

**RE-
INVENTING
THE
ART SCHOOL
21ST
CENTURY**

Reinventing the art school, 21st Century

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Essay #1 /Reflections on Art Education

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Introduction

This essay examines the recent curriculum reform of the Rotterdam University's Willem de Kooning Academy within a tradition of Western art education. It is quite clear to us that the professions related to Western art education programmes are currently undergoing major transformations; perhaps for the first time in history, there is no obvious path toward a new professional practice with its own clear rules and visual conventions. Art education has always been linked to prevailing norms within the professional practice; therefore art schools were able to establish institutional and educational practices which in turn had a stabilising influence on the professions. This is clearly no longer the case in the 21st century.

During the past few decades, Western art education has been unable or unwilling to adapt sufficiently to shifting economic and cultural realities on one hand, and on the other hand to the new technological requirements which its graduates must face. Thus these graduates have often been insufficiently prepared to face market conditions, and ill-equipped to contribute in a meaningful way to the rapid developments in the communications industry. Other education programmes outside the field of art education have emerged to fill this void, but they have done so without the critical-artistic perspective characteristic of art education, which is necessary in order to arrive at a meaningful design practice. Thus, mass communication and internet technologies have come to be dominated by technical formats and standards. Furthermore, shifting social relationships have changed the nature (even the very definition) of the public, and of the need for artistic production. The consumer is increasingly co-creator; do-it-yourself attitudes and methods are challenging the traditional role of the expert, as well as the cult of the unique; meanwhile, service design is becoming as important as product innovation.

Art education will have to embrace a radical transformation if it is to go on playing a meaningful role in this changing world. The new curriculum of the Willem de Kooning Academy (WdKA), Rotterdam University of Applied Sciences, implemented in all of its education programmes from September 1, 2013 onwards, is a major step in this direction. Within the community of art education programmes, the WdKA's new curriculum stands out as one which specifically addresses contemporary challenges facing art education.

This essay begins with a brief historical overview of art education, describing various schools and their relationship with the professional practice and the world at large; then we shall describe some important characteristics of the changing international professional practice of artists and designers; and finally, we will examine the resulting changes in the field of art education in Rotterdam, as well as further changes yet to come.

1. Tradition

Historically there have been six main models or examples for art education. In chronological order these are:

- × The master-apprentice system
- × The Italian Renaissance academy, and subsequently the Académie des Beaux-Arts
- × 19th-century arts and crafts education
- × Bauhaus
- × Black Mountain College
- × Cal Arts, Los Angeles

These are all iconic examples, as they profoundly influenced the way art (and later also design) was experienced and appreciated at important turning points in history; they played a major role in announcing the arrival of a new historical period, and in establishing standards and values of artistic representation for those periods. Since World War I, the accelerating succession of historical periods in Western culture and society has meant that, while successive schools have been internationally influential, they have been so for increasingly brief periods. However, all of these schools have made lasting contributions to the current system of art education. ¹

1.1 Antiquity and Middle Ages

The master-apprentice relationship, which already existed in the Antique period and was institutionalised during the Medieval period into the guild system, was based on the prestige and authority of the master as a highly-skilled practitioner of his trade. The artistic profession had a well-defined body of stylistic and aesthetic conventions, as well as an established set of technical skills in which the master was expected to be proficient. The apprentice (and in a later phase of his 'study', the journeyman) learned his master's trade through unquestioning imitation. The apprentice could even, under the master's supervision, contribute substantially to artworks being produced under the master's name. In this period in history, originality was not a desired quality, nor was the inclusion of personal, idiosyncratic or otherwise expressive visual elements. Reproduction and emulation, and working in the style of a well-known example, were not perceived as a lack of artistic vision, imagination or proficiency, but rather as a demonstration of one's mastery of the proper form and style. One did not wish to break with tradition, but to belong to it. Art in the present-day sense did not exist: creative intellectual labour was the privileged domain of the philosophical sciences, and of music and poetry. Visual art was 'merely' a craft.

Traces of the master-apprentice model can still be found in contemporary art education: for example, the relationship between teacher and student within the relatively sheltered environment of the classroom; or in contemporary educational systems, particularly in Germany, where there is a tradition of students working under renowned artists, according to their specific instructions and often through the intermediary of their assistants.



The master-apprentice model, based on the assumption that artistic proficiency can be learned through imitation of a renowned master, was predominant from the Medieval and Renaissance periods up until the aristocratic culture of the Baroque period. These were rigidly regulated societies with clearly established social classes. Acceptable modes of thought were dictated by the religious and aristocratic classes, and there was no upward social mobility. The content of art was mostly determined by the

church, which held that all worldly reality was subordinate to a higher religious reality.

II



1.2 Academy

The Académie des Beaux Arts, the first state-controlled institute for art education, was founded in France in the 17th century, in order to facilitate the realisation of an increasing number of state commissions for artworks. Artists were trained within a strict framework, so that they may absorb and master the one and only correct style. The Académie's model was copied in most Western countries; the 18th-century Royal Academy of Arts in England was particularly renowned for its strict rules based on a consistent theoretical system, all of which now seem quite mannered and artificial. From the 17th century onwards, an increasingly strict separation between church and state meant that state institutions and aristocratic families held sway over political and social life, imposing their world view through academic doctrines.

Artists were valued for their technical proficiency. The artist's apparent facility in realising an artwork, and his degree of erudition (as well as that of his patron, who commissioned the artwork), expressed through the complex symbolic iconography found in the artwork, were important factors in the definition of artistic mastery. By now, the natural sciences had begun to complement (rather than challenge) the traditional Christian view of the order of the world and the universe, resulting in a search for an elegant symbiosis between science and religion: the universal regularity of science was seen as a demonstration of the grace of the hand of God, who had created the world according to natural laws which men could learn and understand, all for the greater love and praise of God. But this was also a time of great upheaval: the Christian world was torn apart into two hostile factions. In the Catholic lands, the Baroque style aimed to inspire a sense of awe through grandiose artworks for a highly privileged upper class (opera houses, St. Peter's Basilica, Bernini's baldachins); whereas in Protestant bourgeois society, the reading, discussion and interpretation of

the Bible led to a new interest in depictions of small-scale, realistic everyday life (Vermeer, Jan Steen).

In Catholic countries, the Academy encouraged its students to develop their ability to dazzle the crowd through their technical virtuosity and adventurous exploration of subject matter and composition, as long as the style and content remained within the strict societal norms and conventions of the day. The Protestant reformation, although founded on a rebellion against the old social order, was in fact artistically very conservative: here, the Medieval master-apprentice tradition was upheld, and the visual arts were seen as a useful tool for warning mortals against the dangers of thinking they might be any greater than God had made them; the only life which held any true value was the eternal afterlife, where all scores from this temporary earthly life would eventually be settled.

In the Romantic period, which began in the early 19th century, the Academy's ideology of artistic virtuosity was further developed into the cult of artistic genius.² The notion of the uniqueness of the individual went hand in hand with the emancipation of the citizen, who now occupied a social position which had previously been the privilege of the religious and aristocratic elite, according to a world order legitimised by a complex Christian ideology. In the new bourgeois society, on the other hand, politics and a teleological view of history served to provide various justifications for a new individual-centred (Western) world order. Though all of these justifications were based on the same general assumption that society could and should be engineered for the greater good of all, they also held contradictory views as to how exactly this society should function, as well as the means needed in order to achieve it.

With the Romantic movement, artists began for the first time to question the rules set by academia, and to overcome these rules by defining new ones, which in turn would also be set aside as other new movements took over.

The Academy's lasting influence in the West can be seen mainly in today's institutionalised and formalised education programmes, where teachers are expected to conform to established guidelines. Today's art education programmes were largely developed in parallel with other higher education programmes, systematised and regulated according to models applicable to all approved establishments of higher education. The assumption here is that art is something that can be learned, so that a student's academic career is a path leading directly to a professional practice at a certain established level, for which there are clear professional standards; the state is responsible for monitoring the quality of the curriculum and the application of these standards.



1.3 Arts and crafts

The industrial revolution and subsequent methods of mass production created a new demand for education on an unprecedented scale. The 1851 World Fair in London made it painfully clear that mechanically produced goods were ugly and lifeless. New craftsmen were needed, who could apply the new mechanical production techniques to the creation of quality products. In the cities, dignitaries sponsored clubs and associations where young workers could take evening classes in drawing and other techniques mainly focused on building.³ Though engineers seemed to have taken over the fields of design and building, their soulless products left much to be improved. This created a demand for arts and crafts schools as well as technical schools. Most of today's art schools were originally founded either as 19th-century arts and crafts schools, or as 17th-century academies; the Beaux-Arts tradition generally operated on a higher social and intellectual level than the arts and crafts schools, which were more practically oriented as vocational training.



1.4 Modernism

In the first half of the 20th century, the Bauhaus in Germany and the Black Mountain College in the United States broke with academic tradition, adopting radical new principles focused on the development of individual artists with a personal stake in designing industrially produced goods for society as a whole. The Bauhaus emancipated applied design, bringing it to the level of fine art, while Black Mountain College was particularly influential in its adoption of anti-authoritarian principles; teachers were seen as mentors and facilitators, working together with the students to run the institute and generate income.

Here the Romanticist notion of artistic genius was combined with a belief in engineering modern society for the greater good; the artist was a visionary, marching in the front ranks (the origin of the term 'avant-garde') of the army of humanity on its way to a better future. Machines would soon liberate us all.

Something of these notions can still be found in today's art education programmes: ideas that originated at a turning point in history, the dawn of the modern age, when new technologies, new methods of mass production and the rise of civil leadership led to broad social reforms, new labour and power relations, and new aesthetic values. The individual in his uniqueness needed to be liberated from any ruling class, or any class-determined world order. In the

arts, the most intimately personal vision became a vehicle for the universal (as in expressionism); conversely, abstraction became a new aesthetic for the machine age (as in constructivism). On another level, Bauhaus and Black Mountain College brought about a symbiosis between elements of the Beaux-Arts and the Arts and Crafts traditions. Design was emancipated to the level of fine art; and all arts were expected to play a positive role in humanity's struggle towards a better society, which was seen as the logical and inevitable conclusion of our historical journey, from primitive tribes to a fully developed and liberated universal community of humankind. The philosophy of the uniqueness of the individual had by now taken over all aspects of Western culture. Social sciences such as psychology and sociology were founded on a humanist belief in the primacy of the individual. In this world view, artists were the idealised embodiment of the notion that each human being is indeed individually unique and valuable.

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1.5 The 1960s

The California Institute of the Arts (colloquially known as CalArts and located near Los Angeles) was founded in 1961 and is often described as a direct descendant of Black Mountain College. CalArts soon became famous for its anti-authoritarian stance which, in line with the countercultural ideals of the 1960s, held the promise of liberation from bourgeois morals and conventions. The power of creativity and the spirit of non-conformism

would help bring about a better society than the one inherited from the previous generation. The optimism of social engineering had been permanently discredited by the horrors of World War II, while the fresh horrors of the Vietnam War demonstrated that only critically and creatively thinking individuals could manage to bring down the 'evil commercial capitalistic' world of the older generation.

The culmination of these ideals can be found in today's art education: the teacher is a living example of an independent artist, who does not follow any specific style but instead creates artworks, grounded in concept development and a critical view of society, which seek to engage, challenge and respond. The student is expected to follow this example. Indeed, students tend to identify with artists who have rejected the established order of an older generation. The dialectic of this historical period has usually been defined in terms of young against old, rather than rich against poor.

1.6 The current situation

Today's institutes for art and design education are focused on educating competent practitioners, by stimulating each student's individual qualities and thus enabling them to make use of relevant techniques in order to produce original and meaningful contributions to the profession's historical body of work.

Teachers do not work according to any predefined definition of art, not even their own, but rather challenge their students, discussing with them concepts which call into question artistic traditions as well as social norms and values. ⁴

Institutes which now serve as models for others, do so based on their curriculum and the professional reputation of their teaching staff. An institute's success is not based on its educational philosophy and underlying definition of art, but on the subject matter of the curriculum and the reputation of its teachers and alumni. Examples include Goldsmiths, RISD, Central St. Martins and the Royal College of Art.

Now that there is no longer a single dominant conception of style, and that the gap between fine art and applied art no longer applies, one may well wonder which guidelines an institute and its students are expected to follow.

There are several ways in which an educational institute may be successful. The institute may have acquired a certain national or international reputation among the general public, based on the success of its alumni. In the long term, wide brand recognition in itself is no guarantee for actual quality: however, a good reputation often attracts good students and good teachers, allowing the

institute to maintain its acquired reputation. An institute which loses this reputation, will have a long way to climb before it can re-establish its standing.

Some academies have acquired a reputation for a particular discipline or a specific group of teachers; the fashion design department in Antwerp is a good example of this. The department becomes a school within the school; the department's fame can also reflect positively on other departments.

1

The various educational systems have been well described and exhaustively documented. For a brief description of the systems listed here, see: Honour and Fleming, *A World History of Art*, London, 1995. ?

2

The Romanticist notion of genius was eloquently analysed by Egon Friedell in essays written in the early 20th century. See E. Friedell, *Abschaffung des Genies*, Zurich, 1985. The concept of genius is not an objective fact, but rather an idea we like to believe in, and which has characterised Western art from the 19th century onwards, including Modernism and post-World War II movements up until Pop Art. This concept has now become outdated. ?

3

The Willem de Kooning Academy, for example, has its roots in the association 'Van Hierdoor tot Hooger' (literally, 'From Hereby to Higher') founded in 1758. ?

4

The changing role of the artist is very well described in an essay by C. van Winkel, *De Mythe van de Kunstenaar* ('The Myth of the Artist'), Amsterdam, 2007 ?

2. The changing 21st-century professional practice

2.1 Technology and collaboration

New technological, social and macro-economic developments have brought about extremely rapid developments in the professional practice of artists and designers.

New technologies and new modes of communication are having a profound effect on the nature, content, form and scope of art, design and education. The impact of new digital technologies cannot be overstated. The relatively low cost of using relatively complex technologies has not only democratised the production, distribution and consumption of art and design products; it has also democratised aesthetic values. New technologies and methods of communication are no longer the privileged domain of professionals, but are increasingly becoming available to amateurs and consumers. This has fundamentally altered the relationships

between the artist/designer, the industry and the consumer.⁵ The artist/designer no longer enjoys a monopoly in the fields of aesthetics, design and (small-scale) production; the industry no longer holds a monopoly on (mass) production processes and marketing; consumers increasingly handle their own production and distribution. In all these changes, technological innovations (in both hardware and software) play a central role. The complexity of the techniques requires collaboration with experts, as well as new attitudes toward the mastery of technique. Students will be required to familiarise themselves with digital technologies, at least to the extent that they are aware of the possibilities and limitations of these technologies.

As the role of consumers in designing products goes on increasing, designers must learn to adopt co-creation processes. But even the integrated development of product service systems requires artists and designers to acquire new knowledge and skills.

However, research⁶ has shown that students of visual art education programmes in the Netherlands are primarily consumers of digital technologies and digital media, and tend not to identify or present themselves as producers of digital products. Their knowledge of software and hardware is limited, as are their ambitions for production using digital media, production of digital products, and digital distribution.⁷

Another remarkable conclusion of the aforementioned research is that students generally do not work collaboratively, and do not think of digital communication platforms as potential tools for working on collaborative projects or distributing digital products. This contrasts sharply with the professional practice, where loose and constantly shifting (digital and international) collaborations are increasingly becoming the norm. This in turn has led to a new understanding of authorship. Art and design are no longer an exclusive act by a single individual artist or designer; meanwhile, mass communication and private communication are becoming increasingly intertwined. The consequences of these changes reach far beyond the domain of the arts, affecting the curriculum of all higher education programmes.

2.2 Local / global

International relations are also rapidly changing. The dominant position of Western economy and culture is no longer taken for granted. As a result of ongoing crises compounded by failing governmental oversight, public confidence in the liberal capitalist foundations of the Western economic system, and in the ability of governments to solve current problems, has eroded. Meanwhile, shifting age demographics and perpetual national debts create an impression of passing on the bill to the next generation, with the risk of a new clash of generations. A rapidly growing global population, and the

emergence of new economic world powers which have managed to free themselves from Western domination, are threatening to quickly deplete whatever natural resources are left (regardless of whether we will even be able to meet the growing demand for food). Millions go on flocking to the huge cities, where there always seems to be work and money for those who can find it, leaving the countryside to be plundered by corporations eager to exploit its soil and natural resources.

Shrinking confidence in governments and economies, together with increasing urbanisation, have already led many people to start seeking alternatives. These can be found in small informal communities which have developed their own barter systems (exchange of time and services) or even their own local currency. Also, an important shift can be observed in Western values. Economic growth and earning money are no longer the sole factors for determining status. Small-scale economies, sustainability and the search for a sense of purpose are increasingly seen as essential values, and publicly adopted even by large multinational corporations.

New technologies, specifically fablabs and 3D printing, hold the promise of enabling in the near future a shift in traditional production processes, from manual labour and assembly-line production towards local high-quality customised production. This in turn would signify a shift from the globally organised supply chain (with knowledge-based economies in wealthy countries and production industries in low-wage countries, linked together through global transportation and distribution industries) toward locally organised industries where on-demand conceptualisation and production are increasingly the norm.

2.3 The changing role of artists and designers

The contemporary professional practice of artists and designers can be described as: hybrid, multidisciplinary and international. Hybrid, in the sense that artists and designers produce both fine art and applied work, and rely on fluctuating combinations of various sources of income: sales of independent work, work commissions, traditional employment, and subsidies.

Although most artists and designers have received specialist training, the professional practice of the overwhelming majority of artists and designers today is only partially specialised.

The multidisciplinary character of the professional practice is also multifaceted; the artist or designer with specialised knowledge and skills may be part of a multidisciplinary team of artists, designers and/or other specialists; the artist or designer may be a generalist, working with various media or in various disciplines; the artist or designer may assume different

roles, depending on the nature of the task, within teams collaborating on projects; or, the artist or designer may function as an equal partner in a co-creation process with a client from a different discipline or sector.

The international nature of the professional practice is largely based on the speed and global range of modern communication media; artists and designers are able to connect worldwide, 24 hours a day, and to collaborate using digital communication platforms; furthermore, they tend to find their sources of information and inspiration locally as well as globally. Discussions on art and culture take place on a global stage, and the market of supply and demand has also become a global one.

The distinction between artists and designers, founded on the historical dichotomy between on one hand the tradition of the Académie des Beaux-Arts (artes liberales) and on the other hand the tradition of artisans and craftsmen (artes mechanicae), has become irrelevant. Both artists and designers can work on projects and commissions whose scope and complexity are defined and limited in practice by specific goals and budgets; and both artists and designers can create products and services based on their own personal creative ambition, and find a customer for these products and services only after they have been completed. It should be noted here that this artistic and financial independence, which has been a key element of the professional practice of visual artists ever since the Romantic period, has in fact remained unchanged: it has always been a hybrid or partial professional practice. Visual artists create their own market; there is no job market in the traditional sense, with clearly formulated replacement needs.⁸ What is obvious, however, is that the state's role as patron and protector of the arts can no longer be taken for granted.

All these developments require artists to embrace interdisciplinary or trans-disciplinary approaches to art and design processes, as well as a critical historical awareness, and an acute sense of the challenges and developments of the present as well as the near future.

2.4 Professional practice and education: conclusions

We now face important choices in the development of a position on how best to prepare students for a successful start of their professional career, so that they may contribute in a meaningful way to the contemporary field of art and design in Western and non-Western societies:

1. The idea that art and design are subject to fixed rules is an outdated concept. Yet many of the complex conventions and techniques which have come to define art and design clearly demonstrate the need for comprehensive bachelor and master education programmes.

2. Technical expertise and critical engagement are essential requirements of artistic practice, and as such must occupy a prominent place in the education programmes.
3. Regardless of the economic sector in which the artist/designer chooses to make a living, all practitioners must develop strong competences in the fields of collaborative strategies as well as networking and entrepreneurial skills.
4. The intense and inspiring relationship among students and between students and teachers within a learning environment is an essential condition for the development of the critically engaged artists which the professional practice requires.

These are the four pillars on which the academy of the future will be built. It is the institute's responsibility to ensure that this happens in a manner which does justice to the institute's own historical curriculum and reputation, while giving concrete meaning to the choices made in terms of

the new curriculum's focus on specific domains (defined by markets as well as by cultural factors).

The choices the WdKA has made, and the way in which these choices are implemented within a coherent curriculum, will be described in the following section.

5

For an excellent description of the new social relationships which will radically transform urban environments and they way they are experienced as a result of the daily use of new communication technologies, see W.J. Mitchell, *City of Bits, Space, Place and the Infobahn*, MIT, 1995. The book describes a vision of the future which has now already become a reality. ?

6

Aldje van Meer, *I Would Rather Design a Poster than a Website*, Rotterdam, 2012. ?

7

It is doubtful whether our teachers are sufficiently competent in these fields to provide their students with the necessary knowledge and skills. Also, we must realise that our students do not necessarily share the older generation's fascination with digital media. For the younger generation, computers are nothing new; they are simply appliances. As a result, many students show a preference for traditional techniques, which represent different notions of value. ?

8

A recent paper by C. van Winkel and Pascal Gielen offers an excellent overview of this hybrid practice, describing the age-old tradition of the artist as independent entrepreneur. C. van Winkel, P. Gielen and K. Zwaan, *De hybride kunstenaar: de organisatie van de artistieke praktijk in het postindustriële tijdperk* ('The Hybrid Artist: The Organisation of Artistic Practice in the Post-Industrial Age'), 's-Hertogenbosch, 2012. ?

3. The Willem de Kooning Academy

The WdKA has taken on the momentous task of fundamentally reviewing and updating its education programmes and organisational structure, according to the following principles:

1. The WdKA has always been an academy with a strongly practical-minded, sometimes commercial, character. Conceptual ability, a media-oriented outlook and an active international presence have always been clearly recognisable in the curriculum, and must remain so.
2. The WdKA chooses to keep up with the times and to focus its education programmes on the contemporary professional practice, as well as emerging practices.

3. The WdKA's education programmes attract large numbers of talented students. Those talented enough to be admitted and eventually graduate must be provided with a head start in every aspect of their professional practice.
4. The professional practices are varied, as are the professional roles which graduates can be expected to assume within different projects. In order to gain a clear understanding of their possibilities and opportunities, students must learn entrepreneurial skills as well as practical knowledge.
5. Artists and designers are often required to work as part of a team. The complexity of the various projects and media, and the multi-layered intricacies of engaging with a heterogeneous public, all require collaboration with various specialists and actors in the production process. The WdKA makes good use of its position as part of an all-round university of applied sciences, by proactively seeking collaborations and crossovers with like-minded and otherwise related fields of knowledge and education programmes, within the university as well as in the world at large.
6. Good teachers must prepare students for an increasingly complex and heterogeneous professional practice. This means that at least part of the teaching staff must be not only professional artists/designers, but first and foremost professional teachers.

These principles have led to the formulation of a vision on education and professional practices, which in turn has required the adoption of a completely new curriculum.

The professions are undergoing major and rapid changes, as are the products of these professions. Although the necessary insights and skills are deeply rooted in a professional tradition which continues to set the standard for emerging practices, students must become proficient in new forms of knowledge and collaboration. The education programmes no longer make any distinction between art and design; both approaches are active in the arena of public space and commercial production from the perspective of their own disciplines. New challenges are arising in the fields of technology, public space, engaging with the public, and shifting international relations. All these challenges must be reflected in the graduation profiles.

Media focus, research skills and entrepreneurial skills must be integrated as part of the student's competences for each phase of the curriculum. In order to achieve all of the education programme's goals, the curriculum's

individual components must form a coherent whole. This requires a project-oriented approach, which in turn demands new teaching methods. Teachers will now be team members with tasks and responsibilities focused on academic goals, rather than custodians of a specific academic subject within the whole of one year's curriculum. This will require changes in staff policy.

3.1 The curriculum

The WdKA distinguishes three work fields for graduating artists and designers, each with its own economic orientation and operational business model.

Social Practices

Social Practices are artistic practices focused on enhancing the quality of life of individuals or groups within society, by raising their awareness, educating them, or contributing to their sense of identity. In other words: helping people to improve themselves in their relationship with their surroundings. Here, the social engagement of the artist, teacher or designer takes precedence over his/her personal expression. Through engagement with image and design, individuals or groups are shown a new way of perceiving their own world, and of finding their own place within this world.

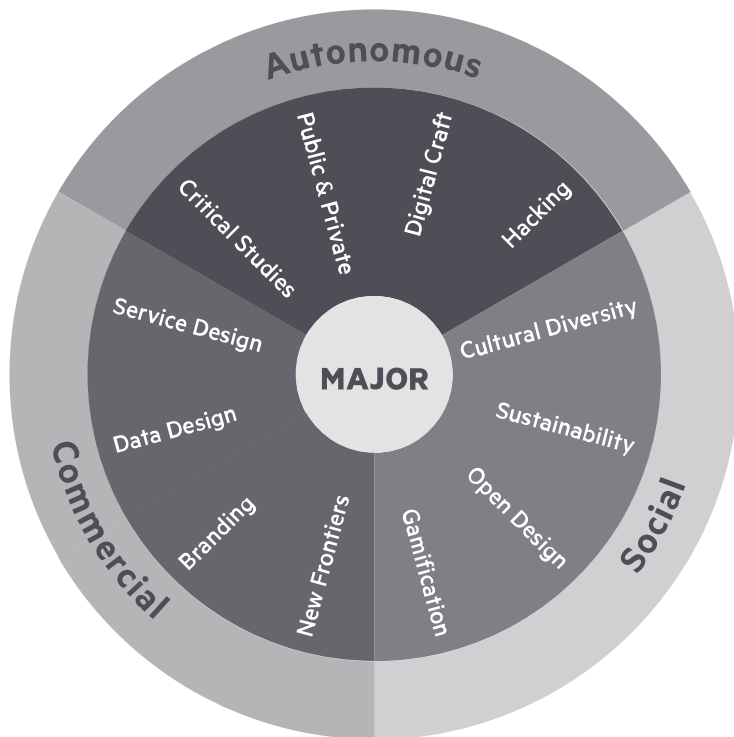
Autonomous Practices

The Autonomous Practices profile focuses mainly on the artistic ambition and expressive possibilities of the (individual) artist, teacher or designer. Autonomous creative entrepreneurs formulate their own goals and assignments, based on their personal vision of the world and the human condition, and give shape to this vision; working from their studio, they then find a market for their independently developed products or services.

Commercial Practices

Commercial Practices combine artistic practice with an original vision of everyday reality, in order to promote and improve the exchange of ideas and goods between various parties. Marketing and commercial principles are combined with concept development and visual aptitudes, focused on reaching a large audience. The visual product or service is largely determined by the situation in which the commission was formulated, or the opportunities of realising large-scale productions for a large audience.

During the course of their studies, students who initially started out within a traditional artistic discipline will increasingly focus on one of these three work fields and learn its methods and conventions. This will become their graduation profile.



This 'wheel' shows how the major specialisations relate to the challenges within each domain specialisation and to the three graduation profiles.

Within this chosen profile, students learn to identify their strong and weak points, and how these apply and relate to various professional roles.

Students learn to work collaboratively, with students of other visual disciplines, and where applicable also with students of other education programmes not directly related to art and design.

During the course of the education programme, the strict division between the different academic disciplines will be left behind. For the WdKA, the traditional distinction between independent and applied work is no longer relevant. Students work in interdisciplinary and transdisciplinary settings on challenges specific to the emerging culture: the markets and the world of the present and the near future. Creative individuals learn how to collaborate in cross-over settings, and even how to develop new specialisations. In order to make this possible, and to organise the educational programme in a flexible way, focusing on current challenges

rather than fixed professional conventions, the traditional major-based specialisations will be gradually replaced by new challenge-based domain specialisations. For each economically defined domain, each challenge is addressed according to the requirements of that particular domain.

Within the three profiles, the education programmes are organised according to four domains: In Transit, Public Space, Technology (Open Source) and Experience Strategies. Within these domains, relevant themes and challenges from the professional practice are defined for each profile. The choice of specific themes and challenges is based on the WdKA's vision of the future professional practice of its graduates.

3.2 From major specialisations to domain specialisations

	Autonomous Practices	Social Practices	Commercial Practices
In Transit	Critical Studies	Cultural Diversity	New Frontiers
Public Space	Public & Private	Sustainability	Branding
Technology (Open Source)	Digital Craft	Open Design	Data Design
Experience Strategies	Hacking	Gamification	Service Design

Social Practices

- × **Cultural Diversity** focuses on the experiences and behaviours of groups or individuals who manifest themselves in their urban environment and along various dimensions or registers (lifestyle, art, religion) as 'local world citizens'.
- × The accelerating shortage of natural resources, the changing economies and the growing world population all demand a reorganisation of our modes of production, transportation and consumption. Within **Sustainability** students research how this process can be designed and influenced.
- × **Open Design** embraces a participative design methodology, where users are invited to modify the design, making the design process a dynamic one. Designers can publicly share their design according to 'open source' principles.
- × **Gamification** is the application of game design principles to non-game situations, focused on boosting the motivation, involvement and active participation of the target group.

Autonomous Practices

- × **Critical Studies** explicitly operates on a meta-level, discussing and questioning the legitimacy of fundamental issues, on a theoretical (conceptual) as well as practical (operational) plane.
- × The blurring of boundaries between areas of tension, such as the virtual and the physical, or the public and the private, generate new perspectives of ownership and exchange. This requires new perspectives on intervention and design of **Public & Private** space.
- × **Digital Craft** focuses on creating and reinventing creative tools, combining analogue and digital technologies, and reconsidering how the two can be combined.
- × **Hacking** means finding applications for a system which were not intended by its creator, resulting in a shift of consciousness. Quick and simple alternatives are preferred above more complex solutions.

Commercial Practices

- × **New Frontiers** focuses on the exploration of new markets. Students develop powers of observation and an ability to recognise opportunities for internationally expanding their business activities and their professional appeal.
- × The media and the methodologies which individuals and organisations use for communicating their identities are changing, requiring new marketing, communication and design strategies for branding, city marketing, profiling, etc. **Branding** focuses on research, design and strategy development.
- × **Data Design** focuses on identifying meaningful information in large amounts of data, and coherently communicating this information to a target audience.
- × By facilitating and enhancing the dialogue between users and designers about behaviour, desire and motivation, **Service Design** improves the quality of an interaction, product or service. These methodologies are used for the creation of user experiences.

These are the challenges which have currently been defined for the various domains and graduation profiles. Naturally, this is a flexible system. Depending on developments in professional practices, markets and artistic

visions, these challenges can be updated or even replaced by new challenges.

The WdKA's research agenda is currently determined by these challenges. Research by teachers and students, as well as collaborations with external partners, focused on solving or re-examining practical problems from these domains, must therefore concentrate on these subjects.

3.3 Working methods

From September 2013 onwards, the education programmes will mainly be implemented in project-oriented teaching formats. This means that there will be less traditional classroom teaching, and more collective study and focused individual study in open 'stations' (which replace the traditional studios and workshops). The teacher's main role is to guide and supervise (groups of) students. The education programmes are structured chronologically into four quarters per year. All of the WdKA's four-year education programmes consist of three phases. The first phase focuses on Profession and Concept (quarters 1 to 6); the second phase focuses on Broadening (quarters 7 to 12); the third phase, the graduation phase, focuses on Deepening (quarters 13 to 16).

The new education programmes are nurtured and supported through increased collaboration with Creating O10, the Rotterdam University's institute for research and innovation, as well as a limited number of strategic partnerships with internationally renowned universities.

Didactical quality will be the main factor in determining staff policy for the coming years. Master-level training for existing teachers, and an increase in the number of teachers with more contract hours (supplemented by a flexible pool of temporary and guest teachers) are the most essential elements of this policy. Accommodations and facilities, including the stations and the electronic teaching environment, will be further customised to meet the requirements defined by the curriculum.

Conclusion

The development of the curriculum described in these pages, and the consequences of its implementation on accommodation and staff policies, have required a huge effort on the part of the academy's teachers. Since the summer of 2011, they have managed to combine their regular teaching duties with research, development and training focused on implementing the new curriculum. In the course of this process, they have thoroughly assimilated and further refined this curriculum. Since the spring of 2013, the curriculum's originators and developers have coached the rest of the teaching staff, helping

their colleagues to fine-tune their working knowledge of the new programme. This way, the curriculum has been implemented from the bottom up, so that the teachers are true shareholders in the new programme.

Of course, the introduction of the programme is not the final stage. We can already glimpse a future of alternative academies; for example, the academy as a living and working community for students and professionals. If there's anything history can teach us, it's that in the long term, the most successful academies are those which continue to evolve, by organically adapting to their changing environments, while those unwilling or incapable of change are destined to extinction.

**Essay #2 /Interventions, Experimentation,
Markets**

**Florian
Cramer**

Art education and cross-disciplinary creative practice

Introduction

Summary: This paper begins by re-examining two major traditions - one intellectual, one vocational - which have historically defined art education in the West. In recent years, however, contemporary art and design have seen the emergence of cross-disciplinary work forms, which are rapidly becoming the norm in creative practices and industries, locally as well as internationally. The curricula of established art academies, implicitly based on traditional concepts of art and design, do not yet reflect these changes. In this light, the Willem de Kooning Academy's 2013 curriculum reform is a radical one.

1. Idealism and fine art

1.1 Plato

In Plato's conception of academia (Ἀκαδημία) there is no place for visual artists. In book ten of *The Republic*, Plato, expanding on the classical Greek concept of mimesis, rejects artistic representation as "third from the truth" ¹ - in other words, an imitation of an imitation (the true original existing only in the metaphysical spheres). Rather than conveying ideas, painters offered nothing but mirrors and shadows, which could only distract from the philosophical truth. Such notions would eventually inspire the iconoclastic movements of later centuries, in Christian as well as Islamic cultures.

A partial exception was granted in the case of music: while Plato banned most harmonic systems from his ideal Republic (as well as all instruments except for the lyre and the harp), music was at least recognised as the creation of beauty. ² Here, Plato was indebted to Pythagorean thinking, with its discovery of corresponding laws of symmetrical beauty in music, mathematics and macrocosmic nature. This exception would have far-reaching consequences for the very definition of the arts in the European Middle Ages. Music was included in the canon of the *septem artes liberales*, the seven liberal arts, together with grammar and rhetoric (as the precursors of linguistics and philology), dialectics (as the precursor of philosophical logic), and arithmetic, geometry and astronomy. On the other hand, those disciplines which prefigured what would eventually become the art and design professions (including weaving and architecture) were relegated to the canon of the 'lower' *artes mechanicae* which also included agriculture, cooking, blacksmithing, martial arts and trade.

1.2 Middle ages and renaissance

This normative divide has persisted to the present day. In fact, it can be plainly noticed in the field of art and design education: on one hand, we have the

'liberal arts' model, as the humanist continuation of the *septem artes liberales*; on the other hand, we have the model of vocational art and design craftsmanship, as an (often class-conscious) continuation of the 'lower' *artes mechanicae*.

The Italian neoplatonist Renaissance philosopher Marsilio Ficino attempted to break through this divide when he founded his new Platonic Academy in 15th-century Florence (financed by the House of Medici and working in close collaboration with contemporary painters such as Botticelli). Through its complete integration of Pythagorean thought, Renaissance neoplatonism was fundamentally based on aesthetics, and on an aesthetics-centred metaphysics. Botticelli's *Birth of Venus*, and later Raphael's *School of Athens* and Leonardo da Vinci's geometrical drawings of the human figure, are all clear examples of visual art striving for that same level of beauty (both transcendental and mathematical-harmonic) which Plato had recognised only in music.

1.3 20th century

From the Renaissance to the present day, much of the history of Western visual arts can be interpreted as a continuous struggle for emancipation from the 'lower' crafts, and acceptance into the 'higher' liberal arts. Through the break with scholastic science in the anti-university academy movement of the 17th century, the liberal arts were transformed into the modern humanities and sciences. In this respect, contemporary notions such as 'concept art' (a term coined in 1961 by the philosopher and artist Henry Flynt, who was fully aware of these historical issues),³ 'dematerialisation' or 'artistic research' do not really describe anything new.⁴ At their simplest level, they express a desire by artists to emancipate themselves from the 'lower' crafts, and to have their work accepted as intellectual labour; or, figuratively speaking, to be accepted as thinkers in Plato's republic. In this light, 'concept' (or 'conceptual') art is in fact straightforward idealism, with an agenda that can be traced as far back as Hegel, who wrote in 1828: "[...] art, considered in its highest vocation, is and remains for us a thing of the past. Thereby it has lost for us genuine truth and life, and has rather been transferred into our ideas instead of maintaining its earlier necessity in reality and occupying its higher place."⁵

The notion of artistic research still carries the potential to break through the confines of conceptualism: rather than merely implying that artists should conform to academia and standard notions of intellectual labour, it offers a way of cutting through idealism, and of emancipating artistic practice itself as an act of thinking. A similar notion was pursued in Western continental philosophy, by Martin Heidegger and later others such as Jacques Derrida; in East Asian intellectual traditions, such ontological

and deconstructive thinking goes back much further, to the earliest beginnings of Taoism (interestingly, in the same century as Plato). Therefore it is not surprising that this divide between fine art and applied art does not exist in countries like China and Japan, except as imported Western culture.

9 Plato, Republic, book X, 602. ?

10 Plato, Republic, book III, 403. ?

11 Henry Flynt, Concept Art, Essay, 1961, in: Jackson Mac Low, La Monte Young (editors), An Anthology, 1962. ?

12 Lucy Lippard, Six Years: The Dematerialization of the Art Object, University of California Press, 1973. ?

13 G.W.F. Hegel, Aesthetics: Lectures on Fine Art, Oxford: The Clarendon Press, 1975, p. 10. ?

2. From metaphysics to ontology, from arts to crafts

Rather than being resolved, the dualisms of Western art seem only to have shifted: from 'mechanical' versus 'liberal' arts, to 'applied' versus 'fine' arts; or, in the 19th and 20th centuries, 'design' versus 'visual art'; and finally, in the 21st century, 'creative industries' versus 'artistic research'. After the recent sweeping cuts in public funding for the arts sector in the Netherlands (which, incidentally, have equally affected many 'commercial' designers who are in fact largely dependent on commissions from subsidised arts institutions), art school students today see 'creative industries' and 'artistic research' as their two major career options. ⁶ The question remains as to whether the two are in fact mutually exclusive.

From a sociological viewpoint, the desire by artists to be recognised intellectually in Platonic academia may be understood as a class struggle resulting in upward social mobility. The notion of the Renaissance painter as an independent maker, researcher and entrepreneur is arguably the earliest manifestation of what Richard Florida calls the 'creative class' - a description that applies not only to creative industries, but may include almost any type of high-skilled labour. ⁷

Another type of class consciousness could be observed in artist-designers who refused this 'intellectual' career path, choosing instead to preserve and continue the medieval crafts and workshops model, while gradually transforming its organisational system: from guilds into cooperatives. The Arts and Crafts movement of the 19th century, guided by the socialist ideas of the art critic John Ruskin and the artist and writer William Morris, was more than merely a counter-reaction to the industrial revolution; it can also be understood as a practical-minded opposition to idealist notions of art, including Hegel's

assertion that art had lost its significance because it had "rather been transferred into our ideas." ⁸ Martin Heidegger's shift from metaphysics to ontology (or, in the terminology of contemporary philosophy, from purely speculative to object-oriented practice ⁹) was in fact understood and applied by the Arts and Crafts movement long before it was theoretically formulated by Heidegger. ¹⁰ Interestingly, Heidegger was profoundly inspired by expressionist artists such as Vincent van Gogh, as well as by the Lebensreform ('life reform') movement which began in the late 19th century in Germany and Switzerland and remained influential well into the 20th century. (Retrospectively, the life reform movement may also be seen as a historical bridge between anti-intellectualist practices such as Arts and Crafts, and the shift in early 20th-century continental philosophy away from Platonist and Hegelian idealist thinking and towards fundamental ontology. In all of these movements and schools of thought, practice is valued just as highly as theory.)

The influence of the Arts and Crafts movement's practical-minded philosophy can be found in various 20th-century art movements, often in unexpected places. The direct legacy of Arts and Crafts in Bauhaus and De Stijl (also known as neoplasticism) is well-known and has been extensively documented. ¹¹ Both De Stijl and Bauhaus adopted Arts and Crafts' anti-industrial programme and applied it to modern industrial design. Even more significantly, they also envisioned, through the (literal) equality of 'arts' and 'crafts', a radical fusion of fine art and design. Theo van Doesburg's 1917 Neoplasticism ('Nieuwe Beelding') manifesto addressed on equal terms "the painter, the architect, the sculptor as well as the carpenter", as visual designers of every aspect of life, for whose work the same principles should apply. ¹²

This blurring of the boundaries between fine art and design has remained an important characteristic of the arts (and of visual culture in general) in the Netherlands. It has also characterised Dutch art education which, with a very few exceptions, was modelled after the 1922 Bauhaus curriculum: a foundation course (German 'Vorlehre'; Dutch - by way of Classical Greek - 'propedeuse') is followed by introductory instruction in composition, colours and materials. The main instructional method consists of material-specific and media-specific workshops, on location in the school. Just as Arts and Crafts was a counter-movement to 19th-century fine art, art schools with Bauhaus-derived curricula were a counter-programme to classicist art academies (modelled on the Académie des Beaux-Arts in Paris, which was founded by Cardinal Mazarin in 1648, at a time when France was still living under absolute monarchy).

What is less well known, is that the core ideas of both the Arts and Crafts movement and the Bauhaus school were later embraced by two art movements of the 1960s, which are usually associated with quite opposite notions of conceptualism and dematerialised art practices: the predominantly American (but also European and Japanese) Fluxus movement, and the continental European (predominantly French) Situationist International. George Maciunas, the founder and central organiser of Fluxus, urged artists (in his 1963 Fluxus Manifesto) to “purge the world of bourgeois sickness, ‘intellectual’, professional and commercialised culture, PURGE the world of dead art” and to “FUSE the cadres of cultural, social & political revolutionaries into united front & action”.¹³ Regardless of the apparent contradiction between the ‘beauty’ ideals of Arts and Crafts on one hand, and the countercultural audiovisual aesthetics of Fluxus on the other, Maciunas (an architect and graphic designer by trade) obviously followed Ruskin’s and Morris’ lead in several respects. Like them, he envisioned Fluxus as affordable art for the common people. Hence Fluxus’ focus on street theatre actions, small-edition artists’ books, and small objects and boxes produced as multiples and sold inexpensively in ‘Flux Shops’ in New York and Amsterdam. Maciunas’ elaborate Expanded Arts Diagram combined popular amusement (such as American Vaudeville) with avant-garde art, design and music into an integrated alternative vision of contemporary art. Significantly, Fluxus was also the first 20th-century Western art movement to include non-Western (namely, Japanese) contemporary art.

The Fluxus programme has been characterised (in its own time as well as in retrospect) as ‘total art’, where art and life are one. While such tendencies certainly did exist within the movement, there is also a danger here of reducing Fluxus to just another romanticist art programme. In 1798, Friedrich Schlegel described a vision of romanticist poetry as “a progressive universal poetry” whose “destiny is not merely to reunite all of the different genres, and [...] make life and society poetic”, embracing “everything [...] all the way down to the sigh, the kiss that a poeticizing child breathes out in an artless song”.¹⁴ By the late 19th century, this idea had further evolved into the late-romantic concept of the ‘Gesamtkunstwerk’ or total artwork (referenced in Maciunas’ Expanded Arts Diagram as WAGNERISM / “whole art”).¹⁵ But the performance scores typical of Fluxus (such as George Brecht’s Word Event, consisting of only the word ‘EXIT’) certainly invalidated any grandiose Wagnerian expectations. Their extreme minimalism and their explicit absence of any higher or metaphysical meaning, made them rather ontological exercises - inspired by Western existential philosophy as well as Japanese Zen Buddhism. Also, Fluxus objects, such as Maciunas’ extensive diagrams, defy any simple classification as art, graphic design or (anti-academic) research.

The Situationist International movement went even further, operating under the guise of a research organisation: its main activity was the publication of a quasi-academic journal. One of the precursor groups which eventually led to the foundation of the Situationist International organisation was the 'International Movement for an Imaginist Bauhaus', established by the Danish painter Asger Jorn after the breakup of the artists' group COBRA. The essential question for this 'Imaginist Bauhaus' was the same which had been central to both Arts and Crafts and Bauhaus: in Jorn's words, "WHERE AND HOW to find a justified place for artists in the machine age."¹⁶ Accordingly, Jorn characterised the original German Bauhaus as an "answer to the question: What kind of 'education' do artists need in order to take their place in the machine age?"¹⁷

In Jorn's view, post-war functionalism, as exemplified by the design school of Max Bill, had twisted the original ideas of Bauhaus (which Jorn credited to Ruskin, among others) and reduced them to mere utilitarianism. His 1957 Imaginist Bauhaus manifesto is likely the first document to literally call for artistic research: "We want the same economic and practical means and possibilities that are already at the disposal of scientific research, of whose momentous results everyone is aware. Artistic research is identical to 'human science,' which for us means 'concerned' science, not purely historical science. This research should be carried out by artists with the assistance of scientists".¹⁸ In other words, the purpose of artistic research is not to elevate or promote artists to the 'higher' level of academia, but rather to save science from blind technocracy. In the same year, Jorn published a collaged subjectivist map of Copenhagen, *Fin de Copenhague*¹⁹ (with a credit for his Situationist comrade Guy Debord, as "Technical Adviser in *Détournement*"). Within the Situationist International movement, Jorn's programme converged with the group's concept of 'unitary urbanism' - a method of mapping cities through subjective experience, rather than top-down functionalist urban planning. This concept particularly attracted the Dutch artist Constant Nieuwenhuys, who was a member of the group from 1959 to 1960.

In contrast to American Fluxus, Jorn's Imaginist Bauhaus and the Situationists' unitary urbanism embraced some elements of European romanticism: from the notion of artists as humanist ambassadors (which Debord rejected, eventually leading him to expel all artists from the group) to the concept of *dérive* (drift): the intuitive exploration of the urban landscape, an idea borrowed from the Surrealists (and, going back even further, from the romanticist *flâneur*, strolling smartly but aimlessly through the streets).²⁰ Conversely, Situationist unitary urbanism may be seen as a direct precursor of contemporary service design: perceiving a built or designed environment, not merely as a structure, but more importantly as

a (customer) experience. In fact, the methodologies of Situationist unitary urbanism and service design mapping have a great deal in common, as the service and interaction designers Bill Gaver, Tony Dunne and Elena Pacenti pointed out in their much-cited 1999 paper *Cultural Probes*: "For instance, our maps are related to the psychogeographical maps of the Situationists, which capture the emotional ambience of different locations."²¹

- 14 Observation based on the author's tutoring of Bachelor and Master students of the Willem de Kooning Academy, Rotterdam. ?
- 15 Richard Florida, *The Rise of the Creative Class*, New York: Perseus Book Group, 2002. ?
- 16 G.W.F. Hegel, *Aesthetics*, op. cit. ?
- 17 The contemporary philosophical movement of Speculative Realism seeks to reconcile these two; Graham Harman, *Tool-Being: Heidegger and the Metaphysics of Objects*, Open Court, Rotterdam, Speculative Realism inspired the recent exhibition 'Blowup: Speculative Realities' organised by V2_ at Roodkapje, Dec. 8, 2012 - January 11, 2013. ?
- 18 Martin Heidegger, *On the Origin of the Work of Art*, in: Heidegger, *Basic Writings*, New York: HarperCollins, 2008, pp. 143-212. ?
- 19 Elizabeth Cumming, *The Arts and Crafts Movement*, London: Thames & Hudson, 1991, p. 166. ?
- 20 Theo van Doesburg, *Ter inleiding*, in: *De Stijl*, vol. 1, no. 1, pp. 1-2. The original Dutch: "Zoowel de schilder, de architect, de beeldhouwer, als de meubelmaker". ?
- 21 George Maciunas, *Fluxus Manifesto*, 1963, reprinted in: Hans Sohm, Harald Szeemann (eds.), *Happening & Fluxus*, Kölnischer Kunstverein, 1970. ?
- 22 Friedrich Schlegel, *Kritische Schriften*, Munich: Carl Hanser Verlag, 1958, pp. 37-38. ?
- 23 Astrid Schmidt-Burckhardt, Maciunas' Learning Machines, 2nd revised edition, Vienna/New York: Springer, 2011, p. 190. ?
- 24 Asger Jorn, *Notes on the Formation of an Imaginist Bauhaus*, in: Asger Jorn, *Against Functionalism*, 1957, <http://www.bopsecrets.org/SI/bauhaus.htm>. ?
- 25 *ibid.* ?
- 26 *ibid.* ?
- 27 Asger Jorn, *Fin de Copenhague*, Édité par le Bauhaus [sic] Imaginiste, 1957. ?
- 28 Walter Benjamin, *Charles Baudelaire: A Lyric Poet in the Era of High Capitalism*, London: Verso, 1983. ?
- 29 Bill Gaver, Tony Dunne, Elena Pacenti, *Cultural Probes and the Value of Uncertainty*, in: *Interactions*, January/February 1999, pp. 21-29. ⇐

3. Since 1970

The above examples of 20th-century art and design all share the following characteristics:

- × Distinctions between 'art', 'design' and 'research' have become increasingly meaningless, except as traditions or points of reference;
- × Innovation takes place in cross-overs: in Fluxus, design thinking is adopted by an art movement; in Situationism, artistic experiment is applied to social research and social intervention; in service design, artistic research is a tool for product/service development;
- × Art is no longer by definition only 'for art's sake'; design is no longer (purely) functionalist; research is no longer (purely) academic.

- × Even cross-over concepts can suffer from limitations inherited from their constituent disciplines' - such as the Bauhaus curriculum, with its sole focus on materials.

Also, the standard vocabulary of art/design history and theory is often inadequate for the analysis of these tendencies. Art theory is constrained by the analytical categories of 19th-century philosophical aesthetics, and defined through idealist terms such as 'conceptual', 'dematerialisation' and even 'hybridisation'.

In all the previously discussed examples, as well as more recent cases which we shall introduce in the next section of this text, artists/designers have been investigating new relationships between visual culture, social intervention, globalisation, new economies, and experimental forms of research and education.

4. Case Studies

4.1. Art as social intervention: Food and RAAF

Food was a restaurant founded in 1971 by a group of artists in New York's SoHo district: visual and performance artists, filmmakers, musicians and poets, loosely gravitating around the main initiators, Gordon Matta-Clark and Caroline Goodden. The restaurant was, first of all, a neighbourhood business; perhaps more significantly, it was the main precursor to what the curator Nicolas Bourriaud has called the 'relational' art of the 1990s. Matta-Clark, in his letter A MATTA'S PROPOSAL (alluding to Jonathan Swift's A Modest Proposal, which satirically advocated cannibalism as a means of solving the Irish famine), described his "mission [...] to restore the art of eating with love instead of fear".

The difference between Food and other performative art projects (Fluxus, happenings) is the complete absence of any symbolic framing. The restaurant simply was, deriving its meaning entirely from its social and economic function: sharing food, creating an artists' community space, and financing artists' projects. Unlike the usual restaurant jobs which artists often must take on in order to support themselves, the work was not perceived as some alienating day job with no connection to the artists' own work, but rather as an art project (or social installation) in its own right. In this way, cooking food was elevated from the lowly artes mechanicae to the level of contemporary art. At the same time, Food dispensed entirely with the notion of art as something different or separate from crafts and

social activism. Food, as an artist-run space designed for enabling processes, social dynamics and experiences, can be seen as an early example of what we now know as 'social design'.

Food became the prototype for all economically self-supporting artist-run social spaces, which typically generate income by selling food and drinks. In Rotterdam, the small venue RAAF ('Rotterdam Art Adventure & Food') is a perfect contemporary example of the concept originally pioneered by Food. RAAF was founded in 2009 (originally under the name Kunstplatform de Kapsalon, 'The Barbershop Art Platform', in a former barbershop in South Rotterdam) by students of the Willem de Kooning Academy. Running the venue, which unequivocally combined art with globalisation-critical political activism, became their graduation project for the Bachelor Fine Art programme.²²

VI



Later on, moving the venue to another location in South Rotterdam and transforming it into RAAF involved some major changes in its programming and economic model, since the makers wanted the venue to be able to sustain itself without government art subsidies. RAAF is now a multi-purpose space, with more emphasis on its café and restaurant function. Besides small exhibitions from Rotterdam artists and other residents of South Rotterdam, RAAF also hosts music concerts and open mic poetry readings, attracts a

steady audience, and serves as a young artists' community hub for the neighbourhood.

Kapsalon/RAAF is in fact a typical example of the post-graduation projects and careers of many of today's artists. Although the project did not entail visual or fine-art work in any traditional sense, the teaching staff of the Willem de Kooning Academy's Bachelor Fine Art programme was forward-looking enough to accept their effort as a fine-art project, and to reward it with a positive assessment. However, there was nothing at all in these students' curriculum which supported or prepared them professionally for their undertaking - no electives or minors to train them in interdisciplinary project organisation, no curriculum options for systematically studying art as social intervention or for acquiring the business administration skills needed for running a self-organised project or venue. Until now, students who chose to work as social designers, community artists and non-traditional educationalists had to rely on their 'natural' project organisation talent or some additional training in order to mature into professional entrepreneurs in these fields.

4.2. Art as radical autonomy: Atelier van Lieshout

Joep van Lieshout is likely the most prominent living artist to have graduated from the Willem de Kooning Academy.²³ Operating with his studio workers under the corporate moniker Atelier van Lieshout (AvL), he describes his work as "objects that balance on the boundary between art, architecture and design".²⁴ These are often monumental sculptural installations which embody dystopian factories of social engineering: hospitals, restaurants, living spaces and brothels, where humans are reduced to anonymous cogwheels in machineries that recycle their waste and feed it back into their food chains. AvL builds these environments as sculptures, architectures and designs to be actually used by real people; for example, the office spaces of the media-experimental arts venue WORM in Rotterdam.

AvL's work is characterised by seemingly extreme contradictions. While the environments depict humans as tiny parts in machineries beyond their control, AvL in 2001 declared its studios in the Rotterdam harbour a free state (with its own currency, legislation and national flag) and spent most of that year focusing its efforts on practical experiments toward achieving economic and ecological self-sufficiency. In this respect, AvL has taken the Western notion of the autonomy of art and artists to its logical extreme (an idea first formulated by Immanuel Kant in his Critique of Judgement, and formalised as government policy in the Netherlands in the late 19th century by the liberal politician Johan Rudolph Thorbecke). However, AvL also undermines the established values of autonomy in fine art by sacrificing

the individual names and signatures of its artists in favour of a collective corporate identity, and by disregarding - much like constructivism, Fluxus and Situationism in the 1920s and 1960s - any distinctions between art, design and architecture.

Autonomy, in this sense, is an issue of intellectual freedom, which goes far beyond any automatic assumptions that contemporary art by definition exists purely for its own sake and on its own terms. (It is worth noting here that the term 'autonomous' is also, in the Netherlands at least, a fairly recent synonym for 'fine art', 'visual art', etc. For example, prior to the 2013 curriculum reform, the Dutch title of the Willem de Kooning Academy's Fine Art Bachelor programme was 'Autonome Beeldende Kunst'; literally, Autonomous Visual Art.) AvL's works, on the other hand, reflect the concept of autonomy in a dialectical way, with the constraints of alienating machineries as the price one must pay for self-sufficiency.²⁵

Thus, 'autonomous' practices are no longer by definition the privilege of 'autonomous' fine art programmes - as Theo van Doesburg already implied a century ago in his *Nieuwe Beelding* manifesto. For art schools, this means that the 'autonomy' of the arts must first of all be questioned in its real-world limitations, and secondly be regarded as a challenge for creative practitioners of all disciplines - regardless of whether these disciplines traditionally were classified as 'fine art' or as 'design'. Prior to the Willem de Kooning Academy's radical 2013 curriculum reform, the 'Autonomous Fine Art' programme (which, incidentally, only accounted for about 2% of the student population) often served as a refuge for students who could not find their place in any of the school's design programmes. For example, students often switched from a design programme to the fine art programme at a later stage of their studies. This in itself is a serious indication that fine art is not necessarily a creative discipline in its own right, but rather a radically experimentalist - often even political - attitude, regardless of the practitioner's chosen discipline.

AvL's work shows us that any creative practice which explores and insists on autonomy, is by definition a social practice. However, unlike the practices of community artists and social designers, autonomy is not necessarily socially constructive; it may just as well be anti-social. This is not to advocate the romanticist (and bourgeois) cliché of the artist as sociopathic genius. Fluxus street actions and Situationist psychogeographical drifts, for example, were anti-bourgeois provocations in their day; nevertheless, community artists and service designers later discovered how these strategies could be applied to socially and commercially oriented creative practices. Conversely, radically autonomous practices such as those of AvL are also unapologetically commercial: AvL is one of Rotterdam's major 'creative industries' enterprises, along with Rem Koolhaas' architectural firm OMA and Marlies Dekkers' fashion

label. If 'autonomy' means that an artist project (such as RAAF) should be able to survive without government funding, then a viable business strategy becomes an absolute necessity.

4.3. Commercial practices: Piet Zwart, Kurt Schwitters, Fabrique

In 1923, the German collage artist and poet Kurt Schwitters toured through eight Dutch cities, performing Dadaist sound poetry with Theo and Nelly van Doesburg (and with riotous audiences providing the necessary scandal and spectacle).²⁶ Schwitters lived from the proceeds of his performances and his collage paintings, which he sold cheaply out of a suitcase he always carried with him. Through Van Doesburg, Schwitters was introduced to Piet Zwart, who had been trained as an architect in a period when Arts and Crafts dominated Dutch design culture. In the year of Schwitters' tour, Zwart had his breakthrough as a graphic designer with his constructivist advertising campaign for the Nederlandsche Kabelfabriek (NKF), a electrical wire and telephone cable manufacturer based in Delft.

Zwart and Schwitters soon became close friends. Schwitters visited Zwart every summer from 1925 to 1928, and again one last time in 1936, before his emigration to Norway and later England. Zwart inspired Schwitters to work as a commercial graphic designer and to set up his own advertising agency, Merz-Werbe, in that same year, influenced by Zwart and Van Doesburg. Schwitters switched to constructivist design and painting. In 1927, Schwitters founded the ring neuer werbegestalter ('circle of new advertising designers') whose membership included Zwart as well as the German typographical designer Jan Tschichold and the Bauhaus professor László Moholy-Nagy. Tschichold's seminal 1928 book *Die Neue Typographie* ('The New Typography') includes examples of work by both Zwart and Schwitters.

What makes this biographical fragment so illuminating, is the way it defies various common assumptions about commercial artistic practices. Zwart and Schwitters were not specialists, but rather multidisciplinary practitioners. In Schwitters' case, exposure to new commercial work fields did not result in less radical artistic work; on the contrary, it played a positive role in renewing his work and positioning it within the avant-garde visual culture of its day.²⁷ Engaging with everyday visual culture made it possible for artists like Schwitters to not only influence the development of mass media, but also to broaden the cultural impact of their own work.

Commercial application of the 'new typography' compelled artists to confront the new technologies of their time. In 1928, Piet Zwart, then still a teacher at the Academie van Beeldende Kunsten en Technische Wetenschappen (the school which is now known as the Willem de Kooning

Academy) wrote in the newspaper *Het Vaderland*: "In fact, the fine art painting programme will have to be shut down completely, in as much as this is still understood as that primitive method of applying colourful matter to a canvas, using a bundle of pig hairs tied to a stick. Instead, there should be a great deal of emphasis on synthetic and visual drawing, advertising, modern reproduction technologies, typography, photography and its visual possibilities, film, and the use of colour in architecture and in the urban space".²⁸ With this article, Zwart scandalised his colleagues and superiors, setting off a controversy within the Academy that would eventually lead to his forced departure five years later. In 2013, Zwart's vision has finally been realised. But as Aldje van Meer, head of the Willem de Kooning Academy's interdisciplinary media lab CrossLab, demonstrated in a recent empirical study, the new digital communication technologies which dominate contemporary everyday life now face very much the same kind of resistance within Dutch art education.²⁹

In 1994, the Dutch design agency Fabrique was, in all likelihood, the first design agency to receive a web design commission in the Netherlands. Yet Fabrique's founder and director Jeroen van Erp describes Fabrique as a 'hyperdisciplinary' agency, offering a holistically integrated brand communication service "in which the traditional boundaries between graphic design, industrial design, interior and retail design, and interactive media are sometimes nearly unrecognisable".³⁰ Fabrique's approach is to design a total customer experience, incorporating product/service ecosystems characterised by synergy of product and brand.³¹ This design practice is, in Van Erp's words, research-driven and based on the assumption that the impact of the digital revolution in changing the interaction of customers with products and services, is as profound as the impact of the industrial revolution was in its day. Just like Gaver's, Dunne's and Pacenti's previously quoted 1999 paper on 'Cultural Probes', Van Erp's design philosophy corresponds with Situationist experience strategies as well as earlier romanticist aesthetics, privileging aesthetic experience (aisthesis) over production (poesis). Consequently, Van Erp thinks of the designer not as a maker, but as a strategist.³²

Fabrique currently employs about a hundred people at its two branches in Amsterdam and Rotterdam; it is one of the few design agencies managing to grow in the current economic climate. Dutch polytechnic education - which includes art schools - tends by default to think of monodisciplinary vocational training as suitable job training. Yet, Fabrique is a striking example of a contemporary employer that expects its designers to think in radical multidisciplinary terms. Clearly, traditional monodisciplinary art and design education no longer prepares students for the contemporary work field. This means that cross-disciplinary, project-oriented and theme-oriented creative work is no longer merely a niche for experimental or activist art; rather, it has become a mainstream skill requirement for the commercial market. Cultural

changes, brought on by new information technologies, are now introducing this development into relatively conservative work domains, such as product design, retail design and fashion design.³³

30 Referring to their project 'The Mobile Kapsalon', the group writes: "During the trip the economic crisis will also develop itself. Not only in the Netherlands, but in the whole of Europe the governments are trying to reduce government debt by letting the innocent civilians pay. Therefore demonstrations, manifestations and other solidarity actions are on the program as well." Ashley Nijland et al., *Kunstplatform de kapsalon*, Rotterdam (self-published book), 2009. ?

31 Joep van Lieshout is currently ranked by artfacts.net among the top 300 contemporary artists worldwide. ?

32 Source: <http://www.ateliervanlieshout.com/pressAboutAVL.htm> (accessed on April 19th, 2013). ?

33 This is precisely what Adorno and Horkheimer have described as the 'Dialectics of Enlightenment' - with fascism, Western consumer society, and the writings of the Marquis de Sade as their main examples. ?

34 Friedhelm Lach, *Der Merzkünstler Kurt Schwitters*, Cologne: DuMont Schauberg, 1971, p. 56. ?

35 Before 1923, Schwitters' visual language was still very much influenced by cubism; in 1919 the Berlin Dadaist Richard Huelsenbeck dismissed him as an "abstract Spitzweg" (referring to the German Biedermeier painter Carl Spitzweg). ?

36 Piet Zwart, *Nederlandsche ambachts- en nijverheidskunst*, in: *Het Vaderland*, May 31, 1928: "Feitelijk zal de schilderkunstafdeling geheel moeten vervallen, indien men daaronder wenst te verstaan de primitieve methode waarbij met een bosje varkensharen, die aan een stokje gebonden zijn, kleurige materiën op linnen worden uitgeborsteld. Daarvoor in de plaats zou veel aandacht besteed moeten worden aan synthetisch en beeldend tekenen, reclame, moderne reproductiemethoden, typografie, fotografie en haar beeldingsmogelijkheden; film, kleurgeving in de architectuur en in het stadsbeeld". ?

37 Aldje van Meer, *I would rather design a poster than a website*, 2012-2013, <http://iwouldratherdesignaposterthanawebsite.nl>. ?

38 The original Dutch: "[...] waarbij de traditionele grenzen tussen grafisch ontwerpen, industrieel ontwerpen, ruimtelijk ontwerpen en interactieve media soms nauwelijks nog herkenbaar zijn", <http://www.ccaa.nl/page/4031/nl> ?

39 Van Erp cites Nespresso as an example of such a brand; Jeroen van Erp, lecture at CrossLab evening *Dynamic Design*, De Unie, Rotterdam, March 27, 2012, published in the e-book <http://extra.wdka.nl/crosslab/2012/07/02/epub-dynamic-design-2>. ?

40 *Ibid.*. ?

41 Van Erp cites the example of window shops in South Korean subway stations, where customers can order goods for home delivery by scanning them with their mobile phones. ?

Conclusion

This paper began by identifying Platonic academicism and Arts and Crafts as two opposite poles which have traditionally defined the practice and education of fine art and design in the West. Then, examining cutting-edge 20th and 21st-century creative practices which focused either on social intervention, autonomous experiment or commercial orientation, we observed that:

- × these practices have rendered the division between 'art' and 'design' either arbitrary or obsolete;

- × further disciplinary specialisations (graphic design, media design, interior design, etc.) have become increasingly problematic as well. The study disciplines no longer correspond to work disciplines;
- × cross-disciplinary categories such as social intervention, autonomous experiment and commercial orientation can be helpful in order to understand cross-disciplinary creative practices - but in the real world, any practice in one of these three fields will invariably involve the other two as well.

The initial question of this paper was whether art/design students nowadays face a choice between 'creative industries' and 'artistic research' (which are in fact no more than new terms for 'design' and 'fine art' respectively). Using the broader term 'creative' instead of either 'art' or 'design' provides an opportunity to embrace both, leaving the old dichotomy behind. Conversely, as the example of Fabrique demonstrated, research has become just as much a requirement in the commercial domain as it has in activist and 'autonomous' fine-art practices. The fact that the term 'artistic research' has become worn out through recent overuse ³⁴ does not in any way change this reality.

The Willem de Kooning Academy will be the first art school in the Netherlands - in all likelihood, one of the first in the world - to implement a new curriculum which structurally addresses the issues and challenges described in this paper. The school's reform is a radical one. But, to conclude with a subjective assessment: if students are expected to find their place professionally within the types of artistic practices described in this paper (rather than other creative niches), then this radical break with the past is a matter of sheer necessity.

42 This is at least the unanimous opinion of the course directors of several fine art master programmes in the Netherlands; Dutch Masters, in: *Metropolis M*, No. 2, April/May 2013. ?

Introduction

The ongoing debate on the social value of art and culture has been with us for some decades now. In the Netherlands, this debate has taken place mostly within the art world itself, and in related political and administrative circles. There has hardly been any broad social discussion on the subject. For a brief moment in 2010 it seemed as though such a discussion might take place, when a new centre-right government, supported (and to some degree inspired) in parliament by a smaller right-wing populist party, began implementing sweeping cuts in public funding for the arts sector. However, it soon became painfully clear that the arts could count on little support from society at large, although the budget cuts and ensuing cultural crisis did gain some notice in the international media, notably the *New York Times* (Siegal 2013). Also, the established system of public funding has found little support from within the academic community, which has regularly questioned the effectiveness of this system. For example, any supposed causal relation between public funding on one hand, and quality or public outreach on the other, has been difficult to demonstrate convincingly (see for example: Van Klink, Van den Born and Witteloostuijn 2011). Some have advocated a transition to an American-inspired model, with much less government presence and a greater emphasis on private benefactors.¹ Meanwhile, proponents of the established system have not been particularly vocal or eloquent in their support.

What is striking about the current debate is how the underlying assumption, that the added value of public expenditures on arts and culture is negative, is left mostly unaddressed and undisputed. State support for arts and culture is not considered a valuable investment for either economic or cultural development; rather, it is perceived as a leak in the economy. Any empirical evidence of a positive spin-off for culture or the economy is simply neglected. Perhaps one of the reasons why this assumption has remained unchallenged, is in fact rooted in attitudes within the art world itself: proponents of creative and artistic endeavours are reluctant to embrace the argument fully, since the dominant discourse is still based on an antagonistic relationship between culture and economy. Therefore there is an urgent need to open up the debate, in order to better understand the contemporary dynamics within the arts, the creative industries, and cultural policy.

⁴³ See for example statements by Arjo Klamer, professor of Art Economics at Rotterdam's Erasmus University, in the Cultural Supplement of the *NRC Handelsblad* newspaper, August 15, 2013 (see: Steenbergen 2013). ?

The market as encompassing principle

The diminishing role of public financing in the arts sector naturally leads to an increased dependence on the private sector and the consumer market as a basis for the exploitation of art and culture. This is a direct consequence of the increasing role of the market as a value-encompassing principle in art and culture policy. This development must of course be examined critically, and its internal contradictions exposed. At the same time, it is well worth exploring the possibilities offered by this new situation, and making productive use of these possibilities. After all, the basic underlying idea, that a fundamental dependence on public financing in the arts sector may well discourage other exploitation possibilities, is in itself not without merit. Also, in several domains of creative production, such as design, architecture and popular music, the market has always played a dominant role. The Flemish economists Van Andel and Vandembemt have argued that public funding may in fact stifle the drive for fundamental innovation, and discourage financial progress. This, combined with a primary focus on gaining reputation (for example, among fellow artists and organisations) and on aesthetic quality, can lead to what they call lethargic entrepreneurship, characterised by a lack of private initiative and a lack of growth for businesses and institutions (Van Andel and Vandembemt 2012, p.165). In other words, the market and the private sector do not by definition inhibit freedom of artistic, creative and economic action. Moreover, the public funding system has its own structural constraints, which can have a stifling influence on artistic and creative innovation. Therefore the time has come to critically examine the relation between art, culture, government and market, and to judge developments on their specific merits, without necessarily calling for budget cuts in the public funding of art and culture. Indeed, it may well be that increased public funding is needed in order to achieve a fuller exploitation of the economic possibilities of art and culture, resulting in net positive effects for the economy as well as society at large.

Curriculum reform

This essay provides a critical reflection on the relation between art, culture and economy, in light of recent developments in policy as well as in the world of art and culture itself. The direct incentive for this reflection is the recent curriculum reform of the Rotterdam University's Willem de Kooning Academy. The structure of the new curriculum emphasises the contemporary role of artists in society, and the challenges this poses for the education programmes. The social environment in which graduates now find themselves, imposes new requirements on their knowledge, skills

and competences. This means that the Academy as well as the art world will have to define a new relationship with society at large. In this essay I will identify some of the underlying trends which determine this process. The Willem de Kooning Academy's new curriculum distinguishes three graduation profiles: autonomous practices, social practices and commercial practices. This essay concentrates mainly (though not exclusively) on developments affecting the third, more market-oriented profile. First we shall examine the shift in perception of the relation between art, culture and economy; then we shall analyse the increasing dominance of the market as encompassing principle in culture policy, while pointing out a number of contradictions in this trend. Next, we shall examine a number of recent developments which demonstrate how art, culture and economy are in fact deeply connected and even mutually supportive: the emergence of the creative industries, the innovative potential of art and culture, the crucial role of creative talent in today's economy, and the role of art and culture in urban environments.

Art, culture and economy

Over the past few decades, the relationship between culture and economy has been extremely problematic, and remains quite complex to this day. In the art world, a deep mistrust of market forces and economic power has developed throughout the 20th century. The market's primacy of financial profit above artistic value has proven anathema to the art world. Also, the formalised industrial division of labour in cultural productions, for example in the large-scale media and entertainment industry, is perceived as a negation of the principle of the individual and unique, which is so essential to the arts. The gap between economy and culture was most eloquently articulated in the seminal work *Dialectic of Enlightenment* by the Marxist philosophers Theodor Adorno and Max Horkheimer (1947). Here they portrayed the culture industry (a term which they coined) as a stooge of encroaching capitalism, promoting cultural shallowness through its emphasis on financial profit and standardisation of production. Meanwhile, in the United States, the theory of 'mass culture' offered a similar critique, but from a more conservative perspective of decrying the erosion of traditional American popular culture by the same aggressive culture industry (Macdonald 1953). These philosophies have long played a dominant role in defining the artistic perspective on economic forces and entrepreneurship, and remain extremely influential to this day. Though they differ in their ideological orientation, they broadly agree in their rejection of the contemporary culture industry. On the other hand, the French anthropologist Edgar Morin proposed a more culturally optimistic vision. In *L'esprit du temps* (1962), translated in Dutch as *'De culturele industrie'* (1965), he suggested an open-minded appraisal of the culture industry's creative products, explicitly attacking what he perceived as the snobbish attitude of the established art

world toward the media and entertainment industries. Morin maintained that the only way to really know popular culture was to immerse oneself in it. At the time, this meant for example dropping a coin in the slot of a jukebox, pressing a button, and listening to the newest hits.

Meanwhile, such cultural criticisms of the culture industry have done little to undermine its economic growth. The media and entertainment industry has developed into a booming economic sector, which has also gained notice throughout the years for the aesthetic quality of many of its products. Cinema, and later also jazz and rock music, have been the subject of increasing critical appreciation, though of course this did not apply to all products released by the industry. However, the crucial point here is that quality and innovation also exist within the commercial system; they are not necessarily determined by the production context. This has led to a reappraisal, in research and cultural criticism, of the importance and value of market-generated cultural products. Also, the negative term 'mass culture' has gradually been replaced by the more neutral 'popular culture', just as the term 'culture industry' has been superseded by the newer concept of 'creative industries'. Nowadays no one would dispute the fact that popular culture also contributes positively to social development, to the cultural identity of groups of individuals, and to the emancipation of citizens. It is also evident that the world of 'high arts' has become intertwined in many ways with the mainstream economy; for example, in the market of dealers and collectors of artworks,² or the sponsorship deals between cultural institutions and commercial businesses. Merely denouncing, obstructing or flatly denying the connections between art and economic market forces is no longer convincing; such attitudes do not accurately reflect the current and specific nature of the relationship between art and economy, as observed in practice.

Therefore this principle is no longer useful as a starting point for practitioners of art and culture, but rather counterproductive. A more positive debate and development should instead explore how art and culture can contribute to reformulating certain underlying principles which govern the economy, for example in all aspects of social and economic innovation processes (cf. Rutten 2012).³ Artistically inspired research, as described by Florian Cramer (2013) in his essay in this publication, provides some important points of reference. By showcasing new values and ideas developed and implemented in sectors such as the practice of artistic production, the art world can become a breeding pool for social innovations, such as those described by Peter Troxler (2013) in his essay in this publication on open design and the resulting 'maker movement'.

Conversely, the dominant economic discourse, particularly among policy makers, tends to see the arts as an expenditure, a liability, a leak in the economy (cf. Potts 2011). Any positive external effects of investments in art and culture are simply not taken into consideration, beyond some kind of 'luxury you can afford'. Public spending on art and culture is seen as icing on the cake, which can be permitted in times of prosperity but not in times of economic downturn. The underlying implication is that cutting down on such useless luxuries ('left-wing hobbies') can only bring positive economic effects. This paradigm is increasingly untenable, as there is a growing amount of evidence demonstrating that investments in art, culture and creativity in fact benefit the creation of value in various ways.⁴

44 For an interesting perspective from within the world of the arts, see: Sarah Thornton (2009)?

45 Peter Troxler's essay in this publication shows how recent developments in technology and technological applications can give shape to these new values and ideas?

46 Interestingly, there has been relatively little research demonstrating the direct benefits to individuals of the consumption of art and culture by these same individuals. What is the value of a culturally developed population, whose citizens have acquired a sensibility to artistic expression, compared to a population whose citizens have not acquired these competences? The main reason why there is a lack of well-founded insight into this issue, has much to do with the methodical complexity such research would entail, in combination with the research tools usually applied by economists for instance. On the other hand, scientists from disciplines other than economics are usually less concerned with quantifying the social and economic return value of art and culture.?

Recent trends in cultural policy: entrepreneurship and creative industries

In order to properly understand the increasing role of the market in the fields of art and culture, we must first consider the changing role of government and public policy. Governments are key players in the world of art and culture in the Netherlands and Europe, and thus influential figures in the context of this debate; not so much as champions of one specific opinion, but rather through the results of their concrete policies. The continuity of artistic and cultural production is highly dependent on the resources made available by national, regional and local governments. Much of the artistic production which is considered socially valuable, cannot be financed solely through the private sector (a combination of funds provided by consumers, sponsors and benefactors). This is what economists call market failure: the market is unable to provide a socially desirable outcome, so that the task must be assumed by the government. In this context, governments in Europe are seen as playing an essential role in the art world, since they are the main source of funding for education programmes, for the creation and production of art and culture, and for organisations which make these available to European citizens, from theatres, museums and public broadcasters to supporting institutions.

Throughout the second half of the 20th century, Dutch art and culture policy has seen a succession of basic principles and philosophies, all justifying this financial state support. Most of these, with the exception of the traditional principle of public edification through art, still play an important role in the contemporary policy paradigm. The criteria applied by various public art and cultural funds in granting public funding to projects, artists and institutions, are directly based on these principles: geographical distribution of access to art and culture, the quality of the works and performances, and the degree of cultural entrepreneurship.

In the late 1990s Rick van der Ploeg, then Dutch State Secretary for Culture, Art and Media, was responsible for introducing the concept of cultural entrepreneurship into Dutch national policy.⁵ Van der Ploeg's tenure (from 1998 to 2002) took place under a broad Labour-Liberal-Democrat coalition, in power from 1994 to 2002. He considered the activities of makers and producers in the art world to be a prime example of entrepreneurship: improvising and dealing with multiple perspectives and new ideas, while managing organisations and realising productions. However, the notion of entrepreneurship, with all its economic implications, was not greeted with immediate and universal enthusiasm in the context of the arts. Gradually, however, the importance of entrepreneurship as promoted by Van der Ploeg has gained acceptance in the world of art and culture, at least at the institutional level. One indication of this acceptance, in the Netherlands and abroad, is the establishment of education programmes in this field. Art management has become a given fact.

The following phase in Dutch art and culture policy also began during Van der Ploeg's tenure. As an economist and an Anglophile, Van der Ploeg was keenly aware of the intensive development of the creative industries in the United Kingdom. He was particularly impressed by the policies introduced by the neo-liberal Tony Blair and by Chris Smith, New Labour's Secretary of State for Culture, Media and Sport, designed to stimulate the creative industries (see for example: DCMS 1998). The British interest in this sector was based on an awareness of the value for the United Kingdom of the exports of creative economic sectors, such as the music industry. In the mid-1990s, the export value of music was equal to that of the British steel industry (British Invisibles 1995). The government, even more than the sector itself, intensively promoted and showcased the creative industries, based on the insight that British creative industries were developing into an key sector of the economy (see also: Rutten and Koops 2012). In the Netherlands however, a coherent policy for stimulating the creative industries was not formulated during Van der Ploeg's tenure, due to a number of factors, notably a lack of enthusiasm from the Ministry of Economic Affairs.

Such a policy would not be established until a few years later, under State Secretary Medy van der Laan (2003 - 2006) and her successors. Finally, in 2009 the policy paper *Ons Creatieve Vermogen* ('Our Creative Capital and Ability') was jointly formulated by the Ministry of Education, Culture and Science, and the Ministry of Economic Affairs. A number of research projects had already been conducted and published by then (see: Hofstede and Raes 2006); in the same period, an Innovation Platform established by the government had declared the creative industries a key sector for the economy (Van Tilburg and Bekkers 2004). Under the new centre-right government however, the policy focusing on key sectors was dropped in favour of a business-oriented policy which in turn led to the formulation of a new sector policy, concentrating this time on 'top' sectors. Here too, policy makers recognised the importance of the creative industries, which were defined as one of these top sectors. A new 'top team' platform was established in order to focus on the potential catalysing effects of the creative industries for the rest of the economy and society in general. Rather than growth within the sector itself, the creative industries were seen mainly as an agent for innovation in other top sectors (Topteam Creatieve Industrie 2011). However, and somewhat cynically, two important subsectors of the creative industries were subjected in the same period to sweeping budget cuts. Netherlands Public Broadcasting was ordered to cut a total of € 300 million, while cuts in the arts amounted to another € 200 million. Also, the centre-right government proposed raising the value-added sales tax rate on art products and services, a measure which was eventually reversed by the subsequent (and currently incumbent) Liberal-Labour coalition. However, this new government also imposed a further € 100 million in budget cuts to public broadcasting (national and regional). All in all, it's hard to understand the logic behind declaring the creative industries a top sector on one hand, while on the other hand subjecting two important pillars of this same sector to such drastic budget cuts.

⁴⁷ Several years earlier, Giep Hagoort had already explicitly introduced the concept in the context of research and education of cultural management (Hagoort 1992). ?

Creative industries: a rapidly growing sector

Western European economies have been in a state of transition for quite some time now. For several decades, traditional industrial production has no longer been the main economic pillar; other sectors now play an increasingly important role in creating added value and employment, particularly in the field of knowledge-intensive business services. Creativity, and by extension the

creative industries, are seen as new and important sources of economic value. As I previously noted, the United Kingdom first understood the importance of the creative industries in the 1990s. Some years later the Netherlands followed, declaring the creative industries first a 'key' sector, then a 'top' sector. Creative industries are considered an economic field in which Western countries are able to excel on a global level. Especially in the United Kingdom, but also in the Netherlands, creative industries have shown over the past few years above-average growth rates.

'Creative industries' is an umbrella term encompassing various economic activities, which provide goods and services resulting from individual or collective creative labour and creative entrepreneurship; the main and defining characteristic of these goods and services is the central role of content and symbolism, as demonstrated by the fact that consumers as well as business customers purchase them because of the meanings they convey, and thus the symbolic value which they 'physically' represent. These meanings provide end users with experiences which have cultural as well as economic value. This way, creative industries play an important role in developing and maintaining lifestyles and cultural identities within society, but also in generating employment and added value.⁶ The products created, designed and produced by the creative industries, including their meaning and symbolism and the lifestyles associated with them, are a relatively new source of economic value. What is new here is not the sector itself, but rather the identification of this sector as an entity, and the recognition of its economic importance.

The main defining characteristic of the creative industries is the dominant role of meaning in their goods and services, which are purchased for their content and symbolism, as these apply and relate to lifestyle value. There is a clear emphasis on articulation and representation, and often on narrative, conveyed through a language aimed at evoking a specific experience in end users. The language can be one of forms, words, images or sounds. These shared characteristics between the various domains which together constitute the creative industries, apply equally to the artworks of fine artists, the products of the media and entertainment industry, and the services offered by designers and advertising agencies to their business customers. This specific nature largely defines how creation, production and exploitation are structured and implemented within this sector; it also defines the sector's market, as well as the specific requirements regarding the expertise and competences of the talent employed within the sector.⁷

Creative industries are an inherently heterogeneous sector. Still, it is possible to cluster different industries according to certain shared

characteristics. We can distinguish three subsectors: arts and cultural heritage, the media and entertainment industry, and creative business services. This subdivision, and the categorisation of industries among these three subsectors,⁸ is designed to enable the quantification of their economic importance. In the domain of arts and cultural heritage, the value is primarily in the aesthetic experience derived from works and artefacts whose creation usually stems from an artistic and cultural need, rather than commercial exploitation. Public financing plays a key role in this domain. In the case of historical buildings for example, the primary concern at the time of their construction was usually not aesthetic; in our time however, it is the symbolic value of these buildings which determines their status as cultural heritage. Cultural heritage also includes museums, archives and libraries. The arts include mostly practitioners of visual arts and performing arts. For the media and entertainment industry, the role of public financing is less important than for arts and cultural heritage; there is a greater emphasis on profitable exploitation, and on reaching a large audience. Typical industries in this sector include radio and television, books, cinema, music, and live entertainment. Creative business services do not work directly for the consumer market, but rather for business customers, usually on a commission basis. This subsector of the creative industries includes advertising and communication, design, and architecture (including landscape architecture). Despite the commercial context, there is definitely room in creative business services for a personal creative signature, for example in the case of architectural firms or design studios. The boundaries between the various subsectors are quite open, fluid and unsteady. For example, part of the gaming industry can increasingly be qualified as a form of creative business services, even though the gaming industry as a whole has traditionally been part of the media and entertainment industry. Serious games are commissioned by businesses in order to teach specific insights and lessons in a more efficient and effective way to their staff, clients or other stakeholders.

The boundary between private and public financing within the creative industries is much less clearly defined than is often suggested. Public funding is by no means the exclusive privilege of the arts sector. For example, the film industry, an important sector within the media and entertainment industries, operates in a market-driven context, but cannot survive without public support in the Netherlands, Belgium, and many other European countries (see for example: Netherlands Film Fund 2013). Public broadcasting is chiefly financed through taxes, but is also an important player with a defining competitive position in the audio-visual market. The printed media sector, with products ranging from newspapers to magazines and books, enjoys a low value-added sales tax rate: an indirect form of public subsidizing. On the other hand, governments stimulate entrepreneurial thinking and acting in the arts and culture sector, in order to achieve a higher cultural return on public

investments. The influx of private funds in the field of art and culture as a result of cultural entrepreneurship has increased in recent years, which in turn also benefits the government (cf. Booz & Company, Van Beuningen and Tieleman 2013). The boundary between culture and economy is thus an increasingly porous one. What is obvious however, is that publicly financed parties as well as private ones, in so far as these could ever be clearly distinguished, both create added value, cultural as well as economic. As such they are socially relevant, they generate groundbreaking experiences as well as economic value, and they provide citizens with an opportunity to earn their livelihood.

Graduates of the wide variety of art education programmes offered in the Netherlands can find employment, not only within a somewhat narrowly defined art sector that is largely dependent on state subsidies, but also in the diverse assortment of creative industries, which include a broad range of economically and socially value-adding activities. This also applies to the Willem de Kooning Academy: as a supplier of creative talent in a variety of disciplines, from visual arts to graphic design and fashion design, from advertising and communication to live entertainment and media. Developments in the creative industries have direct implications for the requirements to students. Alumni of Dutch art education programmes find employment either in the arts sector, where they are expected to function in environments where cultural entrepreneurship is combined with independent artistic practice, or in creative business services such as advertising and fashion design, where the emphasis is rather on applied creativity in a mostly market-driven environment.

48 This definition was proposed in the context of a study of creative industries in the Amsterdam area (see: Rutten, Manshanden, Muskens and Koops 2004), inspired by earlier research by Caves (2000), Scott (2000) and by the British DCMS (Department for Culture, Media and Sport 1998). Based on this study, three subsectors were identified in 2004, which in turn were defined as encompassing various industries. The definition was updated according to the international redefinition in 2008 of the standard classification of economic activities (Rutten, Koops and Roso 2010a). ?

49 The specific business models within the creative industries are an important field of new research, see for example: Van Anel and Vandenbempt (2012).?

50 For a further specification of the industries categorised under these subsectors, see for example Table 1. ?

Review of the creative industries in the Netherlands

The following table shows the employment situation in the creative industries in the Netherlands over the past decade.

Table 1: Jobs in creative industries in the Netherlands in 2011, job growth 2000-2011 / 2009-2011 page 58

In 2011 there were more than 280,000 jobs in the creative industries in the Netherlands, subdivided across the three subsectors: 99,000 in arts and heritage, 92,000 in creative business services, and 89,000 in the media and entertainment industry. This amounts to 3.5% of all jobs in the Netherlands in 2011. In the period from 2000 to 2011, the average annual job growth rate in the creative industries was 3%, considerably higher than the national average of 0.9%. In the most recent years of this period (2009-2011) the growth rate was a bit more than one percent lower: 1.9%. Of the three subsectors, growth has been strongest in arts and cultural heritage, with 4.8% for the entire period and no less than 5.7% for the last three years of this period. An important reason for the high growth rate in arts and heritage, is the increase in registered jobs in the performing arts and visual arts, largely as a result of the compulsory registration since 2008 of freelance creative workers, many of which were not previously registered with the Chamber of Commerce. This has led to an inflated short-term growth rate. The bright side is that we are now able to gain a clearer understanding of the true magnitude of these art practices. The lowest growth rate was noted in the media and entertainment industry: 0.8%. The last three years (2009-2011) have even shown negative growth. Creative business services have been growing on average 3.8%, a rate which has decreased by two percent to 1.8% in the last three years.

Domains	Jobs 2011	Growth '00-11 (number of jobs)	Growth '00-11(% annually)	Growth '09-11 (number of jobs)	Growth '09-11(% annually)
Arts and cultural heritage	98,874	39,808	4.8%	10,445	5.7%
Performing arts	26,596	14,740	7.6%	4,278	9.2%
Creative Arts	24,815	15,210	9.0%	5,980	14.8%
Other arts and heritage	25,186	9,815	4.6%	696	1.4%
Cultural heritage	22,277	43	0.0%	-509	-1.1%
Media and entertainment industry	89,296	7,142	0.8%	-3,122	-1.7%
Radio and television	14,620	2,142	1.5%	-1,035	-3.4%
Press media	33,794	1,219	0.3%	-1,251	-1.8%
Film	12,737	4,337	3.9%	444	1.8%
Music Industry	2,451	303	1.2%	243	5.4%
Book Industry	10,600	8	0.0%	-980	-4.3%
Gaming and other publishers ⁹	2,069	-2,270	-6.5%	-426	-8.9%
Live entertainment	13,025	1,403	10%	-117	-0.4%
Creative business services	92,280	31,369	3.8%	3,223	1.8%
Design	26,200	19,171	12.7%	3,115	6.5%
Communication and information	66,080	12,198	1.9%	108	0.1%
Creative Industries	280,450	78,319	3.0%	10,546	1.9%
Netherlands economy	8,065,110	729,740	0.9%	-29,030	-0.2%

Source: Paul Rutten, Olaf Koops and Otilie Nieuwenhuis, *Cross Media Monitor 2012: Cross Media in Cijfers, iMMovator Cross Media Network, Hilversum, 2012a* (data from LISA 2012).

The number of businesses in the creative industries was more than 117,000 in 2011; of these, more than 46,000 were in arts and heritage, almost 41,000 in creative business services, and more than 30,000 in the media and entertainment industry. From 2000 to 2011 there was an average annual increase of 8.2% in the number of creative industry businesses, compared to 3.3% for the economy as a whole. Currently, 9.6% of the businesses in the Netherlands are creative industry businesses. This percentage is much higher than the percentage of creative industry jobs within the total number of jobs in the Netherlands (3.5%). This is because the average number of employees in creative industry businesses is much lower than the national average. This characteristic small scale is due to the high number of freelancers and small operations; there are very few businesses and institutions in the creative industries with more than 50 employees. Of the three subsectors, arts and heritage has the smallest average number of employees per business or institution.

The creative industry's total revenue grew on average 1.3% between 2000 and 2010, a bit higher than the national average of 1.1%. The growth of the creative industry's total revenue (1.3%) is markedly less than the growth in the number of jobs (3%). This is due to a number of factors, such as the fact that much of the growth was realised in the arts sector, which is characterised by a relatively low revenue per job. The creative industry's total revenue was € 32.8 billion in 2010, amounting to 2.9% of the economy as a whole. The three subsectors are responsible for roughly the same number of jobs, but the media and entertainment industry generates approximately twice as much revenue (almost € 17 billion) as arts and heritage (more than € 8 billion) or creative business services (almost € 8 billion). The productivity in media and entertainment is thus markedly higher than in the other two subsectors (Rutten, Koops and Nieuwenhuis 2012a, pp. 19-31).

⁵¹ The experience in recent years has shown that employment statistics are not keeping up adequately with actual developments in the industry sectors. Within the creative industries, the gaming sector is showing strong growth. Statistics Netherlands and the Chamber of Commerce have recently added a category for gaming. The registration of businesses and jobs in this category is still under development and therefore incomplete. Still, we have included in table 1 for the sake of completeness the statistics for gaming and other publications. There is, incidentally, no indication that a similar situation might also apply for other categories. ?

Creative industries: the turn towards innovation

The first wave in the debate on the creative industries, which took place during the first years of the 21st century, tended to focus on the sector's above-

average growth rate, as expressed in terms of jobs and added value. However, in more recent years the emphasis has shifted toward the broader economic and social impact of the creative industries: the sector's role as a producer of meaning, symbolism and lifestyle value for today's creative economy. In this economy, the human ability to create value based on new concepts and ideas is seen as the main driving force behind increasing prosperity; most of the added value is realised through goods and services which relate to the experiences of consumers and respond intelligently to broad social needs and requirements (cf. Howkins 2001). In this context, the creative industries are increasingly perceived as an important motor for competitive strength and innovation; consequently, the contemporary debate sees here the main value of creative activity, a trend described as the turn towards innovation (see also: Rutten, Manshanden, den Blanken and Koops 2005; D. Jacobs 2007).

Creative industries contribute to innovation, by giving concrete shape to the possibilities offered by new systems and technologies, and by linking these to broad social needs, through processes such as (visual) representation and design. Creative professionals develop new ideas and create designs focused on current and future needs of representation and experience, but also on practical applicability and useful social value. In principle, this practice applies to a broad range of economic and social domains. Knowledge and understanding of trends, culture and lifestyles are essential requirements for offering attractive and competitive products. This type of creativity is not only important for the development of new products and services, but also for their positioning and marketing. The 'addition' of symbolic and emotional value improves the market prospects of goods and services. Since in many cases the functionality of these goods and services has already been optimised, competitive advantage can only be realised by making connections with intangible meaning and cultural value. The combination of both types of activities, the development of new products and services based on the appropriate creative inputs, and the connection of goods and services with experience value, are all essential ingredients for innovation in the creative economy (D. Jacobs 2007). This has led several researchers and theorists to conclude that the creative industries are in fact becoming an integrated component of the innovation systems of contemporary economies, rather than merely an economic sector enjoying above-average growth rates. Therefore the creative industries clearly require specific and focused attention from policy makers. Fortunately, there has been an increasing interest and activity in recent years toward research concentrating specifically on this role of the creative sector in the economy and society at large (see for example: Bakhshi, McVittie and Simmie 2008; Higgs and Cunningham 2008; Rutten, Marlet and Van Oort 2011).

The presumed special role of the creative industries can be clearly demonstrated by examining the function of design as a specific branch of creative business services. Good design, and therefore good designers, are essential for the market success of products and services; not only in providing an aesthetic finishing touch, but also in contributing creative input to design processes, from the earliest phases of the development of goods and services.¹⁰ For example, good fashion designs are essential for the success of the clothing industry, which nowadays is more commonly referred to as the fashion industry, underlining just how crucial the designs have become in determining the market value of its products. Of course, the economic value of the fashion sector goes far beyond design; the production, distribution and retailing of clothing all contribute value as well. Still, design remains the key to this value. Also noteworthy is the important role played by designers in connecting the fashion sector with the domain of new materials. Based on their user-oriented perspective and their knowledge of current social trends, designers provide valuable input to businesses developing new materials for use in clothing. There are a number of ongoing developments, in traditional fabrics and textiles as well as in the field of new fibres and materials. One of the roles of designers is to make connections between parts of the chemical sector and the fashion industry. In the automobile industry as well, design is now the determining factor. The technical specifications of the various brands and types are increasingly similar; distinction is created through design, image and identity, which is precisely where the competences of designers and brand specialists come into play. The role of advertising and communication in the economy is thus comparable to that of design. Professionals in these disciplines create value, by defining specific positions for organisations and businesses within the field of public opinion, and by guiding the launch of new products and services and consolidating the position of existing ones. A recent development in this sector has seen advertising agencies functioning as strategic branding and positioning advisors to businesses, a clear indication of the importance of these competences in the development and success of businesses (Bilton 2009). The creative industries are moving toward the heart of the creative economy. As a result of this development, products in an increasing number of markets are now chiefly defined by their design and their brand. Consumer electronics and information hardware are a clear case in point. In the market for media and IT services, the boundaries between technology, design, and even content are becoming increasingly blurred. The best example of this is Apple, the most successful business of the past decade. Apple has demonstrated the crucial importance of design, even more than Sony previously did with a number of groundbreaking concepts in the electronics industry. Now it seems as though Apple is already losing ground in this respect to Samsung.

The almost symbiotic relationship between information and communication technology on one hand, and creative industries on the other, can be explained by the central role of language and information in both domains. The products of the creative industries are basically immaterial: information which is shared in various formats with individual customers and business clients. Creative industries almost always make use of (newer or more traditional) information and communication technology (ICT). One of the oldest forms of this technology is writing; book printing is, relatively speaking, a much more recent development. The newest forms of ICT include digital networks and various forms of information processing (software). Innovation in the creative industries closely follows developments in information and communication technology, and in some cases also vice-versa. Just as printing technologies once paved the way for book and newspaper publishing, the development of the Internet and new digital technologies is now responsible for an extensive restructuring of the media industry (including the emergence of new segments such as the gaming sector) as well as profound social transformations. Creative industries are at the forefront of this development, precisely because the sector in fact thrives on the development and exploitation of information and symbols, of lifestyle and representation. As a consequence, it is often unclear whether some businesses, including global players such as Google, Apple and Amazon, should be classified as ICT or creative industries. In the Netherlands, TomTom is a good example of the fusion between creative industries and ICT. TomTom facilitates and exploits access to information, thus functioning in many respects as a publisher. Innovative products and services which combine the qualities of creative industries and ICT are the most important generators of value in today's economy. In the virtual domain, new creative concepts can be very rapidly scaled up to a global level.¹¹ The downside to this obvious opportunity, is that a global potential market also means global competition. In the virtual creative industries, the role of local markets plays a much smaller role than in the material creative sector.

The catalysing effect of creative industries on the rest of the economy is not limited to creative business services, which include design, advertising and communication. In the media and entertainment industry as well, products, services and competences are being developed which can be applied within the economy at large, and which add lifestyle value to more generic products and services, by providing them with symbolic qualities based on the gravitational attraction of products and personalities from the world of popular culture (Wolf 1999). Serious gaming is another example of how new applications developed within one subsector add value to another sector. Games, which first originated as entertainment products, are increasingly being applied in communication and information strategies, as

well as in health care, where the use of specialised games in medical rehabilitation processes has met with some very interesting results indeed.

Also the domain of the arts, particularly artistic research, is providing contributions to broader social and even economic developments. An exploratory research of the artistic research practice of a number of leading art and technology laboratories in the Netherlands, such as Waag Society, V2_, Mediamatic and Worm (Rutten 2012) showed how work produced in the field of contemporary arts contributes to the development of knowledge as well as social innovation. In the current practice of art and technology labs, artists ask questions such as: Who are we? How are we living? How do we wish to live? These questions are then the subject of a creative and research process, in which technology is deconstructed and reconstructed: a process known as hacking, broadly similar to the process of reverse engineering as applied in the world of industry. Creative works resulting from this practice call into question existing practices, and provoke new discussions and debates. Media labs thus aim to deconstruct technology from a social or aesthetic perspective, showcasing technological development processes which otherwise might have remained undetected from the dominant design perspective. This in turn allows for the development of possible alternative processes, for the benefit of social values, targets and applications which otherwise may not have been explored. This way, media labs offer alternative and often superior uses of the social possibilities offered by technology; art provides the fundamental research for the creative industries, in much the same way as scientific laboratory research does for industrial innovation. In the United Kingdom, the connection between art, science, the creative industries at large, and ultimately social innovation, is explicitly recognised: the Strategic Technology Board's creative industries innovation programme falls under the University of the Arts in London (cf. Rinnooy Kan, Rutten and Stikker 2013). In the Netherlands, such a connection has yet to be established.

The potential demonstrated in all the above examples manifests itself in the role currently attributed to the creative industries in providing solutions to broad social challenges, for example in the fields of sustainability, mobility and health care. The European Union refers to these as grand societal challenges which are crucial to the future of societies on our continent. Such challenges require integrated responses, rather than purely technological solutions; there are cultural values at stake, requiring an approach in which the creative industries will be called upon to play an important role (see also: Amerika 2013; Topteam Creatieve Industrie 2011). This in turn implies a necessity for the creative industries to connect with other social and economic domains; not only in order to facilitate the productive application of new technologies, but

also for the design of solutions based on the creative industries' characteristic strengths.

52 Research conducted recently at the Erasmus University and the Technical University of Delft showed that the economic performance of a new product improves by almost 20% when the development phase focuses heavily on design (Candi, Gemser and Van den Ende 2010). ?

53 A challenging new development in this respect is 3D printing, discussed by Peter Troxler elsewhere in this volume. 3D printing is a kind of full-circle technology, which makes it possible to break down and define material objects as information, to distribute this information through digital infrastructures, and to materially reproduce the objects using 3D printing at different locations across the globe. ?

Talent for the creative economy

The developments I have described above, all have direct implications for government policy on art and culture, particularly policy regarding creative industries, but also for the curriculum of educational institutions, and for research focused on the creative economy. The perspective is shifting, from the magnitude and growth of the sector itself, toward the broader catalysing effect of the creative industries on social and economic innovation. The crucial question is now: do the ideas, methods and concepts of creative professionals contribute to social innovation, with a positive influence on quality of life and competitive strength? This question directly addresses the promise of the creative economy, in which creativity is the motor of innovation and development. This implies a greater emphasis on creative talent, rather than creative businesses, since it is the individuals working in creative professions who play a crucial role in realising the intended catalysing effect. Therefore, research and policy should concentrate increasingly on the connections (relations and interactions, networks and interfaces, and of course their effectiveness) between these creative professionals and the fields of application in which they function. This is also a crucial development for education programmes focused on the development of talent for the creative industries.

The design practice offers another excellent illustration of the social and economic value of the creative network economy's innovative power. Many designers work in specialised agencies which take on commissions from third-party clients; in this respect they clearly work within the creative industries. However, an even greater number of designers work in organisations which do not fall under the creative industries: for example, the graphic industry or the furniture industry. For these organisations,

fulfilling design needs using in-house personnel proves to be a better strategic option than purchasing these designs on the market, from design agencies. This is a choice which economists refer to as 'make or buy'. It is estimated that two thirds of all designers in the Netherlands work for businesses outside the creative industries (see: Rutten, Manshanden, den Blanken and Koops 2005, Koops, Manshanden and Van der Zee 2011). Therefore these professionals are not counted in the statistics of researchers investigating the creative industries, even though they are an important factor in the creative economy, and their activities are crucial in determining the value of creative competences as a driving force for innovation. As long as the research was still focused on determining the magnitude and scope of the creative industries, there was no urgent need to gain a clear understanding of the presence, range and significance of creative talent operating outside the creative industries. However, the focus is now clearly shifting towards the catalysing social effects of creativity, as a motor for innovation, competitive strength and quality of life; conversely, there is now a decreased interest from this perspective on the numbers of individuals working in a non-creative capacity within the creative industries, but who are currently still included in statistics on the creative sector. These include financial managers as well as office and catering personnel. Employment statistics in businesses with a large number of facilitary jobs relative to the number of creative jobs, are now indiscriminately counted along with businesses employing a relatively high percentage of creative professionals. An example of a sector belonging to the first category is amusement parks, which are part of the leisure industry. Most employees in this sector are facilitary staff, ranging from ice-cream vendors to attraction attendants; all these workers are counted as part of the creative industries, alongside employees of businesses with a high number of creative professionals. These include various creative business services, architects, designers and advertising and communication services, where forty to fifty percent of employees are creative professionals.

Statistics Netherlands has compiled a provisory list of creative professions (a selection from the more than 1200 creative professions officially recognised in the Netherlands), in an effort to measure the extent of the creative sector industries from this perspective as well (see: Uurlings and Braams 2011). According to this list, there were more than 180,000 creative professionals in the period from 2007 to 2009, both within and outside the creative industries. By comparison, there were about 250,000 jobs (both creative and facilitary) in the creative industries in the Netherlands in 2009 (Rutten, Koops and Roso 2010b). In the United Kingdom, by comparison, Higgs, Cunningham and Bakhshi (2008) determined that in 2006, there were 800,000 creative jobs outside the creative industries, in addition to the 1.1 million jobs (both creative and facilitary) within the creative industries. A remarkable conclusion of this British research was that, compared to other economic sectors, there is a

much higher proportion of creative professionals working outside their 'own' sector, the creative industries. In other words, creative skills and competences specific to the creative industries are firmly embedded in the British economy as a whole.

Recent research by Rutten, Marlet and van Oort (2011) on creative talent in the greater economic region of Amsterdam, has shown how various creative sectors are deeply integrated in the regional economy. An important indicator is the migration of talent between businesses from various sectors within and outside the creative industries: creative professionals from creative industries regularly find employment in businesses and organisations belonging to other economic domains. This is only possible in a situation which stimulates the spillover of knowledge, through mobility of creative talent, from the creative industries towards the rest of the economy. Therefore, the conditions necessary for the creative industries to function as a catalyser for innovation in the creative economy are clearly present. Further research will be needed in order to gain deeper insight into such processes.

There is a parallel between the shift of direction in research, which is required in order to gain a clearer understanding of the workings of the creative economy, and a similar necessary change in policy. Creative industry policy currently focuses mainly on businesses, which are still perceived as the most important actors in the creative and innovative economy. However, there is a clear need, in the context of creative sector policy, for a shift of emphasis toward the role and significance of creative talent, and the embedding of this talent within the economy at large, particularly when one considers the promise of the creative economy. Education clearly plays a key role here. Therefore, this essay is also an appeal for the development of creative competences in young creative talent, and for the application of the resulting innovative power toward facing tomorrow's major economic and social challenges. This can take place in the context of a freelance practice, a creative industry business, or other businesses and organisations which have chosen to employ creative professionals. This is the broad framework in which the creative economy is gaining its momentum, and in which institutions such as the Willem de Kooning Academy will continue to play a crucial role.

Culture and talent in the creative city

Since the publication of Richard Florida's book *The Rise of the Creative Class* (2002), creative industries and creative talent have become associated with economic development on yet another level. According to

Florida, the development of the high-tech knowledge economy requires talent which can proactively give shape to innovation. This talent is what he refers to as the creative class: people who are able, as the saying goes, to think out of the box, using their natural and educationally cultivated creativity to give shape to new and existing social domains, and to stimulate innovation by adding new impulses to existing practices. Members of the creative class share a common ethos in which creativity, individuality, quality and a keen sense of judgment are highly valued.

The creative class can be found in a variety of professions: within the creative industries, but also in the public sector, particularly in the fields of technology and higher education. At the heart of the creative class, Florida further distinguishes what he calls the 'super-creative core': artists and professionals in a variety of creative professions, as well as scientists and technological specialists. This core plays a key role in generating new ideas, techniques or content, in science and technology, architecture and design, education, art, music and entertainment. These creative professionals are able to solve complex problems, which requires independent judgment. They are often, though not necessarily, highly educated.

According to Florida, today's regional economies need the creative class in order to become or remain innovative and internationally competitive. A region with a high concentration of such talent becomes a magnet for innovative businesses. Florida accurately observes that jobs (i.e. businesses) follow talent, rather than the other way round. In the industrial age, workers flocked towards factories; in the creative economy however, high-end service and technology businesses choose locations close to pools of talent, which are generally concentrated in metropolitan areas (cf. Glaeser 2011). Conversely, professionals from the creative class choose an attractive, usually urban living environment, and then look for a job in that area. Florida shows how this residential choice is mainly determined by a city's cultural and social climate: its art and culture, as well as the degree of social tolerance. In other words, the talent that shapes the creative economy thrives in a liberal, artistically rich and tolerant environment. In order to attract and hold on to the creative class, a city must offer its residents a rich cultural life. This is usually provided by the creative industries, particularly in the case of cultural activities which are consumed on location: live music, theatres, galleries, museums, film screenings, etc. Art in public spaces is also an important factor in this equation. Regional economists use the term 'amenities' to describe factors which increase the quality of life of residents of a specific geographical location, such as art and culture in an urban environment. Art, culture and creative industries thus indirectly stimulate innovation (in addition to the previously described catalysing effect of creativity) by fostering environments in which creative talent, which is in a position to contribute to urban economic

development and innovation, feels at home. Additionally, Florida recognises the direct value of creative talent for innovation; this is why he considers artists, designers and creative professionals from the media and entertainment industry as an integral part of the creative core. The often conspicuous presence of creative talent in the city is also an important factor in this respect. Creative individuals often work in the city centre, where they frequent coffee and lunch bars; here they meet, cultivate their professional networks, and keep in touch with the pulse of the city, always an important source of inspiration. Such 'third places' outside the workplace and the home provide cities with the flavour and colour which constitute their identity, and enhance their quality of life. Thus Florida highlights the economic value of culture and creativity for the city: not merely because visitors to museums and theatres spend money in the city centre (cf. Van Puffelen, Hietbrink and Wesseling 1985; Booz & Company, Van Beuningen and Tieleman 2013), an argument which is often put forward by cultural institutions, but because culturally rich cities and regions provide an environment in which innovation can thrive, making them attractive for the cultural pioneers sought by cutting-edge businesses. Empirical research has consistently supported Florida's hypothesis, internationally as well as in the Netherlands, demonstrating the vital importance of culture (which is largely realised or maintained through substantial public investments) for innovative cities and regions, thus generating substantial economic value (cf. Florida 2002; Marlet and Van Woerkens 2004, 2007; Marlet 2009, Rutten, Marlet and Van Oort 2011). This in itself should give us another excellent reason to leave behind the old dichotomy between culture and economy.

The British urban planner Charles Landry has addressed in various publications the value of creative talent and creative industries for urban development. His position, more generalist than Florida's, is basically that culture and creativity are essential aspects of contemporary cities, necessary for the development of urban identity as well as social cohesion. Cities are not merely systems consisting of multi-layered economic grids and logistical infrastructures; a city also requires an identity, and needs to cultivate norms and values in line with its historical development, in order to define and maintain its internal consistency. Landry calls for a form of urbanisation which is based on creative production and local identity, in which the material and immaterial culture of a city are deployed to maximum effect; an approach which not only combines, but also integrates, social and economic development (cf. Landry 2000, 2006). Important factors in this approach are the promotion of the cultural products of the local creative industries, and a focus on cultural participation. Such participation enriches and empowers individuals, for example by providing them with knowledge and cultural capital, which also yields value in other

domains of human coexistence. Naturally, creative industries play an important role here. Landry emphasises to a greater degree than Florida the social importance of creativity and culture. In this respect, many cities have seized upon the new interest in creative industries and the creative class as a starting point for urban redevelopment, for example in the re-use of industrial monuments as office and industrial space for creative businesses. As the American urban planner Jane Jacobs once said: "New ideas require old buildings" (J. Jacobs 1969). This way, culture and creative business development play an important role in the redevelopment of neighbourhoods.

Conclusion

In this essay, I have shown how the professional context for graduates of art education programmes is currently in a state of profound transformation. This applies to independent practitioners, to those who tend to formulate their mission in social terms, as well as those who seek a career in more applied creative domains such as design, digital media and advertising. The contemporary situation is by no means clearly defined; graduates of art education programmes such as those offered by the Willem de Kooning Academy currently have a great deal of options to choose from, all made possible through the keen interest of society at large for the possibilities of creativity.

However the Dutch government, particularly on the national level, seems to be in a state of confusion as to how this creative potential can best be stimulated and deployed in our society. As a result, many opportunities are simply being wasted. On one hand this government shows, at least in words, a great deal of interest in stimulating the development of the creative industries, for the greater benefit of social and economic innovation. The sector was first declared a key economic sector, then a 'top' sector, initially because of its magnitude and growth rate, later also because of its catalysing role in stimulating innovation within the broader creative economy. However, the same government also chooses to starve the sector by cutting back on public funding for art, culture and public broadcasting. The extensive productive contribution, in both social and economic terms, of these foundational elements of the creative industries is thus insufficiently recognised, as I have previously described in detail. Subsidising creative activities which do not generate direct revenue demonstrably yields long-term benefits, which are insufficiently appreciated in the current political discourse on art and culture, but rather seen as a wasteful luxury that only costs money. Ironically, professionals in the sector itself hardly contradict this narrative, except from the perspective of their own wish to defend their publicly financed sanctuary, in which economic factors play only a very marginal and diluted role.

In a directly related development, the strict rhetorical division between markets and governments is clearly and increasingly untenable; yet this dichotomy persists to this day in national politics and policy. Precisely in the domain of art and culture we can observe a mixed economy, in which the government along with other parties invests but also reaps the benefits, through tax revenues which are a direct result of successful creative institutions and businesses, which can develop and expand due to factors such as government efforts in the creative field. The resulting positive social results, such as participation in the work process as well as innovative urban environments with a high quality of life and an innovative economy, should more than justify the public investments. Of course, such investments need not necessarily be in the form of subsidies, but can also take place in other ways, for example through fiscal policy or innovative lead customership.

What is striking in this respect, is that regional and municipal governments seem to understand much better the value of these developments, and the resulting necessary public role. In Dutch cities, towns and regions, the importance of a rich cultural climate for economic and social development is often felt more rapidly and directly than by the national government. This certainly applies to large cities such as Amsterdam, Rotterdam, Utrecht and The Hague; whether their policy response is adequate, however, is another matter altogether. Though it would be impossible to draw any general conclusions, it is quite clear that opportunities on this level are increasingly being recognised. In this respect, it is unfortunate to note that Eindhoven, a city whose middle name has always been 'innovation', recently lost its bid to be designated European Capital of Culture for 2016; particularly since the city has demonstrated a clear ambition to further develop this dimension of its urban identity, enhancing its profile as an innovative city. This, incidentally, should by no means be understood as a negative reflection on the other two Dutch candidate cities: Maastricht and Leeuwarden, the second of which went on to win the competition.

In the debate on the social and economic value of the creative industries, the focus is shifting from the magnitude and growth of the businesses which constitute the sector, toward the catalysing effect of the sector on the rest of the economy and on society at large. Within the creative economy as a whole, this potential catalysing effect is much more significant than the size of the sector itself. Creative talent in creative industries is in a position to stimulate and give shape to innovation in the economy and in society at large, by transforming new opportunities and new technological possibilities into contemporary services and products which meet users' needs and tastes. At the same time, we can observe how the same creative talent is spreading out across the economy as a

whole, within businesses and institutions, for example when the role of designers and communications experts is integrated into one function. This implies that the value of creative talent in the creative economy supersedes that of creative industry businesses. The key is first and foremost in the talent, a fact which is increasingly understood at the municipal and regional policy level. In recent years we have come to recognise that talent is indeed the primary critical factor within an innovative regional economy. Businesses depend on talent; if this talent is not present, the businesses will simply look elsewhere. The implication for the national government should be clear: economic policy focusing on talent must take precedence over the current business-oriented policy.

Fulfilling the promise of the creative economy is largely a matter of education: educational institutions are responsible for shaping the creative talent which is destined to play an important role in designing innovation, for the benefit of the entire economy as well as society at large, providing not only essential contributions to the competitive strength of the business world, but also social innovations, related to the productive application of creative competences in areas such as urban development and a variety of social challenges. In this essay, I have provided several examples which demonstrate the possibilities related to all these innovations. These are precisely the challenges which educational institutions such as the Willem de Kooning Academy are in a position to address. The different approaches of the three graduation profiles (autonomous, social and commercial) offer a wide variety of possibilities, related to the different social domains. Of course, it would be unwise to separate too strictly these three domains; various combinations also offer a great deal of interesting possibilities. New applications can be developed within the autonomous practice, which can then be applied in the social and commercial domains, and possibly also vice versa. However, the relative sanctuary of the autonomous practice should not be burdened with targets which must necessarily lead to commercialisable applications. That would be putting the horse behind the cart. Still, any opportunities which arise should certainly be explored.

Art education programmes must prepare their students for a social practice which is dynamic and full of opportunities. There is an unmistakable need for entrepreneurial skills, as well as the competences required in order to establish a distinctive individual profile within an increasingly networked society. If the statistics tell us anything, it is that creative individuals will increasingly need to rely on their own initiative and business skills in order to give shape to their ambitions. Fortunately, today's world provides them with a great deal of possibilities for doing so.

How Changes in the 21st Century Create the Conditions
for a Collaborative Practice in Design

Introduction

Open design appears as one in a row of similar expressions of 'open X' – open access, open data, open knowledge, open cities, open hardware – most of which were coined in the early years of this century and modelled after Open Source in software. They denote a departure from presumably 'closed' practices of dealing with academic publications, data, knowledge, hardware, cities, innovation, and indeed: design; all key areas of the knowledge economy.

Elsewhere in this publication, open design is described as a participative method which invites users to modify a design; the design process then becomes dynamic and iterative. As a social process, open design evolves from a self-reflective to a collective-reflective practice, which makes use of social artistic practices "focused on enhancing the quality of life of individuals or groups within society, by raising their awareness, educating them, or contributing to their sense of identity. In other words: helping people to improve themselves in their relationship with their surroundings." ¹

What are the principal drivers for this development? Is it merely 'the digital turn' – the shift from material to digital media, which has reduced the copying of design artefacts to a few mouse clicks, while bringing media production to everybody's and anybody's desktop? Or is there a broader underlying current at the core of a societal change that questions the fundamentals which our (Western, industrialised) society is built upon?

The 'digital turn' – the computerisation and increasing use of the Internet in so many aspects of daily life, from communication to entertainment, from retail to banking, from relationships to education – has profoundly impacted on how we engage in these everyday activities. It has created new qualities of interaction, for example by replacing slow but immediate face-to-face relations with instant but mediated transactions, facilitated through a variety of intermediate digital systems.

Digital systems are not normally designed to be open and transparent; indeed, recent revelations have shown how they are actually being employed for quite opposite purposes. The Internet is not immune to surveillance and restrictions by the military-industrial complex, despite the fact that it was built on the principle that "nobody owns the Internet, there is no centralized control, and nobody can turn it off." ²

Yet the vision of the absence (or at least reduction) of centralised control, and of a society which attributes more authority and responsibility to the individual, is still alive, not only in (internet and software) technology, but more generally in debates that question some of the effects of industrialisation, including its consequences for society at large. These debates span a whole

spectrum of disciplines – history of technology, sociology, social psychology, economics, law, management – and indeed also: the arts and art education.

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Jeroen Chabot, Reflections on Art Education, in the present publication, p. XX.?

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Brian Carpenter (ed.), Architectural Principles of the Internet, RFC 1958, online at: <<http://tools.ietf.org/html/rfc1958>> (Accessed September 11, 2013), 1996, p. 3.?

Overview

I shall begin this essay by tracing some of the changes which industrialisation – the industrial revolution – has brought to society, and which were reinforced by a second revolution of automation and computerisation, leading to a socio-economic paradigm of central control and technological determinism.

I shall then present different strains of critique of this paradigm: technology is not a choice, but rather offers choices; value is not purely economic, but is a much more complex concept; humans are not primarily competitive but collaborative; and indeed in Internet times, central control must give way to lateral structures. These critiques, and the alternative paths for development which they provide, offer the promise of a society which is better aligned toward individual needs, and toward the greater benefit of all: more cooperative and less fixed on competition, and more laterally structured.

As one example of how some of these strands have found their way into practice, I shall describe the field of Free and Open Source Software (FOSS); software which can be freely shared, copied, modified and distributed. I shall consider the two most important facets of Free and Open Source Software: the legal facet of sharing, which sets a fervent counterpoint to the privatisation of intellectual assets, and the social facet of collaborative practices for the production of software.

Another example, shaped by recent developments, is the creation and manufacture of physical artefacts. Ideas such as 'open hardware' mimic the principles of Free and Open Source Software in this respect. The 'maker movement', exemplified particularly by the development and spread of

fabrication laboratories (fab labs) marks an emergent collaborative practice in the creation of artefacts, and in the development of new local economies.

I shall then trace the development of art education which, at least in Europe and its colonies, was historically an elitist affair, in the tradition of the Italian arts academies of the 15th and 16th centuries. In the 19th century, art education was repositioned to serve the needs of industrialisation. More critical and transformative aspects are a recent development, becoming widespread only in the late 20th century. Art and cultural production can equally be seen as rather utilitarian, following the 19th century approach and serving a market for scarce cultural goods. Only a few developments, notably Dada, Situationism, Punk Rock and the artistic Internet experiments of the mid-1990s have disrupted the status quo; and now open design can be added to this list.

Finally, I shall turn to open design, which in the past decade has moved away from the outer peripheries of design and design education, and closer to their core. As with Open Source Software, there are many aspects to open design, the most important being the legal aspect of sharing versus protecting a design, and the aspect of open design as a collaborative practice. Both, I shall argue, are still 'under development', as design, designers, and artists are only now starting to get to grips with the underlying changes in contemporary society.

To conclude, I shall argue that open design has not yet achieved the level of maturity needed to develop its full potential in dealing with an increasingly complex and ambiguous social environment. Recent developments, as our society continues to evolve beyond its industrial past, will only add to this complexity and ambiguity. However, I am convinced of the necessity of further developing open design; to fail to do so would be a lost opportunity, not only for the discipline but for society at large.

1. Industrial heritage

The term 'industrial heritage' usually brings to mind images of red brick factory buildings, factory owners' villas, and workers' housing, characteristic of the industrial revolution of the late 18th and early 19th centuries – and perhaps also the machines, particularly the coal-powered engines and locomotives which were the workhorses of that period. But of course the first industrial revolution was more than just a collection of architectural features: it brought mechanisation, centralised factories, and industrial capitalists; its iconic machine was the steam engine, its social effect was the division between labour and capital.

The industrial revolution also triggered what James R. Beniger has called a "control revolution" ³ – the development of information processing and communication technologies (including rationalisation and bureaucracy) for controlling the energy and flows of materials within industry. Beniger argues that "a society's ability to maintain control – at all levels from interpersonal to international relations – will be directly proportional to the development of its information technologies." ⁴

Various authors refer to different sequences of later industrial revolutions (for example, Peter Marsh counts five: steam engine, railway, electricity, computer, customisation and complexity⁵) but there seems to be a general convergence in thought, that there has been at least one more industrial revolution, somewhere between the 19th century and today. This second industrial revolution brought automation and later computerisation of manufacturing, as well as scientific management and management consultants; in this sense it can be seen as a continuation of Beniger's control revolution. Its iconic machine was the conveyor belt as a tool for rationalising and controlling assembly. Its social effect was the division between white-collar and blue-collar work, and the struggle by managers to gain control over workers, based on a "military thrust toward total control [that] indulged technical enthusiasms while it ratified managerial propensities." ⁶

While the technical means of automation and information technology create new options for the design of industrial and working conditions, they do not determine which options are chosen and to what end; technology is always an option. Moreover, technology creates intrinsically new qualities of experience, but also contingent possibilities as to how the often conflicting

demands of social, political and economic interests engage with technology to produce a 'choice'.⁷

56

James R. Beniger, *The Control Revolution: Technological and Economic Origins of the Information Society*, Harvard University Press, 1986.?

57

Ibid., pp. 8-9.?

58

Peter Marsh, *The New Industrial Revolution: Consumers, Globalization and the End of Mass Production*, Yale University Press, 2012.?

59

David F. Noble, *Forces of Production: A Social History of Industrial Automation*, Transaction Books, 1984, p. 192.?

60

Shoshana Zuboff, In *The Age Of The Smart Machine: The Future Of Work And Power*, Basic Books, 1988, p. 389.?

2. SThird industrial revolution: societal changes in the 21st century

Technology does more than offer choices. Zuboff and Maxmin⁸ argued, some 20 years after Beniger described the control revolution, that it is necessary to make choices other than those of the centralised control paradigm. This is one of the drivers behind what is also called the third industrial revolution. They argue that the second industrial revolution's managerial capitalism is in urgent need of an overhaul. Today's society of individuals seeking self-determination is in fundamental conflict with corporations, which leads to "frustration, mistrust, disappointment, and even rage"⁹ – a "transaction crisis."¹⁰ "The new individuals [...] insist on self-expression, participation, and influence because they share the certain knowledge that the singularity of their own lives cannot be deduced from the general case. No longer born to a biography, their identities must be invented as they go – cobbled together from personal initiative and private judgment."¹¹

Zuboff and Maxmin call for a new model of capitalism, which they call "distributed capitalism", a paradigm that serves the needs of individuals and treats them as the source of all value. They conclude by quoting Peter Drucker: "It is the customer who determines what a business is. For it is the customer, and he alone, who through being willing to pay for a good or service,

converts economic resources into wealth, things into goods. What the business thinks it produces is not of first importance [...] What the customer thinks he is buying, what he considers 'value,' is decisive [...]"¹²

Similarly, Umair Haque¹³ argues that our economic institutions with their sole focus on economic value are obsolete, and that competition at any cost is a model from the past. He calls for a constructive capitalism which builds on five elements for the benefit of society at large: value circles instead of value chains, value conversations instead of value propositions, a move from strategy to philosophy, completing a marketplace instead of protecting it, and making a difference with the products and services offered, which he calls "from goods to betters".

Legal scholars, of whom Yochai Benkler is one of the most outspoken, offer another critique of the current industrial/market system, as well as scientific and experimental analysis and evidence of the fundamentally non-competitive, cooperative instinct of humankind. Benkler theorised the peer-production model¹⁴ and collected evidence from science, industry and other experiments to demonstrate that there are "more effective collective action practices that are decentralized but do not rely on either the price system or a managerial structure for coordination."¹⁵

Economists have also found that people indeed exhibit social preferences beyond their own material self-interest, and that mainstream "economists fail to understand core questions in economics if they insist on the self-interest hypothesis and rule out heterogeneity in the realm of social preferences."¹⁶

Jeremy Rifkin's analysis is not so much a critique of incumbent industrial society, as a tale of new opportunities emerging today from the coincidence of transformations affecting communication media and dominant energy sources. Such coincidences, according to Rifkin's hypothesis, are what trigger industrial revolutions. The first industrial revolution was made possible not only by coal, but also by newspapers printed on the rotary press; the second industrial revolution depended not only on electrical energy from a grid of fossil-fuel power plants, but also on telephone and radio. The third industrial revolution is now being triggered by the Internet and by renewable energy sources, which both share an important characteristic: they do not require heavy central investments and central management, but rather allow for decentralised, lateral structures. Therefore this third industrial revolution will promote lateral power – in energy, the economy, and the world.¹⁷

All these narratives have a few points in common. They all name the Internet as a driving enabler for people to connect laterally, as peers. They

all leave behind technological determinism, understanding that technology in fact offers more choices than those presented by the incumbent powers of past and current industrial societies. And they all paint a picture of a future industrial society different from what we know today – better aligned with individual needs as well as the greater benefit of society at large, more cooperative and less focused on competition, and more laterally structured.

Interestingly (or rather, disturbingly) the poster boys and 'renegade' innovators proposed as examples by Zuboff and Maxmin as well as Haque are in fact the big proponents of consumerism: Apple, Google, Walmart, Nike – not brands one would associate with a shift toward the self-determination of individuals (certainly not beyond corporate-proposed choices) or the benefit of society at large. These examples do not in fact live up to the analysis in the works of either Zuboff and Maxmin or Haque.¹⁸ Meanwhile, well-known (and endlessly

referenced) examples of 'working anarchies'¹⁹ are Wikipedia and Free and Open Source Software.

61

Shoshana Zuboff and James Maxmin, *The Support Economy: Why Corporations Are Failing Individuals and the Next Episode of Capitalism*, Viking Press, 2002.?

62

Ibid., p. 3.?

63

Ibid., pp. 171-213.?

64

Ibid., p. 93.?

65

Peter Drucker, *The Practice of Management*, Harper & Row, 1954, pp. 37-41; quoted by Zuboff and Maxmin, *op. cit.*, p. 248.?

66

Umair Haque, *The New Capitalist Manifesto: Building a Disruptively Better Business*, Harvard Business Press, 2011.?

67

Yochai Benkler, *Coase's Penguin, or Linux and the Nature of the Firm*, in: *Yale Law Journal*, Vol. 112, No. 3, Dec 2002, pp. 369-446. Yochai Benkler and Helen Nissenbaum, *Commons-based Peer Production and Virtue*, in: *Journal of Political Philosophy*, Vol. 14, No. 4, 2006, pp. 349-419. ?

68

Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom*, Yale University Press, 2006, p. 63. Yochai Benkler, *The Penguin and the Leviathan: How Cooperation Triumphs over Self-Interest*, Random House Digital, 2011.?

69

Ernst Fehr and Urs Fischbacher, *Why Social Preferences Matter: The Impact of Non-selfish Motives on Competition, Cooperation and Incentives*, in: *the Economic Journal*, Vol. 112, Issue 478, pp. C1-C33, March 2002.?

70

Jeremy Rifkin, *The Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy, and the World*, Palgrave Macmillan, 2011.?

71

Zuboff, Maxmin and Haque may be excused by the nature of their publications – as business books, these are required to provide practical guidance for the upper echelons of the management, marketing and executive worlds; such a forced relationship with the professional practice may well lead to intellectually less satisfactory shortcuts. But the authors might also be trying to fix the system 'from within' which is perhaps not possible after all.?

72

Yochai Benkler, *Practical Anarchism: Peer Mutualism, Market Power, and the Fallible State*, in: *Politics & Society*, Vol. 41, No. 2, pp. 213–251, 2013.?

3. Open Source freedoms

Free and Open Source Software (FOSS)²⁰ is by now an established fact, a thriving industry. Almost two thirds of web servers run on Linux, while three quarters of web servers use Open Source Apache to respond to browser requests. 70 percent of web browsers are either completely Open Source (Firefox) or share large parts of their codebase with Open Source products (Google Chrome), and use an Open Source layout engine for rendering HTML – Gecko in the case of Firefox, WebKit in the case of Google Chrome and Apple's Safari. Other notable examples include server-side programming languages (such as PHP) and content management systems (Drupal, Joomla, WordPress). Contributors to FOSS are not just loony coders; Benkler notes that "just under 40 percent of firms engaged in software development report spending development time on developing and contributing to FOSS software."

21

Free and Open Source Software is built on two propositions; a legal proposition which obliterates legal defaults of 'intellectual property' protection, and a social proposition which creates a practice for peer-to-peer collaboration.

The 'four freedoms' described for Free and Open Source Software²² form a radical counterpoint to the software industry's narrow end-user license agreements (EULAs). EULAs are based on the assumption – readily confirmed by legislators and judges – that software code is a form of artistic expression, and stipulate that users may only use a copy of the software for defined purposes; they don't own it and are not allowed to share or copy it, often not even to re-sell it. Free software licenses on the other hand allow users to use the software for any purpose, to study it, copy and spread it (gratis or paid), and also to 'fork' it, i.e. to build new derivative software on top of it.

The freedoms of Open Source clearly state that any piece of code may be used for any purpose whatsoever – even commercial purposes. Therefore Open Source is diametrically opposite to incumbent business models of mass production, which are based on the concept of scarcity and on the assumption that only the owner of intellectual property should be allowed to exploit it commercially. Scarcity is a natural given for original paintings in oil on canvas; a business model based on selling the original makes a lot of practical sense here. Additionally, the value of works of art can be 'oligarchic' or 'positional', drawing their value from social scarcity: any multiplication of the work of art would destroy that which made it desirable in the first place.²³ On the other hand, in the case of anything digital – where the copy is absolutely identical to the original, to the extent that the two cannot be distinguished, and where the original remains unaltered by the copying process – scarcity as the basis for a

business model simply does not work, unless this scarcity is created by artificial means.

In this sense, free software fundamentally breaks with the scarcity-based business model, effectively separating the code – as the part that is easy to copy, and hence hard to protect – from the whole product of a software package, which also includes packaging, installation, maintenance, documentation, training, configuration and customisation. Similar approaches have been developed in the field of cultural production, with the set of Creative Commons licenses which reverse the content scarcity created artificially by copyright. Yet not all Creative Commons licenses actually make the content freely available according to the spirit of free culture (which would mirror the software freedoms); particularly clauses prohibiting commercial use or derivative works make the corresponding Creative Commons-licensed work actually 'non-free'.

73

In this text I use the terms free software, Free and Open Source Software (FOSS), and Open Source Software (OSS) interchangeably; although I am well aware that there is a fundamental difference between FOSS and OSS, insofar as FOSS will always remain free whereas OSS is indifferent to reprivatisation.?

74

Usage of operating systems for websites, W3Techs, August 2011, <http://w3techs.com/technologies/overview/operating_system/all> (accessed October 29, 2012). Benkler, op. cit., p. 221. Charles M. Schweik & Robert C. English, *Internet Success: A Study of Open Source Software Commons*, MIT Press, 2012. Josh Lerner and Mark Schankerman, *The Comingled Code: Open Source and Economic Development*, MIT Press, 2010.?

75

Richard M. Stallman, *The GNU Manifesto*, 1985; Richard M. Stallman, *Why Software Should Be Free*, 1992; both reprinted in Richard M. Stallman & Joshua Gay, *Free Software, Free Society: Selected Essays of Richard M. Stallman*, second edition, CreateSpace, 2009, pp. 43-56.?

76

Roy F. Harrod, *The Possibility of Economic Satiety: Use of Economic Growth for Improving the Quality of Education and Leisure*, in: *Problems of United States Economic Development*, Vol. 1, 1958, pp. 207-213.?

4. Open Source practice

A portrait of Open Source Software which discussed only copyright issues would of course be utterly incomplete. Eric S. Raymond – a chronicler of the Open Source approach – studied the development of Linux and found that “the Linux community seemed to resemble a great babbling bazaar of differing agendas and approaches (aptly symbolized by the Linux archive

sites, who'd take submissions from anyone) out of which a coherent and stable system could seemingly emerge only by a succession of miracles.”²⁴ Earlier Open Source development had been much more centrally orchestrated, according to Raymond.²⁵ In an Open Source project, programmers contribute what they want to contribute, not what they are ordered to contribute. Design decisions are debated within the community, although there is typically a very small core of maintainers – in small projects, only one – who make the final decisions regarding design and the inclusion or rejection of patches, fixes and new features.

The ‘four freedoms’ of Open Source Software are a necessary vehicle for enabling this social practice. If the maintainer would have to negotiate a contract with all other contributors in order to use their contributions, releasing new versions of the software would be extremely problematic.²⁶ In order to attract people to a project and allow them to contribute, maintainers have to adopt an Open Source style of development which Raymond describes as “release early and often, delegate everything you can, be open to the point of promiscuity.”²⁷ These principles have become the distinctive characteristics of Open Source Software development.

The core of an Open Source project typically consists of a small number of maintainers who are in charge of a project that, as Raymond notes, “scratches a personal itch” – they are involved because they want to solve a problem which is highly relevant to them. In the Open Source tradition, many (early) users are able to write code as well, so it is easy to turn them into co-developers, or as Raymond states: “Treating your users as co-developers is your least-hassle route to rapid code improvement and effective debugging.”²⁸ Since debugging is an essential feature of development, this is an important factor for speeding up this development. Thus Open Source development is more than just a matter of sharing end results; it is a fundamental practice of co-creation.

5. Open hardware and the maker movement

The ideas of Open Source and peer production have spilled over from the purely digital domain of software, into the material domains of hardware and manufacturing. Open source hardware has developed a strong foothold in niche markets, for example the educational Arduino microcontroller board which is also widely used for art projects, or the development of highly specialised time-measurement hardware for particle accelerators at the CERN laboratories and elsewhere.

Peer production in manufacturing began manifesting itself seriously during the past decade, in facilities known as ‘makerspaces’ and ‘fab labs’ – a development which has been termed the ‘maker movement’.²⁹ Fab labs

(fabrication laboratories) first originated as an outreach programme of the Center for Bits and Atoms, Neil Gershenfeld's research centre at MIT which explores new ways of bringing together computer science and physical science. A subset of the digital fabrication equipment, tools and processes used by the research centre – CNC milling, laser cutting, microcontroller programming and electronics – was made available to communities worldwide through the fab labs. Beyond mere community outreach, however, fab labs are meant to allow participants to understand and review "the implications, applications, and enabling [sic] research for access in the field to prototype tools for personal fabrication."³⁰ The first fab labs were established in the United States, Costa Rica, India, Ghana, Norway and South Africa; other countries soon followed.

After the publication of Gershenfeld's 2005 book *FAB: The Coming Revolution on Your Desktop – from Personal Computers to Personal Fabrication*, the spread of fab labs went viral; from a handful of fab labs in 2003, the network has grown to some 200 active labs, with almost as many currently in preparation.³¹ Some of the labs are part of an educational institution, such as a high school or university; some act as business incubators for inventors and tinkerers; many serve as catalysts for artists, designers and other creative minds.

What sets fab labs apart from just another shared machine shop, however, is the fact that they explicitly subscribe to a common charter proclaiming fab labs as a global network of local labs, stipulating open access, and establishing peer responsibility for safety, learning and development as a core feature. The charter requires that "designs and processes developed in fab labs must remain available for individual use" while allowing intellectual property to be protected "however you choose." It explicitly permits the incubation of commercial activities in fab labs; yet it cautions against potential conflict with open access, and encourages business activity to grow outside of the lab. Successful businesses are expected to give back to the inventors, labs, and networks that contributed to their success.³²

Local user communities have developed around individual fab labs; yet the larger promise of a global network still needs to materialise, beyond a few token projects. To this end, fab labs will have to focus less on machines and making, and wake up to the challenges of "the social engineering and the organizational engineering"³³ of the larger network. In other words, fab labs will have to start working on how to organise their ecosystem if they are to fully realise the promise of peer-to-peer collaboration.³⁴

The maker movement and specifically fab labs are potentially much more significant than simply letting people make stuff. The Institute for the Future, an influential think tank based in Palo Alto, California, recently

stated that the maker movement is in fact prototyping new forms of citizen-led governance, experimenting with new forms of community, and establishing new ways to create and measure value in local economies.³⁵ Under the categorical imperative of the 21st century – “consume less, create more” – the maker movement may already be putting into practice some of the developments identified above.

6. 'Open' in art education and practice

Academic art education, particularly drawing and design, underwent a utilitarian reorientation during the industrial revolution. A famous example is the Government School of Design in London which was founded in 1837 and eventually became the Royal College of Art, located in London's South Kensington district. The 'South Kensington system' in art education was part of a general drive toward the “development of human capital to produce art goods and manufactures that could expand both economic and symbolic capital for nation-states.”³⁶

The curriculum of art education has since undergone many changes: an emphasis on creative self-expression in the 1920s; an emulation of scientific method, focused on making art education more rigorous, since the 1960s (particularly in the United States, as 'discipline-based art education'); and a more critical, socially reconstructionist or issues-based approach since the 1990s,³⁷ moving towards what Dennis Atkinson calls a “negotiated and transformative curriculum.”³⁸ However, even in this negotiated approach, Eve Harwood argues that the voice of the student is still notably absent, and teaching at times lacks concern for students' aspirations.³⁹ Art education in Europe and North America has followed the development of industrialisation, the rise of capitalism and the emergence of the middle class; economic and cultural imperialism and globalisation have led to an almost worldwide dissemination of this utilitarian mode of art education.⁴⁰ Following Greil Marcus' line of argument, there have been only a few movements in Western art – Dada, Situationism, Punk Rock – that were innovative enough to break with this status quo.⁴¹

Felix Stalder adds to this list the artistic Internet experiments of the mid-1990s. As “cultures without commodity” these movements challenged the utilitarian “commodity culture”; Stalder argues⁴² that intellectual property law needed to be adapted (or rather: dealt with differently), and that the organisation of cultural industries needed to be challenged. Traditional artistic production and monetisation always emphasised individual authorship and the production of unique objects, treating creativity as a scarce resource – hence the need to render the 'intellectual property', the product of creativity, equally scarce.

However, "cultures without commodity" treated creativity as an abundant resource. Authorship moved away from individuals and toward groups, networks and communities. Boundaries between artists and audiences became blurred, the (creative) processes were organised as networks rather than as traditional hierarchies. These networks extended beyond the relatively small, personal scale and became "capable of structuring major collective, or better, connective undertakings."⁴³

7. Open design between sharing and protecting

Open design can be understood as extending the tradition of Dada, Situationism, Punk Rock and the artistic Internet experiments of the mid-1990s. Also, it purports to be to design what Open Source is to software.⁴⁴ Accordingly open design, like free software, has two important facets. On one hand it is often primarily discussed in terms of licensing: how can the protection of rights be overturned to allow use, study, sharing and 'forking' of designs? On the other hand, open design also denotes a certain strand of practice in the field of design: how can the design process become more collaborative?

When discussing the legal facet of design, in terms of licenses to 'free' design, it is often naively assumed that design, like software, can (only) be covered by copyright. Yet design is more diverse than software, and falls under various types of intellectual property protection – even varying from country to country.⁴⁵ The pragmatic approach is to distribute blueprints of open designs (which presumably are indeed covered by copyright) with Creative Commons licenses – typically requiring attribution, often with the share-alike requirement, and customarily prohibiting commercial use and reuse (known as the CC BY-NC-SA license).

Crucially, such distribution licences are quite the opposite of 'free', as they severely restrict the 'free' use of the corresponding designs. Open Source fundamentalists may well accuse such practices of taking a free ride on the Open Source bandwagon, as the Open Source label certainly confers a certain degree of 'coolness' within some circles of our gadget-crazy world. Designers would argue that they simply want to get their fair share if somebody else makes big money with their designs – hence the 'non-commercial' clause.⁴⁶ It seems then that these designers adhere to the incumbent model of physical and artificial scarcity – of a producer buying their design, selling it to the masses, and paying the designer a 'fair share' in the form of royalties.

Finally, it is important to note that not all design disciplines have a strong tradition of intellectual property, and that not all designers cling to protection of intellectual property rights – much to the disdain of policy

makers as well as the intellectual property lobby.⁴⁷ In fashion design, for example, copying appears to promote rather than deter innovation;⁴⁸ other examples include hairstyles, perfume, magic tricks and fireworks displays.⁴⁹ In

these cases, there seems to be no need for 'opening' design, at least not in legal terms.

77

Eric Steven Raymond, *The Cathedral and the Bazaar*, www.catb.org, 2000, p. 3 <<http://www.catb.org/~esr/writings/cathedral-bazaar/>> (Accessed September 11, 2013)?

78

This is not to say that there were or are no hierarchies in Linux development: Linus Torvalds is well known for (and proud of) his Finnish culture of cursing and outspoken "management by perkele", see e.g. <<http://marc.info/?l=linux-kernel&m=137391223711946&w=2>> (accessed July 24, 2013)?

79

In the traditional software industry, this problem is covered by employment contracts stipulating that any code an employee produces belongs to the employer?

80

Raymond, loc. cit.?

81

Ibid., p. 6.?

82

The 'maker movement' is named after the 'Maker Faires', a franchise of O'Reilly's *Make* magazine, a monthly publication dedicated to Do-It-Yourself enthusiasts and tinkerers, founded in 2005.?

83

Fab Lab User Group Meeting, January 18, 2005, online at: <<http://cba.mit.edu/events/05.01.fab/index.html>> (accessed July 13, 2013)?

84

Figures at the time of writing, autumn 2013.?

85

The Fab Charter, draft: October 20, 2012, online at: <<http://fab.cba.mit.edu/about/charter/>> (accessed July 13, 2013)?

86

Neil Gershenfeld, *Unleash your creativity in a Fab Lab*, TED talk, February 2006, online at: <http://www.ted.com/talks/neil_gershenfeld_on_fab_labs.html> (accessed September 20, 2012)?

87

Peter Troxler, *Making the Third Industrial Revolution: The Struggle for Polycentric Structures and a New Peer-Production Commons in the Fab Lab Community*, in: Julia Walter-Herrmann and Corinne Büching (eds.), *FabLab: Of Machines, Makers and Inventors*, Bielefeld: Transcript, 2013, pp. 181-194.?

88

Jason Tester, *Citizens Will Make the Future of Cities*, in: *The Information Daily*, June 13, 2013, online at: <<http://www.theinformationdaily.com/2013/06/13/citizens-will-make-the-future-of-cities>> (accessed June 20, 2013)?

89

Mary Ann Stankiewicz, *Capitalizing Art Education: Mapping International Histories*, in: Liora Bresler (ed.), *International Handbook of Research in Arts Education*, Springer, 2007, pp. 7-34, p. 15.?

90

Lynn Butler-Kisber, Yi Li, D. Jean Clandinin, and Pamela Markus, *Narrative as Artful Curriculum Making*, in: Liora Bresler (ed.), *International Handbook of Research in Arts Education*, Springer, 2007, pp. 219-233.?

91

Dennis Atkinson, *Approaching the Future in School Art Education: Learning How to Swim*, in: Dennis Atkinson and Paul Dash (eds.), *Social and Critical Practices in Art Education*, Trentham Books, 2005, pp. 21-30.?

92

Eve Harwood, *Artists in the Academy: Curriculum and Instruction*, in: Liora Bresler (ed.), *International Handbook of Research in Arts Education*, Springer, 2007, pp. 313-329, p. 320.?

93

Stankiewicz, op. cit., p. 25.?

94

Greil Marcus, *Lipstick Traces: A Secret History of the Twentieth Century*, Harvard University Press, 1989.?

95

Felix Stalder, *Open Cultures and the Nature of Networks*, Futura publikacije, Novi Sad, 2005, pp. 24-29.?

96

Ibid., pp. 7-8.?

97

Bas van Abel, Lucas Evers, Roel Klaassen and Peter Troxler (eds.), *Open Design Now: Why Design Cannot Remain Exclusive*, BIS publishers, Amsterdam, 2011.?

98

Besides copyright, these include registered and unregistered design rights, and sometimes trademark rights; in some cases it may also be possible to patent a design. A discussion of such possibilities would fall outside the scope of this text.?

99

See e.g. Ronen Kadushin, quoted in: Peter Troxler, *The Beginning of a Beginning of the Beginning of a Trend*, in: Bas van Abel, Lucas Evers, Roel Klaassen and Peter Troxler (eds.), *Open Design Now: Why Design Cannot Remain Exclusive*, BIS publishers, Amsterdam, 2011, pp. 108-115, p. 112: "I am saying: please copy. But if you want to make a business out of it, then please call me and we'll discuss royalties. It is my intellectual property, after all; that's the bottom line. If you want to use it, I would love you to use it; we can talk about it. But if you're making money out of it, then I would like a share of it also.?"

100

See e.g. the memorandum jointly presented by the Dutch Ministry of Economic Affairs and the Ministry of Education, Culture and Science, *De waarde van creatie: brief cultuur en economie 2009 (The Value of Creation: Memorandum on Culture and Economy 2009)*, Ministerie van Economische Zaken, Ministerie van Onderwijs, Cultuur en Wetenschap, Den Haag, 2009, p. 40. See also the European Commission's staff working document *Design as a driver of user-centred innovation (Brussels, 7.4.2009 SEC(2009)501 final)* or the newsletters of the European IPR Helpdesk.?

101

Kal Raustiala and Christopher Jon Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, in: *Virginia Law Review*, Vol. 92, No. 8, 2006, pp. 1687-1777, online at: <<http://www.virginialawreview.org/content/pdfs/92/1687.pdf>> (accessed September 20, 2012).?

102

Ibid.?

8. Open design as collaborative practice

Collaboration in design, particularly between designers and laypeople, is in itself nothing new. Participatory design started in Scandinavia in the 1970s under the name 'collective resource approach', in the context of industrial democracy⁵⁰ – a system which allowed workers and their unions to take initiative in systems design, rather than merely responding to management initiatives. Gradually, the concept (now known as co-creation⁵¹) gained acceptance in the fields of human-machine interaction, mass customisation⁵² – and eventually mainstream business, when Coimbatore K. Prahalad and Venkatram Ramaswamy popularised the term.⁵³

In co-creation, Prahalad and Ramaswamy attribute an important role to the customer regarding value creation; this idea has led to an "explosion of interest in co-creation from a marketing perspective. This view appears to be focused primarily on digital forms of co-creation that takes advantage of the social networks in harnessing enormous amounts of input at a low cost." ⁵⁴

Co-creation has also been applied in the field of design, where it is aptly termed co-design. Co-design as a design practice means "collective creativity as it is applied across the whole span of a design process from beginning to end." ⁵⁵ The "landscape of human-centered design" as described by Elizabeth B.N. Sanders and Pieter Jan Stappers extends between "the user as subject" and "the user as partner", and between research-led and design-led practices.⁵⁶ With co-design, they argue, design is moving "from the design of categories of 'products' to designing for people's purposes." ⁵⁷ Professional designers, they assure us, will still be needed – not only as design researchers whose main function is to guide users, but also for their highly developed skills in dealing with complexity, for making generative tools needed by non-designers to express themselves creatively, for keeping track of technological developments, and for their expertise in specific fields (interior design, interaction design, graphic design).⁵⁸ Equally, Paul Atkinson asserts: "It is a short step from co-creation or co-design to a position where users take on the responsibility for creative and productive acts in their entirety." ⁵⁹ Still, he believes that in the future, professional designers will increasingly design systems, which will provide end users with the tools they need in order to be creative.⁶⁰

However, design is destined eventually to move even beyond this model of designer-led participatory co-creation, in which final decisions remain the privilege of the designer. As Carolien Hummels aptly remarks, "open design is based on a libertarian relationship between designers and potential users, and not on a rational one in which the designer is seen as superior." ⁶¹ Just as society is expected to become better aligned to individual needs, more

laterally structured, so will design – at least, open design – eventually do away with the designer as the guardian of the holy grail of design. As businesses are expected to focus increasingly on the greater benefit of society at large, becoming more cooperative and less fixed on competition, so also design will have to develop new practices which eschew individual perfection but rather foster the achievement of common outcomes – which rise above the lowest common denominators as well as individual limitations. Open design is thus a process for enabling design literacy (strategic vision, tactical competence, operational skills) in everyone.⁶²

A real, functioning practice in open design has yet to emerge. There have been a few interesting experimental projects. The (Un)limited Design Contest was held in the Netherlands, nationally in 2009 and open to international submissions in 2010. The concept was replicated in France in 2011, and in Austria in 2012-13. So far these contests have generated a few interesting submissions, primarily in the more mainstream categories such as 'form' and 'fashion'; however participation in the category 'fusion' which was supposed to attract remixes of existing designs did not live up to expectations. Another example is a collection of furniture and accessories called Design for Download and curated by the Droog design studio for the Salone del Mobile in Milan in 2011, which included eight open designs by two design studios. Some authors also cite services such as Ponoko and Shapeways as examples of open design – however, the focus of these services is on manufacturing (with rather limited capabilities⁶³) and distribution of designs that are uploaded to (and occasionally also sold

through) their websites; there is no real collaborative approach here to any new form of industrial production.

103

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104

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Ibid., p. 30.?

Conclusion

In this essay, I have outlined the legacy of earlier industrial revolutions, and reviewed how observers from various disciplines interpret current signs of change in society as leading to a new industrial revolution. This revolution is supposed to generate lateral rather than hierarchical power relations, as well

as businesses that truly serve individual needs as well as the needs of society at large. I have used the example of Free and Open Source Software to illustrate how legal instruments can be used to foster lateral structures – even though the default assumptions of intellectual property, on which legislation is based, are often adversary to the freedoms of Open Source – and how a collaborative practice has evolved in Free and Open Source Software (FOSS). Similar developments can be found in (open) hardware and the maker movement. I drew some parallels with art education and practice: the move from a utilitarian approach in art education in the late 19th and early 20th centuries, toward experiments with networked practices, particularly the artistic Internet experiments of the mid-1990s. Finally, I examined the roots and the current state of the ‘open’ paradigm in design, and concluded that the discipline is cautiously experimenting with this new paradigm.

Design and designers still have a long way to go to, if open design is really to move into the arena of collaborative production as exemplified by Free and Open Source Software development. There are many lessons that can be learned from the early fundamentalist practitioners of FOSS. Developing software is in many respects quite similar to developing a design – there are strategic directions to be set, tactical choices to be made, operational skills required for fine-tuning. Problems must be identified, solutions must be found, decisions must be made – all of which requires negotiation in a collaborative setting. Experts and novices will have to work together: if people can be taught (and can learn) how to develop software and how to write code, there is no reason why they can’t also learn to develop and execute a design.

However, it would be a mistake to blindly mimic the developments in software. There are also important differences: for example, argumentation in software development is mainly informed by logic, while argumentation in design is mainly informed by artistry. A logical discourse is not the same as an artistic discourse; still, there is room within design to develop this artistic discourse, so that it takes place in a peer-to-peer setting rather than a master-disciple setting. The evolution of this artistic discourse is at the core of open design: it must develop into a collective-reflective practice which empowers people, especially when designers lose their privileged position of automatically being the sole experts in a crowd of novices.

If open design as a practice is indeed still far from mature, then the question arises: is open design actually desirable? Is it worth the effort? Wouldn’t it be more sensible to leave open design to a few eccentrics, or maybe just go on using the ‘open’ label for a while, as long as it provides an advantage of coolness?

I strongly believe that the changes observed by Zuboff & Maxmin, Haque, Benkler, Fehr & Fischbacher, and Rifkin will have a strong impact on society in the 21st century. While I do not expect these changes to supersede all incumbent industrial practices, they will certainly add substantial new paradigms (such as collaborative peer production with lateral relations) to an increasingly complex and ambiguous society. Design as a discipline is particularly well positioned to deal with more 'fuzzy' circumstances; it could and should play an important role in helping society and individuals get to grips with this fuzziness. However, as these new paradigms become increasingly influential, neither an expert-led nor a purely participatory approach will suffice. 'Ordinary' people will expect (and demand) to be accepted as peers, as they follow the categorical imperative of the 21st century – "consume less, create more". It is a noble duty for design, to fully develop this new field of open design into a mature discipline; and I strongly feel that it would be a loss to us all if society were to miss out on the contribution which design can make toward a more cooperative future, for the benefit of individuals as well as society at large.

114

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116

Ponoko offers laser cutting, 3D printing and electronics, the latter two only in the US; Shapeways is a 3D printing service.?

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List of figures

- I. Mosaic of Plato's Academy from the House of T. Siminius Stephanus Pompeii, 1st century CE, photograph by Marie-Lan Nguyen, public domain file from Wikimedia Commons
- II. Sculptor's Workshop, 15th century, commissioned by the Arte dei Maestri di Pietra e Legname from Nanni di Banco for the base of the guild niche at Orsanmichele, photograph by Allen S. Farber, State University of New York at Oneonta
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Colophon

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Design:

Publication Station | Willem de Kooning Academie, Rotterdam
Evers + de Gier, Rotterdam
www.eversendegier.nl
Editing and translation:
Joe Monk, Monastic Language,
Rotterdam

Made possible by:

Willem de Kooning Academy +
Kenniscentrum Creating 010,
Hogeschool Rotterdam

Printer:

Publication Station | Willem de Kooning Academie, Rotterdam

Edition: NaN

june 2015

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Reinventing the Art School, 21st Century

Art and design professions are currently undergoing major transformations. Perhaps for the first time in history, Western art education is no longer naturally linked to stabilising norms within the professional creative practice.

During the past few decades, art education has been unable to adapt sufficiently to shifting global economic and cultural realities. Neither has it been able to catch up with the new technological requirements which its graduates must face. The nature of the public has changed as well: consumers have become co-creators, while do-it-yourself culture increasingly challenges the role of the artist as the authoritative creative professional. Meanwhile, service design and project-based practices which exist on the boundaries between traditional fields of knowledge are becoming as important as artistic work in the conventional sense.

Therefore art education will have to undergo a radical transformation, if it is to go on playing a meaningful role in the 21st century.

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