Full Length Research Paper

Minimalism in Art and Design: Concept, influences, implications and perspectives

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The term Minimalist is often applied colloquially to designate or suggest anything which is spare or stripped to its absolute essentials. It has its origins with an art critic seeking to describe what he saw, but has also been used to describe such diverse genres as plays by authors such as Samuel Beckett, films by director Robert Bresson (the narratives of Raymond Carver), the simple musical works of composer Philip Glass (the art installations of Sol LeWitt), the German Bauhaus art movement and even the cars designed by Colin Chapman and the educational principles of John Carroll among others. This paper considers why understanding of the concept is not only necessary but also useful. The principle of Minimalism is proposed as being a useful theoretical tool which supports a more differentiated understanding of reduction, and thus creates a standpoint that allows the definition of simplicity in its various aspects.

Key words: Minimalist, simplicity, theoritical tool.

INTRODUCTION

In New Media Arts, Minimalism is a way of expressing an idea and is an inescapable theme in modern day social concerns as well as art. As its name suggests, Minimalism means using limited material to create a desired effect. A minimalist artist will typically use a limited palette of colors and have a simplified geometric design, as in the works of David Smith, which can be seen at the Gagosian Gallery in New York City. Minimalist sculpture on the other hand is greatly focused on the materials. While many claim that Minimalism is a movement specific to geometric representations, it extends in the modern day far outside this relatively narrow constraint. The influences of Minimalism are deep and meaningful. Aristotle's "Horror Vacui" states that empty space would always be trying to suck in gas or liquids to avoid being empty. More recently, Donald Judd said:

"It is not necessary for a work to have lots of things to look at, to compare, to analyze, one by one, and to contemplate. The thing as a whole, and its qualities as a whole is what is interesting."

What philosophical and social implications does Minimalism have in the twenty-first century? It would be necessary to see where it originates. The term itself, now common parlance, first appeared in the New York of 1929 when David Burlyuk used it in a catalogue for an exhibition at the Dudensing Gallery of John Graham's paintings as described on the Worldwide Art Resources web page Art History: Minimalism (1960 to 1975), but was largely unheard outside the small world of art and design circles until the late 20th century. Even today, its definition is difficult as it covers such diverse genres.

Minimalism still exists despite the fact that it is pronounced dead from time to time. Kyle Gann in 1998 for instance declared that the term, as far as music was concerned was confined to a particular American group of composers and that critics declared the movement to be dead by 1978. Gann explains how the minimalist music of composer Philip Glass was condemned as being a dumbing down of music for a public incapable of understanding anything more complicated.

Minimalism is not only recognizable but visible on many fronts. The style once considered to be subversive has over time become acceptable, in part because it is so widespread in society at all levels. The word has become part of the modern day lingua franca, as mass culture has taken as its own what was once dismissed and seen only as a target for ridicule, from the repetition of 'broken-record

music' (Burckholder, 2006) to the bald simplicity of monochrome canvasses by artists, such as David Smith, and monolithic sculptures, such as 'Accession II' by minimalist sculptor Eva Hesse.

Minimalism had widened its influence with the Bauhaus architecture, design, fine arts and craft movement in Germany in the nineteen twenties. It also spread to rock music as early as the mid-sixties when Young's drones were transmitted via John Cale and others to the Velvet Underground, and from there to the punk generation and their belatedly fashionable nihilism as described by Strickland in 2000. However, Brian Eno and Philip Glass carried the concept in a developing sub-genre of new age music in the seventies.

"Make it pure and simple" – this brief sentence could have served as the motto for Minimalism, an art movement that really began in the 1960s, although there were some earlier manifestations. The movement has been variously described as minimalist and ABC art (Strickland, 2000). The concept behind the movement was propounded by the critic, Clement Greenberg, who had a powerful influence over many of the artists and designers of his era. As early as 1939, although he does not use the term 'Minimalism' he stated, when describing modern abstract art:

"The excitement of their art seems to lie most of all in its pure preoccupation with the invention and arrangement of spaces, surfaces, shapes, colors, etc., to the exclusion of whatever is not necessarily implicated in these factors."

Greenberg urged artists to emphasize the 'objecthood' or actuality of their works – whether a canvas in the case of a painter, or a cube in the case of a sculptor. With Minimalism, the former gestural qualities and illusionism of art were no longer important. The emphasis was supposed to be on shape and materials, and these were to be as pure, plain and simple as possible.

A work, such as Donald Judd's 'Untitled', shows the style characteristic of Minimalism because it is nonobjective, made from industrial, nontraditional materials, it is simple and austere, and because it consists of multiple and repetitive elements (Obendorf, 2009). Minimalism also spread and matured in various directions, with the Arte Povera movement for example, based on the use of few and non-expensive elements, as opposed to the values of established intellectual and cultural institutions; questioning art as a means of free expression.

This paper was motivated not only by an interest in understanding simple design, but also by pointing out what social influence Minimalism have on our way of life. Would it not be much more pleasing, but also far less expensive in both time and effort if simplicity could be part of the plan? The practitioner of Minimalism ought to be able to consciously choose his/her tools and materials and then make informed decisions about design which reflect exactly those aspects of Minimalism the design is trying to achieve. To this end, this paper defines an ideal for design which focuses on reduction as a positive technique, and draws on the idea of Minimalism as a means of differentiating comprehension and simplicity. The resulting minimalist terminology used helps with the comprehension of design qualities and can be used to explain how these qualities are produced in design processes, materials and techniques. In this paper, the concept of Minimalism is proposed as a useful theoretical tool which supports a more differentiated understanding of reduction, and thus creates a standpoint that allows the definition of simplicity in its various aspects, and further, an understanding of a more profound meaning of the philosophical implications of Minimalism.

STATEMENT OF THE PROBLEM

When computer artifacts became widely disseminated throughout society, fresh questions were raised. With the coming of informatics as a research discipline complementing computer and computing science, the focus moved from the engineering view of reducing excessive complexity to the designing engineer with the aim of reducing complexity for the end user and so ensuring that they would be in command of the procedures employed. This ease of use of course meant greater sales and bigger profits for the companies concerned. Many of the problems that surface when systems are used are caused by the complexity of engineering solutions being added to application complexity.

The reduction of this sometimes obstructive complexity is the reason for the use-centered design behind interactive systems. Principles such as 'simplicity' and 'clarity' play an important part in the self-conception in this discipline. Usability is the core of many design concept. The aim of the designer is to create an interactive system that is so non-complex that it becomes unrecognizable as a system, but instead simply fades into the background while quietly enhancing the abilities of the user to get the best out of it. However, such simplicity has proved difficult to define as the meaning is altered according to both the protagonists and their subjects, with both sources and focuses of perspectives. The one common factor to all notions of simplicity is their relative nature, in which all definitions refer to some kind of reduction.

The skeptical reader may ask: Why is the idea of Minimalism considered to be necessary? They might as well ask: Is it absolutely necessary that simplicity is examined and explained? People realize that in every day practice, simple systems can be created without the need to consider theoretical concepts. Over time, experience or even trial and error methods will produce

solutions that are simpler and better. Fieldwork, user modeling, and user testing can all assist in the identification of these, and successful engineering techniques exist to realize them. In the field of Art and Design, the theory is applied in the same way; moreover, the usage and interface need to meet the same requirements.

THESIS STATEMENT/HYPOTHESIS

When considering reduction, one is soon confronted with ideas about degree and direction. This paper tries to arrive at a systematic viewpoint in order to explain why designers strive to produce products and processes which are of 'good design' through reduction; but what exactly should be the correct target for reduction and what methods are already in existence in order to find the aspects of a design which is capable of reduction? Then it must be asked 'Where is the place to start the search for such aspects?'

The phrase 'Less is More' is not only used in design, but also closely linked to the term Minimalism, which, although is initially referred to an art movement in the 1960's was later applied successfully to design in a multitude of other disciplines. In each case, Minimalism always denotes reduction in an extreme case, and a central proposition of this work is to learn by looking at such extremes. Although simplicity as a valuable concept is accepted widely, truly simple systems are relatively rare – many systems, which perhaps began in a simple way, become ever more complex. This paper sets out to understand this paradoxical state both in the liberal arts and in design in general. The arts are understood as a sensitive arena where social and technical values are often displayed and discussed with extreme violence and clarity, long before the ideas behind them pass over to other disciplines. In the words of the director, Peter Greenaway:

"Today, many perceive painting as something that is both remote and insignificant. That is a tragic mistake. Painting is always ahead where sociological and philosophical developments are concerned. Look at the 20th century: all philosophical movements began with painting – Cubism, Surrealism, Minimalism, Structuralism and so forth. A new way of thinking about the world manifests itself always in painting. For me, painting is leading all other arts" (Obendorf, 2009: 23).

Such art provides a way of manifesting new ways of thinking about the world by providing definitions of perspectives from which things look different. Through its Avant Garde nature, analyzing art can either assist by scouting for new trends or by making use of the vast experience that critics and historians have acquired when examining developments.

The approach taken tries to come up with answers that

help to both identify and set the direction for reduction, as well as illustrate any trade-offs in degree. Minimalism rather than simplicity is not necessarily desirable. It can produce results that are boring, inadequate and even dangerous. Making use of the extreme as a model for design enables the viewing of 'extreme' traits in everyday products and so allows designers to find the acceptable and correct degree of reduction necessary. Therefore, the idea behind the work is essential. What is the aim of the product, why is it needed and how can we conceive such artwork? Minimalism is not an achievement, rather it is a means of creating art.

MATERIALS AND METHODS

Four different notions of Minimalism which were observed to recur in the different literatures in art and design are introduced to the design of interactive systems. This trans-disciplinary transfer is based on an extensive analysis of the available critical discourses in both art and design that began in the 1960s and which is still active today. The protagonists of Minimalism are diverse in both their conception of reduction and their judgment of artistic qualities, but this paper utilizes five ideas which repeatedly surface in different literatures:

1. A minimality of means;
2. A minimality of meaning;
3. A minimality of structure;
4. The use of patterns;
5. The involvement of the recipient in the work of art (Alburger, 1996).

For the design of interactive system, four notions of Minimalism were identified in this paper drawing on these common qualities of minimality. These focus on the function, structure, architecture and composition of the interface. The choice of words is deliberate as the first two directly describe aspects of the concrete design, while the latter two points move towards more transient aspects of the design that are determined by the construction method and the introduction into the work context. Functional and compositional Minimalism focus on the use of the tool-in-context, whereas structural and architectural Minimalism stress functionality as accessed by the user.

SIGNIFICANCE OF THE QUESTION

The initial intention behind this project was to define a single, unified standpoint for Minimalism, but the studies of the various available literature in art and design history soon made it clear that there was no agreed consensus about the significance of the term. Minimalism is a term used to describe art and design which at the same time is very similar and different. It soon became clear that this multiplicity of view point can be considered to be a virtue rather than a defect because they allow the disambiguation of various minimalist perspectives, and so of different types of simplicity.

An underlying assumption for this essay is that a wide range of items designed today are already implicitly following minimalist values or are designed specifically

with reduction as a creative motive. In 2009, Obendorf observed that current mature electronic products were being targeted with a rise of 'simplicity' and a corresponding increased stress on 'usability' as opposed to 'abilities'. Some support to his statement is lent by modern day slogans such as 'sense and simplicity' as in designs from Phillips, or new brands such as "SIMply" a German network provider that advertises simplicity as being a key 'feature' of its products (Obendorf, 2009). Software companies, such as Microsoft, use the principle of simplicity heavily. Searching Microsoft.com for simplicity produced more than 100,000 hits. It is the technology that does not make the user feel inadequate. As a response, the company 'Apple' develops uncomplicated designs and interfaces, in which the latter tends to be an inspiration in the market today. Would we be more attracted to pure aesthetics? How does it operate?

The term Minimalism is used in this essay in order to differentiate between several possible meanings of simplicity. This is done in the case of design products, where the minimal qualities of an identified design match with one of the proposed four principal concepts of Minimalism. The application of the developed categories of Minimalism being used as an example of products demonstrates how useful Minimalism is as a standpoint for criticism and analysis. It also helps to enhance the theoretical framework as the abstract ideas are made to connect with the qualities of examples. Consumers need to feel at ease with the tools: a clear design gives a feeling of understanding the object; hence, we see the importance of Minimalism as a support of usability, but beyond that very concept, we see it as a significant reason to make a difference.

NON-MINIMALISM

A term that is as broad as Minimalism naturally evokes various interpretations. All of the following can be considered as legitimate, but some are simplifications which are advantageous and only useful in particular contexts, while others are both different from the basic idea of Minimalism described so far and would be difficult to apply to design. There is a certain balance to find before envisioning the true meaning of an idea. To quote Albert Einstein:

"Everything should be made as simple as possible, but not simpler."

What follows are descriptions of what this paper does not consider to be true aspects of Minimalism.

In the field of mathematics, as well as in theoretical computer science, the minimization of terms used is a significant and common method used to create greater readability and the removal of any possibly ambiguous formulae as described by Cornell in 1997. By making reductions in both the visual and functional complexity of mathematical terms, the readability of mathematical calculations is obviously increased. This process has a central place central in manual mathematics. Reduction is also used to identify equivalent forms unambiguously as when looking for prime numbers or when computing such things as the minimal polynomial of an algebraic number. This then eases the proof of the concept that numbers are part of a ring.

Noam Chomsky is considered to be the main person behind ideas about linguistic Minimalism. He has been heralding several shifts in linguistic research for the last 36 years. In the 1970's 'autonomous syntax', Chomsky (1968) gained huge popular acceptance. His investigation into human languages and their individual characteristics was given a new title and a more concrete form when 'The Minimalist Program' was published (1995). Chomsky takes as a basic assumption the existence of one world-wide grammatical system of all tongues which is capable of generating different languages by making various choices from a number of pre-defined options within the universal system. The minimalist program can then be defined as being from the perspective of the link between propositional thought and sound. The research questions that result from such a concept encompass:

i) The functions of language, taking into account both its cognitive and biological background;
ii) The creation of a system that fulfills the basic functioning of language, that is, the type of machinery that "A superbly competent engineer might have constructed, given certain design specifications" (Chomsky, 1997: 15);
iii) Comparing actual human languages with this concept of an ideal system of language.

Of the reported uses of the term Minimalism, Carroll (1998) in 'Minimalism beyond the Nurnberg Funner' comes nearest to the area of a usability minimalist approach to technical documentation as he had defined earlier in The Nurnberg Funner (1990). Carroll advocated the reduction of learning materials. He preferred a style of learning where facts were not presented in a fixed pre-structured format as in rote learning, but one where learners needed to work actively on real tasks in order to gain knowledge. His underlying principle is that better results in education are achieved if knowledge is actively acquired as the result of being engaged in genuine tasks. According to Carroll (1990: 77):

"The key idea in the minimalist approach is to present the smallest possible obstacle to learners' efforts, to accommodate, even to exploit the learning strategies that cause problems for learners using systematic instructional materials."

Conclusion

Minimalism can therefore be interpreted as a meaning far

beyond the world of art where it was first used. It means a user-centric approach to all things, whether painting a canvas, designing a car or producing a piece of computer software. It attempts to support users as they attempt to accomplish their task. Such support is only required where the user does not reach their set goal with the tools available to them. Minimalism therefore attempts to make help available whenever breakdowns are apparent. In practice, this means an emphasis upon meeting the user in his work, instead of conveying the designer's ideas of the application. Further to what Minimalism can represent, it conveys a very contemporary view on our culture. According to the Tandem Verlag book, minimal art was born as the modernist period came to a close, in a society experiencing an economic boom and a profound moral crisis:

"Minimal art goes further in the search for abstraction, divesting the work of any sentiment and meaning."

There is a subtle, yet powerful impact of Minimalism on our mentality. The use of simple architecture, minimal decoration and limited space arrangement in wellness centers is an example. Comfort is an important feature in our world today, but in doing so, the original message is somehow forgotten, as a result of the fact that from a wish to divest ourselves from the unnecessary, we end up purely using a tool and a trendy approach of interior design. The original aim has somehow been lost in the process of solely using the essence of a message as a form itself.

Minimalism plays an important role in the development of communication tools. The approach supports an ideology that is not only fashionable, but also inescapable in our world today: ecology. The effect of a minimalist concept on our social behavior is crucial.

The human society is based on an exaggerated quantity of information. Today, the new media support and carry this concept everywhere, even to remote places in the world. Our civilization is now in the search of something simpler and truer. The impressive development of the means of communication implies a need for the implementation of a clear and objective interface with many of our technological tools. Minimalism could be a practical solution if it is understood for what it is: a meaningful utilization of elements. Unfortunately, it is very often mistaken for simplisticity. Most people also do not comprehend the concept as such, but see in Minimalism a lack of meaning or a simplicity of means. In doing so, they prove that the idea does not reach the goal of conveying the essence of a subject, but what follows Minimalism is even more intriguing: from a rigorous limitation of elements, emerges a new possibility, which is postminimalism. If there is continuity, there is influence. To illustrate this idea, composers like Michael Andrec, Arvo Pärt or Olesya Rostovskaya demonstrate that there is a life after "less". By the 1950s, Minimalism was already a fait accompli, so "while they admired the way

minimalism communicated with audiences, they saw no necessity for its quiet chords, pretty textures and rhythmic simplicity" (Kyle, 1998).

An artwork with fewer and simpler elements offers a space for imagination, and a gap in the incessant noise in our minds. Minimalism is the possibility to get rid of the too much noise and focus on the essence. With less noise, we can access the freedom we are in need of, that is, a freedom of interpretation. Minimalism is not an idea, but a fact. There is a strong unconscious thirst for less. Minimalism could be an answer to this need, but in the abundance of ideas, it is hard to distinguish the honest message behind the artwork from the trendy manipulation of a simple aesthetic. Like many other art movements, Minimalism suffered from being used and reused, employed and transformed. It therefore lost its original meaning. The theme became somehow stereotyped and stored in a drawer where it lies beneath the remains of an obsolete forgotten tool. Minimalism can also be easily misunderstood: the very few elements lead to misinterpretation because of the lack of knowledge, which unveils the paradox of Minimalism. The concept becomes a victim of its own, although the implications it generates are far from simple, and could be unfortunately simplistic.

Minimalism has also a dark side. Indeed, it has spread to a variety of fields to influence our life, but it has also been overused. Looking back to the multitude of artwork (design, music, fashion, painting and installation) that take their source in Minimalism, it could be hard to understand when one says - as many have: "Minimalism is dead". To a certain extent, this is a fact, in the sense that no purely minimalist artwork is produced anymore. If it is, it is nourished, hybridized and derived from other influences. In terms of communicating a message, Minimalism became an instrument. Dwelling up new approaches would betray the original core. What is left of Minimalism is the remains of the forms, more than the ideology. The principles are still alive, but they are senile. What we have left today instead is a multiple stream of artwork that fished various aspects of minimalism as their starting points. Minimalism is not an answer to itself, but more a path to contentment.

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