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Sports Utility Semiotics: A semantic differential study of symbolic potential in automobile design

Summary

The article aims to illuminate the issue of the symbolic potential in a post-modern society through a semiotic study of car design. In Baudrillard's terminology, we explore the experienced sociological and psychological materiality of objects, which, being above objects' perceptible materiality, modifies constantly the integrity of technological systems (Baudrillard 2005[1968]: 6). The target concepts are analyzed through Baurdillard's lens of symbolic capital and his technological system of objects, coupled with the method of semantic differential (SD; e.g. Osgood 1976, 1981) against the insights of Tartu semiotics. Such a complex framework helps to establish affective attitudes of the subjects towards selected scales as perceptual saliency. The analysis bases on the responses of students of a Polish university, administered in an instrument of 14 concepts and 37 scales. The results of statistical analysis yielded a semantic space of two factors: Potency and Activity/dynamism, which we propose to call Social Prestige. At this stage of the analysis we could not recover the Evaluation factor. The scales that loaded significantly showed that indeed there is an increment in perceptual saliency on both extracted factors in the case of target stimuli (pickups and SUVs).

Key words: semantic differential; luxury; semiotics of economics; Roland Barthes; Jean Baudrillard; symbolic prestige; car design.

Preliminaries

C.E. Osgood, G.J. Suci and P.H. Tannenbaum showed that by posing subjects a series of questions about a specific concept as seven point scales, with the opposing adjectives at each end, we are able to sift out general patterns from them using statistical techniques (Danesi 2009 [1999]: 27). As Danesi further observes, the semantic differential is thus a technique for "fleshing out the connotation of words", or drawing "connotative profiles" Danesi (2008[1999]: 27). Crucially, "research utilizing the semantic differential has shown that, although the connotations of specific concepts are subject to personal interpretation and subjective perceptions, the range of variation is rarely random or haphazard. In other words, the experiments using the semantic differential have shown that connotation is constrained by culture" (Danesi 2008[1999] : 27).

This research aims to put to use such a technique of 'connotative profiles' in a semiotic study of symbolic potential in car design. We use a meta-theory of Baudrillard's work on the technological system of objects, coupled with Tartuvian semiotics, to set a

background for the semantic differential exploration of the tests applied to undergraduate students in a Polish university. The work is structured as follows. The first section addresses some implications of the interrelation of semiotics and economics through the work of Roman Jakobson, Roland Bathes and Mortleman's research on the concept of luxury. The reason for the overview is to bring to light the contractual aspect of semiotics. The next section briefly reviews semiotic work on automobiles. The conclusion is that in general, the researcher's voice mainly is heard in this type of studies and researcher's personal semiotic interpretation is given, hence the need for the discussion as reported in the present paper, namely, an attempt to elaborate the 'rough data' attempted through questioning the subjects. The fourth section presents Osgood's method of semiotic differential as a viable analytic tool and the fifth takes a look at car design through the lens of the dichotomy 'vernacular' and 'skeoumorphic', with particular emphasis on the increase of semiotic potential in subsequent vehicle models. The subsequent sections describe the analytic procedure and the research instrument, followed by the discussion and conclusions.

1. A semiotic balance sheet of economic success and failure

L'étude des signes ne peut cependant se limiter à de tels systèmes uniquement sémiotiques, mais doit également prendre en considération des structures sémiotiques appliqués, comme l'architecture, le vêtement, ou la cuisine" (Jakobson 1973: 98).

Jakobson (1973: 36) points out that during the secular history of economy and linguistics, the two disciplines came several times close to each other. The rapprochement was so to speak from both sides. The scholar mentions names such as Turgot or Adam Smith as economists who dealt with linguistics. In particular, "l'influence de G. Tarde sur la doctrine de Saussure en matière de circuit, d'échange, de valeurs, d'entrée et de la sortie, de producteur et de consommateur est bien connue" (Jakobson 1973: 36). What is more, the fundamental economic concepts were quite a few times the object of provisory semiotic interpretations. For example, citing Feruccio Rossi-Landi, Jakobson assumes that

l'économie au sens propre est l'étude du secteur de la communication non verbal qui consiste dans la circulation d'un type particulier de messages habituellement appelés 'marchandises' ; pour employer une formule plus brève : l'économie est l'étude des messages-marchandises' (235, p.62). Pour éviter une extension métaphorique du terme 'language' , il est peut être préférable de considerer la monnaie comme une système sémiotique à destination particulière. Si l'on veut étudier avec exactitude ce moyen de communication, il faut soumettre les processus et les concepts en jeu à une interpretation sémiotique (…). En realité, 'aspect symbolique, verbal, des transactions économiques mérite une étude interdisciplinaire systématique qui devrait être l'une des tâches les plus fructueuses de la sémiotique *appliquée*" (Jakobson 1973: 36).

What is more, Jakobson says that that integrated science of communication comprises not only semiotics *per se*, that is, the study of messages as such and the codes on which they repose, but also the disciplines where the messages play a pertinent but an accessory role. The scholar agrees that semiotics occupies the central position in the general science of communication of which it underlies other branches, while itself it encompasses linguistics, which in turn, in the centre of semiotics, underlies all other sectors. Furthermore, Jakobson points out that three sciences belonging to an ensemble encompass one another and represent three degrees of increasing generalization: the study of the communication of verbal messages (linguistics) 2) the study of communication of any messages - semiotics, (comprising the communication of verbal messages 3) the study of communication or social and economic anthropology, (comprising the communication of messages) (cf. Jakobson 1973: 37)

An applied work on the semiotics of signing systems was also undertaken by Barthes (1986). Barthes' view reverses Jakobsonian and traditional Saussurean position of the interrelation of language and semiotics. Barthes, in contrast to Jakobson, stresses the priority of language in semiological processing: he agrees that objects, images or patterns can signify, but never autonomously. It means that every semiological system has a linguistic admixture: "[a]s for the collection of objects (clothes, food), they enjoy the status of systems only insofar they pass through the rally of language, which extracts their signifiers (in the form of nomenclature) and names their *signifieds* (in the forms of usages or reasons)" (Barthes 1986: 10). He further points out that it seems impossible to claim the existence of a system of images or objects whose *signifieds* exist independently of language: "to perceive what a substance signifies is inevitably to fall back on the individuation of language" (Barthes 1986: 10). As such, it is semiology which for Barthes is a part of linguistics, in particular the part covering the large signifying units of discourse. Using a dialectic (the contradiction of two conflicting forces, which are seen as the determining factors in their continuing interaction) of 'language' and 'speech' in their so to speak, transcendental aspect, as a general category, Barthes proceeds to the analysis of signifying systems such as e.g. the garment system or the food system.

Another area of pertinence to the present work is Barthes's emphasis on the value in linguistics and semiology. Following Saussure, Barthes points out that economics and linguistics share several similarities: in both realms we are dealing with a SYSTEM [emphasis ours] of equivalence between two different things (e.g. work and reward, signifier and signified). Notwithstanding, in either subjects, this equivalence is not isolated, because if we

alter one of its terms, concomitantly the whole system changes by degrees. There are thus two prerequisites for a sign (or economic value) to exist: a possibility on the one hand to exchange dissimilar things and on the other, to compare similar things, Citing Saussure, Barthes observes that value seems more important than signification: "What quantity of idea or phonic matter a sign contains is of less import than what it is around it in the other signs" (Barthes 1986: 55). From this particular position on the importance of the context follows, Barthes' stand on neutralization, understood as a pressure of the syntagm on the system, "and we know that the syntagm, which is close to speech, is to a certain extent a factor of defaulting'; the strongest systems (like the Highway Code) have poor syntagms, the great syntagmatic complexes (like the image system) tend to make meaning ambiguous" (Barthes 1986: 85f).

For Barthes, signification is a process, the act of binding the signifier with the signified. In this understanding, the two are at the same time, terms and a relation. The association of sound and representation in the language is not exactly arbitrary, as Barthes points out - for no individual is free to modify it – it can be called *unmotivated* (Barthes: 1986: 48). Barthes concludes that in language, "the link between signifier and signified is contractual in its principle, but that this contract is collective, inscribed in a long temporality (…) and, consequently it is , as it were, *naturalized* " (Barthes 1986: 51). What follows, for Barthes, "a system is arbitrary when its signs are founded not by convention, but by unilateral decision: the sign is not arbitrary in language but it is in fashion; and we shall say that a sign is *motivated* when the relation between its signifier and signified is analogical" (Barthes 1986: 51).

This contractual aspects of some semiotic systems is most conspicuous in the concept of luxury. Mortelman (2005) reviews from retrospective stands towards on the topic, starting from Plato and points out that historically there have been two approaches to luxury: the negative one, which blamed luxury either for moral inappropriateness (in Ancient Greece) and / or for eroding the strength of society (in Renaissance). The positive approach (e.g. in works of D'Avanel) stressed the fact sooner or later ordinary people can finally can reap the rewards of industrialization (Mortelmans 2005: 500). The French Revolution seemed to put an end to a link between position, power and luxury. "Luxury became more than ever a consumer product being sold at the market to those who can afford it. To put it in the language of Talcott Parsons: luxury loses its ascribed role and gets an achieved role" (Mortelmans 2005: 502). The author further discerns another divide in the study of luxury, basing on the approach to the need-wants distinction: naturalist and idealist. Mortelmans concludes the review by stating that it is impossible to define luxury in an absolute way: it might be present in all

cultures in all times. Crucially, any product can be turned into a luxury product, as soon as certain conditions are met. It is vital to take into account this cumulative aspect, there have to be several characteristics that occur simultaneously. This is what leads to the narrow definition of luxury as encompassing "scarce products with an objective or symbolic extra value, with a higher standard of quality, and with a higher price than comparable products" (Mortelmans 2005: 507). However fuller understanding is possible taking into account semiotic criteria, such as sign value. Mortelmans posits that "[t]he sign-value of an object is a catchall in which several diverse significations (beyond use-value, exchange value, and symbolic value) can be brought together. Sign-value accentuates the polysemic character of material culture without fixing the actual meaning of it. The broader definition of luxury thus assumes that "luxury products as those products that have a sign value on top of (or in substitution of) their functional or economical meaning" (Mortelmans 2005: 510). It is the semantic space of sign value thus understood which we set off to investigate in the present paper.

Of importance for our analytical paradigm is also the work of Jean Baudrillard on the technological systems of objects. As with every prominent scholar, Baudrillard's thought evolved through the years. [1] We will rely in particular on his yearly books, in which Baudrillard studies the influence of technology on society: *The System of Objects* and *Consumer society*. Baudrillard posits there that objects have become signs and their value is determined by cultural code. In particular, consumer objects are seen as a classification system, coding the behavior of social actors. What actually follows from such an assumption is that consumer objects should be analyzed by using linguistic, rather than social categories:

Technology gives us a rigorous account of objects in which functional antagonisms are dialectically resolved into larger structures. Every transition from a system to another, better integrated system, every commutation within an already structured system (…), precipitates the emergence of meaning, an objective pertinence that is independent of individuals who are destined to put it into preparation; we are in effect at the level of language here, and, by analogy with linguistic phenomena, those simple technical elements -different from real objects – upon whose interplay technological revolution is founded - might well be dubbed 'technemes' (Baudrillard: 2005[1968]: 5).

The thematic focus of Baudrillard' in these works is how an individual experiences technology in an everyday life. The priority is given to form, which, freed both from practical functions and from human gestural system, become relative with regard to one another and to space, to which they provide 'rhythm'. Thus, "it is only the form which is present – which

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[1] See Genosko 1994 on Baudrillard's 'tempestuous' encounters with semiotics, evolving around Baurdillard's battle cry that *'les signes doivent brûler'*.

wraps that mechanism in its perfection and confines it within its contours" (Baudrillard 2005[1968]: 56).

Baudrillard's stand on luxury can be also superscripted by systemic and structural relations and cast in terms of a dyad *affluence: waste*. For Baudrillard, the sign of affluence is not defined in neutral terms, as merely a 'sufficient' amount: enough is not enough. What gives a sign of opulence a required prominence is the fact of being superfluous, of going beyond the level of utility. To that, affluence needs the support of 'waste': "[i]t is that wastage which defies scarcity and, contradictorily, signifies abundance. It is not utility, but that wastage which, in its essence, lays down the psychological, sociological and economic guidelines for affluence" (Baudrillard 1998: 45). In this work we aim to investigate precisely a semiotic dimension of the superfluous.

2. Automotive semiotics

> *In order to become object of consumption, the object must become sign. That is to say: it must become external, in a sense, to relation it signifies* (Baudrillard 2005: 218).

As Mick et al, observe, automobiles, as culturally intensive products, have been a common topic for semiotic analysis, "with their meanings often tied to Western science and technology, sociocultural status and power, and personal freedom and escape" (Mick et al 2002: 46). The idiosyncrasy of the space of the car interior as an interlocutionary setting was appreciated in the form of *Semiotica* thematic issue 191, where aspects such as e.g. talk and activity inside cars have been given coverage, while examining the interior of a car "as socially rich and meaningful" (Haddington et al. 2012: 101).

Danesi (2008) points out that "automobile is experienced by many of us as an extension of bodily armor, so to speak. In the public world of traffic, it creates a space around a physical body that is as inviolable as the body itself" (Danesi (2008 [1999]: 62).[2] In phenomenological terms, the space within the confines of the chassis is peculiar in more than one sense. It is still a public sphere in a sense that people inside are clearly visible to other participants of the urban traffic and are liable for any behavior therein. They have to obey all the codes (overt and covert) binding in the particular community, unlike in a typical private

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[2] As Danesi further on observes, this perception is not restricted to our culture. He cites the anthropologist Basso who found out that for example "the Western Apache of central Arizona also perceive the car as body, even going as far as to use the names of body parts to refer to analogous automobile parts" (Danesi (2008 [1999]: 62)

space (a house), where to a certain extent an inhabitant is shut off from the outside world. On the other hand, there is also a private axis along which the behavior of a car owner can be mapped, which can be described as a sort of ambulant spatio-temporality. The ways of customization of this spatio-temporality can be treated as a code: visibility to other participants of the urban setting spurs treating one's vehicle as a carrier for all sorts of message. [3] In this way, it could be proposed to consider vehicle interiors as *a syntext*, that is a text which "imparts the illusion of connectivity among what would otherwise be perceived as fragmented random texts by simply synthesizing them in an organized fashion" (Danesi 2002: 70).

Fig. 1. Cars as carriers for ideological messages. Upper panel: Some of the accessories to profess support for the Polish national football team during Euro 2012. Photos taken in a place that did host not any of the matches.

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[3] Of course, disregarding purely commercial messages.

 Fig. 1. shows some semiotic instances of disseminating such ideological priorities. During Euro 2012 held in Poland, houses hardly ever were decorated with any national attributes, people did not wear such attributes outside match venues on a day-to-day basis, but the majority of cars circulating around cities were adorned with all types of gadgets, stressing the support for Polish national team for most of the competition time (e.g. flags, small toys, towels hung at all possible places in the interior and exterior of a car).

Baudrillard turns our attention to a difference, within a hypothetical science of structural technology, between massive technological products as aeronautics or shipbuilding – where technical pressures maximize structural constraints – and requirements that car producers are faced with the necessity of continuously exploiting every conceivable variation while meeting few simply technological constraints (Baudrillard 2005[1968]: 5). A perfect illustration of this tendency (where the form is in fact counter-productive to function) is Baudrillard's comment on the design of North American cars from the 50s, which had massive tail fins. As the scholar points out, through this formal solution we "witnessed a veritable triumphalism on the part of the object: the car's fins became the sign of victory over space – and they were purely a sign, because they bore no direct relationship to that victory" (2005[1968]: 62). There was no relationship to that victory because, as Baudrillard further observes, these fins are in fact counterproductive in terms of drag coefficient [4] and the real velocity that could be attained. The fins are thus representative of a fantasy of aerodynamics (of planes) as a quasi-enhancement of the Cd value: "Tail fins were a sign not of *real* speed but of a sublime, measureless speed. They suggested a miraculous automatism, a sort of grace. It was the presence of these fins that in our imagination propelled the car, which, thanks to them, seemed to fly along of its own accord" (Baudrillard 2005[1968]: 63). This type of objects thus connotes a technical object in a natural and allegoric way. In automobiles, thus, "the personalization function is not just an added value - it is also a parasitic value. Indeed, from the technological standpoint it is impossible to conceive of an object in an industrial system being personalized without thereby losing some of its technological optimality" (Baurdillard 2005[1968]: 153).

Car design as such has also been studied extensively for semiotic impact. Karjalainen (2007) points out that apart from informative function, design serves as a carrier of various

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[4] Cd (drag coefficient) – a measure of the car's wind resistance.

symbolic meanings. He suggests that brand design cues be 'value-based' in order to foster a solid and consistent recognition, giving example of BMW using strong shapes and dynamic forms in its cars which clearly communicate the BMW values of performance and power. In particular, he concentrates on the difference between explicit and implicit design cues in creating recognition for the brand discussing the results of projects performed by his students. He suggests a future analytical focus as the coherence between semantic transformation and semantic attribution as well as between the design intent and user perception.

Mick et al. (2002), providing an in-depth semiotic overview of consumerism, also mention some landmark elaborations on the semiotics of vehicles. They include Hoshino's (1987) study of commutative and denotative meaning, with an example of the Tall Boy car (developed by Honda in the early 1980s). However, as Mick et al. observe, the interpretation provided by the author is purely subjective and it is not clear if other researchers would similarly differentiate the connotations let alone potential consumers (Mick et al. 2002: 10). Odile Solomon, drawing on Jakobson's (in fact, Brugmann's) communication model, argues that automobile designs have two main communicative function: phatic and poetic. Blending the characteristics of the phatic function with the Gestalt principles of balance, consistency, grouping, and subdivision, she then elaborates on how the differentiating shapes of cars such as the Volkswagen Beetle (ovoid), Austin Martin (cubic) and Citroen CX (concave trapezoid) influence memorability for the brands. She also extends these insights by revealing the tendencies of meaning in automotive designs across cultures by examining multinational automotive publications and interviews with designers in Japan, America, France, Italy, and Germany (Mick et al. 2002: 11). Lefebre's (1989) Barthian analysis deals with the semiotic potency of vehicle ownership and care-taking in Pakistan, in particular, with decorative paintings on trucks, with the cabins and fronts reproducing mosques and Koran quotations, and the sides of the trucks showing naturalistic scenery (e.g. mountains, lakes). He concludes that the ornate sign system on Pakistani trucks is meant to show that the driver is a religiously reverent but courageous adventurer who owns a gorgeous and prestigious vehicle (Mick et al. 2002: 46). As pointed out above, most of these elaborations show a researchers' voice mainly, their interpretation of the design. Our work to check a specified (potential) consumer cohort was aimed at improving this shortcoming.

3. Semantic differential as an analytic tool

The SD scale has been elaborated and developed by Charles Osgood in a series of publications in the 50s. In 1946 Stagner and Osgood adapted the idea of 'parallel polarities' to be applied for "the measurement of social attitudes and stereotypes, by using sets of 7-step scales defined by pairs of opposites (e.g., rating PACIFIST against scales like fair unfair, valuable-worthless, and strong weak). Later at Illinois (in the early 1950's), this became the Semantic Differential Technique (…). The results clearly demonstrate the universality of three affective features of meaning, Evaluation (E), Potency (P) and Activity (A)" (Osgood 1981: 56f). These three features, known also as primary dimensions of connotative meaning, "kept reappearing despite deliberate and independent variations in the sampling of scales, of concepts" (Osgood 1971: 171) as three dominant and orthogonal (independent) factors. They had been arrived at through forming correlations between the scales and then factor-analyzing these scales. The procedure is in detail explained in Osgood (1971: 171). [5]

> Imagine a space of some unknown number of dimensions. This will be our hypothetical semantic space, and we can explore it by analogy with the more familiar color space. Like all self-respecting spaces, this one has an origin, which we define as complete "meaninglessness" (analogous to the neutral grey center of the color space). The meaning of a sign can be conceived as some point in this n-dimensional space, and can thus be represented by a vector from the origin to that point: the length of this vector would index the "degree of meaningfulness" of this sign (like saturation in the color space) and its direction would index the "semantic quality" of this sign (analogous to both hue and brightness in the color space). To talk about "direction" in any space requires that we have some reference coordinates (Osgood 1971: 171f).

The three factors are the three dimensions of the semantic space. The above cited work reports studies that had been carried out to evaluate the generality of affective meaning systems across language and culture groups. The procedures designed to order qualifier-types in particular languages were cast in terms of three criteria: (a) maximum over-all frequency of usage (salience), (b) maximum diversity of usage (productivity), and (c) minimum correlation in usage (independence) (Osgood 1971: 177).

Since the present paper will be concerned with altitudes, of key importance is the notion of attitude as such. As Minato (1981: 21) admits, in spite of the plethora of definitions of the concept in contemporary psychology and social science, some consensus can be reached. For example, Thurstone (1974 as cited in Minato 1981: 21) defined attitudes as "the sum total of man's inclinations and feelings, prejudice of bias, preconceived notions, ideas,

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[5] "The denotative or referential uses of terms-the way the lexicon carves up the world-appear largely arbitrary and unique to particular languages until the ethnolinguist discovers a framework of semantic components that can be imposed comparably on these phenomena" (Osgood 1971: 171).

threats and convictions about a specified topic". Osgood pointed out that attitudes are learned and implicit. "Further they are predispositions to respond, but are distinguished from other states of readiness in that they predispose toward and evaluative response" (Osgood 1957: 189). Assuming attitudes to be tendencies of approach or avoidance, Osgood contends that attitudes "can be ascribed to some basic or they bipolar continuum with a neutral of zero reference point, implying that they have both direction and intensity and providing a basis for the quantitative index of attitudes. Or, to use a somewhat different nomenclature, attitude are implicit processes having reciprocally antagonistic properties and varying in intensity" Osgood 1957: 189-190). Building on these views, Minato assumes that attitudes are "psychological constructs proposed for explaining that fact that that each person responds consistently to a specific objet or a group of objects in a specified way, especially favorably or un favorably, positively or negatively " (Minato 1981: 21). Hence, attitude can be said to be "a learned implicit process which is potentially bipolar, varies in intensity, and is part of the internal meditational activity that operates between a stimulus and the individual's more overt evaluative response pattern" (Minato 1981: 22).

Another key issue is the so-called *Polarization of substantives*. According to Osgood, the polarization (or affective intensity) of a concept is indexed by its distance from the origin of the semantic space. It can be calculated "either as an average of the absolute deviations of judgments of individual subjects from the midpoints of scales, or by the algebraic average of the deviations for individual subjects-in which case concepts for which different members of the culture have antagonistic meanings will suffer cancellation in polarization toward zero" (Osgood 1981: 188ff).

Within the thematic focus of the present study, we could mention a study by Hsu et al (2000), who provide an SD analysis of telephone design .[6] The aim of the study was to stress the usefulness of the quantitative data in the study of the relationship between design elements and user evaluations in formulating design strategies. The researchers pointed out the fact that the users feeling about the product is a complex cognitive process and many variegated factors contribute to the perception of a product form (Hsu et al. 2000: 376). Designers and users were asked to apply SD scale to rate their perceptions toward 24 real telephone samples. Subsequently several multivariate analyses were performed to analyze the subjects' perceptions. The results fell into separate perceptual space for both subject samples and suggest that there are crucial differences between designers and users in product form

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[6] The same reference for overview of research on the product semantics.

perception. What is more important, the conceptual models of these two subject groups are made up of different components.

4. Vernacular versus skeuomorphic aspects of car design

Our analysis will also rely on the dyad 'vernacular' versus 'skeuomorphic'. Porphyrios (1997 [1983]) assumes that, notwithstanding the superficial associations with rusticity that the concept of 'vernacular' evokes, its basic meaning is different: "The idea of vernacular has nothing to do with stylistics. [. . .] The essential meaning of vernacular refers to straightforward construction, to the rudimentary building of shelter, an activity that exhibits reason, efficiency, economy, durability and pleasure" (Porphyrios 1997 [1983]: 179–80) as cited in Evans – Humphrey 2002: 191). As Evans – Humphrey (2002) further stipulate, " 'a vernacular', if that term has any validity at all, must relate architectural processes to a given social and technological context. It is then the practical expression in built form of the habitus of social groups. The vernacular is always ordinary and it may even be ugly (Venturi et al., 2000 [1972]) but it cannot be divorced from the experiences and emotional associations of viable everyday life" (Evans – Humphrey 2002: 191). Skeuomorphs, on the other hand, as Evans – Humphrey (2002) further put it, are artifacts which are meant to evoke the appearance of objects made of other materials. They may involve transformation of previously functional features into decorative ones: "Skeuomorphic architecture is thus likely to spin away from the vernacular, whether vernacular is understood in the direct sense or in the transcendental form" (Evans – Humphrey 2002: 192). The authors further distinguish between the sense of a 'mythic order' and symbolism that may assume many contingent forms: "The skeuomorph cannot be seen to 'stand on its own' (of course, no object in fact does this), but inserts itself into relationality from the beginning by virtue of its pretending to be something else" (Evans – Humphrey 2002: 193). As Evans – Humphrey point out, skeuomorphs involve a citation from the original context, "a cipher of cultures and icons of identity" (Evans – Humphrey 2002: 190).

Our preliminary research hypothesis was that in the particular milieu under analysis, pickups and SUVs (Sports Utility Vehicles) involve a skeuomorphic dimension, semiotically translatable first of all into augmented vehicle dimensions. Such augmented dimensions in a middle sized town in industrial surroundings are a-teleological – purely symbolic and completely dissociated from any praxis.

Let us first take a look at exemplary dimensional specifications, respectively of a pickup and a van taken from one make. Assuming there is indeed a considerable variety across models, the strategy of comparing varieties within one brand would have an advantage of reducing the idiosyncratic variegation. For Toyota brand we get the following specs as juxtaposed in Table 1. (a pickup model Toyota Hilux, SR 4x4 Extra-Cab Cab-Chassis Turbo Diesel Manual, with common rail injection system, source:. http://www.toyota.com.au/hilux/specifications/sr-4x4-xtra-cab-cab-chassis-turbo-diesel-manual) and a van Hiace (2.5 DSL 15 STR AC DLX, a 15 seater type bus). (http://www.pomtco.com/automotive/toyota_hiace_bus_diesel.php). Also 2.5Ltr Turbo Diesel, 4-Cyl, 16V, DOHC, Common-rail type Direct fuel injection system.

For a Mitsubishi make the results are more drastic. A Mitsubishi pickup L200 (Triton) is longer than the specifications above for Toyota van, with 5185 mm (http://www.ehow.com/list_7521924_technical-specifications-mitsubishi-l200.html) and width of 1815mm. The transporter's dimensions are 2.21 m^2, with the charging capacity of 960kg. The 2477cc engine produces 175 horsepower, with the torque of 350 Newton meters. To compare, the specs for Mitsubishi L300 van are acutely lesser: length: SBW 4380mm, LBM 4780mm, width 1690mm. Engine capacity is 2533cc and max torque 195 Nm (http://www.carshowroom.com.au/newcars/2012/Mitsubishi/Express/M9P12A). On this example, pickups actually exceed corresponding vans by far both in terms of dimensions and technical specifications. Finally, a Mitsubishi SUV (http://www.carshowroom.com.au/newcars/2012/Mitsubishi/ASX/MEV12A) ASX 4D Wagon (all three 2012 models) has engine capacity 1998cc (or 1798cc) with max torque 197 Nm, height 1625, width 1770mm, payload 595kg, and an 'unassuming' length of 4295mm.

Table 1. Specification of the dimensions of a Toyota pickup and a 15 seater bus (van).

		a pickup (Hilux)	a van (Hiace)
Maximum Cargo Volume:			
Exterior Length:		4980 -	4695 mm
Exterior Width:		1760	1695 mm
Exterior Height:		(mm) 1835	1980mm
Wheelbase:		3085	2985
Curb Weight:		1720	1690-1855
engine	Max torque[7]	Nm 343	241.2 Nm
	Max power	kW 126	kW 75.3

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[7] The rotational force generated by the engine.

There is one intriguing observation to be made. A van designed to seat 15 people has actually smaller dimensions and technical specifications (half as much power, it is shorter and has narrower wheelbase) than a pickup. The key thing to take into account is that pickups in an investigated context are not bought to accommodate any passengers or to carry anything at all. They are usually driven by a single owner. Sometimes the owner buys an additional gimmick: a boot cover, which makes the vehicle pretend it could host additional two passenger seats at the back (resembling in that way a huge SUV, see specimen 2 from Fig.2). Of course, there are no doors to access these quasi passenger space, hence the cover in question is but another means to boost the overall symbolic space of the vehicle.

It might be also of interest to check the diachronic development of the target model. Let us compare specifications of exemplary Toyota SUVs (Land Cruise) from 1997 and 2011, added dimensions for a sedan of the same make, which are shown in the Table 2. A brief cursory look at these random specifications for a SUV reveals several regularities. First of all, it can be notice that, in diachronic terms there has been an addiction blow-up of already huge dimensions: models from 2011 are slightly larger, wider, higher and much heavier compared to the models from 1997. On the other hand, there has been a decrease of the cargo volume: that is, of the actual praxis of the SUV: how much it can actually carry. There is a thus a double impact of the weight: with the increase of ' net' weight of the car from 4,751 lbs. to 5765 lbs (2614.96 kg) there are been an actual decrease of the amount of volume dedicated to carrying stuff. There is thus double way of decreasing the praxis: by increasing overall dimensions. The volume of the car has been increased and it is able to carry less goods. What, in semiological terms, has been increased, what more can it carry? It was a semantic dimension of this message that we hoped to recover using the SD tool. If our supposition was correct, it would mean that pickups would place higher than vans, sedans and even than SUVs on the dimension of symbolic prestige. We set out to enquire what is really being carried in these huge always empty boots, with the overall dimension of the vehicle, as shown, greater than these for carrying 15 people – and our supposition was that it is a symbolic prestige that the owners carry. In other words, driving an oversized car, with a useless considerable space at the back, and to which one gets by making an effort of stepping on a sill, conveys a specific message to an 'ordinary' street user.

Table 2. Specification of the changes in Toyota Land Cruiser model

	1997	2011	Toyota Avalon (sedan 2011)
Maximum Cargo Volume:	90.9 cu.ft	82 cu. ft.	14.4 cubic feet
Exterior Length:	189.9 "	194.9 in | 4950 mm.	197.6 "
Exterior Width:	76.0	77.6 in | 1971 mm	72.8 "
Exterior Height:	73.6 "	74.0 in | 1880 mm.	58.5 "
Wheelbase:	112 "	112.2 in | 2850 mm.	111.0 "
Curb Weight:	4,751 lbs.	5765 lbs | 2614.96 kg	3,572 lbs.

5.Description of the instrument and the analytical procedure

According to Barthes' semiological principles, a corpus for the semiological study is inevitably ridden with *immanence*: the view from inside. It can be conceived of as "a finite collection of materials, which is determined in advance by the analyst, with some (inevitable) arbitrariness, and on which he is going to work" (Barthes 1986: 96). While the corpus should be wide enough to give reasonable premises to assume that its elements will saturate an entire system of resemblances and differences, at the same time it should be as homogenous as possible: both in substance and in time (Barthes 1986: 97). The main goal of the study was to investigate semiotic values in car design, through which we tried to throw semiotic light on the way "the rationality of objects comes to grips with the irrationality of needs", as Baudrillard (2005: 6) concisely observed.

In accordance with Barthes stipulations, the corpus for the research was compiled so as to cover the maximum range of saliency types and at the same time, we aimed at maximum homogeneity. The target items, as mentioned in the preceding section, were pick-ups and SUVs. While definitely their design determined the function as used in cross-country advantage contexts, we sampled their *raison d'être* in another context: in a middle-sized town with reasonably good quality of streets, no dunes or swamps to cross over while getting from one suburb to another. With that, time lapse needed to drive through the locality averaged half an hour. An economic particularity of the locality is that the number of pick-ups and SUVs has been constantly increasing over the recent years, just as in other Polish towns and cities, in defiance of the aggravating economic crisis and mounting complaints about the quality of

life in all possible media. The research question was thus trying to find a dimension where the obviously huge amount of inconveniences (e.g. difficulty to park, increased fuel expenses, difficulty to drive through relatively narrow streets, coupled with the lack of immediate necessity to use a SUV or a pick-up on an everyday basis in a town with a population of about 120 000 inhabitants. [8]

We were thus faced with two constraints on the corpus formation. One was to take into account a wide spectrum of other makes against which to check the semiotic potential of pickups and SUVs, and the opposing constraint, to make the database homogenous, that is, to eliminate all possible variables that could influence the perception of the stimuli. The first filter was the color. We decided to include in the instrument only a specified range of color of the makes. Since the target items were available in the setting only in grey or black, we decided to include the filler material which would involve only these neutral colors. In practice also dark blue and dark green had to be taken into account, but definitely we excluded bright colors such as e.g. red or bright green or yellow. [9] Another parameter was the size of the car. The research target was investigating cars which are quite spacious. Given the huge variety of makes and types of cars on the market we had to narrow the study to eliminate the factor of size as such as well. That is, we included in the instrument only cars that are *ipso facto* already quite large (or neutral) in terms of dimensions. In practice it meant exclusion of small cars from the instrument.

It must be pointed out that arriving at a suitable concatenations was very difficult. Several 'interim' versions of the instrument were elaborated. Basing on the results of these pilot versions and the feedback from the respondents themselves, the final selection involved thus specimens as presented in Fig.2.

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[8] It must be pointed out here what the perception of the dimensions varies across cultures and in time: cf. for example, the issue of a full-size car in North America. Assuming a certain degree of analytical abstraction, we concentrated on the Polish endemic to a middle-sized town in the 2010s.

[9] For the importance of color in commodity perception see e.g. Evas – Lefley (2002). As the authors point out, the physical cues and the connotative ones do not always match. For example, in terms of scientific descriptors, violet is a 'fast', high frequency and high-energy color, while red could be termed a 'slow' and low energy one slow one (Enas – Lefley 2002: 92). The authors further point out that in fact, fast cars bodies are never violet while quite frequently they are pointed red. It could be an interesting socio-semiotic fact why pickups or SUVs are never painted red.

No.1.

No.2.

No.3.

No.4.

No.5.

No.6.

No.7.

No.8.

No.9.

No.10.

No.11.

No.12.

No.13.

No.14.

Fig. 2. Stimuli contained in the instrument.

[1] was assumed to be a neutral, zero reference point and was discarded in the final calculations. [2, 4, 8, 11] were our first target: pickups, optionally with and without the boot cover. [9] was a SUV – the second target. Of interest were also [8] and [12] – which were relatively high class, luxury cars. [5] was a filler material, of the similar parameters as a pick up, but it was a van – a purely functional vehicle. [7] was a common sedan type. The filler material contained also samples of designs which were placed as 'extravagant' outsider, or ideological experiments: a retro styled mini cooper [13] and an old dilapidated Volkswagen golf [10].

The respondents both for the pilot study and for the main study were students of Opole University of Technology (Politechnika Opolska), aged between 21-23 with no linguistic or semiotic background at all. They were chosen at random from standard departments of a University of Technology, following typical specializations as e.g. Mechanical Engineering, Electrical Engineering, Automatic Control, Civil Engineering, Management, Production Engineering, Logistics, Physiotherapy or Physical Education. The subjects filled the questionnaire individually in electronic format. A computer with copies of the questionnaire was placed during their classes in the classroom and a researcher was present to clarify possible queries. In this way, the respondents did not lose their class time nor did they devote their personal free time to the questionnaire. We also wanted to give each person exactly the time they needed to answer fully without hustle or looking at the peers. The instrument was distributed according to these guidelines for several months, starting from February and finishing at the end of the academic year in early June. Altogether we obtained 72 valid answers, but the total amount of respondents exceeded by far this number: a lot of questionnaires were invalid due to incorrect filling (e.g. missing replies, or double crossing a scale). The instrument featured two introductory pages, an example page, and 14 pages with stimulus concepts: each stimulus concept was contained in one page beside identical sets of 37 scales. The scaled concepts were as follows (in English translation):

1. Active-passive
2. emotional – subdued
3. practical --impractical
4. agreeable ----disagreeable
5. dynamic ---- static
6. friendly ---repulsive
7. chaotic- ordery
8. brave ----- covardly
9. selfish ---altruistic
10. unusual –commonplace
11. obtrusive ---discreet
12. strong –weak
13. pleasant –unpleasant
14. congenial (familiar)- strange
15. sociable –unsociable
16. attractive –unattractive
17. noisy --quiet
18. conscientious - unconscientious
19. efficient –unefficient
20. progressive - conservative
21. imposing (bossy) - submissive
22. energetic - lazy
23. fast – slow
24. impulsive - reasonable
25. reliable -unrealiable
26. dangerous -safe
27. successful -unsuccessful
28. kind -unkind
29. rich -poor
30. intuitive- logical
31. terryfying -reassuring
32. cheeful - sad
33. lustful -chaste
34. hardworking -lazy
35. smoking -nonsmoking
36. boastful -modest
37. competent –incompetent

From a statistical perspective, there are two ways of proceeding: 1) Extract a factor structure direct from the scales (i.e. a more exploratory approach) before then producing the SD scores on the basis of these; 2) Assume *a priori* that particular scales belong to E, P or A (or indeed something further) and then move immediately to averaging these and producing the SD scores. If one opts for the first solution (1), it is probably best to have more scales rather than less – probably not fewer than 10-12; if for the second – (2), you should probably have an equal number of scales per dimension (2 at least, or preferably 3 each). To be on the safe side, it is best to stick to scales that previous studies have shown to weigh heavily on the particular dimension and that are also at least a bit relevant to what is being rated (e.g. *full /empty* may not necessarily be an obvious choice for monuments, though e.g. Hogenraad (1977) extracts it as a scale item for Activity).

Doing a factor analysis on a data matrix, there are broadly three things that you have to take into account:

- the "communalities" of the individual variables (i.e., in our case, the word-pair scales);
- the size of the extracted factors ("eigenvalues");
- the size of contribution of each variable to each factor ("loadings").

Communalities are the first stage. Crucially, when an indicator variable renders a low communality, it means that the factor model is not working well for that particular indicator and possibly it should be eliminated from the model. What counts here as 'low' is a little bit more subjective; however, MacCallum, Widaman, Zhang and Hong (1999) suggested communalities should all be greater than 0.6, and this is what we used. The size of retained factors comes next – a very common criterion is to retain only those factors with an eigenvalue greater than 1. A minimum of 3 variables per factor is also critical (Velicer & Fava, 1998) because a factor with fewer than 3 items is generally weak and unstable (Costello & Osborne, 2005). Every scale entered into the factor analysis receives a loading on (i.e. contribution to) each factor. But only the highest loading items (either positive or negative - so the polarity of the original scale is not important at this stage in the process) are useful for interpreting the factor and turning it into an analytic dimension. Rules of thumb in the literature for the minimum value for "high loading" vary a bit between 0.4 and 0.6. We used 0.5, but it makes little practical difference to the outcome either way.

A 95% credible interval is a range of values around the mean of a sample. It is based on the premise that we want to generalize from a sample to a larger population, which is

usually the whole point of an experiment and experimental statistics (to give a more linguistic example: we may have corpus - i.e. a sample - of 1 million words of British English, but it is the whole of British English that we want to make claims about, not just the finite number of texts in our sample). A sample mean is usually taken to be a good estimate of the corresponding population mean, but it may not be an exact estimate. A 95% credible interval gives us a range of values which we are 95% certain contains the true population mean, even though it may be different from the sample mean.

With these stipulations in mind, the data were loaded into the program of Hogenraad & David (1971) and subjected to a between-items principal axis factor analysis with varimax rotation. It was ensured that all of the communalities exceeded 0.6, since "if communalities are high, recovery of population factors in sample data is normally very good, almost regardless of sample size, level of overdetermination, or the presence of model error" (MacCallum, Widaman, Preacher & Hong, 2001: 636). The first pass of the factor analysis consisted of eliminating the scales with low communalities (< 0.6) before re-running it. This led to the retention of just thirteen out of the original thirty seven scales in the factor analysis with communalities greater than 0.6. The selection that entered final analysis is as follows:

1. Active-passive
2. dynamic ---- static
3. friendly ---repulsive
4. brave ----- covardly
5. obtrusive ---discreet
6. strong –weak
13. modest –boastful

7. pleasant –unpleasant
8. imposing (bossy) - submissive
9. energetic - lazy
10. fast – slow
11. successful -unsuccessful
12. Rich -poor

The next stage of the analysis extracted four factors which met the Kaiser criterion (eigenvalue >1). There was a problem meeting the ideal criterion of > 3 items per factor with loadings ≥ 0.6. So, as a compromise, the factors 2 and 4 (2 items > 0.6, but everything else < 0.4) were rejected and factors 1 and 3 (2 items > 0.6 but with 2 more > 0.4) were retained. Factors 2 and 4 were pleasantness (F2 = friendly, pleasant) and something to do with boastfulness (F4 = obtrusive, boastful). Retained Factor 1 is the potency factor (successful, rich, strong, imposing). Retained Factor 3 is the activity/dynamism factor (active, dynamic, fast, brave). For the SD proper, two dimensions corresponding to Factors 1 and 3 we extracted, using all 4 of the scales mentioned above for each factor. So, in subsequent discussion, "Factor 1" is potency and "Factor 2" is activity/dynamism.

6. Results and discussion

Tartu scholars assumed that

Etant donné que le texte se manifeste dans ces cas par la non-expression, la valeur du message se définit par sa véracité au niveau sémantique de la lingistique globale, et au niveua du 'bon sens'. Pourtant, comme les textes les plus véridiques sont ceux qui ont le plus de credit, il est clair que, là, également, nous avons affair à un sens supplementaire, un sens textual, à côté de la signification linguisitique globale (Lotman – Piatigorskij 1969: 213).

The instrument was devised so as to capture such a possible supplementary sense evident in a connotative layer of automobile design. Before staring the discussion, we must observe one crucial principle: that of relevance. It basically means keeping to one point of view only, and excluding all that are not associated with this point of view. These other factors, as Barthes (1986: 96) emphasized are not denied, they are only ascribed to another kind of relevance, "but they must themselves be treated in semiological terms, that is to say that their place and their function in the system of meaning must be determined. Fashion, for instance, evidently has economic and sociological implications; but the semiologist will treat neither the economics nor the sociology of fashion: he will only say at which level of the semantic system of fashion economics and sociology acquire semiological relevance" (Barthes 1986: 96).

An initial hypothesis, as pointed out in the previous section, was assuming a set of pickups as a target group and positing that they will place somewhat higher on either or both factors as possessing a surplus semiotic value. The remaining material was meant to position and, mathematically speaking, 'to integrate' the target material against selected parameters present in the design of other cars. The key factor was dimensions. In terms of this parameter, pickups share similarity mostly with vans. This is with the reservations, that they place closest to vans, although a pickup can exceed by far the size of a van. A corresponding SUV model ([8]) does not come near to a pickup in terms of overall dimensions nor technical specifications. Hence, the first question was whether there will be any difference between a van and a pickup: the difference will semiotically translate on the connotative impact of the purely utilitarian space management. Another factor was the type of the engine (assuming that the owners, buying an automobile, are aware of this parameter, although it is not visible to 'the naked eye'): as noted above, pickups have the torque exceeding that of a van and of SUV.

[10] Let us now discuss the cognitive positioning of the stimuli one by one, with stimulus concepts (particular cars) referred to heretofore in brackets.

The results for this stage of the analysis are presented in Fig.3. Taking a rough look at the graph seems to imply that the respondents indeed cognitively grouped some of the stimuli into semantic clusters, marked on the graph with ellipses. The groupings are generally consistent with a semiotic affinity in the design as discussed above. Of course, these are only suggestions, especially with the medial clusters. However, it could be noticed that all the target items (pickups) placed relatively close one to another and we could safely posit a cluster status of this stimuli [2,4,8,11]. Actually, [11] places the lowest of all - still the distance to [8] is visibly much lesser than the corresponding distance to [9] on both axes. There is actually a semiotic explanation for the lowest position of this item, which we will adduce further on.
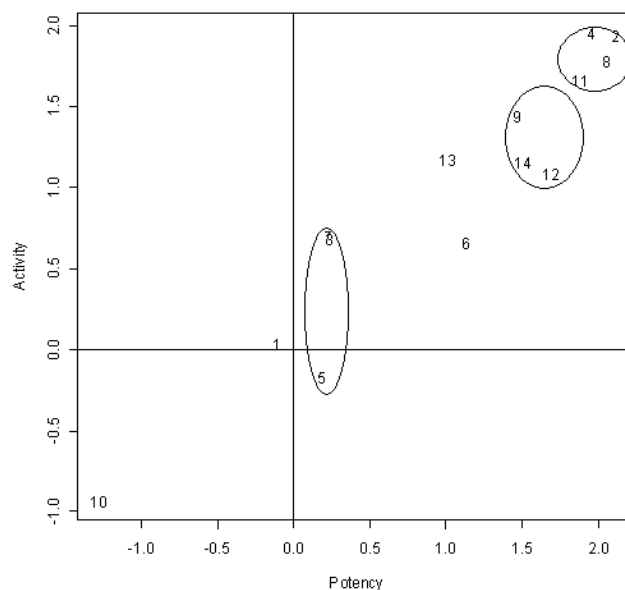

Fig. 3. A semantic space for the two extracted factors.

Let us now discuss the cognitive positioning of the stimuli one by one, starting with the cluster containing specimens [7, 3, 5]. [7 and 3] [11] place practically on the same level on both

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[10] Of course, the pickups torque comes nowhere closer to e.g. 2013 Aston Martin's V12, with a torque of 420Nm, and a horse power of 510. Still, an excess in engine power can be noticed compared with SUVs and vans, taking into account that by definition pickups have space for only two people.

[11] At this point we cannot provide any explanation for the patterning of [3] in this group: perhaps the reason simply was that it definitely does not belong to luxury items and respondents evaluated it as closer to 'practical' vehicle (that is, by default not luxury).

factors, and share with [5] a similar position on the Potency axis. Incidentally, [7 and 5] were the only cars which were theoretically assessed prior to the empirical analysis as having high criterion of functionality (the vernacular): [5] – a van and [7] – a sedan type with a car roof box. [5] – a van, has the same dimensions in purely technical terms as the target group of pickups, but these dimensions in pickups in the context of the performed research, as stipulated above, are skeuomorphic and symbolic. Leaving aside [10], which was placed in the instrument for illustrative purposes mainly, [5] has the lowest rating on activity (dynamism axis) with which it contrasts acutely with its skeuomorphic counterpart, the pickups (the group [2, 4, 8, 11]). This fact, odd as it may seem, corroborates equally surprising results for the study of vernacular objects reported in XXX- YYY (2013): in that study, vernacular wayside shrines versus Licheń [12] (skeuomorphic) wayside shrines were subjected to the same type of analysis (SD) and results confirmed this pattern: although respondents for that study declared themselves in 98 % Catholics, at the same time they evaluated negatively typical country wayside Catholic shrines, and their highest rating on evaluation was attributed to Licheń sculptures least resembling religious objects or involving a lot of external citations. On the other hand, the parallel is not complete in a sense that we could not recover evaluation factor at this stage (pleasant, friendly, nice, helpful etc.) so strictly speaking, the issue is the evaluation on the Activity/ potency axis and not the Evaluation factor as such.

[13], as mentioned before, was included in the instrument as one of the 'odd' examples in the filler material: it shows a small car (Mini) retro-styled. It terms of the semiotics of design, it does not share any attribute with any of the target or remaining filler material. Since it was placed towards the final parts of the instrument, the respondents had already had the time to cognitively construe a semantic space involving the remaining brands. As can be seen, the SD result reflects this atypical status of the vehicle. It can be seen as a harmonic type for our material, placing on similarly (high) values for both factors, practically mid-way between the groups with the highest and lowest ratings. It seems that the respondents in general ranked the owner as relatively dynamic and socially prestigious: in a sense, moderately positive.

Another 'oddity' in the filler material was an item [10], showing a small automobile of quite a shabby appearance. It also was included as an additional background to the main research. Placing it as No 10, towards the end of the instrument, ensured that, similarly to the case of [13], it would not influence the responses and yet, might provide a new dimension to

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[12] Licheń is one of the most popular contemporary Catholic pilgrimage venues in Poland.

the analysis of the semiotic potential. As can be seen, it has received the worst overall rating in the recovered factors: the lowest rate in dynamism and activity.

[1] was a challenge in the instrument make-up. Definitely we could not have placed any of the target items as the first segment in the instrument because we wanted the respondents to have adjusted their ratings and have created a pre-conceived semantic space before a target model would enter the picture. Hence we opted for a model which we thought would be quite neutral: not too shabby or glamorous in appearance and which would be, so to speak, semiotically transparent (relatively large, quite popular within the area the research was done). As can be seen, the results reflect this 'tentative' status of the first item: the respondents placed it practically in the neutral (zero) point on both significant factors.

A clear semiotic cluster that emerged at this stage is a group involving [9, 12,14]. This cluster involves all the luxury items from the database – a SUV and a hybrid [14] included – except the target ones (pickups). In compliance with the initial hypothesis, the luxury items did not group with the pickups but formed a visibly separate cluster, collocating slightly lower on both axes then the target items but still visibly higher than the remaining material. Interestingly, a SUV was patterned with a car of a different shape ([12]) – which, we hypothetically posited, could semiotically connote more speed (like towards a sports car) hence we suspected may be the owner would be rated as more dynamic than that owner of the SUV. Still, the relatively similar position of the two owners in the recovered semantic space would validate the name of SUV (sports utility vehicle).

The cluster [2, 8, 4, 11] is the target cluster – the pickups. The results for this cluster are consistent in a way that all pickups stimuli were placed quite close to each other by the respondents, however, there does not seem to be a difference regarding the pickup version with a skeuomorphic boot cover or without it: items with a boot ([2, 11]) are in a way 'interspersed' with the items without it ([4, 8]). To recall, initially we suspected that the version with a boot could place higher in social prestige space than the version without it: in semiotic terms, the boot cover is more skeuomorphic that the boot itself since the uncovered boot could potentially be used to place oversized objects, while the same boot covered, 'pretending' it is a space for accommodating passengers, gives a uniform message that nothing ever is being carried inside and it definitely cannot be used to transport people since there are no doors to access this skeuomorphic appendix. As can be seen, the results did not corroborate the semiotic impact of the cover as such, however, nevertheless, the spread of the responses provided two important insights into the semiotics of the accessory in question.

First of all, it is important to note that a pickup with the boot cover was not patterned with the SUVs, which it resembles at first blush but it was cognitively grouped precisely with the pickups. In terms of the semiotic potential, the respondents thus 'encrypted' the boot cover as nothing but another skeuomorphic adornment, which does not serve any purpose, just as the empty rail does not serve any purpose in 'town' pickups. So on one hand the message corroborated our hypothesis that the boot cover is skeuomorphic – it is not recognized as functional at all. However, as mentioned above, we also suspected that perhaps the version with the boot cover would place higher than versions of pickups without it, since, theoretically, the volume of the skeuomorphic space in an automobile is augmented. While in [4] there is indeed a slight increment on the Activity axis, there is a decrease on the potency axis with respect to an item without the boot cover. And in [11] there is a decrease on both factors. It could thus be posted safely that indeed the boot is perceived as a skeuomorphic (the automobile patterned with pickups not the SUVs) but it does not seem to carry additional value with itself.

Another problem with the results in that actually [2] and [11] are practically the same type – [2] perhaps with more tuning accrued onto it. Yet they were rated relatively differently (possibly assuming polar values within the cluster). Searching for the explanation of the significantly lower position of [11] we were made aware of one issue in the preparation of the instrument. Although we controlled for the color and the dimension of the stimuli concepts, it was impossible to control for the graphic presentation, that is, the exact angle the photo was taken and the surroundings of the automobile, given that the collection of the photos took place in random, streetwise context. [2] is the only take of a pickup which was shot, so to speak, en face. Additionally, this is the message that was known only to the respondents (the residents of the locality the photos were taken): the car is parked near the local shopping mall, on a place where no parking is allowed. [13]

In semiotic terms, it might also be noticed that the vehicle in question (a Mitsubishi) has a peculiar design, which makes its front look somewhat shark-like, conveying an impression of aggressiveness. Additionally, it has a set of gadgets (tuning) which, in our paradigm, are to be considered skeuomorphic: pretending as much as possible that the vehicle is to be used off-road in extreme driving conditions (e.g. additional set of lights, supportive tubing which emphasizes the shark-like line created by the radiator grill, wing design and the headlights). The key is that all this creates a condensed quasi-substance 'attached' to the

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[13] This seems to be another particularity of a pickup car driver in an urban context. They usually are parked in places, where an 'ordinary' citizen would be fined immediately.

automobile, the substance which would never be used for its real purpose in a middle-sized town in Poland. In the presentation of the stimulus [11] all that 'semiotic substance' is absent precisely because of the way it is shown to the respondents (from the rear). Hence, there is a consistent semiotic explanation to the divergence of perception between theoretically the same type of vehicle among our respondents. As can be thus seen, the SD gave us the means to depart from the semiotic level, and dissect particular aspects of the design and correlate them with particular axes of factors, reverting back to the semiotic in interpreting factorial results.

Conclusions

As M. Lotman observes, for semiotic description there is no principal divide between perceived and not-perceived relations and meanings: semiotics allows to cross the opposition between received by the senses and the comprehended because signs explain themselves through signs (M. Lotman 2002: 10).

In this study we aimed to explore this divide between perceived and not-perceived relations as differences in symbolic potential in automobile design, trying to 'flesh out' a semiotic profile of *the superfluous* in a specific context. We assumed that, judging both by semiotic and technological criteria, there is a surplus value (skeuomorphic dimension) in pickups which we intended to pin down using the tool of SD. The observation was that pickups, a vehicle for a sole driver and no cargo in the investigated context, have the biggest physical dimensions of all personal cars, approximating in fact a van-bus for over 10 people. We wanted to enquire how this excess of space translated semiotically. We proposed a semiological position in analyzing the data, in agreement with Baudrillard's idea that only a semiological model can decipher the meaning structure of a modern commodity, because the consumption is defined by the organization of materiality as signifying substance. The results showed a specific dimension to the superfluous substance in the automobile design, rendered as augmented values in the semantic space and the difference between target items and 'control' item of the same dimension (e.g. a van).

This difference in the semiotic potential was checked for the specific context and for specified cohort of young adults. The SD gave us thus the means to dissect particular aspects of the design and correlate them with particular axes of factors jointly subsumed as Social Prestige (active/ dynamic and powerful). The results showed that indeed a surplus semiotic value can be translated directly into the positioning in the semiotic space: the owners of

pickups were rated highest on both factors and owners of others luxury cars below then, while still keeping a significant distance to the 'ordinary' vehicles. As far as the social competence is concerned (pleasantness, friendliness, helpfulness etc.), we could not recover significant results at this point. The study could thus be considered a first exploration into the semiotic exploration of symbolic potential in car design using the tool of the SD and already at this stage of the research the results confirmed Baudrillard's definition of consumption as a systematic act of the manipulation of signs.

References

Barthes, Roland, 1986 [1964]. *Elements of semiology*. Paris: Editions de Seuil.

Baudrillard, Jean. 1997 [1968] *The System of Objects*, [trans. James Benedict], London & New York: Verso.

Baudrillard, Jean. 2005 [1968]. *The system of objects*. London: Verso.

Danesi, Marcel. 2008[1999]. *Of cigarettes, high heels, and other interesting things: An introduction to semiotics*. New York: Palgrave Macmillans.

Danesi, Marcel. 2002.*Understanding media semiotics.* London: Arnold

Evans, Christopher – Caroline Humphrey. (2002). 'After lives of a Mongolia yurt: The 'archeology of a Chinese tourist camp". In: *Journal of Material Culture*. 7(2). 189-210.

Eves, Bob – Martin Lefley. 2002. "The Color Concept Generator: An adaptive fuzzy color semiotic design tool" . In: *Semiotica* 142–1/4 91–105.

Genosko, Gary. 1994. *Baudrillard and signs: Signification ablaze.* London: Rutledge.

Haddington, Pentti – Maurice Neville – Tina Keisanen (2012). "Meaning in motion: sharing the car, sharing the drive". In: *Semiotica 191.* 101-116.

Haładewicz-Grzelak, Małgorzata – Andrew Wilson. 2013. "Mapping skeuomorphic artefacts among Polish young adults: A semantic differential study of sculptures at the Licheń pilgrimage centre". *Polish Sociological Review.* (181)1. 103-128.

Hogenraad, R., & Simon, J. "Structures affective et descriptive dans les jugements d'impressions de l'espace" In: *Psychologica Belgica*, 1977, 17, 5-23.

Hoshino, Katsumi (1987). Semiotic marketing and product conceptualization. In Umiker-Sebeok 1987: 41–56.

Hsu, Shang – Ming C. Chuang – Chien C. Chang. 2000. "A semantic differential study of Designers' and users' product form perception". In: *International Journal of Industrial*

Ergonomics 25 375- 391.

Jakobson, Roman O. 1973. *Essais de linguistique générale. Vol. II. Rapports internes et externs du language.* Paris: Les Éditions de minuit.

Karjalainen, Toni-Matti. 2007. "It Looks Like a Toyota: Educational Approaches to Designing for Visual Brand Recognition". In: *International Journal of Design, 1(1),* 67-81. Available online at http://www.ijdesign.org/ojs/index.php/IJDesign/article/view/43/14

Lane, Richard. 2000. *Jean Baudrillard: Rutledge essential thinkers*. London: Taylor and Francis

Lefebvre, Alain (1989). The decorative truck as a communicative device. *Semiotica 75 (3/4),* 215–227.

Lotman, Yurij M. – Alexandre Mosjejevič Pjatigorskij. 1969. "Le texte et la fonction.". In: *Semiotica*

Lotman, Juri (ed.) 2002. = Лотман, Юрий Михайлович (ed.). 2002. *История и типология русской культуры* [history and typology of Russian culture]. Санкт-Петербург: Искусство.

Lotman, Mihhail 2002 = Лотман, Михаил 2002. Семиотика культуры в тартуско-московской семиотической школе [*Cultural Semiotics in Tartu-Moscow School of Semiotics*; In Russian] In: Lotman, J. 2002: 5–20.

MacCallum, R. C., Widaman, K. F., Zhang, S. B., & Hong, S. H. (1999). 'Sample size in factor analysis'. In: *Psychological Methods, 4*(1), 84-99.

MacCallum, R. C., Widaman, K. F., Preacher, K. J., & Hong S. (2001). Sample size in factor analysis: The role of model error. *Multivariate Behavioral Research*, 36, 611-637.

Minato, Saburoh. 1983. "Some mathematical attitudinal data on eight grade students in Japan measured by a semantic differential". In: *Educational Studies in mathematics.* (14). 19-38.

Mick, David Glen – James E. Burroughs – Patrick Hetzel – Mary Yoko Brannen (2004). "Pursuing the meaning of meaning in the commercial world: An international review of marketing and consumer research founded on semiotics". In: *Semiotica* 152–1/4 1–74.

Mortelmans, Dimitri. 2005. "Sign values in processes of distinction: The concept of luxury". In: *Semiotica* 157–1/4. 497–520.

Osgood, Charles. "Semantic Differential Technique in the Comparative Study of Cultures". In: *American Anthropologist*, New Series, Vol. 66, No. 3, Part 2. 171-200.

Osgood, Charles. (1981). "The cognitive dynamics of synesthesia and metahphor". In: *Review of Research in Visual Arts Education*. Vol. 7, No. 2(14), 56-80.

Porphyrios, Demetri (1997 [1983]). "Classicism is not a Style". In: Charles Jencks and Karl Kropf (eds.) *Theories and Manifestoes in Contemporary Architecture*. 179–81. Chichester: Academy Editions.

Poster, Mark. 2001. (ed.) *Jean Baudrillard: Selected writings.* Stanford: Stanford University Press.

Poster, Mark. 2001. "Introduction". In: Poster (ed.). 1-9.

Solomon, Odile (1988). "Semiotics and marketing: New directions in industrial design applications". In: *International Journal of Research in Marketing 4 (3),* 201–215.

Solomon, Odile (1992). "Aesthetic references and cultural representations". In: *Objects and Images*, S. Vihma (ed.), 146–158. Helsinki: University of Industrial Arts.

Umiker-Sebeok, Jean (ed.) (1987). *Marketing and Semiotics: New Directions in the Study of Signs for Sale.* Berlin: Mouton de Gruyter.