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FORM FOLLOWS FUNCTIONS - AN EMPIRICAL STUDY VERIFYING THE CONCEPT OF FOUR PRODUCT FUNCTIONS DERIVED FROM JOCHEN GROS' THEORY OF PRODUCT LANGUAGE

Art research paper

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Abstract

At the end of the 20th century, it turned out that the principle of functionalism is not sufficient as an approach to design and does not describe all the relationships of users to objects in their possession. Since the 1960s, new concepts began to be formed enabling better understanding of design as a creative discipline that plays an increasingly important role in the modern world, as well as the attitudes and decisions of groups creating the "designed world" - designers or producers, and those who benefit from the effects of their activities - consumers, users etc.

One of the interesting concepts is Jochen Gros' theory of product language. This paper presents a research experiment verifying the concept of four product functions derived from the theory of product language, conducted during the master's course for students of design at the Eugeniusz Geppert Academy of Art and Design in Wrocław. The text is made of two parts - an introduction constituting a literature review and a report from an empirical study.

Keywords

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1. Introduction

1.1. What is followed by form?

Functionalism, as a design principle derived from Louis Sullivan's thesis that form follows function, dominated design practice throughout much of the 20th century. Searching for a new style in design, corresponding to the needs of a new society, rebuilding after World War I and then after World War II, functionalism seemed to be the most appropriate tendency for an ever more dynamically developing creative discipline: design[1].

Modern experiments with form were conducted by one of the most important design academies in history, the Bauhaus. Although the design style at this school changed significantly during the 14 years of its existence (1919-1933), in the most important period of its operation, the main goal was to prepare patterns for mass production:

> Gropius […] believed that Henry Ford's type of industrial capitalism could benefit workers and that, in order to survive, the Bauhaus needed to adopt an industrial approach to design, in the conviction that a better society could be created by the application of functionalism[2].

Among the means leading to this goal were to be formal experiments - searching for product forms best suited to the new world, striving for machine aesthetics. The Bauhaus influenced the history of design, inter alia, as a laboratory of bold creative and educational experiments, intensive intellectual work and a place where ground-breaking projects in terms of formal and technical solutions were created.

The legacy of the Bauhaus, however, is characterized by a certain contradiction which casts a shadow over its widely appreciated achievements. Despite the Gropius' manifesto foretelling changes, that art and technology are to create a new unity, the sales results of Bauhaus products were not high, moreover, a relatively small number of projects were suitable for mass production.

Marcel Breuer's furniture, symbolic designs of the school, began to be produced after the designer left the Bauhaus, and the metal studio, the place where some of the most famous projects-icons of this institution were created, did not cooperate with companies producing on a larger scale[3].

A good example is the so-called Bauhaus lamp, designed by a student attending this school, Wilhelm Wagenfeld and engineer Karl J. Jucker in 1923–1924. The industrial appearance is ensured by the choice of materials - metal, glass, displaying functional elements and reducing it to basic geometric

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1   Ch. Fiell, P. Fiell, *Industrial Design A–Z*, Köln 2016, p. 62.
2   Ch. Fiell, P. Fiell, *Industrial Design A–Z*, p. 62.
3   P. Sparke, *Design. Historia wzornictwa*, tłum. E. Gorządek, Warszawa 2009, p. 86.

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shapes – but at that time the lamp was not suitable for mass production[4]. The Bauhaus did not have much of an influence on German industrial production[5].

Il. 1. The so-called Bauhaus lamp, Wilhelm Wagenfeld and Karl J. Jucker, 1923–1924, https://collections.vam. ac.uk/item/O116634/mt8-table-lamp-wagenfeld-wilhelm/ [accessed: 11/07/2021].

After World War II, a second design school was established in Germany, the fame of which spread all over the world: Hochschule für Gestaltung in Ulm (1953–1968). For the second time design was used as a tool that would allow to build reality based on new principles and would change social relations. Efforts were made towards the social responsibility of design that would strive to create

simple, practical, and efficiently produced furniture and objects of everyday use to improve the general standard of living in an increasingly technological world, and that equated technology with simplicity of appearance and function[6].

The Ulm School of Design played a significant role in international design and influenced the change in the approach to industrial products of both manufacturers and users, but the design style derived from it, that is simplified shapes, narrower colour range and the conceptualisation of form, made the products designed in accordance with the "Ulm model" difficult to accept by the general public. Electronic equipment, furniture and kitchenware were appreciated by connoisseurs with a sophisticated

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4   J. Strasser, *50 Bauhaus icons you should know*, Munich–London 2018, p. 76. See also: *Historia designu*, ed. E. Wilhide, translated by A. Cichowicz, D. Skalska-Stefańska, Warszawa 2017, pp. 130–131.
5   D. Raizman, *History of Modern Design*, London 2003, p. 201.
6   D. Raizman, *History of Modern Design*, p. 288.

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taste, who were able to recognise the avant-garde concepts and the cultural themes contained in them. This is clearly confirmed by David Raizman, a design historian, who wrote that

> […] Braun products and design policy were not directed toward a mass market but rather to a discriminating audience with a more conscious awareness of abstract aesthetics and a belief in the connection between simple, undecorated forms and uncluttered, efficient modern living[7].

A good example is the Braun Phonosuper SK4 radio-turntable hybrid designed by Ulm lecturer Hans Gugelot and Braun collaborator Dieter Rams, in 1956. At that time, this technically innovative device with a rational form, bold material solutions and a minimalistic use of colour, acquired the somewhat mocking nickname „Snow White's coffin"[8]. Braun's designs applied the principle of functionalism, but were also the result of the architectural, social and aesthetic theories of their time[9], which could have posed a challenge to consumers.

Il. 2. Braun Phonosuper SK55, 1963, Hans Gugelot, Dieter Rams, https://collections.vam.ac.uk/item/O168285/ phonosuper-radiogram-sk55-radiogram-rams-dieter/ [accessed: 11/07/2021].

Because of these and other experiences from the practice of post-war design, the surfeit of the „black box", the requirements of the capitalist market saturated with goods and the human nature's natural need for changes, functionalism lost its dominant role in design practice.

Klaus Krippendorff, designer, professor of cybernetics, language and culture at the University of Pennsylvania, while pointing to the aforementioned discrepancies between theoretical assumptions and the practical implementation of design ideologies, he also added that the statement „form follows function" contains the assumption of the hierarchism of society, that is becoming outdated at an increasing pace and which no longer reflects the social reality of the 20th century, and even more so

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7   D. Raizman, *History of Modern Design*, p. 289
8   P. Sparke, *Braun SK4, 1956*, [in:] *Historia designu*, pp. 270–271.
9   D. Raizman, *History of Modern Design*, p. 289.

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of the 21st century. Because if "form follows function", then who decides what kind of function it should be? Who determines this function in an unquestionable and non-negotiable way[10]?

In a hierarchic society, the functions were determined by the principals, that is producers, industrialists, company owners. It also happened that the exact specification of the function was done by designers, but they were hired by manufacturers and implemented the requirements and ideas of the latter. Internal contradictions in the design output, which could be seen it the works of two aforementioned German schools, had already occurred before, for example, in case of William Morris (the idea foretelling designing as a way to improve the quality of life of representatives of all social classes, confronted with the practice of producing luxury goods purchased by wealthy representatives of society).

The sense of imperfection and crisis of the dominant design concepts induced designers and design theorists to search for new theories, new approaches to design resulting from different social conditions, a change in mentality, other than previous expectations in relation to the immediate environment, as well as different market conditions. The sacramental statement that „form follows function" was changed by experimental designers from Milan and Los Angeles into „form follows fun". The increasingly deeper understanding of the relationship between humans and the "artificial" environment they have created allowed for several modifications of the original Sullivan's sentence (among others as a result of the theory of product language, discussed in subsection 3), up to the 21st-century declaration that "form follows meaning"[11] – because in our times meaning turned out to be a key determinant of the interaction between humans and the designed artifact.

1.2. Semantic issues relating to the practice and theories of design

The development of research on product semantics is a continuation of the 20th-century interest in language, communication and signs. Semiotics, that is the science of signs and symbols, was introduced to the curriculum at the Hochschule für Gestaltung in Ulm by its second director, Tomas Maldonado[12]. The school tried to renew its approach to design and, while continuing some didactic assumptions of the Bauhaus, enriched the curriculum with new subjects and issues, such as economics, psychology and semiotics. As one of the founders of the school, Otl Aicher, wrote,

> The Ulm model was born: a design model strengthened by science and technology. The designer is no longer a great artist, but an equal partner in the decision-making process accompanying industrial production[13].

However, designers who studied at Ulm were of the opinion that Max Bill's, the school's first principal, approach to semiotics was too superficial, based on the representational aspect of signs. A deep

10   See K. Krippendorff, *The semantic turn: a new foundation of design*, Boca Raton 2006, pp. 5–7.
11   Zob. http://www.ctrlzak.com/projects/form-follows-meaning [accessed: 05 /07/2021].
12   K. Krippendorff, *The semantic turn…*, pp. 305–310.
13   D. Rinker, B. Stempel, *HfG, Ulm School of Design. 1953–1968*, Ulm 2007, p. 9.

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analysis of contemporary design and the experience gained during the creation of various design projects, led several German designers and design theorists to formulate their own design theories, in which the main emphasis was placed on the semantic aspects of design. Thus, the semiotic interest in signs was deepened by reflection on the meaning of signs - semantics.

In the 1970s, this subject was taken up by Jochen Gros, who, after graduating from the Hochschule für Bildende Künste in Brunswick, started working as an academic teacher at the Hochschule fur Gestaltung in Offenbach am Main[14]. It was there that he began to develop the theory of „extended functionalism", solidified in the form of the so-called product language theory, in German: *Der Offenbacher Ansatz*. Jochen Gros's student and continuator of his work on language and semantics is Dagmar Steffen, the author of the book *Design als Produktsprache, Der Offenbacher Ansatz in Theorie und Praxis*, widely used as a textbook for students[15].

Richard Fischer, a graduate of the Ulm School of Design, also a designer and design theorist was Jochen Gros' collaborator. Fischer focused in particular on studying the so-called signalling functions of a product based on humanistic cognitive methods[16].

In the 1980s, Klaus Krippendorff and Reinhardt Butter explored the issue of product semantics. Both of them, like Fischer, graduated from the Hochschule für Gestaltung in Ulm, but pursued their professional lives in the United States. They were the first to use the term "product semantics" in the "Design Issues" journal published in 1989[17]. Krippendorff presented his theory more meticulously in a monumental work *The semantic turn: a new foundation of design* [18].

In this book, Krippendorff recognizes product semantics as a basic concept for human-centred design and, deriving the described changes from the philosophical theories of Ludwig Wittgenstein (language revolution), discusses the sense, meaning and context of design, among other issues. The author also deals with the meaning of artifacts at different levels of their life, at the level of use, at the linguistic level, in life cycles, and in the so-called ecology of artifacts.

Not only German researchers contributed to the development of the science of product semantics (although the fact that some concepts were written only in German made the dissemination of knowledge about them somewhat more difficult). Semantics, as an important aspect of human-centred design,

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14   https://www.smow.com/en/designers/jochen-gros/ [accessed: 18/06/2021].

15   https://www.hslu.ch/en/lucerne-university-of-applied-sciences-and-arts/about-us/people-finder/profile/?pid=790 [accessed: 29/06/2021].

16   http://www.designlexikon.net/Designer/F/fischerrichard.html [accessed: 18/06/2021].

17   K. Krippendorff, R. Butter, *Product semantics*, „Design Issues", 2 (1989), no 5.

18   K. Krippendorff, *The semantic turn…* Krippendorff updated his version of the history of artifacts as the beginning of the semantic revolution in the jubilee publishing house of the university in Offenbach: K. Krippendorff, *Design Discourse*, [w:] *Der Offenbacher Ansatz. Zur Theorie der Produktsprache*, ed. T. Schwer, K. Vöckler, https://www.transcript-verlag.de/978-3-8376-5569-8/der-offenbacher-ansatz/ [Accessed 5 May 2021], pp. 334–340.

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has gained interest in various parts of the world. Since the 1980s, design schools in Finland, India and Japan have been using the achievements of product semantics in design and theoretical work.

The issues of product semantics are also tackled by Dutch schools. For example, one of the leading design schools in Europe, the University of Technology in Delft, conducts research on the semantics of sounds made by products. A book by Gerhard Heufler, an Austrian designer and academic teacher - *Design Basics. From Ideas to Products*[19] - which describes the basic issues related to product design from the point of view of the consumer, designer and producer, and refers to Jochen Gros' theory of product language, is also used by this university.

1.3. Form follows functions

Heufler presented an analysis of the designed product from different points of view using the example of interaction with cutlery. Guests invited to someone's home for a party for the first time sit down at the table and start eating. Picking up the cutlery, they make their first assessment. They notice more or less consciously that, for instance, the bowl of a spoon is too shallow, so it is difficult to eat soup with it, and that it does not allow you to get the right portion of soup, but that the handle fits well in the hand, while the fork's teeth are too sharp and even perilous.

This is the so-called user level where the physical aspects of the product are experienced, enabling recognition of its practical functions.

When the guests are satiated they begin to look around, taking a closer look at the surroundings. They also look at the cutlery, and conclude that their overall shape is nice, but over-decorated, which spoils the impression of elegance. The spoon and fork are well proportioned, but the handles do not match the whole arrangement.

Thus, at the observer level, guests experience the sensual aspects of the product, which allows them to define aesthetic functions.

At some point, the guests start to look more widely at the space in which they find themselves. The reflections that come to their mind are now of a different type. They realize that the room is quite modest, so they start to be baffled by the fact that the cutlery was so expressive, even ostentatious. They wonder why such open, direct hosts put such ostentatious table service. There can be several conclusions. For example, cutlery can be a family heirloom or can reveal the owners' aspirations to achieve a higher status.

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19   G. Heufler, *Design Basics. From Ideas to Products*, Berlin 2004.

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At this point, the artifacts are analysed from the owner's point of view, who allows to perceive their symbolic functions related to social aspects[20].

All these three aspects: practical, aesthetic and symbolic, determine the manner in which an object functions during its life, during the processes of its use. The fact that practical function comprises physical experience seems quite obvious. Meanwhile, sensory experience also performs an important function not only in terms of pleasure or joy of using the object. Scientists have observed that products that we perceive as aesthetically pleasing also seem to be easier to use and therefore more likely to be used, regardless of whether they are actually easy to handle or not. This phenomenon called *Aesthetic-Usability Effect* plays a significant role in the acceptance of projects and the tolerance of recipients in relation to design solutions[21].

On the other hand, symbolic functions relating to the reception of a product in the social context are arousing more and more interest nowadays. The meanings that products acquire during their use, the issue of whether these processes can be controlled or designed, may turn out to be the key to gaining market advantage in times of market saturation with similar goods.

The thesis „form follows function", transformed by postmodernists into „form follows fun", turns into „form follows functions". This is an extended concept of the usage process.

1.4. Theory of product language

According to Heufler, Jochen Gros defined product language as human-object relationships that are transmitted through our perception channels, our senses, as the emotional effects of the product. Gros compares them with the practical functions that arise as a result of the direct physical impact of the product.

According to the dictionary of the Polish language, one of the meanings of the word „language" is

a socially consolidated set of signs relating to some human actions or expressing human emotions, and each arrangement of elements of reality to which a person has given some substance[22].

In the case of the product language, the signs are human designed artifacts, mediating his/her interaction with the world, constituting an important element of the surrounding reality.

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20   See G. Heufler, *Design Basics…*, pp. 21–24.

21   W. Lidwell, K. Holden, J. Butler, *Universal Principles of Design, Revised and Updated: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design*, Beverly–Massachussets, 2010, p. 30.
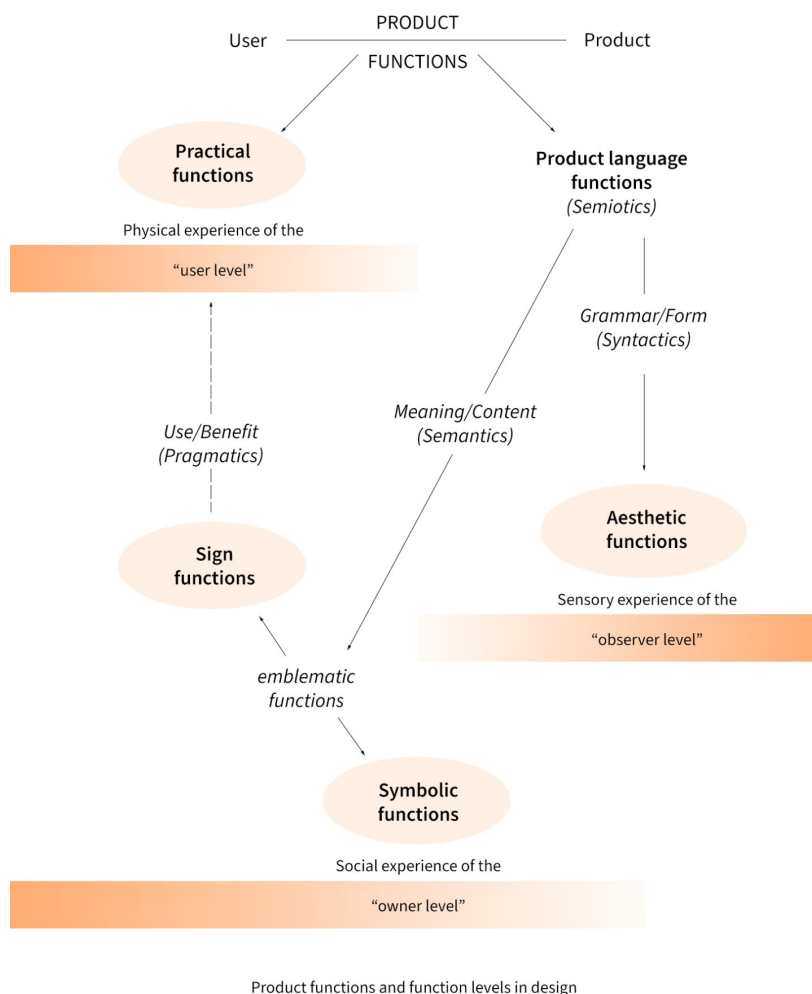
22   https://sjp.pwn.pl/sjp/jezyk;2468170.html [accessed: 24/06/2021].

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PRODUCT

User — FUNCTIONS — Product

Practical functions

Physical experience of the

"user level"

Product language functions
(Semiotics)

Use/Benefit (Pragmatics)

Meaning/Content (Semantics)

Grammar/Form (Syntactics)

Sign functions

Aesthetic functions

Sensory experience of the

"observer level"

emblematic functions

Symbolic functions

Social experience of the

"owner level"

Product functions and function levels in design

Chart 1. Four functions of products in the theory of product language, source: G. Heufler, Design Basics. From Ideas to Products, Berlin 2004, prepared by Beata Ludwiczak

Like in any language, the function of a product language requires structure that is grammar and meaning or put it otherwise, semantics. This is a simplified approach, but it well illustrates the issue under discussion.

Grammatical aspects relate to formal aesthetic functions, that is, the form of the product, thus the shape, colour, material and surface as well as the structure of the form, oscillating between opposing poles of the arrangement of form, that is order versus diversity[23].

Recently, more and more attention has been paid to aspects called by Heufler as emblematic functions[24]. According to the theory of product language, these functions convey additional meanings,

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23   G. Heufler, *Design Basics,* p. 42.
24   „Emblematic functions".

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not related to practical functions. The emblematic functions are divided into signalling and symbolic functions.

In his book, Heufler used an example of a door handle. The ergonomic-looking handle is a sign that it will well fulfil its practical function, which means that it will be easy to hold it in your hand and open the door, and it signals that it should be pressed down and not, for example, pushed, as in the case of a vertical handle. On the other hand, the gilded door handle will be a symbol of wealth or ostentatious pretentiousness. We can conclude that this is not about an isolated view of the product features, but about their impact on the observer.

There is a great diversity of these human-object relationships. The signals relate directly to the product and its practical or technical functions, so they demand certain reactions from the observer. Typical signalling functions are the result of stability, precision, orientation, durability or flexibility. On the other hand, the symbols do not refer directly to the product; rather, they evoke cultural, social or historical connotations. Typical symbolic functions are luxury, modesty, eroticism, freedom, nostalgia, etc.

In practice, analysing signalling functions is not difficult, as logical reasoning leads to the conclusion as to whether practical or technical functions are reflected in the language of the product.

Interpreting symbolic functions is much more complex. For some, the Birkin purse will be an example of great design, for others, of a licentious wealth and capitalist inequality in the distribution of goods. Various interpretations are influenced by upbringing, worldview and social position.

However, recognition of the different ways in which products function enables better understanding of the human-object relationship and a more conscious design process. This was the goal of the experiment carried out at the Eugeniusz Geppert Academy of Art and Design in Wrocław in the 2020/2021 academic year.

2. The study of functions derived from the theory of product language

As part of the Semantics of Form subject covered by the Department of Design at the Eugeniusz Geppert Academy of Art and Design in Wrocław, a research experiment was carried out, based on the theory of product language. The aim of the study was to determine whether the four product functions derived from Jochen Gros' theory of product language, presented in the book *Design Basics. From Ideas to Products* by Gerhard Heufler, take place in everyday interactions with artifacts. The study was based on the analysis of the relationships of the studied group of users describing their attitude to selected artifacts.

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2.1. Hypothesis

Jochen Gros's theory of product language distinguishes four functions that products can fulfil: practical, signalling, aesthetic and symbolic. Therefore, when conducting a research experiment among students of the Academy of Art and Design and their acquaintances, it seems interesting if by analysing the reasons for which a given object plays an important role in their lives, the respondents will indicate all four functions, and what will be the quantitative ratio of the results obtained in each function category. Moreover, it was decided to explore whether there is a significant difference between reporting the above-mentioned types of functions by people studying design or working in a design profession (hereinafter referred to as "designers") and people not professionally related to design (hereinafter referred to as "non-designers"). The proposed hypothesis assumed that in the assessment of products, designers pay more attention to practical functions than non-designers.

2.2. Methods

The research material was collected using oral or written interviews. The initial assumption was to persuade the respondents to write down their responses, but in some cases it was more effective and faster to record the statements of the interviewees and then write them down. All the students conducting the study expressed their opinion in writing. The research method used in the study was content analysis.

2.3. Procedure

The study was conducted during the Semantics of Form classes at the Eugeniusz Geppert Academy of Art and Design in Wrocław. Three female and two male master's programme students participating in the research were tasked with writing a report in response to the following instruction: "Choose an object that is important to you, such that you take with you every time you move, or you would take to a desert island, such that you always know where it is, one that accompanies you in your daily life, etc. Justify your choice in writing, the text cannot have more than 1000 characters".

Responses were given spontaneously, without any knowledge of the theory of product language. Then, to increase the amount of material for analysis, the students and the teacher collected comments on the same topic from their families and acquaintances. A total of 14 people took part in the study. All responses were recorded in writing (some took the form of an oral interview, later written down by a member of the research team).

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Then, during the course, students listened to a lecture on the theory of product language and began to analyse the content of the transcriptions[25]. The first stage was selective coding, which consisted in identifying text fragments that could be assigned to particular categories, that is functions resulting from the theory of product language. It was therefore a qualitative analysis, the results of which were quantified, which allowed for statistical processing[26] and drawing conclusions presented in the form of a report. According to Aldona Glińska-Neweś and Iwona Escher, "it is possible to combine both qualitative and quantitative approaches in the analysis of the content[27]".

The students' work with the theory of product language and analysis of the content was of an educational nature, not all conclusions drawn by them were justified by the theory of product language. The following discussion and conclusions were written by the author of this paper.

2.4. Results

Fourteen people took part in the study, including 8 people studying design or practicing a profession related to design (hereinafter referred to as designers) and 6 people not related to design (hereinafter referred to as non-designers).

The respondents mentioned the following artifacts: 4 telephones (3 cell phones and 1 satellite), 5 items of personal use attached to the body (ring, glasses, watch) or kept close to the body (key ring and pocket knife), one item of clothing (sweatpants), one means of transport (a bicycle, or actually two bicycles, as both were mentioned in one interview), as well as a hair dryer, a notebook and a notebook with recipes. It must be admitted that the mobile phone is also an object carried close to the body, however, it has been mentioned separately due to the complexity of its functions, as well as the role it plays in the life of modern person, which is reflected, inter alia, in the fact that it is an artifact listed as the largest number of times.

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25 This procedure consists in generating, for example based on the transcription of an interview, categories (codes) covering the conceptually studied area, assigning properties to them and combining these categories with each other by looking for relationships between them, see A. Glińska-Neweś, I. Escher, *Analiza treści w badaniach zjawisk społecznych w organiza-cji. Zastosowanie programu IRAMUTEQ*, "Studia Oeconomica Posnaniensia", 6, (2018), no 3, https://www.researchgate. net/publication/325946878_Analiza_tresci_w_badaniach_zjawisk_spolecznych_w_organizacji_Zastosowanie_progra-mu_IRAMUTEQ_Content_analysis_in_the_research_of_social_phenomena_in_the_organisation_Application_of_IRA-MUTEQ_software?enrichId=rgreq-56648c492e2e1fb6fb03d94ac46c6a8f-XXX&enrichSource=Y292ZXJQYWdlOzMyN-Tk0Njg3ODtBUzo2NzUwOTk2NDg3MzMxODRAMTUzNzk2NzcwNzcA2Mg%3D%3D&el=1_x_3&_esc=publication-CoverPdf [accessed: 20/02/2021], p. 10.
26 A. Glińska-Neweś, I. Escher, *Analiza treści w badaniach zjawisk społecznych…*, p. 10.
27 A. Glińska-Neweś, I. Escher, *Analiza treści w badaniach zjawisk społecznych…*, p. 10.

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	practical function	esthetic function	signalling function	symbolic function
pocket knife	3	3	0	4
phone I	5	0	0	1
glasses	3	1	0	3
key ring	2	1	0	2
notebook with recipes	0	0	0	4
watch	0	0	0	4
phone II	4	0	0	1
sweatpants	5	1	0	4
notebook	8	0	0	2
phone III	1	0	0	0
ring	0	4	0	3
phone IV	8	0	0	0
bicycles	5	2	0	1
dryer	7	1	1	0
	51	13	1	29

Table 1. Number of functions mentioned by the owners of individual artifacts, source: own materials.

Overall, the respondents mentioned 94 functions, including 51 practical functions, 29 symbolic functions, 13 aesthetic functions and 1 signalling function.

The designers listed 38 practical functions, 5 aesthetic functions, 11 symbolic functions and 1 signalling function. The non-designers mentioned 13 practical functions, 8 aesthetic functions and 18 symbolic functions. Signalling functions were not mentioned by non-designers.

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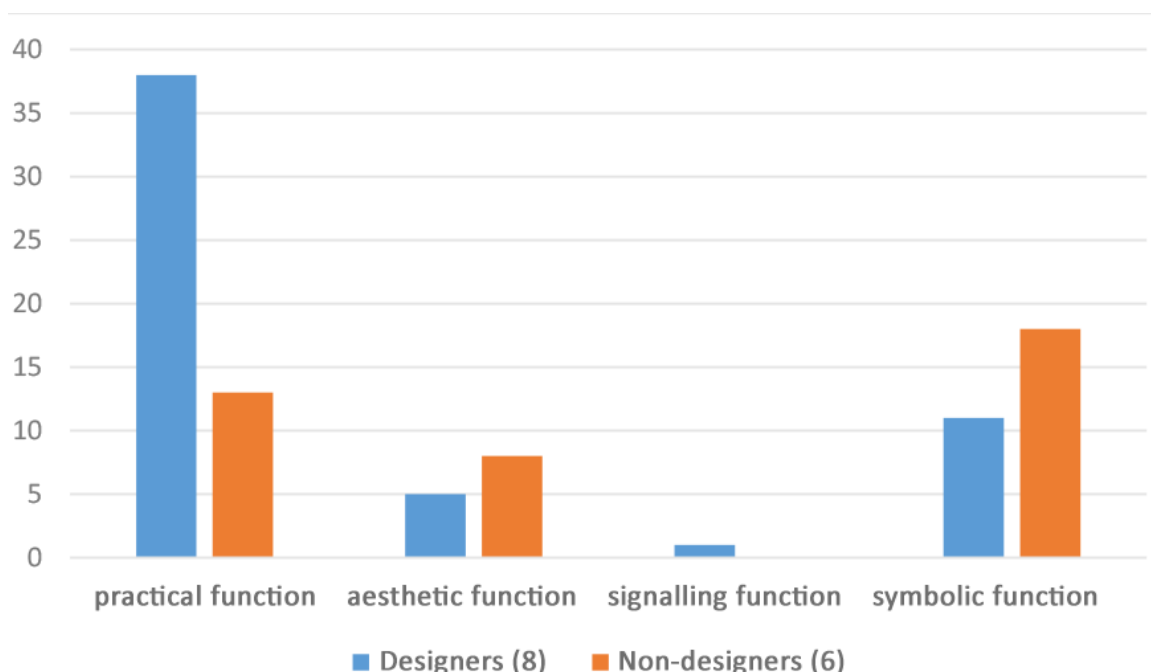verifying the concept of ...

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Chart 2. The total number of individual product functions mentioned by designers and non-designers, prepared by the author based on author's own material.

As can be seen in the presented chart, the hypothesis put forward at the beginning of the study, assuming that designers pay more attention to practical functions, has been confirmed.

2.5. Discussion

The qualitative research method - content analysis - was used to analyse the statements written by the owners of the artifacts or by the interviewing them students-researchers. One of the drawbacks of this method is its subjectivity, because it consists of coding the transcriptions[28]. Researchers have to make their own decisions concerning the classification of individual fragments of the text, which is why some theorists consider content analysis as reactive research, "that is research where there is some researcher's interference in what is being studied"[29]. It should be noted that making their own decisions and discussing them helped students participating in the Semantics of Form course to better understand the issue of functions considered in the theory of product language - an example would be the statement about sweatpants: "they cuddle me when I am lying", first classified as a symbolic function, finally assigned to a practical function.

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28   A. Glińska-Neweś, I. Escher, *Analiza treści w badaniach zjawisk społecznych…*,, p. 10.
29   A. Glińska-Neweś, I. Escher, *Analiza treści w badaniach zjawisk społecznych…*, p. 8.

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From the perspective of the conducted experiment, it seems that the research question could be formulated a bit differently. Instruction: "Choose an object that is important to you, such that you take with you every time you move, or you would take to a desert island, such that you always know where it is, one that accompanies you in your daily life" directed the attention of some respondents to the conditions prevailing on a desert island and, as a result, they focused on such functions of objects that could satisfy the specific needs of such a situation (no Internet, need to defend oneself against a group of native cannibals; about the pocket knife: "On a desert island it would not be so handy. I would exchange it for a kitchen knife or some machete"). The phrase "desert island" has also been treated metaphorically: "lockdown is a kind of my desert island".

Also, the lengths of statements, although limited ("Justify your choice in writing, the text cannot have more than 1000 characters"), were varied, depending on the respondents' temperament or their ease of expressing themselves in writing.

Nevertheless, the choice of objects made by the respondents is interesting. The telephone was mentioned four times (three times cell phone, one time satellite phone, due to the expected lack of internet). The importance of this device in everyday life is clearly demonstrated by the following sentences: "It has everything I could need", "It is such an item that I do not leave home without". This connection with the telephone raises even "self-critical" comments: "My motivation, as well as probably of many young people, is the downright excessive attachment to this device". Nowadays, the mobile phone has become a part of the human body: "Without a phone, I feel like without a hand".

As it was said, practical functions were the most numerous, referring to individual objects, the owners were able to list several functions from this category. An owner of a cell phone listed eight practical functions (including "ease of communicating with each other through it", "the ability to take photos of cosmic quality", "access to current information"), similar to an owner of the notebook (including "taking notes", "drawing elements that aroused my curiosity", "writing down my thoughts"). An owner of a hair dryer listed seven practical functions ("it helps to look after personal care", "it dries up hair", "it can be folded in half", "it can be hung in a convenient place", "it can be easily transported").

Aesthetic functions almost always appeared in the description of the meaning of artifacts kept on or close to the body (the exception is the telephone, which was never mentioned in the context of aesthetic functions). Most of these functions were listed in the case of the ring, an object, by definition, decorating the body ("minimalist, beautiful form", "it fits my taste perfectly"), and then a pocket knife ("red, beautiful, shiny"), which, although carried close to the body, was probably treated as a nostalgic object ("I got one like this from my dad", "my friends from the yard were jealous, because it was something in those times", "I felt like MacGyver"). In the remaining reports there are mentions of one aesthetic function (e.g. „softness of the material" - about sweatpants, „the aluminium frame is

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made of pipes with much thicker cross-sections than steel frames, which gives it the appearance of off-road machines" - about a bicycle, "aesthetic dimension - if you have cute glasses, then you are also a cute person").

Interestingly, symbolic functions were listed for as many as 11 out of 14 artifacts. Only one phone "deserved" the mention about its symbolic function: "without a phone, I feel like without a hand". The third artifact, which had no symbolic meaning for its owner, was a hair dryer. Examples of phrases relating to symbolic functions are as follows: "its sentimental value makes me always want to have it with me and I take care not to lose it" (ring), "they are expensive, so this is also an important reason for taking care of them" (glasses), "I have a special fondness for it, because I assembled it myself from parts bought online and in bazaars" (bicycle), "sense of freedom" and "sweatsuit is the best friend who is always there when I need it" (sweatpants).

The only one mention of the signalling function was in the description of the dryer - a semi-circle shaped hook suggests that the dryer can be hung.

The study was conducted on a small research sample (14 statements). It does not therefore seem reasonable to draw more precise conclusions based on the quantitative results. A significant, more than two-fold difference between the number of practical functions mentioned by designers versus non-designers indicates, however, differences in the perception of these functions, confirming the proposed hypothesis.

The minimum number of reported signalling functions is also striking. In the study, the signalling function was mentioned only once - by a professional designer. The signalling function is related to the practical use of the product, to the physical interaction with the product, and its mention by the designer also seems significant.

It would be interesting to analyse the differences in how men and women perceive functions. However, for such an analysis to be worthwhile, it would have to be carried out separately in a group of designers and non-designers. Too few statements were available for such an analysis.

The author intends to continue this research in the future. Undoubtedly, however, the additional goal of the experiment, that is familiarizing students with the theory of product language and disseminating knowledge about the functions of artifacts covered by this theory and signalled in the phrase "form follows functions", was achieved.

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