

# THE SEMANTIC DEBATE IN DESIGN THEORIES APPLIED TO PRODUCT IDENTITY CREATION

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## **ABSTRACT**

The process of form giving is a complex topic for product designers and is inherently connected to the field of aesthetics. Fundamental questions need answers: are there absolute aesthetic principles that, if followed, can guarantee a “good form” and a successful product? What importance should user and market response be given? This highlights the debate on the extent to which the designer is entitled to be the only judge of a product’s aesthetics, as well as on how much other stakeholders (such as client companies, product users) have a say in the product’s meaning creation through its form.

In the past century the modernist paradigm and its translation in functionalist principles for product design has prevailed. However this paradigm has been increasingly challenged in the beginning of this century with the emergence of human-centered design theories.

In this article, we will attempt to give an overview of how this paradigm shift from positivist to constructivist philosophical worldviews has impacted design theories and form-giving principles. The purpose is to give young designers a basis for reflection on aesthetics and the creation of meaning and identity through form giving.

*Keywords: paradigm shift, design semantics, aesthetics, product identity, human-centered design, worldviews.*

## 1. INTRODUCTION

One of the most consensual statements we can make about today’s world is that it is increasingly globalized and open to exchange of communication and goods. One of the consequences is that it becomes increasingly important for each of us as individuals and as part of communities to be aware of our identities and how to communicate them. One of the ways we do that is by purchasing, owning, using, living amongst products and services that tell something to us and about us. Products that communicate an identity.

This aspect, whether it is seen from a human behavioral, consumerist or marketing point of view, cannot be ignored by product designers.

As we will see further on in this review article, one of the ways designers can presumably influence what their products communicate is through aesthetics and form giving. However, the field of aesthetics is in fact quite controversial, with conflicting views, definitions and use of terminology. In fact the whole concept of “product identity” itself is debatable. As little literature was found to describe and explain the fundamental differences in this area this article will aim at creating an overview of the main views on design philosophy and the debate on aesthetic intentions in design. Concretely, the main outcome of this debate lies on the discussion of the role of the designer in defining and assessing the intended identity of a product in relation to the role of end-users both as observers and as potential stakeholders in the design process. In short; who defines and creates the meaning of a product; the designer, the user as an observer or alternatively users involved in the design process? Thus we need to first place ourselves in a broader philosophical perspective and identify the paradigms or worldviews that predominate and then present concrete meanings in design theories and ultimately in design practice with specific methods, techniques.

To do so we will identify an historical evolution in the use of worldviews to justify different design theories, first in §3, then in §4. Parallels to the implications of these theories on form giving and product meaning will be drawn along. The main authors we will be referring to regarding concrete theories of meaning giving through product aesthetics are Krippendorff [1], Warell [2], Karjalainen [3,4] and Muller [5].

Finally we will reflect on the differences between technology-centered design and human-centered design. The importance of awareness about this debate, especially in design education, will also be highlighted.

## 2. PHILOSOPHICAL WORLDVIEWS

Although philosophical ideas remain most often largely hidden in the design world, they still influence the practice of design and need to be identified. It is advisable for individual designers to be aware of the larger philosophical ideas they are dealing with as a clear set of references. In order to identify different existing sets of philosophical references we shall present the notion of worldviews.

As explained by Creswell [6], based on Lincoln & Guba [7], a worldview can be defined as “a basic set of beliefs that guide action” and is similar to paradigms or epistemologies.

An interesting way of seeing worldviews is through the analogy traced by Galle [8]; an analogy between the computer world and the world of design, as illustrated in Table 1.

Table 1: Analogy between computer world and design world based on Galle [8]

Computer world	Design world
Applications	Design theories
Operative systems that enable applications to run on hardware	Underlying metaphysical theories (worldviews) in terms of which design theories describe reality
Hardware	Reality

As in the computer world then, worldviews may be incompatible, or in other words design theories (applications) may be incompatible and inconsistent in other worldviews (operative systems) than their original ones.

As we will see further on, the types of philosophical beliefs held by individual designers will often have great impact on their approaches of design theories and indirectly on the concrete methods and techniques they use. Four different worldviews are briefly presented here, based on the work of Creswell [6] on research design (and use of qualitative, quantitative or mixed research methods) and will be discussed further on: positivism, constructivism, pragmatism and advocacy. The major elements of each position are summarized in Figure 1.

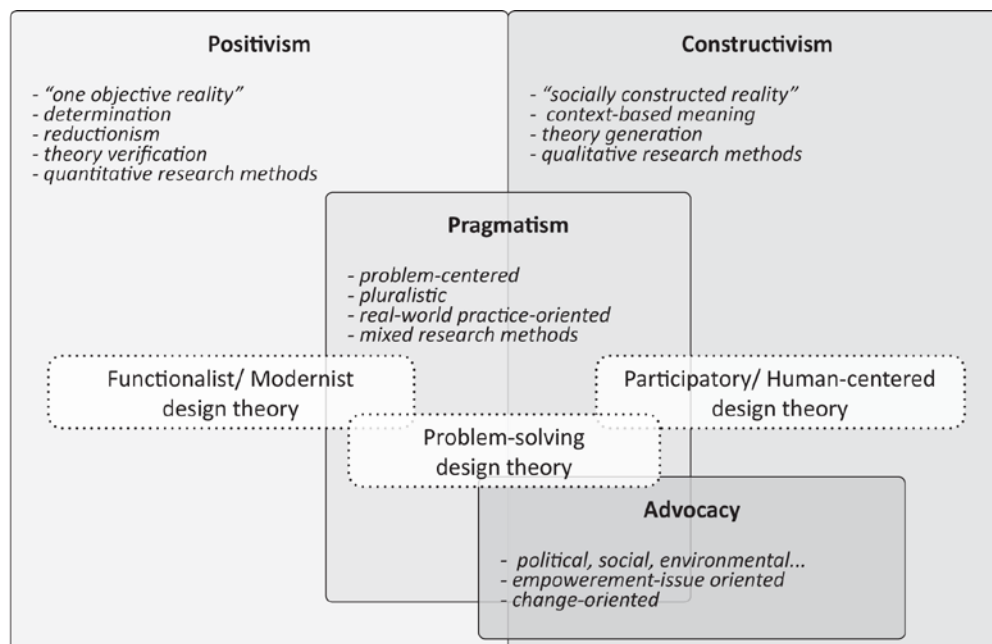


Figure 1: Overview of presented worldviews and design theories.

It should be noted that the presented worldviews may take various forms and may make use of principles that are comparable from the one to the other. They are not considered as rigid and separate but rather may overlap on each other to varying degrees. Pragmatism for example makes use of elements from both post-positivism and constructivism but remains a worldview on its own. However as Figure 1 shows, positivism and constructivism in their most literal form can be viewed as antinomic.

It should be noted that only a brief presentation with the main aspects relevant for design application and design research shall be made.

## 2.1 Positivism and Post-Positivism

Positivism, also referred to as “scientific method” or “empirical method” is associated to modernism and briefly put claims that there exists an objective reality independent from the observer. Unlike positivism, post-positivism offers a vision that is more nuanced and better suited for study of design science; it recognizes that we cannot be absolutely positive about the truth of knowledge when studying humans [9].

The key assumptions are:

- It is a deterministic philosophy (causes determine effects) that enforces the scientific need to assess and identify causes that influence outcomes
- Reductionist: reduces ideas into a discrete set of “sub-ideas” to test, based on careful observation and measurement of the objective reality
- Scientific research is the process of making claims to then abandon or refine some of them for other, more accurate ones. Most quantitative research starts with the test of a theory.
- Objectivity is a basic requisite for relevant research; used methods need to be checked for bias.
- However, post-positivism recognizes that knowledge is conjectural - absolute truth can never be found. This means that evidence established in research is always imperfect instead of proving a hypothesis.

Implications of the positivist worldview in design will be elaborated mostly in §3.

## 2.2 Constructivism

Also referred to as “social constructivism” or “social construction of reality” and is affiliated to postmodernism (rejection of absolute truth). It defers radically from post-positivism by acknowledging that we are constrained by our own perception and as such cannot access reality and that what we consider to be reality is constructed. In other words the observer and the observed cannot be separated; reality is co-constructed by individuals in a social context [7].

It assumes that individuals develop subjective meanings of their experiences and that these meanings are varied and multiple.

Beliefs change over time as the realities they describe; as such researchers seek to capture the complexity of views instead of narrowing them to a few categories of ideas. Subjective meanings are socially and historically influenced; constructivist research focuses on the contexts and interactions among individuals. This is the opposite of post-positivist research where interpretation of observations is influenced by the background of the researcher.

The goal of research in this perspective is to reflect the individuals’ mental construction of the meaning of a situation, which implies developing patterns of meaning rather than starting from a predefined theory.

Implications of the constructivist worldview in design will be elaborated mostly in §4.

## 2.3 Pragmatism

This worldview, as summarized by Cherryholmes [10], seeks to clarify meanings based on situations, actions and their consequences rather than antecedent phenomena as in post-positivism. It puts great importance on focusing on a problem and then using pluralistic approaches to derive knowledge about the problem. However stands are not taken on the debate of reality as objective or subjective.

The pragmatic worldview assumes that:

- An ideology or proposition is true as long as it works satisfactorily.
- The meaning of a proposition lies in the practical consequences of accepting it

- Impractical ideas should be rejected
- The truth of an idea needs to be tested to prove its validity
- Any ideology or theory may be used as long as it is seen purposeful but their choice should be justified.
- Focus on “what” and “how” to research based on an intended consequence
- Agrees that research always occurs in a set of contexts, whether they are social, historical, economical, political.

Implications of the pragmatic worldview in design will be elaborated both in §5 and §6.

## 2.4 Advocacy

This worldview arose as a reaction to the imposed structural laws and theories of post-positivism [6]. It claims that these do not fit the needs of marginalized individuals who face issues of social justice. It is related to constructivism in the embracement of human-centered considerations but criticizes the fact that constructivism does not go far enough in advocating for marginalized people.

It assumes that:

- Research needs a political agenda
- Specific issues need to be addressed such as empowerment, inequality, oppression, domination...
- As such research based on this worldview often starts based on a specific issue
- Individuals need to be included in the research process in order not to be further marginalized
- Focus on change
- Emancipatory; aims at helping people out of structures that limit self-determination and self-development.

Elements of the advocacy worldview in design will be presented in §6.

Karl Marx [11] stated that “philosophers have only interpreted the world (...); the point is to change it”. Let us comply to that and move from philosophical considerations to their applications in the world of design.

We will first see that positivist and post-positivist paradigms have set the trends and determined the predominant theories in design and form.

## 3. A POSITIVIST-INFLUENCED HISTORY OF FORM GIVING

The earliest theorists of aesthetics held the perspective that attractive features reside in the object itself and that beauty is an objective property, which is a strongly positivist-based statement. This approach in turn implies that each object has an ideal form, which will tend to be considered as attractive by any observer. We will see in this chapter how this basic assumption has been embraced to varying degrees throughout the past century.

### 3.1 Functionalism

Functionalism from a design history perspective is most often embodied by Louis Sullivan’s famous dictum “Form Follows Function” [12].

This dictum, elevated to a design principle, infers that the form of products can only emerge from the clear understanding of the functions they serve. This takes away the focus on the question of what they are to serve, where functions come from, and the legitimacy of those who define them.

It also reflects a hierarchic design world in which specifications are written on the top and handed down or taken for granted, as if coming from an invisible authority. This rather deterministic approach has had great influence by defining a field of “communicative functions” as presented by most tenants of this theory such as Vihma [13], Muller [5], Warell [2] in Figure 2.

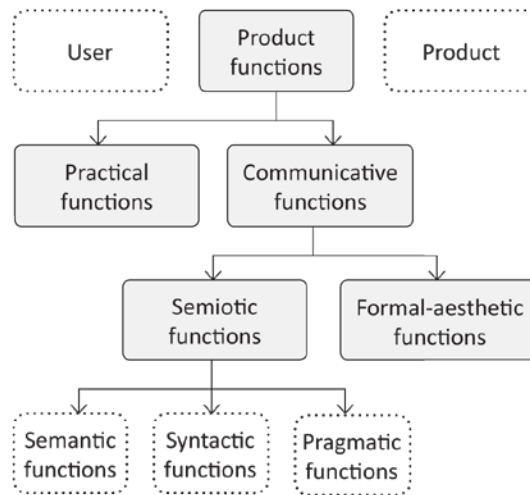


Figure 2: Functions in the field of product communication (modified from Muller [5] after J. Gros)

This reduction of product communication into normed sub-functions puts great emphasis on the use of the theory of semiotics.

### 3.2 Semiotics as a Function

Semiotics is the study of cultural sign processes such as analogy, metaphor, signification. Semiotics is closely related to the field of linguistics, which studies the structure and meaning of language more specifically. We can identify semiotics' positivist roots by its name: "semi" refers to a description of reality based on two separate worlds, the world of signs/signifiers and the world of referents/signified. Semiotics are usually divided into three branches, which include:

- Semantics: Relation between signs and the things to which they refer; their referent i.e. meaning of the sign
- Syntactics: Relations among signs in formal structures, e.g. product's relations to surroundings and internal structural relations
- Pragmatics: Relation between signs and their effects on the people who use them – e.g. ergonomics.

Peirce and Morris are the main theorists behind the most commonly published applications of semiotics. The most used rhetoric is that of the "triadic sign" illustrated in Figure 3.

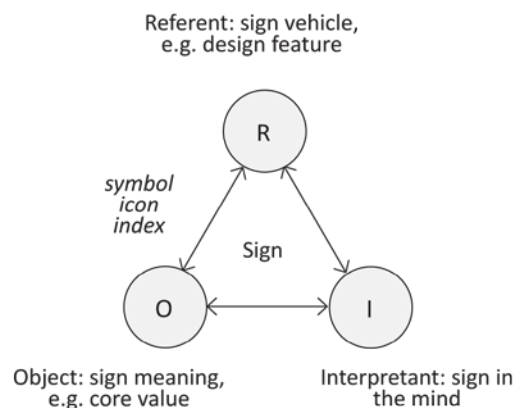


Figure 3: Peirce's triadic sign (Warell [2])

It is a theoretical construction where the meaning of the sign resides in the interactions between objects, referent and interpretant. In short the relation between an object and its referent can be that of:

- An icon, or sign that bears a likeness to what it represents, like a woman-figure on a door showing that the room is to be accessed by women only.

- An index, or sign causally related to what it designates, like a footprint showing the former presence of someone on a beach.
- A symbol, or something that designates something else by convention, like the “male” or “female”-sign, or a heart to express love.

This relation presupposes however the correct perception and interpretation of the interpretant if the designer is to vehicle the correct intention. As we will see in §4 Krippendorff [1] denounces that very conception of intention.

### 3.3 Formal-Aesthetic Functions

As described in Muller [5], adepts of functionalism are founding their vision of aesthetics on the notion of objective ideals that take the form of for example inherently pleasing proportions (such as the golden section) and the adherence to strict geometric rules. Rationality predominates by the embracement of the Gestalt theory, which identifies the psychological tendency to perceive or construct symmetry, regularity and harmony even when it is not actually present. This desire for order in visual stimuli results in a number of aesthetic principles, commonly referred to as the Gestalt Rules, such as symmetry, proximity, similarity, continuance, repetition and closure.

The Gestalt theory can be considered a typical positivist theory; however most recent authors have a more nuanced way of using it that may be considered post-positivist. Warell for example has divided the appreciation on formal-aesthetic functionality of products in two categories [2].

- A sensuous, “non-interpretative” mode, denoting a primarily appreciation of the form.
- A semiotic, “interpretative” mode denoting an appreciation based primarily on attribution of meaning to the form.

He then addresses this duality further when writing about interpretative and non-interpretative perceptual experience [3].

### 3.4 Meaning creation – a semantic transfer

We shall now look more specifically at the notion of product meaning, at how different theorists approach the notion of transferring a meaning to a designed object [3, 4]. Warell classified 4 types of semantic functions when considering how form elements of the product communicate their purpose by use of semantic signs:

- Describing (purpose and mode of operation)
- Expressing (properties)
- Exhorting (to reaction and handling)
- Identifying (product, origin, producer, nature, category...)

More specifically an interesting way of illustrating the semantic transfer is in the theories of designing for brand recognition and differentiation. Corporate brands are entities that usually dispose of a defined identity with at its center a set of core values. These values are in turn, according to the authors, transferred into the design by use of so-called “traceable” or “explicit” and “non-traceable” or “implicit” design cues in order to create recognition for the brand identity. A complete framework on the analysis and generation of “traceable” design cues has been proposed through Warell’s “design format theory” which mainly makes use of syntactic considerations by study of concrete form elements and their ordering as explained in his “Framework of Design Syntactics”.

Karjalainen [4] completes this approach with a stronger semantic focus by emphasizing the importance of “non-traceable” design cues that communicate values, still on a representational level (that is to say on a positivist plan), using for example metaphors.

We are discussing the use of product form as a way of communicating values that the designer identifies as appropriate, desirable and that he wants the product to express as an intention. As observed, this presupposes acceptance of a positivist worldview that focuses on the notion of representation of an ideal idea into the “real world”.

However, the acceptance of this point of view needs to be debated in conjunction with other paradigms, which may be better suited to giving products meaning to their end-users.

#### 4. HUMAN-CENTERED FORM GIVING: THE SEMANTIC TURN

In order to illustrate the importance of worldviews as a base for design theories and their implications we shall now present the radically different worldview of constructivism and its historical development.

As Krippendorff [1] proposes let's take some distance and look at an evolution on the definition of design. To a certain extent, reference is made to Simon [14] reflecting on the difference between science and design; according to him "science describes how things are; design how things should be". Replacing "is" with "should be" is an imperative, normative statement. The focus is on "problem-solving" with a technical rationality. Krippendorff judges this as a positivist way of looking at things; the design process it infers is typically one of analysis/synthesis/evaluation, which necessarily gives a finite space of solution. He expresses that this has proved to work well in larger system design problems where the outcome of the process can be authoritatively implemented but that it has proved to fail in complex, social design problems such as for example city planning, where the design typically improves the lives of some at the expense of others.

This brings us to the concept of "tame", technical problems versus "wicked problems" as defined by Buchanan [15], which are typically problems or conflicts that can never be totally and permanently resolved. In this aspect the focus falls on the definition of the "wicked problem", highlighting the need for a new way of thinking and moving away from the positivist, top-down technical problem-solving point of view.

As we will see, the theories advanced to that purpose are in the domain of constructivism and lay out methods for human-centered design (see Figure 1).

In that spirit, Krippendorff attempts to set an explicit foundation to a paradigm shift, which he calls the "semantic turn".

##### 4.1 Denegation of semiotics

Krippendorff takes a sharp stand against the elaborate vocabulary of semiotics that according to him diverts designers from the meaning of products to artificial epistemological assumptions. For clarity purposes, we should highlight that his use of the term of "semantics" is incompatible with the notion of semantics as a part of semiotics in the positivist worldview; in that perspective one could consider Krippendorff's "semantics" as being on the same theoretical level as for example Vihma's "semiotics", which highlights the incompatibility of the two theories. From now on, unless specified otherwise, we shall use the word "semantics" from Krippendorff's point of view, with a great focus on "meaning" for users and observers.

Three main points can be drawn from this distantiation:

1. Semiotic theories are built on the differences between two worlds rather than acts of distinguishing contextual meaning-creation processes. Semantic in contrast raises awareness that the human world is created, constructed by human involvement. The theory of semiotics is faced with contradictions:
  - Syntactics can be viewed as a theoretical construction of a reality with no place for humans to recognize syntactic relationships
  - "Semiotic semantics", defined as the relations between signs and the object (whether it is convention, causality or similarity) need to be learned by the observer; as such they are as well human constructions
  - "Semiotic pragmatics", defined as the relation of psychological causality between signs and their users acknowledges at least users but denies them participation and creativity.
2. Semiotics does not leave room to the multiple interpretation of signs and does not seem to take into account that their meaning can evolve over time, between subjects, in different contexts.
3. In semiotics the process of giving meaning can be described as a monologue – semioticians consider their meaning of a sign as factual and construct explanations on when and why people fail to recognize the signs as intended by the designer. As opposed, the "semantic turn" describes the process as a dialogue between user and designer and opens for a reflection on user involvement in the design process

To sum up, according to aesthetic semiotics, designed artifacts would be representations of an intention of the designer. Krippendorff warns then against "pretentious semiotizations", deception of

users regarding the nature of products. In that aspect Krippendorff cites Umberto Eco: “Semiotics is the discipline that studies everything that can be used to lie”.

#### **4.2 A constructivist approach, the semantic turn**

In reaction to the semiotic point of view, Krippendorff highlights that one should not separate artifacts from what they mean to stakeholders. He advocates for a non-representational concept of meaning that encourages products to be self-evident to their users and proposes to systematically expand the space of possibilities and contract it down to “arguable proposals” for products that facilitate future developments. This includes that:

- Decisions on meaning cannot be taken away from those affected by a design
- Design proposals are to be evaluated empirically by providing arguments, demonstrations and tests for the projected reality

Krippendorff also introduces the term “character” which relies on the linguistic attribution of adjectives. These attributions cannot be accurately or physically measured and may include aesthetic values, revealing feelings and sensations commonly accepted by different individuals. As such, sets of adjectives may be used to define a character that describes the communicative intention of the designer when giving form.

His model of a design process for “designing the character of artifacts” relies on an otherwise typical diverging/converging process in five steps; elaboration/expansion, analysis/grouping, generation of sensory manifestations, reconciliation of incompatibilities, testing. It also proposes concrete methods and techniques (Such as e.g. “semantic differential scales”) with a strong emphasis on user testing.

#### **4.3 Distantiation from Kansei engineering**

The use of adjectives for defining the “character” of a product is strongly reminiscent of the “Kansei engineering” theory which proposes highly refined scientific methods for translating feelings (Kansei in Japanese) into consumer products, as exposed by Schütte [16].

As Krippendorff puts it one can however object that focusing mainly on first the definition and statistical classification of words then on the statistical evaluation of perception of these words, contributes to narrowing the space of solutions in a typically normative, post-positivist manner which is intrinsically different from a constructivist point of view. By doing so Krippendorff contests the relevance of that approach and describes it as being potentially less fruitful than a typical human-centered approach.

### **5. A PRAGMATIC APPROACH IN FORM GIVING**

We have so far seen theories that adhere mostly to positivist and constructivist worldviews. It is now interesting to look at a more pragmatic, nuanced description of the realities of design practice. In order to do so we shall base our reflection on Crilly [17], who wrote a qualitative study based on interviews of practicing designers. This led to the drafting of a conceptual framework that lists all parameters that influence when designing for intended customer response as shown in Figure 4.

The essence of the framework lies in the recognition of an essentially problem-based approach (the problem being defined as the expression of an intention based on motivational factors and moderated by constraining factors) and of a “designerly” intent that as well recognizes the importance of consumer involvement. This recognition is however tempered by the identification of potential issues related to this involvement in form giving, as well as the problem of limited resources in design projects as a limiting factor.



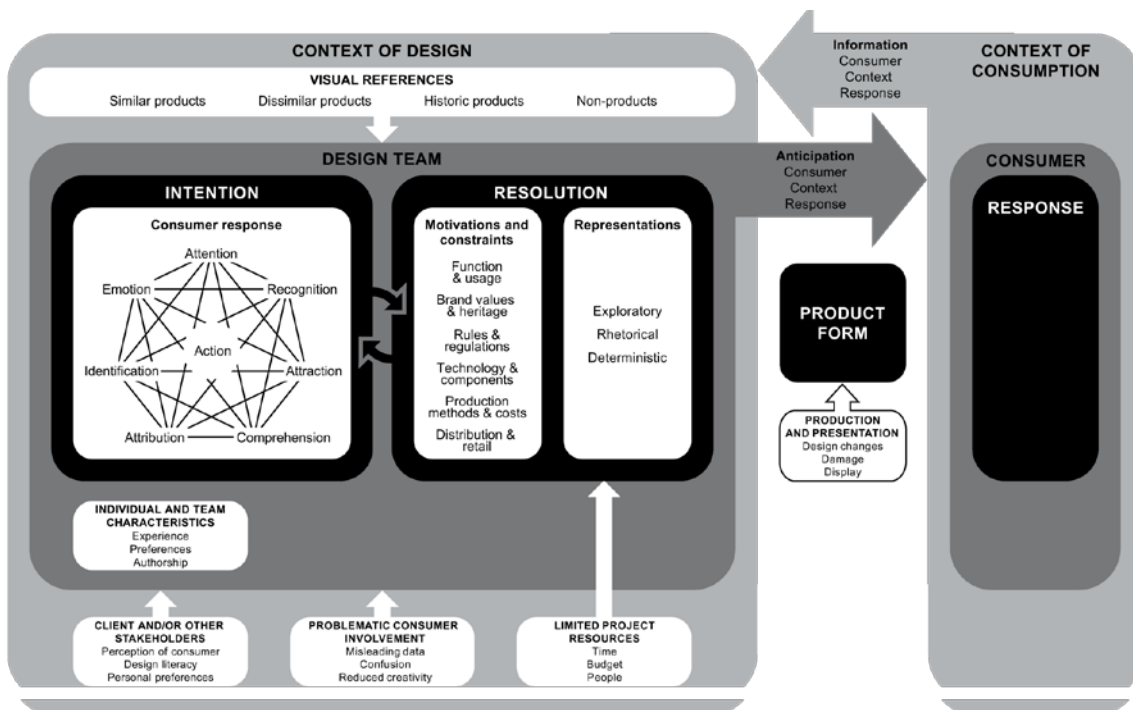


Figure 4: Conceptual framework situating designer intent within the context of the other determinants of product form (Crilly [17])

## 6. DISCUSSION

We shall set a foundation to the discussion by drawing some preliminary conclusions from the theories we have exposed so far.

Firstly, we shall recognize the general relevance of a pragmatic, problem-based approach to design; whether the problem is defined in a functional, positivist way or whether the problem is to “define the wicked problem” as Buchanan puts it, it seems that basing the design process on the definition of a problem in the larger sense, even if it is recognized as unsolvable, can be universally applicable as long as it opens for the eventuality of an infinite space of possible solutions. Secondly, the constructivist view of reality as socially and individually constructed seems to be the most relevant and interesting way of looking at design theories. As Krippendorff bluntly puts it “*There is no absolute truth, the best one can get (as a designer) is a verbal confirmation of the intention*”.

However the discussion resides then on the impact of these conclusions on the process of giving form to products.

We shall illustrate the influence of worldviews on design processes and from there on product form with the following, somewhat charicatural example illustrated in Figure 6.



Apple Remote



Google TV Remote by Sony



Logitech Harmony 1100

Figure 6: Remote controls for TV systems

Apple has a clear strategy of innovation through strategic design implementation. Their products offer only the functions the designers see as relevant to offer and these functions are soberly expressed through their form. This positivist-influenced way of designing is reinforced by a very consequent use of pre-established design guidelines. The product's functionality and form is in other words "pushed" down to the end user who is expected to follow the designers' understanding and expected use of the products. In other words the products are a representation of an ideal that is defined by the designers.

A very different intent is expressed by the form of the "Google TV remote"; it shows a multitude of ways the user could interact with the product. One could expect that this product is the result of a process of user involvement, maybe workshops and focus groups, that resulted in highlighting the need for various ways of use. The product is a representation of the multiplicity of uses that the users express wishes for.

Finally, one could see the Logitech remote control as an expression of a more pragmatic approach to the design problem: the problem is not defined as "how to remotely control a TV system" but rather "how to simplify the user's interaction with a multitude of electronic devices".

### **6.1 Is there such a thing as "product identity"?**

Former BMW head of design Chris Bangle declares in Hustwit's documentary *Objectified* "The designed object has to be the reflection of what you want to see in it – it is the observer that sees "speed" in the shape of a car – we speak here of emotional authenticity" [18].

This illustrates that an embracement of a constructivist, human-centered theory of design infers that a product cannot actually have an intrinsic identity, that meanings are acquired in use, not designed – as such, it is impossible to force meanings into artifacts.

However even in the optic of a user involvement process, part of the role of the designer is still to create a form, and even if the intentions are not his or hers they are still defined and must be transferred in form.

As such it seems to me that the definition of a product identity is possible as long as one recognizes the potential multiplicity of that identity and its dependence on social and cultural contexts.

It is interesting to notice that all the cited authors, whether their approach is mostly functionalistic or human-centered, mention what can be considered in this aspect the notion of identity definition, although in different ways ("character" for Krippendorff [1]; "values" for Karjalainen [3]; "semantic specifications" for Muller [5]...). The main ways it is embodied in the design process is in the form of words and adjectives (let's call them "core values") as well as moodboards and collages. We refer here to the works of Butler-Kisber [19] and Eckert [20] on the role of moodboards in particular as means of communicating an intended identity inside and outside the design team as well as for documenting and recording purposes.

### **6.2 Is there such a thing as "good form"?**

As we have seen in §4, Krippendorff's views on the concept of an authoritative formal transfer of a designer's intention raise the question of "honesty of products" (as according to him, doing so could legitimate use of deceptive means of expressing values in the form; say for example using false wood decorations in car interiors). This brings ironically in mind that, in a modernist tradition, the "honesty" of a product's form is at the basis of the notion of "good form" (in that perspective "honest" means that the content of the message should correspond to the product as it is, and not to "what one wants to make the market believe it is", as Monö puts it [22]).

The concept of "good form" is indeed quite controversial. It is historically related to the criteria for judging designed products by design award institutions (Vihma mentions "Die gute Industriform" [13], now known as iF awards and Hestad [21] mentions the Norwegian design council's "Merket for god design").

Vihma [13] denounces the normative effect by design awards of a narrow interpretation of the concept of good form described originally in a list of ten criteria, mostly functionalist or defined in a positivist, absolute manner; it is all about the form and its functional meaning, nothing or little about both the user response and the market response.

One could object that in some cases products need to communicate “authoritatively” defined values, such as in the case of design for brand recognition; especially in mature, competitive markets where corporations are depending on being recognized and differentiated. Of course some would argue that design should ethically place itself outside of these commercial, market-driven ways, which brings us to the next discussion.

### **6.3 What about advocacy?**

We have exposed in §2 the worldview of “advocacy” and it has not been discussed further. Does it mean that the notion of advocacy in design theory does not have a direct impact on product identity and form giving? It depends.

We have chosen to place ourselves on a constructivist plan when it comes to the notion of meaning giving through form. As such we recognize that values are only important as long as users consider them as being important. A possible example of that is the fact that a lot of chairs around us are actually uncomfortable, which is an expression of the fact that we consider other aspects about chairs as being more important than the actual seating comfort. This illustrates that semantic, meaning-related considerations should always precede other considerations – be them political, ethical, environmental, universal, emotional sustainability issues... On the other hand it doesn’t rule out the possibility for objects to semantically advocate for the mentioned issues. To illustrate this point let us take the example of “green” design (that advocates for environmentally sound behavior). Some products make a point of looking environmental-friendly. However it doesn’t mean that all products that are designed in an environmentally friendly manner should necessary communicate it through their given form; all depends on the semantic priority that is given to that particular value.

## **7. CONCLUSION**

Although such a level of abstractive theorization as the one presented in this paper may awake skepticism about its concrete utility for design practice, one should highlight the importance for a designer of being able to place the design process for a specific project in a bigger philosophical perspective, in order to have a clear set of theoretical references. It is the author’s opinion that one should be able to choose the most relevant standpoint when reflecting on a particular design problem, without it meaning that that choice is definitive. In other words this paper argues for a pragmatic way of relating to philosophical worldviews from a design perspective.

Its purpose of offering an overview of different worldviews and a discussion on how these may be used in conjunction with form giving issues related to design theories, should equip researchers, educators with the knowledge to answer the following question:

“If products have an identity, how is it defined, by whom, whom shall it give meaning to, and how is it communicated throughout the design process?”

Moreover one should stress the importance of the philosophical roots of design theories in design education as a basis for design history teaching, as well as their roles as bases for students to understand the theoretical background of their specific teaching institution.

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