

József Zalavári

DESIGNING THE FORM

Design Ecology



With Short
Design Ecology
Encyclopaedia

SCOLAR  DESIGN

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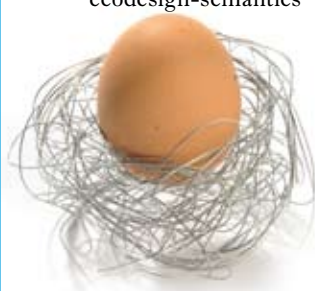
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Introduction

Design is the most important human manifestation of today. It is the imprint of our age, it is the prime cause for the existence of our visible world, the source of our success and failures. Since the 1970s the term applied for „design” in Hungarian is „industrial form-design” in mirror translation. Although design covers a much greater field than industrial design, it signifies for the entire design development process, including the end product as well. We get closer to the point when we try to interpret the notion of form; by unfolding the philosophical claims on form or by a reconsideration of the term „design” we may arrive to greater relevance.

To the question „why to design?” there is a seemingly simple answer: so that we feel good in the world. To the question „what to design?” we may receive such obvious answers as objects that serve a comfortable living, a habitable environment.

The present writing is not considered with design-history, whereas a brief knowledge on the history of applied arts and sciences is prerequisite for a full grasp of the issues to be raised. We made an attempt to respond the ultimate question of „how to design”. The answer in a most condensed form is as follows: design with a deep concern to ecologic sustainability. Certainly, the answer is not this simple, because for being able to do so, we should know what it exactly means. Present writing serves this purpose: it gives a detailed presentation on design paradigms and its outcomes; it considers the marking work of the predecessors and contemporary objects born out of an ecological standpoint.

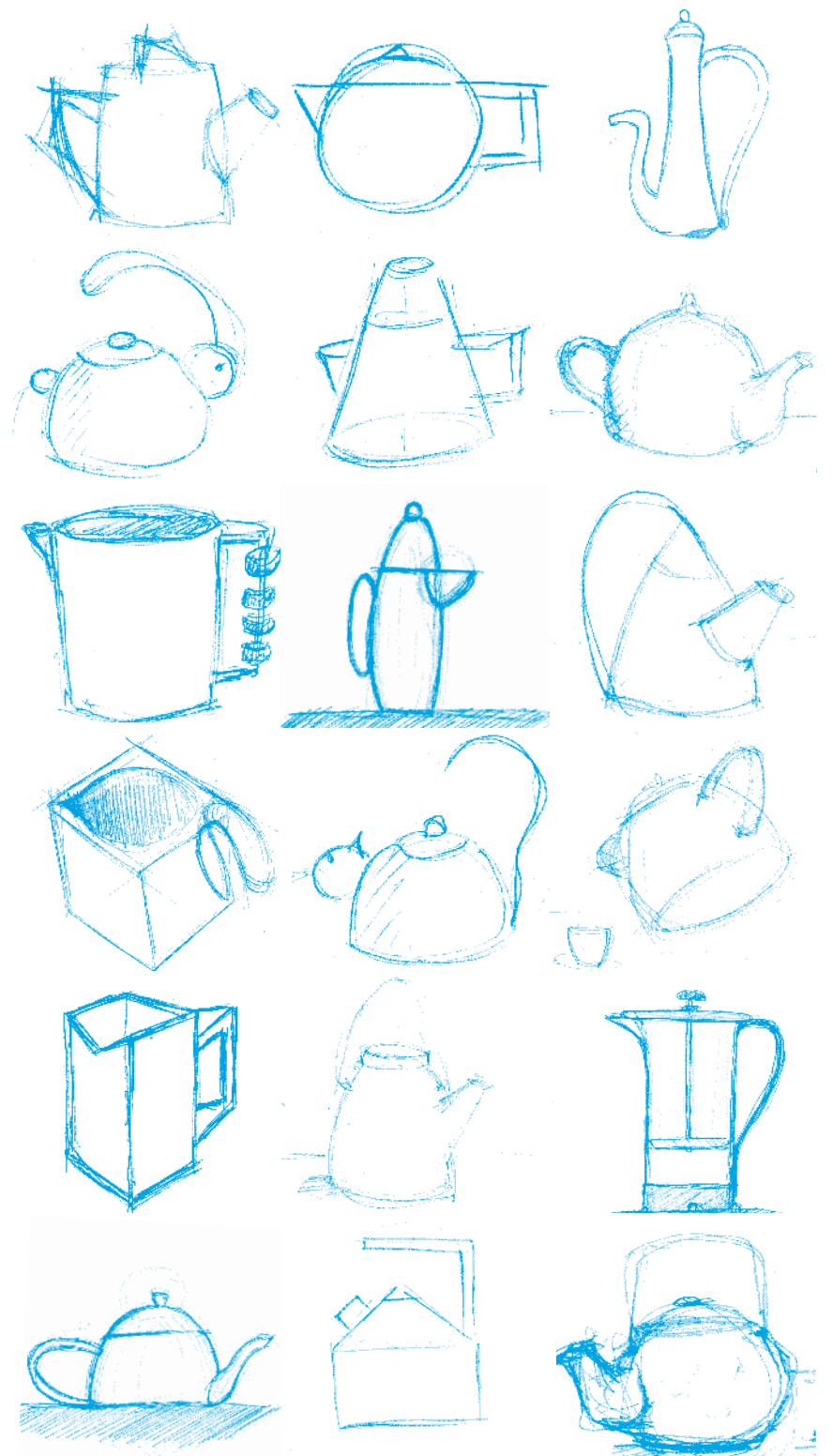
Design has always been influenced by the intellectual tendencies of the various ages. At the beginning, our everyday objects came out of the hands of craftsmen, later on artists have created our pieces of

applied arts. By placing design onto a rational-scientific basis, engineers took over the lead. In modernism the functional systems-theory was absorbed into design thinking. Later, in the creation of cultural identity, arts and science jointly shaped our environment. Natural disasters, quick climatic changes have recently attracted an ever increasing interest in the occurring conflicts between the man-made and the natural environment. Thanks to its father, Ernst Haeckel, the science of ecology has, though nearly with a century delay, influenced design considerably. The principles that created the industrial civilisation, the fact that humanity ignored the impact made by objects onto nature have geared irreversible destructive processes. Ecological design, an environment-conscious design methodology could provide a satisfactory answer to the accumulating problems, especially if it would be coupled with research

conducted into a new field of design-theory, the evolutionary design-ecology. It is more likely that only with an interdisciplinary, holistic approach will we be able to respond the question raised by design-ecology: Why do we design and produce objects and thus create an environment that obliterates our survival, and endangers the existence of the entire human race? The answer may only come out of joint efforts. A design-ecological approach requires the reconsideration of design and its paradigms. It is indispensable to have terms, forms, methods, materials to respond the challenge that we are facing. This book offers a hand for present and future designers, for professionals in contact with design as well to those with an interest to create a new relationship with the man-made environment.

József Zalavári

Function and form



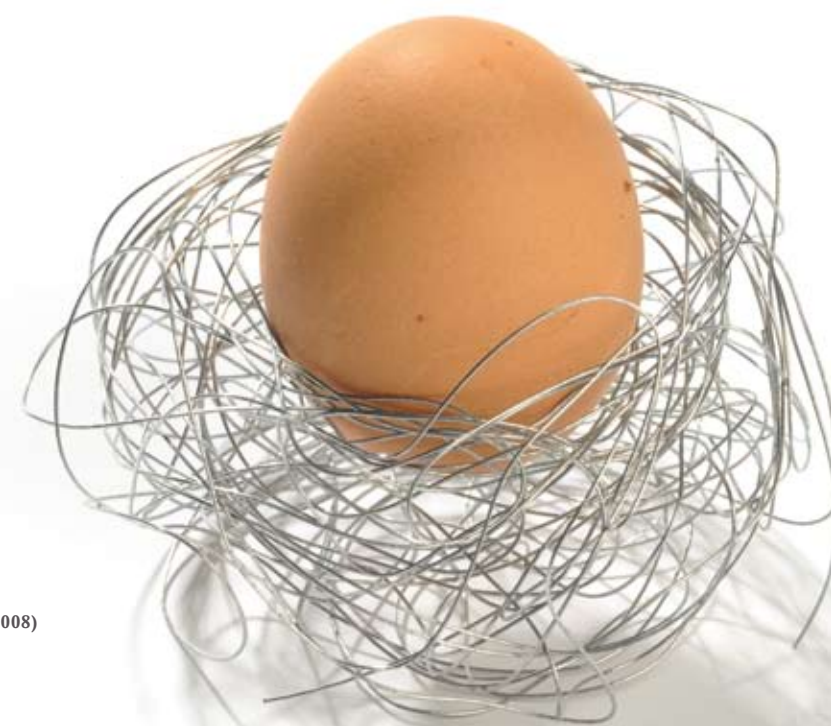
*“One needs to find the form corresponding with function.”
 Llouis Sullivan: The Tall Office Building Artistically Con-
 cerned*

Frigyes Pogány's book, the Beautiful Human Environment was published in 1976. In its time this oeuvre was considered by architects, object- and environment designers and visual communication professionals to be the prime source of inspiration, a collection of esthetical, ethical and professional concerns, and this view continues to exist till today. The last 30 years' conceptual and professional shifts are detectable in the concepts introduced in this writing. The chapter concerned with design deemed the at that time official definition of ICSID (International Council of Societies of Industrial Design) for industrial design to be less precise and advised it to be revised. It interpreted the officially applied concept of “content” to be congruous with function and thus it emphasised the dominance of function over form. [1] When interpreting function, it distinguished between outer and inner function, thus paving the way for a new concept of “hiding”. In this concept, hiding becomes effective and creates a harmonic relationship with the user through symbols and the symbolic content. The Hungarian term for the profession – form design – was misleading according to Pogány, “because it is impossible to design merely the form”. [2] Subsequently: “Formal composition does not exist in itself [...] The designer unfolds the form of the well interpreted content – goal, purpose, complex function – through the selection of the most appropriate means.” [3]

Frigyes Pogány's definition on function published with István Kisléghy Nagy in 1949 has lasting relevance: “The architectural content [function] consists of practical and ideological motives.”

[4] The complex interrelationships between form-function-material-structure led Pogány to the raising of a unique question and to its response: “in the interconnected chain of material, structure, function and form which factor provides the greatest degree of freedom in choice and forming? [5] He found form to be the answer, while emphasising its harmonic and contradictionless relationship with the other factors: “Forming thus takes place freely to a certain degree, but if we interpret function in unity with practical and ideological motives, forming is absolutely defined and unambiguous.” [6]

While reading through these lines the question rises automatically: where is the “relative” freedom in forming today? Which are the present ideological motives and practical goals in the design intent? How can this ideology be interpreted in the 21. century? Today's designers may raise similar questions and endeavour to respond them.



• Tímea Eperjesi: Niche (2008)

1.2 The moulded material

*"The manifestation of the material is the form. And this is certainly a postmaterialist statement."
Vilém Flusser: The Shape of Things*

The material of the form

The precept of „Form follows function“ has its implications to its connection with material. The introduction of the notion of material to that of form and function redefines their hierarchic order. Design in the designer's mind is a unique set of interconnecting elements. The degree of freedom the designer may employ is limited by the qualities of the materials she works with. The form of a table is a structured functional form which was born at a certain moment in a long evolutionary process that we consider today to be a table and we call it the table's archeform. The connection between material-structure-form came to be an idea. Time certified it to be an idea. A new, unprecedented form fixed itself in culture as constant information. The formed (in-formal) information is further applicable as a program to create new connections between material and form. The realised object's form is separable from its actual material appearance. Through this separation the designer's task becomes to create connections between constantly changing, originally independent forms and materials.

Verner Panton designed for Vitra in 1959-1960 the first single-material, single-form injection-moul-

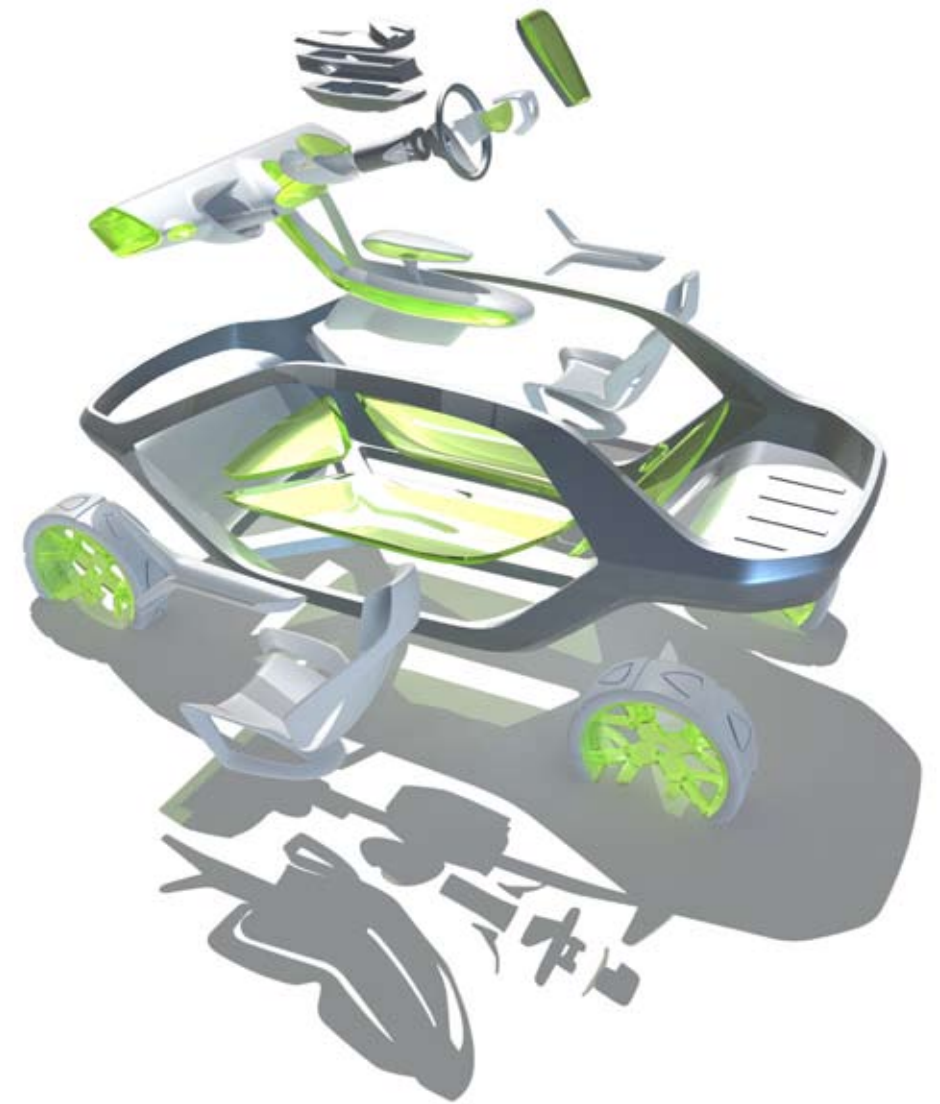


- The Panton-chair was manufactured in the Vitra factory in 1967, since then it was produced in 4 different materials. The latest version was born in 1999 – the omnisatisfactory material being the polypropylene.

ded cantilever chair, the famous Panton chair. The polymers available in those days wore off very quickly and could not fulfil the static requirements of the form, either – due to prompt ageing the chairs cracked easily. Vitra has found the polymer that fully satisfied the requirements of the form in 1999. Thus, an efficient mass-production of a duly-evolved design of an ideal material- and form-relationship could take place.

The preliminary experiments for the curvilinear form of the stacking chair were carried out by Gunnar Aagaard Andersen between 1952 and 1953, predating Panton by seven years. The Danish designer glued newspaper sheets on chicken-wire. With his prototype he succeeded to overcome the obstacle of feasibility: he created a completely new type of chair out of materials at his immediate disposal.

Design according to
the general evolutionary
view





Gerrit Rietveld made his attempt for the cantilever chair: he designed Zig-Zag chair for Metz & Co in 1934. Still, his earlier Red/Blue chair constructed in 1917-1918 has proven to surpass the relevance of the cantilever chair. This opened a new chapter in the relationship between function and form. While contemplating Rietveld's work, we witness the emergence of an idea in the form of a chair, the dominance of an abstract form, where even the material of the coloured timber battens becomes indifferent in respect to the form. Timber, through embodying the abstract quality of rigidity is capable of incorporating a form while communicating a general material quality. Colour eliminates the material-likeness and the definite function of the spatial structure while reinforces its abstract functionality.

If the object under consideration is not the ideal of a chair, then what is it? The functionality of form together with its material realisation became accidental. The object is realised out of instantly present circumstances and thus is an imprint of a particular moment. Accidental does not apply to hesitating, and the definite function does not suffer harm either! The form may perfectly function as a chair.

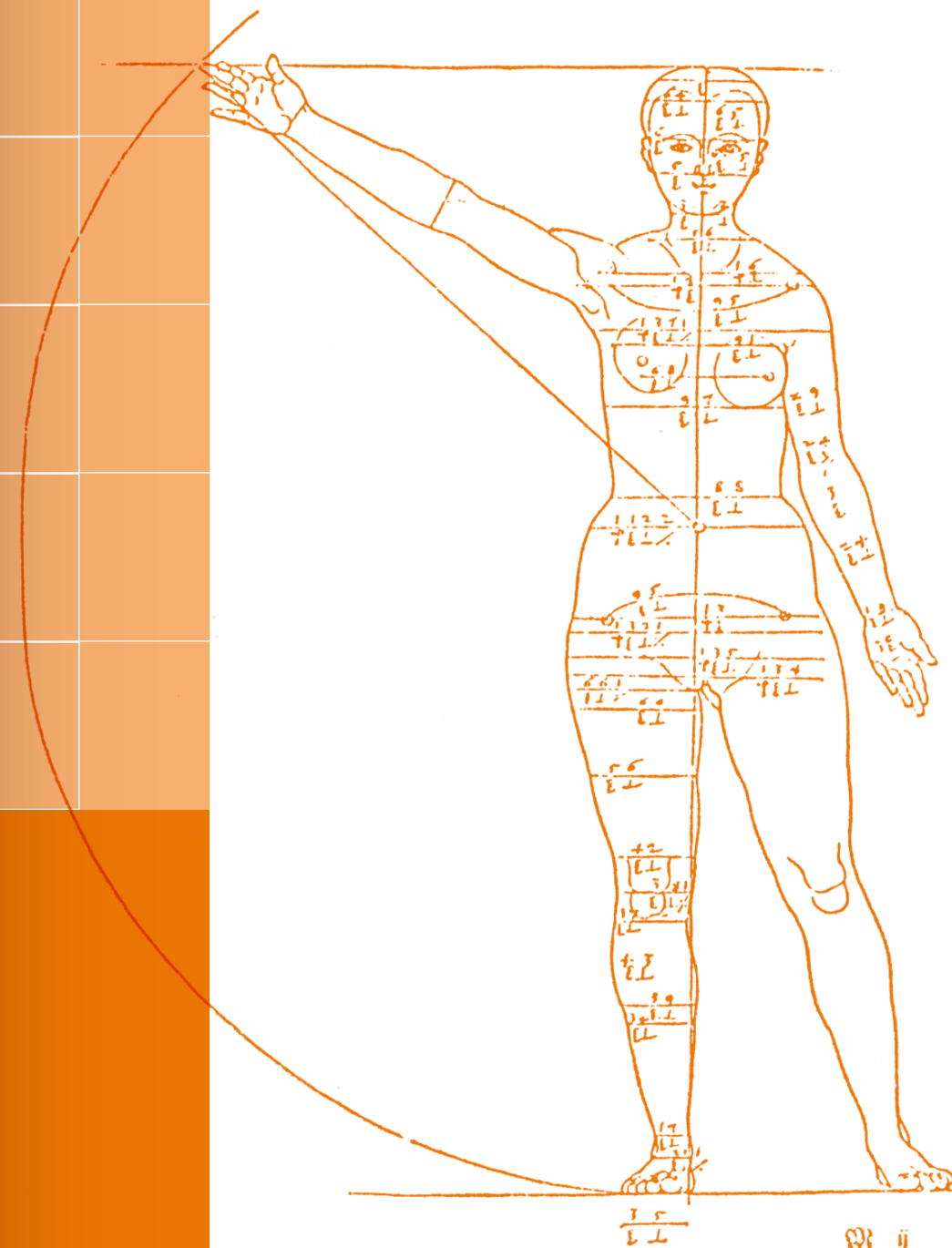
The inclination of the two planes of the Rietveld-chair corresponds with the ergonomics of sitting. The object goes beyond its immediate function and reflects an idea that was formerly present only in the fine arts. It defines a new connection between space, material and the human being. Is it possible that this would be the true ideal of all our objects?

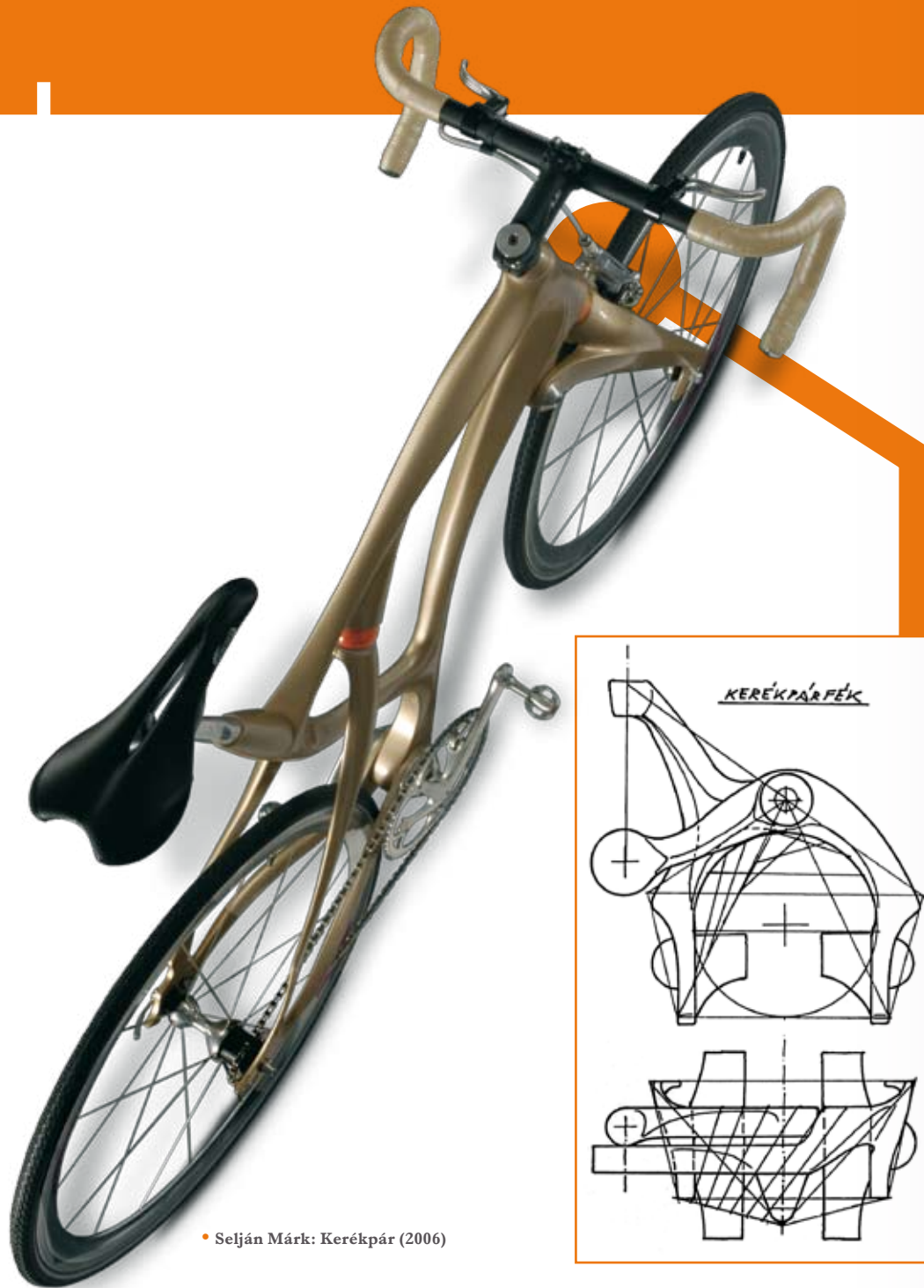
Through cascading the chairs examined above, the history of form unfolds itself, the process of the emergence and articulation of the thus interpreted idea.



• Gerrit Rietveld: Red/Blue chair (1917-1918)

A forma emancipációja

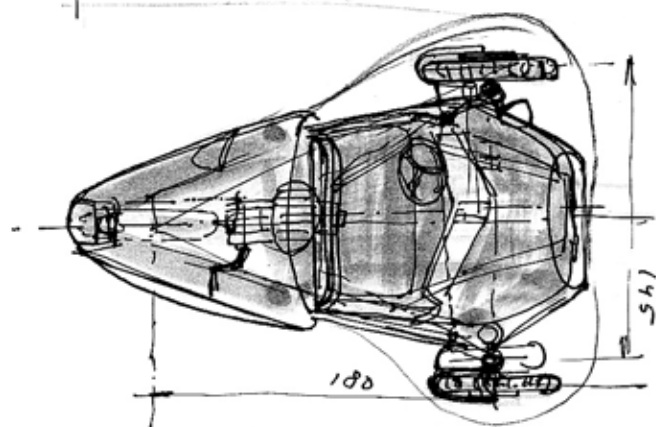
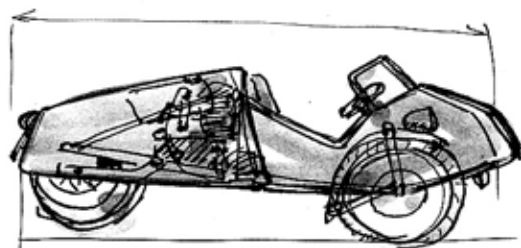
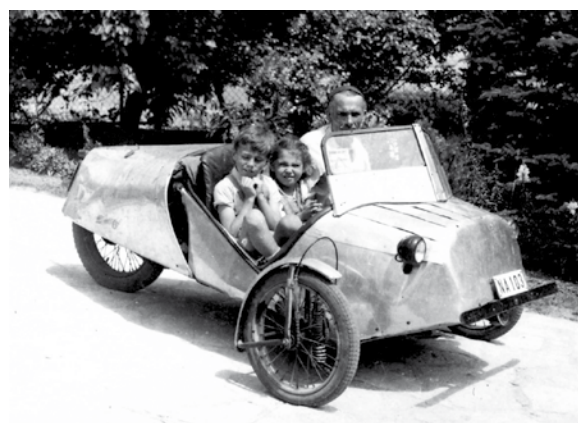




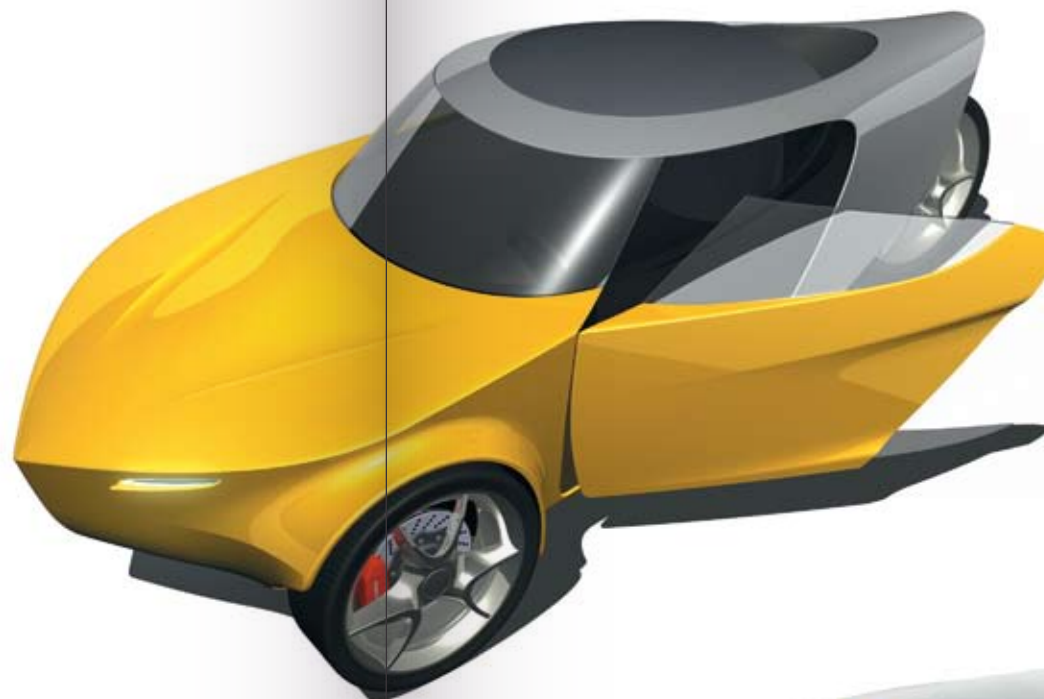
• Selján Márk: Kerékpár (2006)

With the support of sound- and light effects the mobile steel structure promotes the impression of a fantasy-creature. The Wall of Time, with the aid of a special „fracturecamera” provides the visitor with a hitherto unprecedented space- and time-experience. Footprints is a planar floor sheet of 3600 fluorescent light-points; our footprint remains visible for a short period after walking on its surface. One of the most unique creations is a nearly 1,5 meter diameter disc with concentrically organised light-points and radial light-lines. The light- and colour-intensity of the surface is changing according to the energy-consumption of the spaces connected with it. In the spirit of Buddhism the project became an object for meditation of ecological design. Basing itself on human senses it extends them and by so doing creates a higher level organic relationship between humans and their surrounding environment. When encountering these objects we may well observe a striking similarity with the sculptures of Moholy-Nagy, Nicolas Schöffer or Max Bill. The further takings of the principles of concrete art as interpreted by Max Bill or the new virtual dimensions introduced into our 3dimensional world by kinetic art have inspired Ekuan to present the new aesthetic and ethic questions of design in the realm of art design.

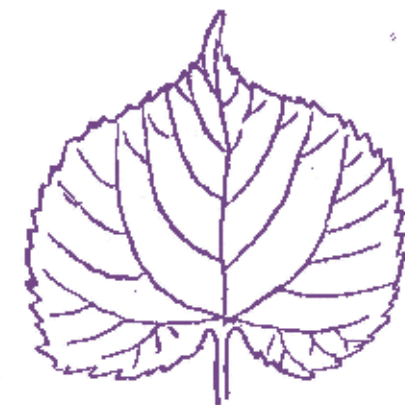




- András Dózsa Farkas: Three-wheel mobile (1948)
- Ákos Stégmár: Verolex design concept (2006)



The applied form





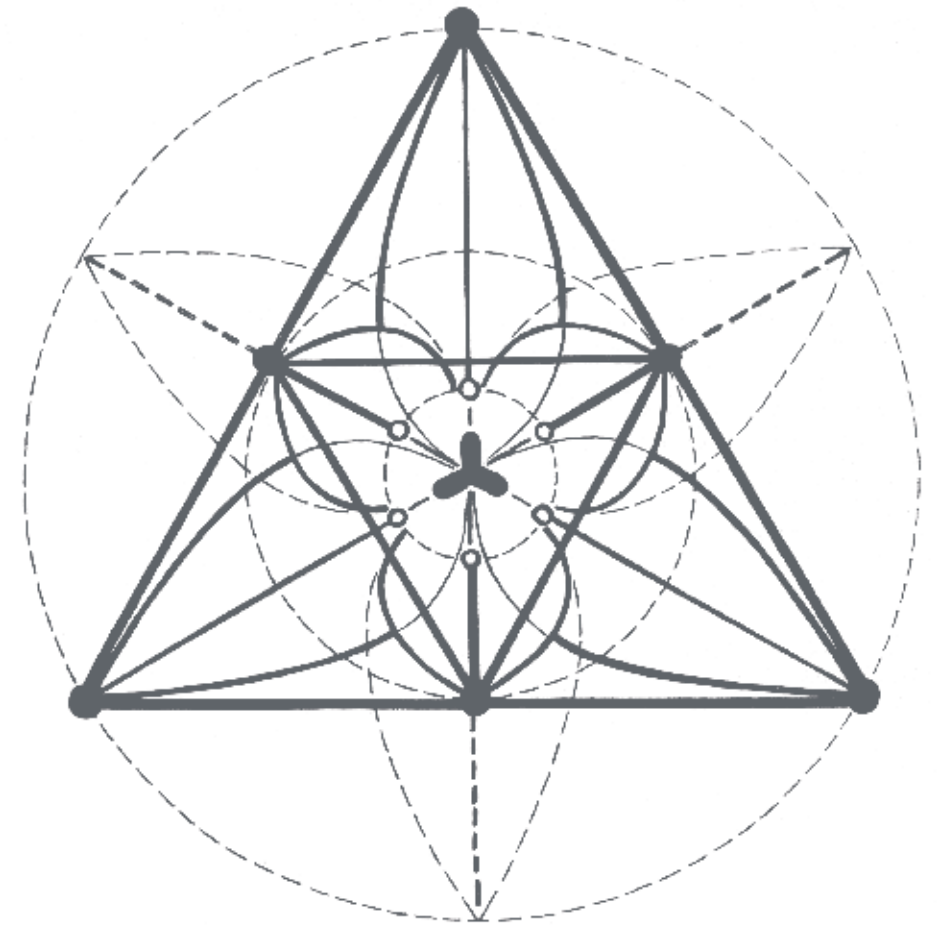
• Balázs Lenkei: @-chair;
interactive, ergonomic
swivel-chair for computer-
work (2006-2008)



The working form of information society is that of sitting, whereas our body is not „designed” for sitting all day long. It causes arthralgy and lordosis in an ever increasing degree among employees. The main goal of the designer is to apply artificial intelligence and to fuse the latest developments of office chair-design and that of latest technology. The chair and table is designed specifically for computer-work, provides great flexibility and adjustability while promoting proper seating. The incorporated intelligent software constantly adjusts the seat, the backrest and the arms of the chair to an ideal position corresponding with the seating position of its user.



Design Ecology Encyclopaedia



Design archetype

Design archetype Every basic functional object has one or more archaic appearance in material and form. Geographically separated cultures have been developing surprisingly similar objects. This common origin is discernable within the form of our new objects. (Ervin László)

P

Parasite architecture The new architectural unity creates a host-parasite relationship with its receptive environment, exploiting the characteristics of its host, coexisting with it in a functional symbiosis. The host-building does not die and the new parasite architecture is not able to survive on its own either. Interdependence occurs: the physical planes, infrastructure, energy sources are utilised mutually. The roots of parasite architecture may be found in the Art Nouveau ornaments, in the work of Antoni Gaudí and Rudolf Steiner, in organic architecture and in the Japanese bubble architecture of the 1970s.

Butterfly effect The title of Edward Lorenz' conference paper in 1949 was: "Predictability: Is a fluttering movement of

a butterfly in Brazil able to cause a tornado in Texas?" The movements and changes that appear to be chaotic in nature became describable through chaos theory and are important factors in the changes occurring in the biosphere. The phenomenon labelled as "butterflychaos" is present in design as well, when an unpredictable personal creative idea induces the spreading of new fashions, product-forms or styles.

Platform principle Design strategy worked out by car-manufacturers when elements and parts of different models are standardised to achieve cost-efficiency. This method spread to all fields of design.

Prosthesis The artificial extension or projection of human organs. The original meaning of the phrase (artificial replacement of a missing part or organ of the body) is interpreted in a wider context. The machine, the functional object becomes an integrate part of the human being. Her biological or intellectual functions, quantitative or qualitative features, her efficiency is increased by an object or a system of objects.

Proxemics Communication theory concerned with the origins and uses of cultural, social and personal space. It examines the individual's distance- and space per-

Reform ecology

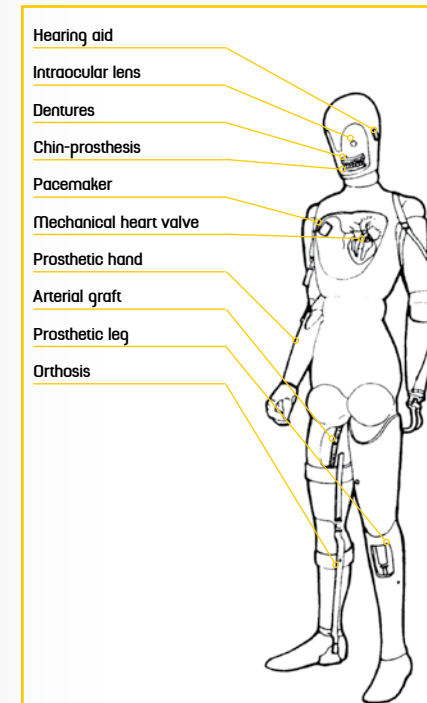
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Face-lift A manner of styling, when product lifetime is extended by the redesign of the added formal elements of an object. Small scale technical development might accompany it.

Ready-made A mass produced object deprived of its original function and its placement into another artistic-cultural context. The shift in meaning and function without any physical change on the object results in a different object.

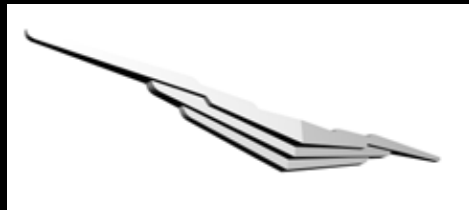
Redundant form-order An object with forms, colours that are not indispensable to fulfil its function, but influence its general impact. The formal redundancy of an object may carry meaning, characteristics, cultural and stylistic symbolism and peculiarities of its designer.

Reform ecology It addresses the regulation of water-and air pollution. Its main objectives are to reduce the exploitation technologies applied in agriculture and to preserve and protect the rainforests.



• "Prosthetic Man" Evolution extends to the replacement of human organs with prostheses (American Hospital Supply Corporation's Permanent Lobby, Exhibit Industrial Design 25th Annual, In: Design Review)

ceptions, her distance-keeping habits from her environment, the correlations and proximities occurring between the individual and her environment, and the physiological, psychological and cultural impact of these phenomena.



József Zalavári designer, academic. He is active in both the making and the teaching of design (Hungarian Academy of Applied Arts, Budapest University of Technology). From 2005 onwards his pieces are regularly shown on the exhibitions of the Hungarian Sculptors' Association. He is a bearer of several national and international awards (Hungarian Design Award 1986, 1996, International Cardesign Competition, Honorable Mention, Tokyo 1998, Ferenczy Noémi Prize 2008).

The objects, concepts that were once József Zalavári's dreams integrated themselves into our everyday unnoticeably: the beloved "Unipress and kótyogó" coffee pot, the Ikarus 955 Bus, the logo for Ikarus or the new Pannonia motorcycle...

"Design is the most popular phenomenon of our times. When well interpreted it applies to a creative attitude that objects anything and takes shape in any kind of form. Design connects an object to its user, it identifies the modes of application, therefore it is a lot more than shaping a form – it is an integrate part of our lives; its quality defines the practical value of our environment."

The task of the designer is to create a harmonic relationship among practical goals and existing conditions, the individual's powers, her personal and social aims. József Zalavári's oeuvre assists to comprehend this complex problem by introducing the main principles of design, its basic elements and the ways they are connected.

It proves that design is neither an artistic nor a technological but a social phenomenon. The book with its thematically structured chapters, the added short design ecology encyclopaedia and the illustrations inform the reader clearly and enjoyably about the essence of design and the nature of an ecological approach. This book fills a vacuum in the literature on design, it serves not only as a useful advisor but an indispensable handbook for industrial and economical experts seeking contact with design, as well as for designers, artists, design students and to everyone with an interest for design."

prof. Stefan Lengyel

(from the Preface)