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## MINIMALISM: AN OPTIMAL AESTHETIC FOR THE SUSTAINABLE DESIGN

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**Abstract:** *This paper reports on the attempt to develop an optimal aesthetic for a sustainable approach to design. The evaluation of minimalism is as a basic resource and substitute for the current traditional aesthetic. This paper presents a brief introduction to minimalism, working principles, and design concepts, with the intention to highlight those worth being to the attention of designers with sustainable agendas. It goes on to outline the eco-characteristics of the minimalist aesthetic. Why it is so important in a sustainable design framework? The paper explains how minimalism offers ground-breaking information in determining the sustainable aesthetic.*

**Key words:** *minimalism, minimalist design, minimalist aesthetic, sustainable aesthetic*

### 1. INTRODUCTION

Sustainable designs should become a compelling alternative over unsustainable traditional designs, where aesthetic has its utmost contribution. The products currently designed may appear beautiful, but they lack “the power to transcend physical form,” Sugimoto argued, they miss “the depth of meaning derived from inspiration”, which Sugimoto believes is the mark of ‘true’ beauty [14]. Addressing aesthetics is part of the process of sustainable development. Tischner (quoted in Charter, 1998) underlined that the aesthetic appeal could be “a generating purchasing stimulus.” Products aesthetic can affect the socio-cultural and economic dimensions of sustainability. Papanek [23] highlighted the necessity of the new aesthetic for design considering sustainability. The questions answered briefly in this paper are as follows: What is minimalist design? What is a minimalist aesthetics? Is the minimalist aesthetics an optimal aesthetics for the sustainable design?

The answers, based on a thorough search of the literature, were intended and needed as elucidation of interrelated links between minimalist aesthetic and sustainable design, and the potential of their cohabitation. The driving philosophies of both minimalism and sustainability are pertinent to be considered the

ultimate solution applied on individual/global scale to current stringent humanitarian, environmental and financial current issues. Sustainability as an emerging movement in design is in need of a suited aesthetics – a face – which minimalism could provide; As well as a history and tradition.

### 2. CONTENT

#### 2.1. What is minimalism?

Minimalism refers to a movement in various domains of expressivity, especially visual art, architecture, and design, where the work, radically ‘stripped’ to its fundamental features, [1], [2], [21] “results in formal austerity or essentiality”. Judd stated that “It isn’t necessary for a work to have a lot of things to look at, to compare, to analyze [...]. For Pasca, [2] minimalism constitutes “the taking to an extreme of a design culture that prefers simplicity to formal excitement, the reduction of signs to superabundance, laconicism to confused representation, reserve to discursive effusion.”

Minimalism can be seen as “a decisive criticism of our contemporary values of excess, an attempts to lay foundation in those episodes [...] of human thought and culture through which mankind also expressed the need for essentiality, for simplicity, and fundamentally, for truth” [2].

## CONCURRING DESIGN PRINCIPLES

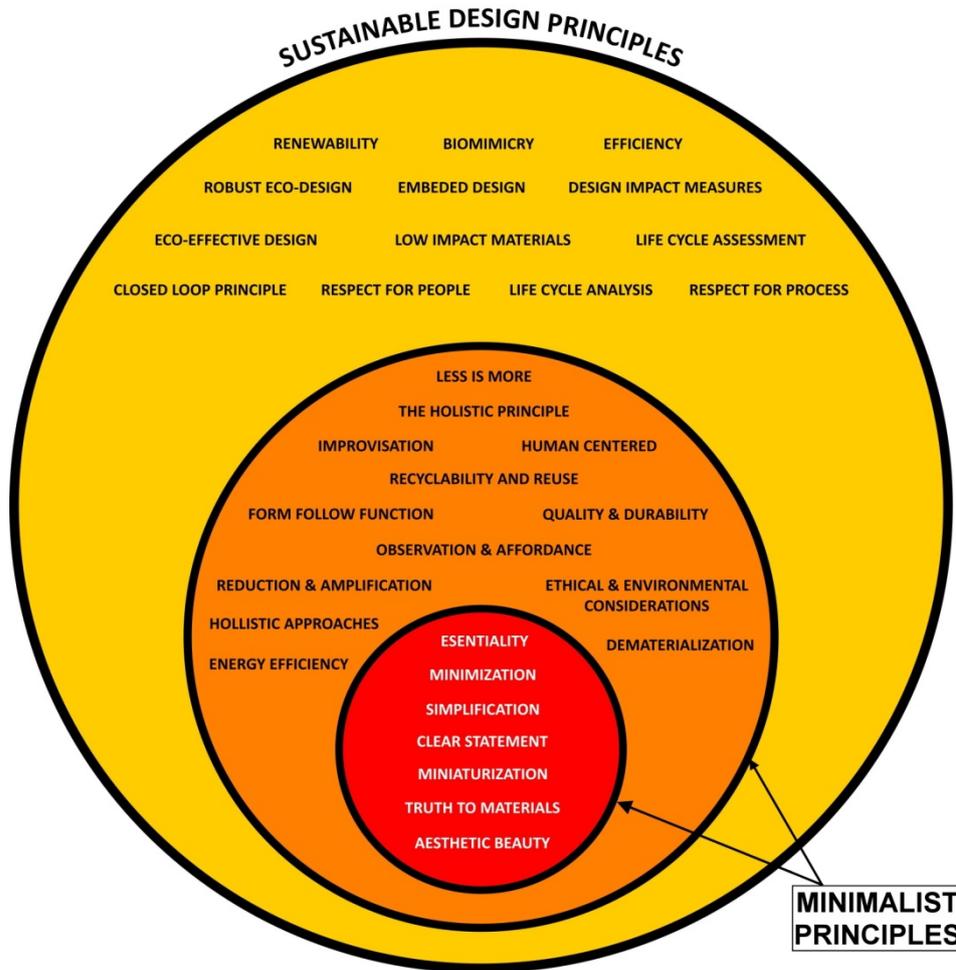


Fig. 1. Concurring principles of minimalism and sustainability

### 2.2. Principles of minimalism in design

Albeit diverse conceptions of ‘reduction’ are being implemented, the reiterate principles are: a ‘minimality of means’, a ‘minimality of meaning’, a ‘minimality of structure’, and the ‘use of patterns’ [21].

Instituting simplicity as a goal, “minimalism in not to be equated with simplicity”, but rather a sum of principles that “go to extremes to create a focus of the recipient, an involvement of the user, and a way of looking at things – a minimal perspective. [21] Minimalist simplicity is the result of “rigorous focusing through the elimination of distraction” [20].

The notion of essence - or “what is left when there’s nothing else that you can throw

away” [17] determine an end result which is the projection of that experience, the essence of effect (Ibid.). Ive rephrases with regard to Apple philosophy: “We have refined and refined every detail in the service of the user, just to get rid of complexity. If something doesn’t need to be there, it isn’t there. I don’t know how we can make something any more essential, any simpler” [...] (Ive, 2008).

Due to its status of ‘open concept’, minimalism became difficult to be located in a definite moment [30]. It is an a-historical phenomenon [2], [30].

Bertoni brought subsidiary examples: AG Fronzoni whose *Serie '64* furniture anticipated Donald Judd’s experiences with objects. The structure is determined by basic geometric shapes, “rendered with a minimum of incident

and maneuvering” [6]. The surfaces of the iPod, like the Braun Transistor Radio T3, are composed of geometric forms –circle and rectangle alone. No other elements distract the attention of the user [3].

The aphorism ‘less is more’ is considered the ‘working’ principle of the minimalist aesthetic [5]. It may be regarded as minimalism's foundational doctrine. The effect may be enhanced by a radical economy of means, such parsimony comprising the values of completeness and precision of statement.

The notion of ‘clear statement’ is crucially important. (...) As Battcock underlined [1], clarity is a key characteristic, amplified by the minimalist reduction. Motte [20] traces the stages in the dynamic of such an enterprise: denuding the subject of “anecdote and incident”, with intention of drawing it into focus; reducing the representational discourse to a minimum.

The search for ‘expressive’ clarity has a precedent in what Colpitt called minimalism's “propensity for literalness” [20]. Minimalism is a return to clarity, meaning “in a context that appears to lack all”[7]. Clarity leads to simple understandability and intuitive usability, of decisive importance for private users and for computer novices, an important target group for Apple [3].

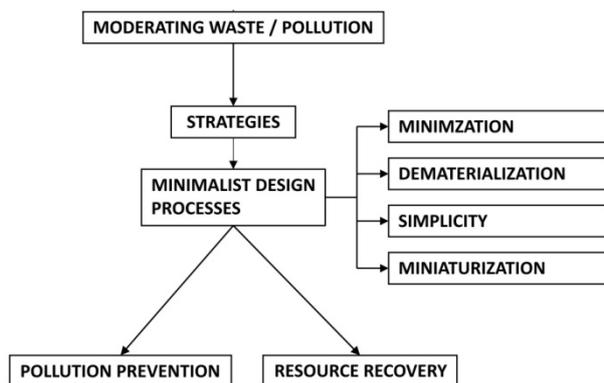


Fig. 2. Minimalist processes considering sustainability

Minimalism reorders values by “locating profound experience in ordinary experience.” By shifting emphasis to direct experience,

“minimalist design makes a clear statement about the nature of reality” [20].

### 2.2.1 Simplicity and miniaturization

Simplicity has a moral dimension that go beyond aesthetics: “it can be seen as the reflection of some innate, inner quality, or the pursuit of philosophical or literary insight into the nature of harmony, reason and truth”

Miniaturization and simplicity, principles of the minimalist undertaking, “converge on the notion of lessening” [20]. Reduction is of functional importance. Reduced design is the black and white design of the Braun television, the *Atelier TV 3*, which seems to consist exclusively of the screen, and Apple *iMac* [3].

The concept of ‘amplification’ is equally important, “generating a theoretical paradox”: “through a reduction of means, minimalists hope to achieve an amplification of effect” [20]. Leepa suggests that “reducing the number of integers that compose a work of design allows a concentration on the remained elements, investing them more powerfully and directly with the sorts of effects they wish to achieve.

Technical properties of the components in a product influence form. “The development of transistors in the 1950s, followed by the microchip in the 1980s, made possible an extreme reduction in the size of the products.”

Miniature components made new products possible. “The potential of the technology has become expressed in form through a fashion for miniaturization.” Examples of applied miniaturization are the Psion series 3 pocket computer (1992) issued by Psion plc. [13]; More recently the Apple iPod shuffle 2G (2006), 4G (2010); iPod nano 6G [3]; Form has contributed to a new function; Box for Sony *Stowaway* (1979-80) the first personal stereo cassette player; Sinclair microvision television (1977), by Sinclair Radionics Ltd., ‘Marketed as ‘the only pocket television anywhere in the world’, 4000 sets were being made a month after the end of the first year of production [13].

### 2.2.2 Dematerialization

The concept of ‘a product of service’ refers to the assumption that instead of products ‘to be bought, owned, and disposed of’ by ‘consumers’, products would be reconceived as ‘services’ [16]. The tendency towards dematerializing in design is informed by a mix of factors: development in the electronics industry and the new economy, awareness of environmental issues, social motives, annoyance at the glut of objects and visual stimuli in our society, and criticism of our overdesigned surroundings.

In that respect Martí Guixé is an exemplified designer, with an interest in function: “I’ve been trying to eliminate the object’s form and to design it as if it were pure function.” Using the most minimal means Guixé manages to tap many layers of meaning [24]. Guixé is described as “a form taker instead of a form maker.”

“With design and purpose accomplished, the physical object disappeared.” Such dematerialized design, “dissolves in the course of people’s actions; People perform this actions without thinking” [9]. “A lot of what we seem to be doing in a product like that (*iPhone*) is actually getting design out of the way [...] When forms develop with that sort of reason and there are not just arbitrary shapes it feels almost inevitable, it feels almost undersigned.” (Ive, 2008) Rams’s motto was: “As little design as possible” [2].

Fukasawa often uses the phrase “designing the unconscious”, which in Sasaki’s [27] opinion, “summons up the idea of finding a core awareness.” “The ‘core awareness’ implicit in interactions between people and things has proved a major theme of Fukasawa’s investigations. His analysis of the ‘active memory’ of many different people using the same things in the same place lets him read the special characteristics of shared environments”.

Under the direction of Fukasawa, ‘the shape vanishes’ (*Neon*). He promotes minimal working (*Pen*) and the absorption of traditional elements (*Vermillion Ink Pad*). ‘A shape just as you thought it would be’ would embody (*Ball Point Pen With Name Stamp*) ‘an obvious idea’ (*Twelve*) [18]. An example of shape with the operation included is offered by the CD Player

(1999) designed for MUJI [9]. In the Tile Light (1998) project for INAX Corporation, the interest was directed toward ‘the possibility of erasing the existence of things.’ “Thinking of a tile design, I came up with the idea of making one of the tiles a light” [9].

LED Watch (2001) for DMN + IDEO, was developed as a frameless display - a ‘white cube fashioned into a watch’: “I always wondered whether or not the frame could be eliminated. I believed that what was important were the contents being displayed and not the window around them. Because of this display window, electronic devices could look nothing other than electronic devices [9].

“The instinctive knowledge of how to use something can be suggested in a design, through shape most often, but also through memory and experience of other things that looked or behaved similarly, even if the end result is different [19].

### **2.2.3 Truth to materials**

Tadao Ando’s architecture designs incorporate: geometry, nature and authentic materials, while Takashi Sugimoto creates “a layered discontinuity that seems to summon an ancient spirit” [14]. “Such primordial space can only be produced by Sugimoto’s own natural design approach, which implies a restrained industrial process, materials to be used with prevalence in their natural state, and their properties fully exploited.

Loos (1898) offers the perspective of a space freed from subjectivism and a use of materials based on their specific characteristics or properties. He expresses the impossibility of seeing material egocentrically, as a simple means for the artist’s disposal; the impossibility of accepting “the prospect of the Self as the sole governing language, the sole word, as Cacciari stated [2].

His choice of material (selecting ‘sick’ marble for the *Muller House* and cutting it into millimeter-thick sheets), is a stage in his vendetta against waste as much as “an ethical perspective to his criticism” [2]. AG Fronzoni disapproved all forms of superfluousness, redundancy, and waste of materials, labour or technology, as much as moral and ethical”.

The idea that form should respect the characteristics of the material out of which it is formed has, like the message of Sullivan's maxim, been a staple of Western design theory. Popularized with the words 'truth to materials', paraphrased from the writings of John Ruskin [25] and William Morris, [26] it has formed a refrain with 'form follows function' in twentieth-century texts on design [13].

Dohner [8] argued in an article: "Imitating other materials may be an interesting technical stunt for some engineers but it robs the new material of its birthright, destroys its identity and natural beauty, thereby degrading it". Similarly, Verner Panton, explaining his approach to design said: "I try to forget existing examples...and concern myself above all with the material.

The result then rarely has four legs, not because I do not wish to make such a chair, but because the processing of materials [...] calls for new shapes', the goal is to provoke users imagination as much as to fulfill a practical function [13]. For Super Potato, "materials can communicate a sense of history, a link to a person or place" "Materials provide information", and Sugimoto sees his designs as "a delicate web of information, conveyed through different materials" [14].

#### 2.2.4 The ethical character of minimalism

Developed societies currently face "the spectre of renunciation, a choice that it is ethically commendable but difficult in egotistical terms"[2].

#### APPROACHING AESTHETICS

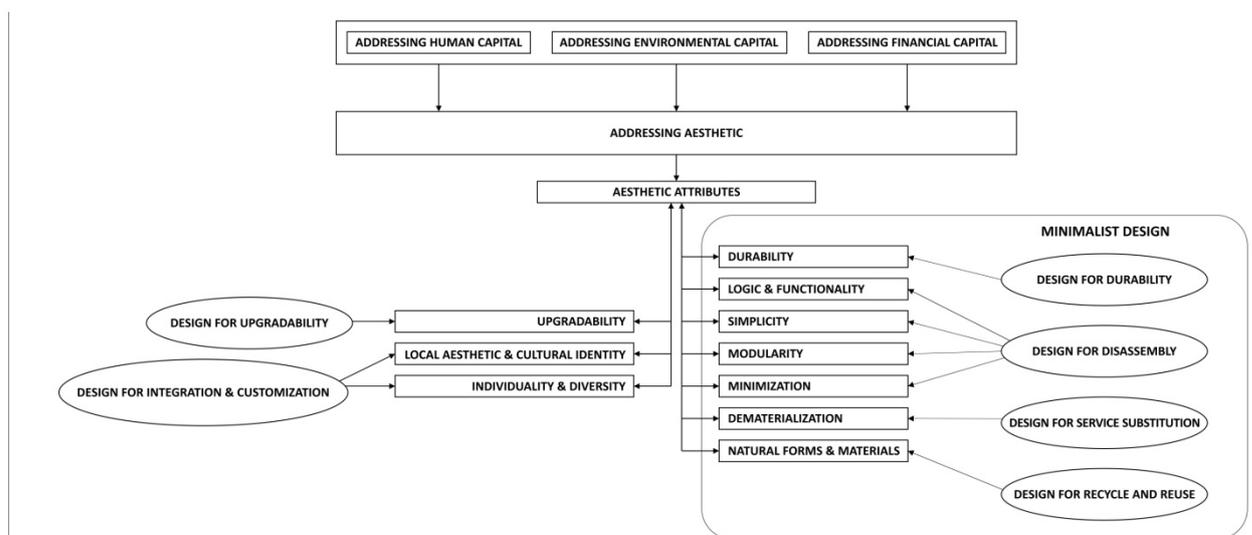


Fig. 3. Addressing minimalist aesthetic within a sustainable design framework

The ethical character of Minimalism is the answer, being not a style, but "an attitude, a way of being" [2] - a movement that "continuously opposes the false myths of: well-being, opulence, obtuse facileness". Design should not be about "form follows finance" – or "form follows fevered ego" Sinclair stated. "The disappearance of the Self leads to comprehension and acceptance of reality".

Minimalism conceives space as density - the void doesn't have a negative connotation: "Forms, metaphors [...], aim to stand out

against and to fill up the void, in a pervasive sense of horror vacui." Its "primarily ethical character" is rendered by the rejection of all that is superfluous, pointless, misleading [...] [2]. The crisis affecting developed countries, economic and above all ideal, is widespread and a cause for extreme concern [2]. It is certainly no coincidence that Minimalism is talked about almost exclusively in those highly developed areas that have played the largest role in causing the current environmental issues: "You can only liberate from too much, from the pointless and from excess".

Choices are oriented toward responsible products that reflect and support user value system: not more products but better products [11].Werkstatts made a powerful argument counter to the concept of luxury: “every cultured individual should feel ashamed of such material abundance” [28]. Precedent in ethic design practice is the 20<sup>th</sup> century architectural movement International Style with its strategy

of achieving universal design solutions; Advanced by Ludwig Mies van der Rohe, Walter Gropius, Le Corbusier and Adolf Loos, their goals were social as well as aesthetic, aiming to “globally replace unsanitary and inequitable housing, with clean, minimalist, affordable buildings unencumbered by distinctions of wealth or class” [16].

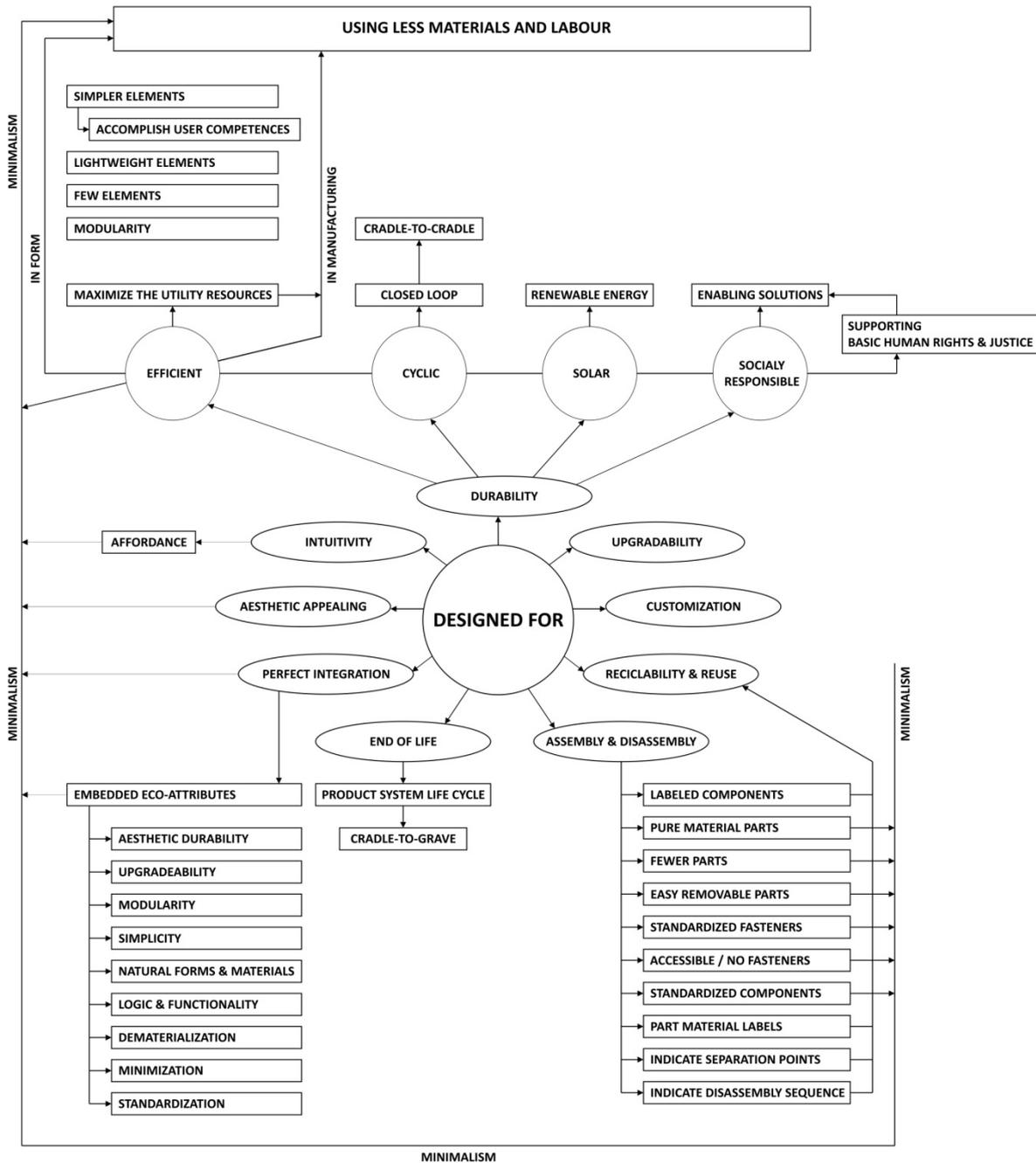


Fig. 4. The role of minimalism in determining the properties of the sustainable product

New challenges associated with “the globalization of industrial capitalism, the environment, national and trans-national socio-economic disparities, and rapidly evolving scientific and technological developments”, demand incremental changes. It is also essential “to encourage ideas that break with convention, that test preconception and, potentially, reframe our notions of product design and post-industrial material culture” [31].

The surface reading of objects encourages designers into attention-grabbing tricks. As products compete to be noticed, what shouts loudest may not be the most pleasant to live with in the long term. At first sight, Second Phone looks mysterious like one of Rams’s radios for Braun it has been reduced to a carefully radiused block. Ultimately, it treats the consumer as intelligent and able to recognize common-sense thinking as well as a minimalist aesthetic [22].

Critics describing Industrial Facility and Konstantin Grcic’s work tend to focus upon its “clinical exterior”, described as minimalist [22]. In his defense, Grcic states: “I have an abiding interest in very essential things. But this doesn’t only refer to how things look...I am primarily interest in the way an object is used, and I believe that aesthetics will naturally develop from that. I don’t want to deny that design has a lot to do with giving form to something, creating structures and making things beautiful.

### 3. CONCLUSION

Sustainable designs should become a compelling alternative over unsustainable traditional designs. The aesthetic appeal could become a generating purchasing stimulus. Products aesthetic can affect the socio-cultural and economic dimensions of sustainability, through the notions of symbolic loading and image making.

Aesthetic attributes promote product sustainability through aesthetic durability related to following factors: features permanence; aesthetic aging (flexibility); design property (no rapidly boring due to a fashionable or neutral design); timeless design (anti-fashion); market policy (slowly changes

of aesthetic values in the market); long-life and style.

The keywords to eco-aesthetics: aesthetic durability; aesthetic upgrade-ability and modularity; simplicity and minimalism; logicity and functionality; natural forms and materials; local aesthetic and cultural identity; and individuality and diversity.

Products designed to be remanufactured increase product’s durability. Modular structures ease repair and replacement. Products that are being meaningful (that resonate with our values, emotions, and meanings) are often the most satisfying and durable of all. Products that fit multiple uses can outlast those with specialized uses.

Aesthetic sustainability emphasizes the aesthetic values of nature rooted in cultures and traditions. Designers promote the absorption of traditional elements. Sustainable approach to design is based on a strategy of returning to archetypes and refining them.

Embedding eco-attributes in products must not diminish product performance, or escalating unit costs. Sustainable products must retain the level of primary attributes and cost structure that enable them to compete in markets where the rule is survival of the economic fittest.

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## MINIMALISMUL: O ESTETICĂ OPTIMALĂ PENTRU DESIGNUL SUSTENABIL

### Rezumat:

Această lucrare informează cu privire la încercarea de dezvoltare a unei estetici optime pentru abordarea sustenabilă a designului și evaluarea minimalismului ca sursă de inspirație, respectiv un preferabil substituit al esteticii tradiționale curente. Această lucrare prezintă o scurtă introducere a minimalismului ca și curent în design, filozofie și estetică. Sunt menționate succint principiile directe și conceptele unui design minimalist, cu intenția de a evidenția nevoia de aducerea a acestora în atenția designerilor cu agende sustenabile. În continuarea expunerii sunt subliniate caracteristicile ecologice ale esteticii minimaliste și aportul adus într-un cadru de proiectare sustenabilă. Articolul concluzionează evidențiind modul în care minimalismul oferă informații inovatoare în determinarea unei estetici sustenabile.

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