (form engineers).

After 1950, the professional type was also dominant at the academy in Arnhem, led by director Henry Wabbes (1957–1978) and at the newly established applied arts schools in Breda, with director Gerard Slee (1950–1976) and Eindhoven with director René Smeets (1950–1970). By contrast, the applied arts schools in Enschede, led by Bram Middelhoek (1954–1966) and in Utrecht under Marinus Boezem (1966–1969) were distanced, but mainly distanced artists who valued their personal creativity above all. Unlike the academies in Arnhem, Breda, The Hague and Eindhoven, the training of this type of artist was elevated to directorate policy in Amsterdam and Enschede. One big exception was the Academie voor Beeldende Kunsten which, in Kampen (1978–2002), which, contrary to the zeitgeist and under the influence of a protestant-Christian emancipation struggle, once again focused on the dependent artist type.

In the period 1983–2012, there was strong political pressure on the academy directors to train well prepared dependent, vocationally-oriented artists. This can partly be explained as a reaction to the trend in the period 1968–1983 for training distanced artists. Art was no longer seen as a form of self-expression and personal development, but as a profession that could only be properly practiced if one possessed some basic qualifications that were deemed absolutely essential. Most directors, however, had a very different opinion. They placed emphasis on training the professional artist type, who, with an entirely personal way of looking, (design) thinking, making and (artistic) research, could provide a meaningful contribution to people and society. However, the interpretation of this professional artist type was strongly influenced by the history of the various academies: Arnhem wanted interdisciplinary, artistic researchers, The Hague called for scientifically recognized artistic researchers and Utrecht examined the possibilities of a hybrid researcher who crossed the boundaries between art and technology and art and economics. The main exceptions in this period were the academies of Enschede and Kampen, which continued to pursue a management policy that focused respectively on the distanced and the dependent type.

Dominant artist types in the educational establishments for graphic, product and fashion design

For the various educational establishments, it is much more difficult to establish which artist type was preferably trained there. The ideas of the directorates played a role, but equally important were the opinions within the design disciplines and those of individual design teachers. It is not easy – partly because in many cases written source material is lacking or was inaccessible – to distil a coherent picture, if that even exists. Part o provides a mosaic of partial studies on the courses for graphic, fashion and product design at the various Dutch art academies. In these design disciplines, there were very different views about the role of the designer. To some degree, the ideology of the design courses was consistent with that of the directorate, but in some cases it were entirely conflicting. The ideas about artistic practice could also vary widely among the various design courses at a single academy.

The education in the field of graphic design was largely derived from the traditions of typography and (2- and 3-dimensional) advertising. Because for a long time typography was directly related to the possibilities and limitations of manual or machine printing and readability, even before the emergence of Dutch design education, rules and guidelines existed for the design of letters and layouts, which are described in many textbooks. The typographer regarded himself as a subservient artist who merely mediated between the author and the reader. This professional, and sometimes strongly dependent attitude was dominant in typography education at the (applied) art schools between 1921 and the mid-eighties. Important typography teachers such as Chris Brand (Breda), Gerrit Noordzij (The Hague) and Alexander Verberne (Arnhem) taught students the rules of calligraphy and typography to enable them to play the game with a professional attitude. The main exception to

this was the typography teaching of Charles Jongejans at the Amsterdam academy (1953–1981), which had a more distanced character. But Karel Martens in Arnhem was also an early advocate (since 1977) of an attitude of design students that was more independent of the rules and customs of what was considered good typography.

Things were different in advertising education. Theories and rules that were developed for this from advertising education were taught only at a limited number of academies, and over a much shorter period than was the case with the typography rules. It was mainly the academies in Breda and Eindhoven that took the advertising profession and (advertising) psychology seriously in the period between 1950 and the early seventies. Anyone who wanted to design an effective advertising message, after all, needed to have knowledge of the effects of shapes, colours and typography on the attention and understanding of the observer. In most cases it concerned a form of instrumental knowledge for a dependent type of advertising designer.

Most art schools, however, saw no advantage in downgrading the advertising designer to an illustrator or typographer of advertising theories that were primarily aimed at enticing the public into buying. The designer had a personal responsibility to inform the public in a correct ethical and aesthetic manner. After the nineteen sixties, the word 'advertising' was declared taboo at most academies and replaced with course titles such as 'publicity design' or 'visual communication'. Unlike the word 'advertising', these names are an expression of the desire to inform the public as objectively and transparently as possible. That required a more professional attitude from the publicity designer.

In the courses for product design, it is also possible to distinguish multiple traditions, whereby a different type was always shown. The (applied) arts education for gold/silversmith and jewellery design had taken place mainly in the workplaces for the dependent, handicraft artist ever since the start of the first course in this field in 1897. Hardly anything changed in this model when new academies were created in the nineteen twenties: Academies in The Hague (1914), Amsterdam (1924), Arnhem (1929) and Maastricht (1949). The dependent type – with or without some distanced traits – remained dominant for as long as there were education courses for the Catholic Church or an affluent and art-loving clientele. When these disappeared the education for gold/silversmith and jewellery design became a form of free visual art, practiced by a more distanced type.

The situation in the courses for industrial design, which began after the war in The Hague (1950) and Eindhoven (1955), was very different. Here, there was an emphatic desire to train a professional type of designer, a designer with sufficient knowledge in the artistic as well as technical and economic fields. This model of the same designer ideal in the late sixties as students began calling ever louder for more personal creativity and intuition in the design process. But in the Industrial Design Course in The Hague and at the Academy for Industrial Design in Eindhoven, that did not lead to the desire to train a fundamentally different type of artist, and this situation continued until the late nineties.

In the increasing focus on industrial design, the courses for gold/silversmiths in Amsterdam and Arnhem tended towards design studios for the professional type. Led by design teacher Wim Jaarsveld in Amsterdam (1955-1978) and under the influence of designer Gijs Bakker in Arnhem (1968-1978), ideas were used that contrasted with the ideology of the distanced type that prevailed in the academy (Amsterdam) and the course (Arnhem). The design workshop for industrial design in Amsterdam managed to survive for

a long time in its isolated position. In Arnhem, the department of Design in Metal and Plastics again became more of a workplace for the distanced artist type after the departure of Bakker.

In fashion education there are also two distinct traditions: textile design and garment design. The most important developments only took place after the war, with the arrival of new fashion departments in Arnhem (1953), Breda (1950), Maastricht (1953) and Utrecht (1963). For decades the fashion design in Breda, Maastricht and Utrecht was workplace education for training the dependent type. The fashion education in Amsterdam and Arnhem was also taught in workplaces, but during the period 1950-1983 these were mainly used for training more distanced fashion designers, with a strong emphasis on the development of a personal artistic vision. Because clothing has to meet functional, social and symbolic demands, in these courses attention was also given to the psychological, social and anthropological aspects of garment design, in addition to the history of clothing. None of this applied to textile design, which became a form of free art after the nineteen sixties.

In fashion and in design we find the training of the professional type mainly in the design classrooms for weavers and textile designers, who were also trained for the industry, such as in Amsterdam under Kitty van der Mijll Dekker (1934-1972) and in the textile department in Eindhoven (1950-1983).

The relationship between the artist types and the theoretical training

Is there a plausible relationship between the artist type that was dominant in a course and the quality and quantity of the theoretical training at an art academy or in a design course? The study shows that it is not easy for an academy or course to name the artist type that was preferably trained there. In most cases, the views within the design traditions of graphic, product and fashion design and the individual views of the teachers were more decisive factors for the type of artist that was trained than the ideology in the boardroom. In some cases, the ideas in a course are influenced by the vision expressed by the director.

The most important conclusion that can be drawn is that discursive theory played a particularly important role in the Dutch design education when both the directorate and the course had a preference for the professional artist type. For the academy in The Hague, this was the case for a long period under the directorships of Piantenga (1928-1942), B. Th. de Hey (1942-1957) and Beljon (1957-1985) and the courses for advertising (Gerrit Kiljan, 1921-1968), (typo) graphic design (Noordzij, 1960-2012) and industrial design (1950-2012). Here, new theoretical insights were applied and/or developed, such as Kiljan's 'form development' and his 'grammar of form', Piet Zwart's 'visual organization of the advertising assignment', Noordzij's 'theory of script', Beljon's 'morphology' (a theory of form) and 'design methodology' which was derived from foreign design theorists such as Bruce Archer and Christopher Alexander. An exception to this was the textile department, which was only affected to a limited degree by forms of discursive theory. Unger's typography professorship fits in this long tradition of theory education and development at the design courses in The Hague.

The picture at the Amsterdam academy seems entirely contrary to that of The Hague. There, for a long period (from ca. 1950 to 1983) a view prevailed among the directors and teachers that above all distanced artists should be trained. The necessary handicraft and formative theory education and the statements by teachers also reveal that no attention was given to the teaching

of discursive forms of theory. It was left to the individual teacher to decide whether or not to teach this. Only in the preceding period, when the academy was led by Stam (1939–1948), was the professional type expressly pursued, both by the directorate and by certain courses, such as the weaving department of Van der Mijll Dekker. She taught the design theory of the Bauhaus and 'binding doctrine' as a practical design application. Nevertheless, in the period after Stam there were individual teachers who focused on the discursive theory of the discipline, such as Van Toorn and Boterman in graphic design and the theory teachers Freek Holzhauer and Simon Mari Pruys in the Industrial Design department. Van Toorn was particularly important with his design strategy of 'operational criticism'.

The influence that the academy in The Hague exerted on design education in Arnhem was unmistakable under the directorship of Verberg (1957-1978). These years were the heyday of the application and development of theoretical insights for designers. At that time, Peter Struycken developed his 'general image information' for the students in the foundation year of all courses and Bakker developed his 'fundamentalist' design approach at the department of Design in Metals and Plastics. In graphic design, Verberne and Jan Vermeulen taught the typographic rules of Henri Friedlaender and Marius Wagner continued the tradition of Kiljan's grammar of form. The fashion education indeed took place in the workplace, but gave relatively much attention to the (cultural) historical, psychological and social context in which clothing is designed and worn. A focus area that became an official field of research with the advent of the fashion professorship in 2002.

Like the academy in The Hague, the academy in Breda also shows a long period in which both directors and teachers of the graphic design course had the intention to train the professional type. In Breda too, influences from the Hague academy can be traced, through teachers such as Ubbrand Pijper and Kees Zwart. From the establishment of the academy in 1950 until 2012, there was always much attention for the theoretical and (cultural) historical background of advertising, typography and graphic design. New theoretical insights were developed by Hugues Boekraad, initially as theory teacher, since 1988, and later as professor of Visual Rhetoric (2003-2012). But in the fashion department very different views prevailed on the desired artist type. In the first decades, the fashion department wanted mainly a dependent type, but from the seventies on, a more distanced, artistic type was desirable. Forms of discursive theory played virtually no role.

The same applies to the fashion course in Maastricht. There, the most important course for the professional type was the graphic design department led by Wim Simons (1970-1989). In Maastricht, Simons continued the practical and theoretical educational ideas of his teachers in Breda: Brand, Jan Begeer and Wim Smits.

The Academy for Industrial Design in Eindhoven, under the directorships of René Smeets, Wim Gilles, Kees Houtman and Lucassen, shows most explicitly that the desire to educate professional designers was accompanied by a relatively large amount and diverse forms of educational theory. The academy in Eindhoven has always expressly profiled itself as a design course and distanced itself from the artistic design education of the other (applied) arts schools. This led to the most comprehensive curriculum of practical and theoretical subjects. It is significant that director and teacher Smeets was always seeking a design and ornamentation that did not have an individual character, but which harmonized with the traditional folk cultures and nineteenth-century 'doctrine of ornamentation' as well as with the visual language of avant-garde art and the latest insights in perceptual psychology.

When we look at the academy in Kampen, where the dependent type was long dominant, indeed we see that the main emphasis there was how essential instrumental knowledge is for the realization of a design.

It is therefore likely that a relationship exists between the dominant artist type and the quality and quantity of the theoretical training, particularly when this is pursued on all levels – both by the directorate and heads of departments and teachers.

What knowledge and theory are still relevant for contemporary design education?

The discursive forms of theory that were developed and applied in the Dutch design education were unmistakably under the directorship of various scientific fields, such as (perceptual and advertising) psychology (particularly Gestalt psychology), marketing, semiotics, cybernetics, (visual) rhetoric, art history, cultural history and philosophy and anthropology. Much of this knowledge was used mainly in an attempt to achieve what Van der Tas called the 'inter-subjective symbolism' of the expressive capacity. A visual language derived not from an individual perception (subjective symbolism), but also not so strictly bound by laws and rules (objective symbolism) that no freedom is left for individual, inventive and artistic interpretations of the designer. The intersubjective symbolism involves a constantly regenerative and inventive game, with rules that remain recognizable for everyone. This requires the design education to familiarize the students with these rules, teach them to apply these and, if desired, to provide the space to reject them for a better alternative. At the very least, it is relevant to acquaint students with forms of discursive theory, such as 'the grammar of ornamentation', the 'grammar of form', the 'visual organization of the advertising assignment', the 'theory of script', the 'Systematical Method for Designers', 'general visual information', 'visual rhetoric', 'morphology', 'fundamentalist design', 'product analysis', 'cubist constructions' and 'operational criticism', to provide them with insight into the ground rules that were once developed and that were valuable in a specific cultural-historical context. These form the *body of knowledge* upon which the professional design practice is founded and to which the design students are expected to relate. Study dependent practical assignments should indicate the extent to which this knowledge remains situationally and strategically valuable.

The history of Dutch design education, however, also shows that scientific (discipline specific) knowledge does not immediately lead to useful design knowledge. People are always needed who, versed in the various scientific fields, are able to translate scientific insights into the practice of the designer. In most cases, these are people who stand with one foot in the theoretical and the other in the practice of their discipline and the latter in the practice of the designer. They are few and far between, but can follow the example of several important inhabitants of *The house of i*: Gijs Bakker, Joop Beljon, Hugues Boekraad, Wim Gilles, Gerrit Kiljan, Gerrit Noordzij, Paul Schuitema, René Smeets, Peter Struycken, Jan van Toorn and Nico van de Vecht. They have all been involved with design theories based on scientific knowledge, as well as on their own and other people's experience for their practical designing. They, in turn, have built upon the insights of similar theoretical pragmatists such as Gottfried Semper, Jan Slothouber, Jan Tschichold, Le Corbusier and Christopher Alexander. Although their theoretical ideas and insights are specific to a period and perhaps no longer useful in contemporary design education, new knowledge developed from the aforementioned scientific fields will always remain relevant to professional designers working on

products and services that are specifically intended to have a practical or symbolic function in the service of an individual or group within society. But then people are needed who are able to convert the scientific knowledge into practical design strategies. The design theorist mentioned in the introduction to this study, Kees Dorst, is such a person. This makes it all the more worrying that he appears to have virtually no connection with the current design education at the Dutch art academies, apart from a guest professorship in Design Methods at the Design Academy Eindhoven.

The value of this research

Most studies and publications on the subject of Dutch design education lack a clear theoretical premise. They are often descriptive, historical studies – whether or not in the form of a jubilee publication – intended to underscore the cultural importance of the art academy in question for the city and the Netherlands or abroad. Not infrequently, these publications display hagiographic traits. With the theoretical framework of my research, based on the artist typology of Van der Tas, I hope to provide a structure that can be useful in future research into the Dutch and foreign art and design education.