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A MODEL FOR THE SEMIOTIC ANALYSIS OF OBJECTS

INTRODUCTION

Consider these sentences:

- “[it] clearly does squeeze lemons, however badly some people may think it achieves this. It does also start conversations […]” (Lloyd–Snelders 2003, 246)

- “[t]he fact that it is practically unusable makes it easy to see it as an object of art”. (Koskinen 2005, 21)

- “This product may not be especially functional, and its prime role would appear to have become positional [i.e. social], but it also is a strikingly sculptural and perhaps inspirational design” (Walker 2006, 30)

- “The fact that [he] turned such a banal object into something that pleases the eyes is impressive, even if it doesn’t aim to be the most functional lemon squeezer” (Russo–De Moraes 2003, 146)

- “Likewise, it by very dint of its poor utilitarian performance that one is forced to stand back from it and think about it as an aesthetic object” (Julier 2000, 77)

- “Every time it is used, it reminds the user of its elegance and approach to design. It fulfils […] promises through its performance, re-conjuring the emotions originally connected with the product. It also serves as a point of surprise and conversation for the associates of its owner” (Khaslavsky–Shedroff 1999, 47)

- “It was born, and with it some headaches for the champions of “Form follows function”” (Alessi 1999)

- “[It] needs someone to demonstrate how it work[s] (Molotch 2005, 149) […] Gourmet kitchen shops provide ways […] to learn what a particular product can do. Gaze upon it; it helps to be told to press a citrus half down on the pointy top with a twisting motion, after sliding a vessel underneath to catch the liquid” (Molotch 2005, 146)

- “[it] presents itself as a kitchen utensil that is convenient to use. The form of its main body possesses a downward directionality opposed in its spidery legs, which spells out its method of use.” (Kim–Boradkar 2002)

- [It] was indeed seductive. I saw it and immediately went through the sequence of responses so loved by merchants: “Wow, I want it” I said to myself. Only then did I ask, “What is it? What does it do? How much does it cost?” concluding with “I’ll buy it” which
I did. That was pure visceral reaction. [It is] indeed bizarre, but delightful. (Norman 2005, 113)

- “I think this is ugly, it looks like an extraterrestrial spaceship” (a usability-test user in Russo–DeMoraes 2003, 147).

What are they talking about? Are they talking about the same thing or not? I’m sure you know what the object being considered is and that, despite the differences in points of view and judgments, all commentators are talking about the same thing: Juicy Salif [JS], the squeezer designed by Philippe Starck and produced by Alessi (Fig. 3). Most of these randomly found comments revolve around JS’s (lack of) functionality in contrast to its aesthetic features. Guy Julier (2000, 67), before defining JS as being “beautifully dysfunctional”, described it in a much more faceted way noting the anomaly and ambiguity of this object and ending his considerations with a question: “So is this an object of use or of contemplation?”

As far as I know, none of the commentators is a semiotician. Therefore, my question is: “what should a semiotician say about an object like JS? Should s/he add her/his judgments to those listed above? Should s/he try to answer Julier’s question? Should s/he comment and judge those comments?” I think that a semiotician has to elaborate tools that enable her/him to account for JS – or for any other object. Following Louis Hjelmslev’s “principle of analysis”, I consider an object to be a point of intersection of a network of relations. Therefore, “accounting for an object” means to analyze a certain object by describing the relations that the object articulates and, in doing so, deploying the way in which it articulates meaning and, hence, signifies.

In the following article I will present a model that, mapping the sets of relations that should be described, suggests a procedure to “account for” objects. I will test the model on JS, showing also how the semiotic discourse about objects differs from other discourses exemplified above.

PRELIMINARY REMARKS

“How can we account for the way in which an object signifies?” This is the question that semioticians interested in objects have to answer. But, this question cannot be taken for granted: it presupposes a certain idea of what semiotics is and what semiotics can and should do. Within the wide and manifold domain of research in semiotics/semantics of objects/products/design, other questions could be raised and assumed as guidance for research.

Through this question I assume that objects do signify and, thus, that they are a legitimate subject of semiotic inquiry. Beside that, this question suggests that “the way in which an object signifies” has to be “accounted for” and that semioticians should say “how” to account for objects’ signification.
Hjelmslev’s Legacy within the Semiotics of Objects

Following the Danish linguist and semiotician Louis Hjelmslev (1943), “analyzing signification” means to describe relations. Or, more precisely, it means to describe relations between sets of relations, what Hjelmslev would call “forms”\(^1\). Indeed, for Hjelmslev signification is a relation – called “semiotic function”\(^2\) – between two forms: a form of expression and a form of content. By giving relevance only to relations without the need to presuppose a subject, a mind or any other instance that, transcending relations, would interpret them, Hjelmslev proposes an immanent theory of signification (Deleuze–Guattari 1972, Eng. tr. 242-243).

His immanent theory of signification is based on a relational epistemology in which relations always precede and constitute elements. Indeed, for Hjelmslev, an object is a point of intersection of a network of relations\(^3\). Clearly Hjelmslev derives his conception of semiosis from Ferdinand de Saussure, but contrary to de Saussure’s “signifier” and “signified”, Hjelmslev’s “expression” and “content” do not presuppose any fixed ontological investment; indeed, they are completely reversible: what works as an expression within a certain “semiotic function”, can work as a content in another. One of the consequences of Hjelmslev’s approach is a complete dismissal of de Saussure’s latent dualism\(^4\) (Deleuze–Guattari 1972, Eng. tr. 242-243; Fabbri 1998).

Since Hjelmslev was a linguist who mainly dealt with verbal language and linguistic categories, his theory has been considered to work, and not even too adequately, only for verbal language, without being able to account for any broader conception of language developed by semiotics. His theory has been considered formalistic (Coquet 1991; Fontanille 2004) and unable to account for the substantiality of objects (Semprini 2002). But Hjelmslev’s approach is not formalistic: it is just a coherent deployment of a relational epistemology into an immanent theory of signification and into a method to account for the manifestations of signification. The same relational epistemology and immanent theory of signification can be used to account for manifestations other than those of the verbal language, objects included, as long as we are able to detect the relations that a certain manifestation articulates.

Algirdas J. Greimas, who based his semiotics on Hjelmslev’s theory, knew that and, indeed, in an article about urban space (Greimas 1974) defined the relations between citizens and technologies in relational terms: “individual instances” are constituted by the sum of all the relations that an individual has with the objects that surround her/him. Gilles Deleuze and Felix Guattari (1980: Eng. tr. 66-67) used Hjelmslev’s approach to account for

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\(^{1}\) And later has been called “structure” (Greimas–Courtès 1979). In this paper I use the term “form” only to refer to a “set of relations”. I use the term “shape” to refer to what in design discourse is considered a “form”.

\(^{2}\) Hjelmslev uses the concept of “function” in mathematical terms, as a synonym of relation.

\(^{3}\) The same epistemology (see CP 3.417; Fabbrichesi-Leo 1993) and a similar immanent theory of signification (Chauviré 1995, 63-64) can be attributed to Charles S. Peirce, despite the fact that the vulgarization of his semiotics gave relevance to subjects and interpretations.

\(^{4}\) Klaus Krippendorff’s critique of semiotics’s dualism (Krippendorff 2006) completely ignores the Hjelmslevian relational approach, which is the only way to dismiss any kind of dualism – including the one between the human subject and the external world that Krippendorff endorses – without giving up the opportunity to account for their emergence. Krippendorff ignores also Greimasian semiotics and its contribution to the semiotics of objects (see below), to which his more general critique of semiotics does not apply. For a Peircian critique of Krippendorff’s critique, see Vihma (2007).
things not directly related to verbal language such as when they considered the prison a form of content. More recently, Actor-Network Theory (ANT) has used Greimasian semiotics in order to account for objects (Akrich 1992; Akrich–Latour 1992; Latour 1992) within a relational framework that resembles Hjelmslev’s, despite the fact that the latter is not explicitly taken into consideration by ANT’s researchers. As for Hjelmslev, ANT relations also precede elements and constitute objects: “attachments are first, actors are second” (Latour 2005, 217).

Differently from Greimas’s and Deleuze and Guattari’s exemplary reference to objects, ANT has developed a method to account for objects that clearly and productively shows that a relational framework is effective and adequate in tackling objects, in all their materiality, without indulging in formalism. That’s why I’m going to consider ANT’s method. It may sound awkward to be assuming a sociological approach (as ANT is considered) in order to answer the initial question explicitly addressed to semioticians. But, despite the fact that ANT has tended to dismiss (Akrich–Latour 1992; Mol–Mesman 1996) what is really at stake with semiotics, i.e. signification, it made not only a diffuse use of Greimasian semiotics, but inscribed itself within this discipline (Akrich–Latour 1992; Mol–Mesman 1996; Law 1999, 3; Latour 2005). As I will show, what ANT dismisses is not signification *tout court*, but a transcendent theory of signification that is usually considered the only possible theory of signification and that is usually ascribed to semiotics (Mattozzi 2006b).

My reference to ANT does not mean that I do not consider any semiotic approach to objects. On the contrary, the model I’m going to present is basically a revision of Jean Marie Floch’s model used to analyze the Opinel knife (Floch 1995). What I’m taking into consideration is, then, what I’ve defined (Mattozzi 2004; 2006a; 2006b) as the second phase of the semiotic reflections about objects (Floch 1995; Fontanille 1995; Semprini 1995; Deni 2002), developed by the middle of the 1990s, in which objects have been considered as texts, and no longer as mere signs (Marrone 2002), allowing the development of a relational approach.

My interest in ANT is due to the fact that it deploys a relational approach, more consistently than the aforementioned semiotic research (Mattozzi 2006b). ANT’s consistent deployment of a relational approach results in the ascription of relationality to ontology, which differentiates ANT from Hjelmslev, for whom relationality was mainly an epistemological feature⁵.

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⁵ This is obviously not the only difference between ANT and Hjelmslev, of which there are many, but here I’m more interested in showing what they share than what sets them apart. However, despite what Greimasian semiotics has been thinking, within a relational framework the passage from epistemology to ontology is not problematic, but consequential, as ANT has shown (see Monjou in this volume for a different take on this issue).
Actor-Network Theory as Semiotics

ANT tries to account for the way certain articulations of relations among various instances (human and non-human) emerge, become relatively stabilized, and are translated into other articulations, creating assemblies of translations. ANT’s aim is then to account for actors as a “network of mediations” (Latour 2005, 136), i.e. a network of relations in which each relation is not just a simple link between elements, but a translation that transforms while letting the elements that are connected emerge.

As we can see, even if signification is not explicitly taken into consideration6, the approach is very similar to that of Hjelmslev. We can catch the similarity in Latour’s Reassembling the Social, in which mediators are always complex (Latour 2005, 39) and, therefore, a mediator is always, recursively, also an actor-network, i.e. “what is made to act by a large star-shaped web of mediations flowing in and out of it” (Latour 2005, 217). Latour, then, underlines that mediators get into reciprocal relations through “translations” which are considered to be “relation[s] that do[…] not transport[…] causality but [that] induce[…] two mediators into coexisting” (Latour 2005, 108). Thus, what for Hjelmslev are forms, i.e. “sets of relations”, for Latour are “mediators”, what for Hjelmslev is a “semiotic function” that correlates two forms, for Latour is a “translation”. Considering all that, we are now able to fully appreciate Madeleine Akrich and Latour’s (1992, 259) definition of semiotics as “the study of how meaning [sense] is built, but the word “meaning” [sense] is taken in its original non-textual and non-linguistic interpretation; how one privileged trajectory is built […] in that sense semiotics is the study of order building or path building”. A trajectory is what an assembly of mediations outlines. Within this relational framework, Akrich (1990) has defined the signification of an object as the re-articulation, performed by the same object, of the network of relations within which we are placed and which define us. Therefore, for ANT, as for Hjelmslev, accounting for an object and, hence analyzing its signification, means to describe the relations it articulates, i.e. the relations that constitute it and that are deployed by it - “the world inscribed in the object and the world described by its displacement” (Akrich, 1992, 209, italic in the original). In order to effectively produce an account, ANT has elaborated a few categories and concepts, among which one of the most important is that of script. A script is the scenario inscribed within a certain object, i.e. roles, constraints, competences, actions, sanctions outlined by the object in relation to what surrounds it (Latour 1992).

A Model out of a Methodology

In what follows, I will try to answer the initial question – “How could we account for the way an object signifies?” – by presenting a model that allows the analysis of objects, i.e. the description of the relations they articulate. It is an upgrade of Floch’s model [Deni 2002; Floch 1995] and it can also be considered an upgrade of Akrich and Latour’s script, which, differently from the latter, tries to account for all relations that an object articulates, not just those directed at its surroundings, usually considered by ANT and other approaches

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6 Actually Latour (2005: 39), while defining what a mediator is, relates it to signification: “[m]ediators transform, translate, distort and modify the meaning or the elements that are supposed to carry”.
such as workplace studies\textsuperscript{7}. I try, thus, to answer Latour’s request (2005, 233): “when faced with an object, attend first to the associations out of which it’s made and only later look at how it has renewed the repertoire of social ties”.

Before tackling the model, I want you to notice that if semioticians actually answer the initial question and tell “how to account for the way an object signifies”, semiotics is conceived as mainly a methodology: a discourse about methods used to account for signification, i.e. methods that allow the description of relations. Hence, the products of semiotics are mainly and, in a certain sense, merely descriptive concepts, categories and models semiotics can offer other disciplines that are interested in signification. Therefore, semiotics is not a theory and even less an epistemology, although, as we have seen, it is imbued with theory and epistemology. Semiotics is more similar to cartography than to any conceivable theory, and its products – categories and models – are analogous to GIS or 3D modeling software, i.e. tools to operate descriptions. And, as cartography is a practice that tells how to produce and use tools such as maps that predispose other practices (e.g., traveling), so semiotics, in relation to design, should be considered a practice that tells how to produce and use descriptive tools that predispose the practice of design.

\textsuperscript{7} It also tries to take into account Pasquale Gagliardi’s idea of “sensory maps” [Gagliardi 1990], by considering an object as a body [Fontanille 2004].
ALONG THE MODEL

An object exists, as any other actor, only as long as it takes part in action: it does something and it is made do something. Basically, an object exists only within practices. It is within practices that the relations that constitute a certain object and that are deployed by it are articulated. A knife is a knife since it forms a relation with other actors in a certain way: it cuts and is made to cut, indeed its shape enables cutting, i.e. penetration, even if only superficially, into other bodies, but at the same time its shape allows also grasping, envelopment into another body.

In order to account for an object and so describe the way it articulates relations and the way it takes part in practices, we have to consider the various relations that an object can go through. But in order to actually account for the object and not just for the practices in which it participates, we have to describe on what basis a certain object can take part in certain practices, i.e. we have to describe the relations that predispose the relations articulated within the practices.

The model (Fig. 1) is a map of these relations: it allows tracking them down and ordering them. It does not tell how to describe them: the categories used to describe them are taken from Greimasian semiotics, which is also the semiotic approach used to elaborate the model.

The model basically considers two kinds of relations: relations external to the object, the *objective* ones, and relations that are internal to the object, the *objectual* ones\(^8\). The latter are divided into two levels of relations and an intermediate stage:

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\(^8\) Even if *inter-objectual relations* address what is exterior to the object, they are still interior relations, since they are inscribed into the object.
The first level, on the bottom – *inter-objective relations* – accounts for practices as I described them earlier. It is the level at which objects manifest themselves as such, taking part in a series of interrelated actions;

The next level – *inter-objectual relations* – accounts for the relations that predispose *inter-objective relations*: they are relations that are inscribed into the object; for instance a keyhole predisposes a relation with a certain key and a hammer predisposes a relation with
A hand and a nail. Akrich and Latour’s script accounts for these kinds of relations; also, Klaus Krippendorff (2005, 53) in his product semantics mainly considers such relations, since he considers the meaning of artifacts to be basically “their affordances, the set of their imaginable uses”;

The third level – the first from the top, *intra-objectual relations* – accounts for relations among parts of the object that are internal to it and that, constituting it, predispose it to be a singularity;

In between *intra-* and *inter-objectual relations*, there is a stage that accounts for the object as a singularity in relation to its *plastic configuration* (the shape together with other perceptual features, such as color, consistency, etc.\(^9\)), in relation to its *body*, articulated in a *core* and an *envelope* (Fontanille 2004), and in relation to its *figure*, recognizable and usually nameable; the object as a singularity predisposes the deployment of other, external, relations.

The model relies on two assumptions: an object is an intersecting point in a network of relations (Hjelmslev 1943); and an object is a *body* (Fontanille 2002; 2004). These two assumptions account for the multiplicity (relations) and the singularity (point, *body*) of an object. Hence, they account for the object as an actor-network.

Within the model, the relations that precede other relations – above, in the model – predispose the following ones, while the relations that follow other relations deploy the preceding ones.

As we can see, each level of relations outlines features of an object that have been considered by previous models and theories. The originality of the model resides, then, not so much in the features it considers, but in the fact that it puts them together and in the way it structures them on the basis of an immanent theory of signification.

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\(^9\) This is the level where predispositions take place (see Monjou, this volume). However, the concept of predisposition used here is taken from Jullien (1992) and not from the analytic tradition discussed in Monjou.

\(^10\) Similar to the concept of *gestalt*, as proposed by Sybille Kicherer (cited in Vihma 1995).
General Features

Signification

According to Hjelmslev’s immanent theory of signification, signification occurs as a relation between forms: in the model, this relation takes place as a passage, or a translation, from one level of relations to another. For instance, the set of relations that constitutes the intra-objectual level is the form of expression of the set of relations that constitutes the inter-objective level, which is its form of content. Greimas (1970) would call this dynamic a “horizontal transcoding” in which a system is deployed into a process, which, in turn, becomes stabilized into a system, which, in turn, gets deployed into a process, and so on. These are relations between levels, but in order to account for signification relations internal to each level must also be considered. Each level, indeed, can predispose another one on the basis of its internal structure. Relations internal to a specific level are organized according to certain dynamics and tensions that display a narrative organization in which a transformation or a tension toward a transformation emerges.

Objects of Enunciation: Objectual vs Objective Relations

The most important passage, or translation, that allows the deployment of signification as a manifestation – a meaning effect that can be actually perceived – is the one between inter-objectual relations and inter-objective relations (Fig. 1c, 1d), i.e. between the interior and the exterior of the object. Akrich (1990), too, underlines that this passage is the most critical for signification – the one in which “the world inscribed in the object and the world described by its displacement” (Akrich, 1992, 209, italics in the original) become connected.

Does the difference between interior and exterior actually account for the difference between objectual and objective relations? In a way, it does, but not completely. For the sake of this introduction, I limit myself by saying that objectual and objective relations pertain to different domains, or different spaces, in a similar way as a painting pertains to a domain different from the one of the wall upon which it hangs. In more adequate semiotic terms, objectual and objective relations pertain to two different “enunciation layers”, i.e. to two different frames of reference.

Recursion

The model is explicitly recursive. Firstly, the model presupposes that the same relation that articulates the main translation between objectual and objective relations takes place also

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11 This is a way to dynamize and empiricize Hjelmslev’s concept of signification. With the same aim, Greimas defines signification as translation.

12 We could refer the difference between relations that are internal to each level and relations that take place between levels to syntax and semantics. As we can see, syntax and semantics are distinguished in purely relational terms. My use of these terms is different from Vihma (1995), where syntax is referred to internal relations and semantics to representations.

13 We can account for these dynamics and tension thanks to Greimas’s narrative syntax.

14 Fontanille (2005) would talk of “levels of immanence”.

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among objectual relations. Secondly, the model takes into account the relative and recursive properties of phenomena, so that what are considered objective relations of a phenomenon in one situation can be considered objectual ones in another. Thirdly, as we can see, on each level of objectual relations, intra- and inter-, the model takes into account the plastic development, the corporal and the figurative interactions, as happens when the object is considered as a singularity.

Specific features

Inter-objectual Relations

Inter-objectual relations can be considered syntagmatically or paradigmatically (Fig. 1c). Up to now I’ve mainly described syntagmatic inter-objectual relations, which are also those that constitute Akrich and Latour’s script. Syntagmatic inter-objectual relations are, indeed, relations inscribed into a certain object that predispose it to interact with other actors (human or non-human) that are co-present within a certain situation. Syntagmatic inter-objectual relations outline a network that allows the object to carry out its narrative program, i.e. allows the object to do what it is supposed to do according to what its figure (Fig. 1b) presupposes.

Paradigmatic inter-objectual relations are constituted by all the actors that can replace the object within its syntagmatic network. For instance, the paradigmatic inter-objectual relations of a hammer are constituted by the set of all objects – hammers, but also shoes or stones – that can take the hammer's place. As in linguistics, considering a paradigm allows accounting for the specific value of a certain item. Because of that, outlining a possible paradigm for a certain object is always a critical phase within the analysis process. This phase of the analysis pertains basically to the construction of a corpus that allows assessment of the value and relevance of the object under analysis. Different results can emerge from different paradigms even if the object and its syntagmatic network are the same; for instance, should we consider a shoe and a stone within the paradigmatic relations of the aforementioned hammer? Or, instead, shouldn’t we consider just different kinds of hammers?

The Object as a Singularity

Inter-objectual relations (Fig. 1c) are inscribed into an object, which emerges as a singularity (Fig. 1b) on the basis of what intra-objectual relations predispose (Fig. 1a). The object as a singularity is an actant, i.e. a singularity that takes part in a transformation, through an action or a passion. But an object is not just an actant: it is an actant with a certain plastic configuration that outlines a body that lets a figure emerge\(^\text{15}\) (Fig. 1b). It’s on the basis of the figure, nameable and recognizable in what is outlined by the plastic configuration, that an object predisposes a certain narrative program and its syntagmatic network of inter-objectual relations (Fig. 1c). The articulation of a body in a core and an

\(^{15}\) For this generative trajectory of objects see Fontanille (2002; 2004). See Latour (2005, 52-55) for a discussion about the differences between actant and figure within a non strictly semiotic context.
envelope can be described only on the basis of what the figure predisposes as a narrative program.

The Object as a Body

According to Jacques Fontanille (2004), a body is articulated in a core and an envelope. An object is a body, too. The core and the envelope, even though they can have a figurative manifestation – body/shell, flesh/skin, product/packaging, etc. – are first and foremost abstract, immanent, instances that account for the increasing complexity of the actant toward figuration. The core, which keeps the property of the actant, is related to transformations – actions, what a certain body does; hence, the narrative program. The envelope is an interface between the core and other bodies: it manages the relations between the inside and the outside of the body, within the transformations carried out by the core. Therefore, the envelope is related to how a certain body does what the core predisposes.

Assuming objects as bodies allows consideration of the relations between objects – and, more generally, actors – primarily as relations between bodies in which interactions between cores and envelopes are involved (Fig. 2). The relations between reciprocal cores and envelopes depend on syntaxes of penetrations and envelopments (Fig. 2): an object’s envelope envelops another object (Fig. 3c) or is penetrated by another object (Fig. 2b), which can eventually get to the core causing a break (into pieces, slices, etc.). As we can see, these basic interactions allow one to account for operations of transformation of substances and materials: cutting, for instance, is an operation of selection (Bastide 1987) – a part of a whole is separated from the whole – which affects the envelope and the core, whereas peeling is an operation of selection that affects only the envelope.

Moreover, interactions between bodies, considered as an articulation of a core and an envelope allow one to account for the deployment of senses (Fontanille 2004) and the properties of materials. For instance, touch depends on the contact between envelopes, and the properties of materials, such as consistency or texture, can be distinguished on the basis of the kind of contact between two bodies. The simple syntaxes of pressing, penetration and envelopment can set the basis to account for emotions related to objects: for instance, a body that can penetrate the envelope of the user’s body can be seen as frightening, while an

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16 This articulation derives from Maurice Merleau-Ponty’s phenomenology.
17 Even though I’m using Fontanille’s theory, I’m not assuming it completely. Among other things, I’m not assuming its dissymmetrical stance between the human subject and the non-human object: for Fontanille (2004), an object can be considered a body only as the result of a projection over it by a human subject of his/her corporal properties. My revision of Fontanille’s semiotics stems from consideration about the body in Deleuze and Guattari (1980; 1991), Fabbri–Marrone (2001, 362), Latour (2004).
18 Simply stated, an actor is a figure that comprises one or more actants.
envelopment can be perceived as a pleasant protection or a suffocating, and frightening, enmeshment.

Intra-objectual Relations

*Intra-objectual relations* (Fig. 1a) are relations among parts that predispose the object to emerge as a singularity. Parts can be considered in different ways:

- as plastic parts\(^{19}\), constituted as networks of contrasting plastic traits related to shapes, colors, properties of materials (consistency, texture), etc. For instance, a cylindrical brown element is part of a hammer;

- as *bodies*: each plastic part outlines a *body* in interaction with other bodies outlined by other plastic parts. For instance, in a hammer, the cylindrical brown element is a body that penetrates another body that, in turn, envelops the end of the former;

- as *figures*: parts that are recognizable on the basis of a specific *plastic configuration* and in relation to that are nameable. For instance, in a hammer, a handle and a head.

Parts can be divided into sub-parts.

Plastic relations

Plastic and figurative are two autonomous, but related, levels usually considered within the semiotic analysis of images (Thurlemann 1982; Greimas 1984; Floch 1985). The plastic level regards relations between shapes, colors and their topological distribution; the figurative level regards relations between what are recognizable as objects of the world according to certain cultural grids (Greimas 1984). Each of them is considered a language and has its own expression and content plane. For example, Felix Thurlemann (1982) has shown that in the painting *Blumen-Mythos* by Paul Klee the plastic level is articulated by contrasts between straight/curved lines and the figurative level by figures recalling mountains and plants opposed to figure recalling stars and moons. These are articulations of the expression plane that refer to a semantic opposition between “terrestrial” and “celestial”, through which the painting articulates its general meaning regarding a cosmological mediation developed by a sky-rising flower constituted by shapes that are outlined by curved and straight lines.

Within the semiotics of objects, the plastic level does not account only for shape and colors but also for other features such as the properties of materials (consistency, texture), weight, warmth, etc. These are basically all perceptual features that emerge on the basis of the deployment of the senses (Fontanille 2004). These perceptual features are manifested as traits of an object on the basis of the contrasts that a certain object articulates. Plastic parts are constituted by networks of these traits, outlining tensions and dynamics.

In order to better understand the specificity of the plastic level and its analysis we have to compare it with the figurative one: while at the figurative level traits, elements and tensions and dynamics are recognized on the basis of a correlation with something exterior (usually what is considered the world), at the plastic level traits, elements and tensions and dynamics achieve relevance and significance only on the basis of internal relations.

\(^{19}\) This level has to do with features similar to those addressed by the “formal aesthetics functions” within the Theory of Product Language (Steffen, this volume).
Contrasts emerge as discontinuities and do not deploy themselves only in binary series. Contrasts are modulated. The aspectual syntax based on the opposition between limits and thresholds introduced by Claude Zilberberg (1993) can be used to account for the modulation of continuities and discontinuities and, in this way, can be used to track and to hierarchize the various contrasts that constitute the plastic articulation of an object.

Plastic, Corporal, Figurative within *Inter-objectual Relations*

The differences of plastic, corporal and figurative relations can be used to better describe the way in which the presupposed relations between the object and its surroundings are articulated: the relations with the surroundings, indeed, can be described as plastic relations in which different shapes, colors, consistencies, etc., of objects and movements are contrasted, or as interactions between bodies, taking into account operations of transformations, or as recognizable and nameable actions as, for instance, “cutting”. As we can see, plastic, corporal and figurative inter-objectual relations can be useful to account for gestures: “cutting” a celery stick or cutting a loaf of bread, even if figuratively – they are both called “cutting” – and corporally – it is an operation of selection that affects both the *envelope* and the *core* – they can be considered the same relation of transformation, they differ at the plastic level in relation to the directionality of the movement – vertical vs horizontal – and for their aspectual development – punctual and iterative vs durative and iterative.
THROUGH THE MODEL

Intra-objectual Relations

JS features various plastic contrasts:
- shapes: thick/thin, spiked/curved, quasi-circular horizontal section/quasi-rectangular horizontal section, symmetrical/asymmetrical (rotational symmetry around the vertical axis);
- textures: smooth/streaked;
- positions: up/down.

These contrasts predispose the emergence of two contrasting parts (Fig. 3): a “nucleus” (thick, quasi-circular horizontal section, symmetrical, streaked, up) and a “bar” (thin, quasi-rectangular horizontal section, asymmetrical, smooth, down). They both feature curves and spikes, but the latter are placed differently: the “nucleus” is bottom spiked, while the “bar” is top spiked.

The two plastic parts also contrast in the way they vary. The “bar” has a discontinuous development that permits the clear emergence of two sub-parts: one long, curved and basically vertical, the second short, linear and diagonal, positioned one on top of the other. The “nucleus” has a continuous development through which two sub-parts emerge, one spherical and large, the other spiked and narrow; they do not emerge from a punctual demarcation as happens for the “bar”, but thanks to a long threshold (Zilberberg 1993) that outlines a lower long conic shape.
The lower and longer sub-parts of the bar also vary continuously in relation to its horizontal section, letting at least two sub-sub-parts emerge. The evident contrast between the two main plastic parts, which is manifested by the meeting point of the two parts, where a strong demarcation directly opposes different diagonals and shapes of different thickness, could outline a dichotomic object never achieving an effective wholeness and uniqueness.

This does not happen for three reasons:
- Besides the various contrasts, there are also some common traits: one material, one color, both parts feature curves and develop along the vertical axis (along which all major contrasts take place);
- the “bar” is manifested in three occurrences and they are positioned at an even distance around the “nucleus”, creating a configuration that assumes as a center the same vertical axis of the “nucleus”, which is also the pivot for the general rotational symmetry of the object;
- both parts share the same tension; the contrasts considered do not just create an abstract tension between opposing plastic traits, but through the juxtaposition of the vectors outlined by the two parts, what emerges is just one common dynamic: each part features a spike that is placed (Fig. 3) in the position opposed to the one each part occupies – the “bar” is top-spiked but bottom-positioned, the “nucleus” is bottom-spiked but top-positioned; this configuration inverts the position of the spikes in respect to the position of the part they feature on – the spike of the “bar” is higher than the spike of the “nucleus” – and so it creates a plastic chiasmus that manifests the tension and the internal dynamism of the object.

The internal articulation of the plastic level of the intra-objectual relations creates a dynamic between the two main parts that deploys a quite explicit narrative syntax within which the “nucleus” is an actant-subject performing a downward movement toward a hypothetical object of value, while the “bars” constitute an actant-anti-sender or an actant-anti-subject that prevents the conjunction with the object of value.

The two parts, at the corporal level, acquire a body so that the content they articulate concerns a massive body that weighs on the three slim bodies that, with strain, keep it from moving in a downward direction.

At a figurative level it is possible to see that the “bars” are props that sustain a percuteur (Leroi-Gourhan 1943).

In summary, it is possible to say that, as for the intra-objectual relations, JS emerges as a simple and essential object: it articulates one material, one color, two parts, just three props. But it displays a complex articulation of these parts through which a conspicuous dynamic is created.
The **Body**, between the **Plastic Configuration** and the **Figure**

The *plastic configuration* that emerges from the plastic *inter-objectual relations* features a vertically centered shape articulating, through a tension, an upper filled and condensed part and a lower empty rarefied zone, outlined by three elongated parts (Fig. 3). This *plastic configuration* outlines the *body* of the object. As we know, the *core* accounts for the *narrative program*. In order to describe the articulation of the *body* and, hence, what, within the *body*, is the *core* and, consequently, what is the *envelope*, the *plastic configuration* of the object must be identified. The *plastic configuration* can be described by looking at the *figure*.

Here I do not consider the problem of the recognition of *JS* as a squeezer. It's enough to say that the upper part of the “nucleus” is a figurative part that is usually found in squeezers as the part used to penetrate the halved fruit to be squeezed (Fig. 3b). Therefore, *JS* is assumed to be a squeezer. A squeezer's *narrative program* is “to squeeze”, usually citrus fruits. “To squeeze” means to press hard on or together, compress, to exert pressure on, as by way of extracting liquid: squeeze an orange. Then, “squeezing” comprises two actions, pressure and extraction: pressing one *body* over another in order to open its *envelope* and take off a part of the *core*. It's not by chance that the only part that *JS* has in common with other squeezers is also the part that allows it to carry out its *narrative program*. Hence, this part is its *core*. The rest of *JS* is the *envelope*. Also, the lower part of the “nucleus” is part of the *envelope*: it modulates the extraction by letting the juice grazing the *envelope* of the “nucleus” downward, so that the extracted part is not just extracted but actually taken away from the rest of the squeezed body.
Inter-objectual Relations

By virtue of the core and the narrative program it is possible to outline the syntagmatic inter-objectual relations: JS itself, a halved citrus fruit, the hand and arm of the user (Fig. 3b). The paradigmatic inter-objectual relations comprise all squeezers. In order to compare JS with the other squeezers in a more adequate way, I built a sort of “system of squeezers” based on the intersection between the kind of energy used to press and the domain in which it is used (Fig. 4). JS is a manual squeezer; since manual squeezers are only domestic, it will be mainly compared with domestic squeezers.

<table>
<thead>
<tr>
<th>DOMESTIC</th>
<th>SEMI-PROFESSIONAL</th>
<th>PROFESSIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANUAL</td>
<td>a.</td>
<td></td>
</tr>
<tr>
<td>MECHANICAL</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ELECTRIC</td>
<td>b.</td>
<td>c.</td>
</tr>
</tbody>
</table>

Fig. 4

Figuratively, the relations between JS, the fruit and the user's hand and arm take the form of a vertical steady movement exerting pressure by the arm and a horizontal iterative half-rotation by the hand over the fruit. The latter, contained in the hand, is rotationally rubbed over the “nucleus”, which resists the pressure and the rotation. Therefore it can penetrate the fruit and exert friction in order to extract the juice. These movements can be accounted for through the narrative syntax: the user is the actant-subject, the juice is the actant-object of value, the fruit is the actant-anti-subject, and the juicer is an actant-helper that renders the actant-subject able to perform (Greimas–Courtés 1979).

At the corporal level we have already seen that squeezing implies the penetration of a body into another through the opening of the envelope. The specific action displayed at the figurative level comprises also an envelopment by another body – the hand over the fruit – and an envelopment by the fruit over the vertical streaks of the “nucleus”. Since this last
envelopment is continuously repositioned, as a consequence of the rotational movement, friction is generated, resulting in a more effective extraction.

At the plastic level the movements that connect the three actors articulate a contrast between horizontality and discontinuity versus verticality and continuity.

*JS* is as competent as other squeezers to carry out its *narrative program*. But it works differently. Indeed, the other squeezers do not just squeeze, they also filter, contain and pour. For each of these actions regular squeezers display a specific figurative part: bulb, filter, container, pour spout (Fig. 4a, 4b). All these parts introduce discontinuities to the *plastic configuration* of regular squeezers and an alternation between vertical and horizontal development of the shapes. Following the shapes, the process that goes from squeezing to pouring is also discontinuous and characterized by vertical dynamics and horizontal slowdowns and stoppages. This process is then complex: it is articulated in four sub-processes that introduce two demarcations, two limits: filtering and containing.

Actually, *JS* does not just squeeze. It also pours, but the two processes are enchain in continuity and articulated just through the threshold that, on another level, characterizes the “nucleus”. Compared to regular squeezers, *JS* carries out an aspectual contraction (Zilberberg 1993) that renders the process shorter and continuous by transforming limits into thresholds and removing some of the latter.

On both levels of relations, *intra-objectual* and *inter-objectual*, *JS* valorizes verticality and continuity or, better, continuity along the vertical axis. Contrarily, regular squeezers are characterized by discontinuities and by the alternations of vertical and horizontal developments. The articulation of the *plastic configuration* of *JS* is, then, opposite to the one of a regular squeezer: *JS* is simple and essential in relation to its parts, but it combines them in a complex way that lets a dynamic emerge, whereas regular squeezers are complex in relation to their parts, but they combine them in a simple way – just a superimposition that does not create any tension, nor any dynamic.

*JS’s* specific *plastic configuration* lets emerge the *envelope* that introduces, in the network already outlined, two other actors: a base plane and a glass (Fig. 3b). Stemming from the *plastic configuration*, the *envelope* too is characterized by the rotational symmetry and by verticality, which sets this tool apart from all other kitchen tools, hampering its recognizability. These two features predispose *JS* to undermine, hamper and reject any interaction with its surroundings: it does not pass on to the user its competence. Because of its rotational symmetry the object is self-centered: does not offer any “point of grip”, nor does it offer anything outside the space it occupies (Fig. 3b). In regular squeezers the handle and the pouring spout, which often break a possible rotational symmetry, connect the object with the surroundings (user, glass) (Simmel 1911; Fig. 4a, 4b, 4c). The props would seem to be the only place to hold *JS* while squeezing, but because of their excessive thinness and the spikes they display, they hamper and reject an effective hold – because of the spikes they look dangerous since their shape predisposes penetration of the user’s *envelope*. Moreover, because of its excessive verticality, *JS* hampers the exertion of the necessary effort.

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20 From this point of view, then, *JS* can be considered innovative and more effective than regular squeezers.

21 Kitchen tools can be divided into tools for transformation – such as knives, which are used to transform other actors’ *bodies*, and tools for containment – such as plates and bottles, which are used to envelop other *bodies*. The former develop mainly horizontally, the latter either horizontally or vertically. *JS* is a tool for transformations and is much taller than any other kitchen tool for transformations [Fig. 13].
As for its *envelope*, *JS* “does not make do” (*ne pas faire faire*) but also “makes not to do” (*faire ne pas faire*): even if *JS* is a competent actant-subject, it does not turn itself into an actant-sender for the user (Greimas–Courtés 1979). This depends on a conflict that it sets between the *core* and the *envelope*: the *envelope* undermines the user’s relation with the efficient *core*.

**Inter-objective Relations**

Fig. 5 shows a use of *JS* in everyday life that re-articulates its network of relations, deploying a different signification. Through the introduction of *JS* into the kitchen sink, a flat base plane is replaced by a concave one that allows the user to lower the object in order to deny one of its most important features – verticality – as well as its conspicuousness. This practice shows a possible negotiation a user has to perform in order to take advantage of the *core* and its competence, going past the *envelope*. In this way the user discovers that *JS* works well for squeezing, but it works as well when it has to be cleaned. With *JS* in the sink, under the faucet, cleaning becomes just part of the process: turn on the faucet and the water will follow the same path as the juice.

**Conflict of Interpretations or Articulations of Multiplicity?**

In order to conclude the analysis, I want to get back to the well-known issue of the change of status – from “object of use” to “object of contemplation” – that *JS* has undergone. Saying that it is “beautiful but dysfunctional” certainly does not account for this change; rather it is a statement that asks to be accounted for.
On the basis of the analysis I proposed, what we can do instead is to try to check if JS displays features that predispose this change. Indeed, it does and these features are mainly related to the envelope:\footnote{And are not related to beauty. Rather, it’s very likely that an esthetical judgment is elicited by these features}

- as Georg Simmel (1911) has noticed, artworks, contrary to artifacts, delimit their own space that does not get into a relation with its surroundings, exactly as JS does;
- JS, with its own vertical development and tension is quite conspicuous and, because of its simplicity, it also does not conceal anything, therefore it solicits gazing and, hence, contemplation;
- its plastic configuration outlines other figures (Fig. 6) besides (and before) the one of a squeezer, and since these figures all pertain to an extraordinary domain, JS mediates between an ordinary domain (the kitchen) and an extraordinary one, as artworks usually do (Rastier 2001).

\begin{figure}
\centering
\includegraphics[width=0.8\textwidth]{fig6}
\caption{Fig. 6}
\end{figure}

Is that all? JS’s core predisposes it to be considered a tool, while its envelope predisposes it be considered an artwork? Probably JS is not just ambiguous, but is multiple. Indeed, the extraordinary domain it mediates (Fig. 6) pertains to the ’50s and ’60s science fiction, which, for us, is trite and ordinary; thus, why do we not consider that JS actually ironizes
its own possibility of being an artwork? And, what about the user that, between the table and the shelf, discovered that JS is a tool for the sink, just like a colander?
CONCLUSIONS

Now, the differences between semiotic discourse and the discourses of other approaches, exemplified at the beginning, should be clear. These differences do not concern so much what can be said about JS, since many things can be found in other discourses, but the fact that 1) I have shown on what basis (methodological or analytical) I could state something, and 2) I basically never express a judgment. Judgments are instead present in all the initial quotations and they are a necessary part of such normative discourses as design critique, ergonomics and usability.

Semiotics is a descriptive discipline; therefore I limited myself to a description. However, I’ve been describing not so much the object as the relations that the object articulates. Thus, at a deeper level, the difference with other discourses is that I did not describe or judge the object, but accounted for it and the way it signifies, and, in doing so, I deployed the multiplicity of the object. It is thanks to this process that, in the end, I have been able to address not the question Julier asked about JS – “So is this an object of use or of contemplation?” – but the basis on which the very issue arose – a conflict between core and envelope – showing also how one can take part in this conflict – taking the part of the core or the part of the envelope or even a more skewed, ironic, stand.
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