

Semiotic aspects of the hybrid language of design

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A premise: design is language

Initially, to be able to approach the semiotic aspects of the hybrid language of design, it is necessary to accept the premise that design is language. Actually, there is no longer much doubt about the affirmation that painting, sculpture, architecture, poetry and music, as well as visual arts, in general, are languages. This way, by extension, there is not too much to disagree when someone affirms that design is language. However, if on one hand the acceptance of such manifestations as language is generalized, on the other hand the approaches carried out in many situations have not overcome a verbal metaphorical focus.

The tradition of such metaphoric-linguistic approaches makes evident the super-valuation of the verbal sign in our culture, although people do not get tired of propagating to the four directions that we live in a world of images, in the era of iconographic culture. What many authors still insist to propose, when approaching sign non-verbal systems like languages, is trying to understand such codes in a rigorous analogy to the linguistic system.

However, by accepting design as a language phenomenon, we must admit a wider notion of the word “language”, that is not equal to “idiom”, but as “a wide semiotic phenomenon that incorporates the idioms (verbal languages), but is the manifestation of something more general, even incorporating the non-verbal signs” (BRAIDA e NOJIMA, 2014a, p. 33). This notion is sufficiently proper and pertinent for an epistemological study of design, especially when we consider the communicational and semiotic aspects of its products/objects.

We highlight that Santaella (1996, p. 314) affirms that “where there is a kind of order, codification, transmission of information, communication process, there will be language”. Therefore, if we consider that Design conceives products and services throughout systems of order and codification, processes of communication and transmission of information, it is legitimate the affirmation that design is language.

It is precisely this premise that has given the basis for the researches we develop, in the ambit of the Studies Group in Design – Languages – Transversal, linked to the Laboratory of Communication in Design (Design LabCom), of the Post-Graduation Program in Design of the *Pontifícia Universidade*

1. A wide approach about design as a phenomenon of language is carried out by the authors in the book entitled “Why is Design language?”. See Braida e Nojima (2014a).

Católica do Rio de Janeiro (PUC-Rio). It is also based on this premise that this work has been developed.

The hybrid language of design

As specified in the doctor's degree thesis of Frederico Braida, under the orientation of Vera Lúcia Nojima and Monica Moura, entitled "The hybrid language of design: a study about the contemporaneous manifestations"², the word "hybrid" may be considered as an analytical category in the contemporaneity, especially because it has showed to be relevant in the context of many sciences, such as biology (place of origin of the term), linguistic, arts, anthropology, sociology or in the cultural studies.

In fact, the hybrid term and its variations (interbreeding or hybridization) have been frankly used as a contemporaneous category, mainly in the attempt to overcome the conceptualizations that operated throughout dialectic pairs and that did not contemplate the existence of an universe of possible mixtures (NOJIMA, BRAIDA e MOURA, 2014, p.73-74). What is revealed is the adoption of the "hybridism" as a contemporaneous concept directed to the comprehension of a society of multiplicity, of mixtures and convergences in which everything, potentially, is hybridized: cultures, communications, languages, signs etc.

Also in the field of design, be it in the academic field or in the professional ambit (if it is possible or recommended to separate them), the hybridism has been manifested under many faces. It is sufficient to look around us and we will perceive the existence of a great quantity of products that are configured as multiform and derived from many languages, therefore each time more they are generators of multiple meanings and then presenting themselves as multifunctional or multiuse. They are all products that, such as a smartphome, regardless the modality of design they may belong (fashion, products, graphic, interiors, digital, urban, jewelry design etc.), carry characteristics that allow them to be called "hybrid".

Beyond the smartphones, we have a universe of design products that may be considered hybrid (FIG. 1). The hypermedia itself, the language of the digital medias, which composition is made with the potential reunion of sounds, images and texts, make the hypermedia design and all its products as hybrid. The unexpected mixtures of signs

2. See Braida (2012).

that awake many senses are also presented as a constant, as in the case of the Melissa sandals, which have a characteristic smell of a mix of bubble-gum with caramels and lollipops, mixing visual, tactile and OLFATIVOS signs. More specifically, we can mention the sandal Melissa Ultragirl, of the British designer J. Maskrey, which is a classic example of hybridism in materials, since it is a product that results from a mixture between the banality of plastic with the sophistication of Swarovski crystals.

1.



2.



3.



4.



5.

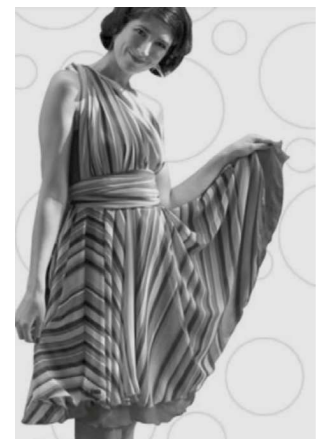


FIGURE 1 – Hybrid products.

1. SmartPhone Nokia E63. Available at: <<http://www.fayerwayer.com.br/wp-content/uploads/2009/06/nokia-e63-business-smartphone.jpg>>. Access in: 02 jan. 2012.
 2. Homepage of the website (in Portuguese) of the brothers Campana. Available at: <http://www.Campana.com.br/home_br.html>. Access in: 10 jan. 2012.
 3. Sandal Melissa Ultragirl, of the British designer J. Maskrey. Available at: <http://www.melissa.com.br/uploads/produtos_has_cores/94249218f3fa59ab61753c6dde266doe.jpg>. Access in: 10 jan. 2012.
 4. iPanda. Available at: <<http://www.mundotecno.info/wp-content/uploads/2011/05/caixa-de-som-ipanda-amethyst.jpg>>. Access in: 08 ago. 2011.
 5. Skirt-Dress-Blouse from the store *Diversa*. Available at: <<http://www.dversa.com.br/>>. Access in: 10 jan. 2012.
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There are also many examples of hard definition objects, because they are hybrid of design and art, or because since their conception and configuration the esthetic aspect stands out more than the functional one, like the iPanda, a type of speaker, a MP3 player, that has a dock for iPod or iPhone, which appearance is the face of a panda bear. Or, still, it is possible to find in the market clothes that can be transformed into skirts, dresses etc., according to the desire of the user, because they have been projected to attend this plural character.

We verified, therefore, that the hybridism in all possible manifestations is inherent to design. That is, there is a hybrid language subjacent to the production of any object in the field of design. Nevertheless, how to get to know the variety of existent hybridism? It is precisely this question that this text is willing to answer.

Theoretical presuppositions of the hybrid language of design

There are three theoretical formulations (or conjunct of theories) of semiotic-Peirce's basis that have been structured inside of the specific field of design and that open the door to the comprehension of the hybrid language of design³. Firstly, we can talk about the theories connected to the triad form, meaning and function, so propagated by many researches and authors of the field. Secondly, we highlight the theory about the semiotic dimensions of design (syntactic, semantic and pragmatic), arising from the semiotic dimensions of language, proposed by Morris (1970) and approached in design, for example by Quarante (1994), Gomes Filho (2006), Niemeyer (2003) and Braida e Nojima (2014b). Finally, in third place, contributes to bring to evidence the constitution of the hybrid language of

3. An explanation about these theories can be found in the book entitled "Triads of design: a semiotic view over form, meaning and function". See Braida e Nojima (2014b).

design the theory about the functions of the products (esthetic, symbolic and practical) carried out by Löbach (2007), based on the approaches of the functions of art elaborated by Mukarovský (1993).

About the hybridism between form, meaning and function, we verify that it is present in great part of the conceptualizations carried out about design in the contemporaneity. The conceptualization of design proposed by Heskett (2008, p. 13, emphasis added by us), for example, brings subjacent such hybridism when affirming that “design in its essence may be defined as the human capacity of giving *form* to the environment we live in, in a manner never seen before in nature, to *attend our needs* and give *sense* to life”. This is, therefore, the triad of design: form, meaning and function, which finds a direct correspondence with Peirce’s triad of the universal phenomenological categories (firstness, secondness and thirdness), or still in relation to the elements of the sign (representative, object and interpreter) (see PEIRCE, 1977).

Although by projecting an object it is possible to put emphasis in one of the three elements of the triad, in practice this division does not exist. Accordingly to Quarante (1994, p.291), for example, when you put higher emphasis into the form, you may talk about formalism; when you value the semantic aspect, the product’s meaning, you have the notion of stylization; at last, when the function gains a greater distinction than the form and the meaning, functionalism is close. Also, according to Walther-Bense (2000, p. 91), Max Bense presents three theories in which the design objects can get support: (1) technological-constructive theories; (2) semiotic-communicative theories; and (3) teleological-pragmatic theory. We verify that such theories come to evidence through direct reference, respectively, to the elements of the design triad: form, meaning and function.

Even though, by adopting an analytical posture, it is possible to accentuate the isolated look over the form, the meaning or the function, we must highlight that these elements are characterized as an imbricate whole, influencing and redefining themselves mutually. When related to Peirce’s categories of firstness, secondness and thirdness, such interdependence excels, since, according to Peirce (1980, p. 97),

the categories may not be dissociated one from the others in the imagination (neither from other ideas). The category of the first one may not need the second or the third, and the second one may not

need the third. But the second one necessarily needs the first one and the third needs the second one.

Considering the trichotomy of the signs, its relations and the dimensions of the semiosis proposed by Morris (1970), some authors, when applying the semiotic theories in the design field, have appointed the existence of three semiotic dimensions in the objects. According to Quarante (1994, p. 278, our translation), “transposed and simplified to the analysis of an object or product, considered as signs carrier”, we have the syntactic, the semantic and the pragmatic dimensions. These dimensions have become familiar and important to the design field, according to Nadin (1990, p. 6).

The syntactic dimension is related to the appearance of the objects, or their structures, to how the parts relate to each other to compose such object, comprehending the technical aspects, the textures, colors and everything that is related to the materiality of form. On the other hand, the expressive and representational issues are related to the semantic dimension, which involves the relationship process of the object with the meant thing. It is taking under consideration the semantic dimension that design frames our perception of how the objects must be understood (SUDJIC, 2010, p. 51). At last, the pragmatic dimension involves the destiny of the products, including their complete life cycle, functions and forms of use.

The same way the design triad form, meaning and function presents itself in an ultimate instance as an indivisible whole, also do the three semiotic dimensions of the products. According to Quarante (1994, p. 277), the three dimensions of the product are widely dependent one on the other, since Morris (1970) had already showed the interdependence of the didactic relations of the semiosis.

Finally, associated to the triad form, meaning and function and to the semiotic dimensions of the design language and products (understood as language) there are the functions of the products: esthetic, symbolic and practical, all proposed by Löbach (2007). According to Löbach (2007, p. 55), “in the process of use the necessities of the user are satisfied, endowing the product of certain functions”. Therefore, it is throughout the use appliance of the concept of function that the world of the objects becomes more understandable for man (LÖBACH, 2007, p. 54). Still according to Löbach (2007, p.54), “the essential aspects of the relations of the users with the industrial products are the functions of the products, which become

perceptible in the process of use and make possible the satisfaction of certain needs” (LÖBACH, 2007, p. 54).

However, although directly related to the pragmatic dimension, since it belongs to the third universal category of thirdness, the functions of the product are also related to the syntactic dimension when it is presented as an esthetic function, and with the semantic dimension when it is about symbolic function. The esthetic function is linked to the configuration and to the appearance of the product. “The esthetic function is the relation between a product and a user in the level of the sensorial processes. From there we may define: *The esthetic function of the products is a psychological aspect of the sensorial perception during its use*” (LÖBACH, 2007, p. 60, emphasis added by the author). And the symbolic function is the one that “is determined by all spiritual, psychological and social aspects of use” (LÖBACH, 2007, p. 64). That is, “an object has a symbolic function when the spirituality of man is stimulated by the perception of such object, by establishing connections with his previous experiences and sensations” (LÖBACH, 2007, p. 64). Finally, Löbach (2007, p.58) postulates that “are practical functions all relations between a product and its users that are situated in the organic-corporal level, that is, physiological”. The practical function is the one that in fact, gets closer to the *strictu sensu* notion of function, relating, therefore, with the pragmatics of products.

According to Bonsiepe (1991 apud BÜRDEK, 2006, p. 287), “it is not perceived that the functions are nothing but linguistic differences made by an observer. The functions are not in the products, but in the language”. Therefore, we may associate each one of the functions of the product to the semiotic dimensions of design, schematized in the following way (Table 1):

SEMIOTIC DIMENSIONS OF LANGUAGE	DESIGN ELEMENTS	PRODUCTS' FUNCTIONS
Syntactic	Form	Esthetic
Semantic	Meaning	Symbolic
Pragmatic	Function	Practical

TABLE 1 – Co-relation between the dimensions of language, design elements and the functions of the products. Source: Braida (2012, p. 147).

The same way, the triad form, meaning and function and the semiotic dimensions of language and design are inter-related, the functions of the product coexist in an inseparable way. Although in some products there is the predominance of some function in some level, the other ones are present, since they are interdependent. Such recognition makes Löbach (2007, p. 67) affirm that one of the possibilities of configuration of the products is the one that take into consideration the *symbolic-functional esthetic*, that is, the one that articulates the three functions the way they coexist: inseparable.

Three main types of hybridism in design

Based on the theoretical table and with the support of an empirical analysis of design products, we could verify that in the general and more abstract plan the hybridisms occur in the ambit of the semiotic dimensions of the languages, what validates the existence of three great types of hybridisms. It is, therefore, from the triad structure of the dimensions of language (syntactic, semantic and pragmatic) and its articulations with the three correlatives of the design triad (form, meaning and function) that we propose the typology of the hybrid language of design.

There are three main types of hybridism, among which we may insert all types of existing hybridisms in the field of design: (1) syntactic hybridism, (2) semantic hybridism and (3) pragmatic hybridism. However, these types show subdivisions, which are better to describe all hybrid manifestations of the contemporaneous design. These subdivisions refer to the aspects of mixtures, the processes that originated a specific hybrid product.

We highlight, however, that a single product may belong to different types or subtypes of hybridisms . That occurs for two reasons: the first one is due to the fact that the divisions inside of the proposed typology are not stagnant, that is, in many cases the types are imbricate, although almost always in a hybrid object there is the predominance of the syntactic, semantic or pragmatic hybridism; the second reason is due to the triad logic used for the composition of the typology, which preconizes the inter-relation between form, meaning and function.

The syntactic hybridism could also be designated as form hybridism, because it is the type of hybridism that is manifested in the form of the products. This is a type of hybridism that is above the dominance of the

firstness, revealing itself in the more superficial dimension of the product, in its appearance, fully realizing itself in the fulfillment of its esthetic function. Under a wider point of view, we say that the products that contain the syntactic hybridism are multiform. They are products that can suffer a variation of form, with or without the action of the user, leading or not to a variation of meaning, implying or not being conceived through the hybridism of different forms. They are subtypes of the (1) syntactic hybridism: (1.1) hybridism of codes; (1.2) hybridism of channels; (1.3) hybridism of materials; and (1.4) hybridism of techniques or technologies.

The semantic hybridism is the type of hybridism that is under the dominance of secondness. This type is manifested in the semantic dimension of the products and becomes evident with the fulfillment of its symbolic function. Although it also depends on the form and function, the semantic hybridism is concretely evidenced in the ambit of the products' meaning. In this sense, the design products studied under the focus of communications must not be seen only as objects of use, but also as carriers of multiple meanings. However, according to Ferrara (2007), it is through use that the meanings are reached. This way, it is possible to see a clear dependence relation between the semantic hybridism and the syntactic and pragmatic ones. This is, in a more abstract plan, the logic itself of the sign's action: a first one that is connected to the second one throughout the mediation of a third one. There are two types of (2) semantic hybridism: (2.1) hybridism of archetypes and (2.2) hybridism of contexts.

Finally, the pragmatic hybridism refers mainly to the hybridisms that comprehend the qualities of utility, functionality and practicality of the products, making available for the users many ways of integration of the products in their lifestyle. It is, therefore, a type of hybridism that is manifested in the pragmatic dimension of the products of design, throughout function, in the fulfillment of the practical function of the products. The pragmatic hybridism is about the multiple functions of the products and their many possibilities of use. There are four different types of (3) pragmatic hybridism: (3.1) hybridism of uses; (3.2) hybridism of language functions; (3.3) hybridism of practical functions; and (3.4) total hybridism.

The typology of the hybrid language of design is born, therefore, from the crossing of three matrixes or theoretical postulates that interlace and complement themselves, being one of them conceived in the ambit

of semiotic, transposed and applied by many authors to the study of design, and the other two specific of the design field: (1) matrix of the semiotic dimensions of language; (2) matrix of the triad of design, or of the elements of composition of the product; and (3) matrix of the functions of the products.

The table that follows (TABLE 2), is a great matrix that shows the correlations between the matrixes cited before, from which is born the typology of the hybrid language of design. As we may notice in the lines of this net, there are the subdivisions of each one of the matrixes reunited and in the columns the correspondent classifications, because they all fit into the three universal categories of Peirce: firstness, secondness and thirdness. This way, we highlight that the typology verified finds its logical basis on Pierce's semiotics.

	1 HSYNTACTIC HYBRIDISM	2 SEMANTIC HYBRIDISM	3 PRAGMATIC HYBRIDISM
UNIVERSAL CATEGORIES OF PEIRCE	Firstness	Secondness	Thirdness
SEMIOTIC DIMENSIONS OF LANGUAGE	Syntactic	Semantic	Pragmatic
PRODUCTS' FUNCTIONS	Esthetic	Symbolic	Practical
TRIAD OF DESIGN ELEMENTS	Form	Meaning	Function

TABLE 2 – Table of the correlations between the constitutive matrixes of the hybrid language of design. Source: Braida (2012, p.234).

Based on this table, we made explicit that the formal hybridism appears in the ambit of the materiality of products, in their perceptive faces. It is about mixtures that occur in the form, not necessarily related to the meaning and function. The formal hybridism concerns qualitative issues

and mixtures, and takes place in the fulfillment of the esthetic function of the products. The semantic hybridism, by its time, involves the aspects present in the syntactic hybridism, since it is from secondness and also related to issues of form. As the name indicates, this type of hybridism acts in the semantic dimension and is concretely manifested in meanings, drawing on the symbolic function of the products. Finally, the pragmatic hybridism, because it belongs to the thirdness, is related to the form and the meaning, but it is concretely manifested throughout the (practical) functions of the products.

Still, in a diagrammatic way, in a formal analogy with the structure of a sign, the table above can be represented by the next graphic (FIG. 2):

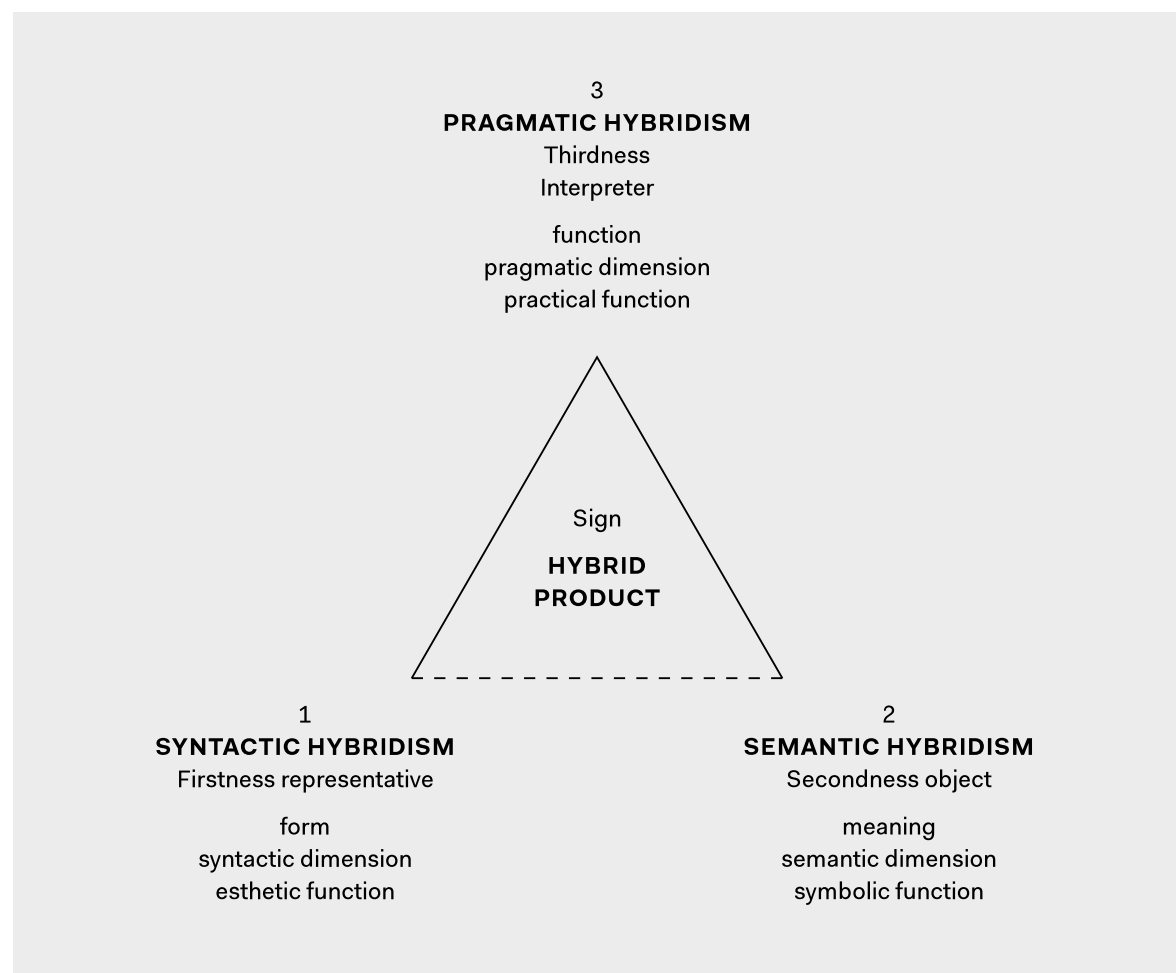


FIGURE 2 – Types of hybridism and their semiotic relations. Source: the authors.

Final considerations

To conclude, it is worth highlighting that what we intended to do in this text was to make evident how the varied range of hybridisms existing in the field of design is manifested. That is, we tried to show the logic of the constitution of such hybridisms. If on one hand the typology of the hybrid language of design is still presented inside of an excessively theoretical mark, which critic could be its low repercussion in the ambit of design praxis, on the other hand we want to highlight that such typology may instrument the analysis of the products as well as it should be understood and explored as a conceptual-methodological guideline for the project of hybrid products.

This way, having them analyzed inside of the design field, we were able to see that the hybridisms are manifested throughout the semiotic dimensions of the products' language, being revealed, concretely, throughout forms, meanings and functions, and being completely realized in the fulfillment of the products' functions (esthetic, symbolic and practical).

The *hybridism*, transformed into category of analysis of the products of contemporaneous design reveals that the hybrid manifestations of design are distributed according to the logic explicated above, which is showed throughout a typology which main types are: (1) *syntactic hybridism*, (2) *semantic hybridism* and (3) *pragmatic hybridism*.

Then, we conclude that all hybrid manifestations of design are derived from hybridisms carried out in the ambit of forms and/or meanings and/or functions. Therefore, they are not but fruits of endless mixtures and combinations that can be resumed into three main types (syntactic hybridism, semantic hybridism and pragmatic hybridism), which logic we have delineated in this work piece.

We also reinforce that the structuration logic of the typology of the hybrid language of design is the same as the Pierce's sign, because as such, it

Attends to notions of an iconic firstness, of a second indicial and of a third one to build a symbol that is renewable throughout a new first look... that may be open in new perceptions, with new indicial provocations and suggests new symbolic appropriations (NOJIMA, 2008, p. 223).

We may affirm, than, that the typology has been born throughout a research, as a consequence of a methodology that is based on the theory of signs. According to Walther-Bense (2000, p.99), “for a meaningful and fruitful application of semiotics, the presupposition is a theoretical foundation of the theory of signs itself, having in mind the essential control of its means and methods”.

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