Product semantics meets the user: A Design workshop with a fresh look to an old paradigm

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Abstract:
The article is about how Product Semantics, as an old paradigm of design, can be reevaluated to have a broader look to include a user-centered approach. In this attempt, a workshop held in ITU, Department of Industrial Design was taken to exemplify the potentials of this new approach.

The main focus of this paper is to test the possible extensions of the seven semantic categorization of Burnette (1995) and see how "useful" it is in order first to analyze the users' connection with their material world; and second, ideate the data gained from this analysis into more concrete design concepts. This was tested in an educational exercise as a controlled practice.

This paper presents a small workshop performed together with graduate students of Industrial Design in Istanbul Technical University to see how those possible extensions of methods or approaches can reach the desires, wants, and perspectives of user by using only the main categories that Burnette presented years ago. This exercise tries to transfer an old paradigm of design, Product Semantics, into a new and fresh one with a new look to the users, how they see their material world and how a designer can extract new clues about design with an approach similar to design ethnography.

Keywords: Design, product semantics, user-centered design, design education

1. Introduction
The literature of Product Semantics uses a fairly old paradigm structured on linguistics with an understanding that all cultural phenomena are structured like language. It focuses basically on the representation of functions and values carried together with the product. It is based on a tradition of communication studies that extends and transfers the structure of language into all cultural phenomena such as advertising, film and objects.

It has emerged in the early 1980s, highly affected by the growth of microchip technology, that allowed for the miniaturization of the internal parts of electronic goods. Henceforth the form of such products did not have to be so tightly determined by their internal workings (Julier, 2008). In other words,

these developments opened a new scope of symbolic representations and interventions on product design, devoid of its technological and formal constraints. This was a starting point of a new paradigm to interpret material world in a purely linguistic and semiotic environment.

However Product Semantics derives from the concepts and the understanding of semiotics as an area of study; it has fundamental and almost existential differences. As Krippendorff criticized the perspective of semiotics in his book "The Semantic Turn" (2006), Product Semantics has some instrumental aspects, especially with its relation to the agent of user, that semiotics lack. He explains his argument with the primary sub disciplines of classical semiotics that are syntactics, semantics and pragmatics, as introduced by Morris. In syntactics, as a study of relations between signs, according to Krippendorff, there is a reality in which humans do not exist or even are not allowed to enter. Secondly; semantics, defined as the relations between signs and the objects they refer to or signify, constructs a reality independent of the sign users. Even the third category, pragmatics as the relationship between signs and their users, seems to suggest the existence of the concept of user, the way the sign users are acknowledged is without conceptual participation and without creativity (2006:276).

Similarly, Väkevä (1989) criticizes semiotics when it is applied to material objects, because objects cannot be reduced to mere signs without losing their material reality. Therefore, design, for him, as the creation of these objects, "is not just a representation of ideas, but something very tangible in our daily life." (Väkevä, 1989:9)

The problem of trying to explain everything with abstract concepts in semiotics seems to continue in most of the studies of Product Semantics, because it is coming from the same tradition of thought. In this literature the concept of user is regarded as an important agent of design in general, but not taken in its specificity as a real individual with his/her desires and personalities. However much the mainstream literature of Product Semantics gives importance to the subjective choices of the individual users, most of the studies in the literature of Product Semantics depend only on the mind and experience of the designer in design process and have a limited relationship with the user. Especially compared to the more recent methodologies like design ethnography, which originated from anthropology and sociology, we can see how dominant semantic approach is in the making use of more abstract and objective linguistic structures, rather than real subjective needs and choices of the potential users.

In design ethnography, there comes the terms like "deep hanging out" by participant observation with end users in their own environments and becoming part time anthropologists; so the patterns, customs and attitudes of people are revealed (Salvador, Bell and Anderson, 1999). However, Product Semantics is a study performed in a more "sterile" and designer based environment. In one of the oldest studies on Product Semantics, Giard defines Product Semantics as "study of meanings, but as they are communicated in manufactured objects. In a similar way to the written language, product semantics uses a kind of alphabet, … line, colour, shape, form and texture (Giard, 1990:1)." What is understood from this definition is this area of study is based also how communication occurs in and among

the components of the object, rather than how people/users communicate with it.

As known by those familiar with the literature of Product Semantics, the famous motto of Krippendorff is "Design is making sense of things" (1989). However, connected with this motto, there comes questions like: "How design makes sense?" and "whose sense is this sense?" The question of "how" converts the focus of semantics closer to the area of ethnographic approaches about the user and the question of "whose sense" can be answered by an understanding that is much closer to the area of user centered design.

One of the old studies that examines the user side of Product Semantics is Burnette's article titled ''Designing Products to Afford Meanings'' (1995). Burnette, in the beginning of his article, says: "not enough has been done to develop ways to establish expressive intent in a product or to assess how that intent is understood by those who consider or use it" (Burnettte, 1995:120). In his study he offers a categorization of seven dimensions of Product Semantics connected to the subjective aspect of design: emotional, empirical, cognate, contextual, functional, evaluative and cultural semantics.

In the first section of the paper, Burnette defines the content of each category and in the second part he presents each category in the context of possible methods to be used in the design process to develop together with the potential users of the products. In that sense, Burnette's study on Product Semantics does not stand in a purely theoretical paradigm. This methodological account of the study presents a framework to be testified in different contexts and occasions. Even though Burnette presents different methodologies to extend the scope of each category in the paper, he doesn't present any case study that applies one of those methodologies. The only attempt is a concept design of a fan designed by him simply to exemplify how each category becomes visible on a product, but it definitely is not an outcome of a study held together with potential users, so it contradicts to what he claims throughout his paper.

The main focus of this paper is to test the possible extensions of the semantic categorization of Burnette and see how "useful" it is in order first to analyze the users' connection with their material world; and second, ideate the data gained from this analysis into more concrete design concepts. An educational exercise seems to be a good start to do that.

This paper presents a small workshop performed together with graduate students of Industrial Design in Istanbul Technical University to see how those possible extensions of methods or approaches can reach the desires, wants, and perspectives of user by using only the main categories that Burnette presented years ago. This exercise tries to transfer an old paradigm of design, Product Semantics, into a new and fresh one with a new look to the users, how they see their material world and how a designer can extract new clues about design.

2. The brief of the workshop
The workshop was held in a graduate course titled "Product Semantics" at Istanbul Technical University. The course is a theoretical one based on student presentations of the readings stemming from the basic texts of

semiotics to advertising analysis by Williamson (1978) and Product Semantics by Krippendorff (1989, 2006), Vihma (1989) and Väkevä (1989)). Burnette's article is paired with readings by Vihma and Väkevä to see how the scope of semantic approach to products can expand. In his study, the seven semantic dimensions he offered were "useful" to analyze the existing material objects with a variety of different views.

Those dimensions were evaluated in the same "Product Semantics" course two years ago with a different view. Students were required to choose one single object (preferably their favorite object) and analyze the object by using the semantic structure given by Burnette. Their capability to understand the definitions and the content of each category was tested in their analysis. Each student's work was interesting by its own standards; however the resulting analyses were limited because all of the analyses was based on the subjective repertoire and thoughts of the analyzing person him/herself. Because of this limitation, the new brief was given in a different manner in the next time and associated with a class exercise, namely the semantic workshop.

Before the workshop, students are first given some papers about Products Semantics (Including Vihma, Väkevä and Burnette) and they presented these readings in the class before the workshop was performed in order to understand and have a critical account on the existing literature of Product Semantics and a chance to discuss different approaches. Following the week of presentations, they are required to bring an object of their own, which they like, dislike, or with which they have some form of a strong feeling.

In the class exercise, students are divided into groups of two and they are required to ask questions of each other about the object they brought. As mentioned before, the questions are structured based on the categorization that Burnette presented in his paper: emotional, empirical, cognate, contextual, functional, evaluative and cultural semantics.

Burnette's semantic categorization can be summarized as follows (Burnette, 1985:121-122):
Emotional Semantics: meaning derived from remembered experience; e.g., distaste, pleasure, delight, an aesthetic experience, a childhood fall, etc.
Emprical Semantics: meaning derived from direct experience; e.g., glare from a light, a new face, a color, a soft object, a name, etc.
Cognate Semantics: meaning derived through abstract association; e.g. car as animal, eye as camera, car as horseless carriage, etc.
Contextual Semantics: meaning derived from the situation of the referents based on orientation, groupings, circumstances, interactions, communications, etc.
Functional Semantics: meaning derived from making, doing, using, affordances; e.g., a closed door, a hinge, exerting pressure, operating, etc.
Evaluative Semantics: meaning derived through comparison, judgments, tests; e.g, heavier than, better than, good, habitual, more efficient, etc.
Cultural Semantics: meaning derived through social experience, norms; e.g., rituals, traditions, languages, laws, conventions, etc.

However, apart from these main descriptions, students were not limited with the approaches, suggestions, or the design methods Burnette had given in the paper, but the descriptions of each category are kept as a source of

inspiration for the workshop. The primary aim of this exercise was to collect as much data and clues as possible in order to understand the nature of the relation of the person with his/her object specifically and with the material culture in general. The second aim of the exercise was to test the ability of the student to extract design ideas stemming from the raw data collected from the categorical approach of Burnette.

Three hours of classroom workshop was reserved for the gathering of the data by the interviews of the partners with each other. The second part of the research was required to be performed at home. In that part of the study, they were required to design or ideate a flash disk inspired from the data gained during the workshop. The reason why a flash disk as an object of design was chosen is its abstract potential to carry different forms and accordingly different semantic dimensions on it freely, because it doesn't have a natural connection to a specific form like a wheel or plane. So, it seemed to be a good basis from which to inscribe the semantic attributes that resulted from the workshop.

3. The process and the results of the workshop
In this section, the whole process of the workshop and some of the resulting design ideations will be narrated and documented. Five different design ideations were made out of the process of semantic workshop by five different students and each of them was designed with a different focus that manifested the scope of different approaches and methodologies created and used. However, only three of the semantic process will be presented here because they exemplify different approaches in analysis and design and also they are more successful in terms of process and design compared the other two. The amount of the sampling can be seen as insufficient, however, this kind of sampling seems more suitable for an approach which is more qualitative, descriptive and in-depth, in order to discuss the details and different motifs why people feel attached to certain objects and how these motivations can be converted into brand new design ideas.

Three couples of students were constituted in order to make a reciprocal study of the analysis and design for each other. The instructor of the class was also interviewed as part of one of the groups to complete the even number of couples.

Group I: Esra Bici – Ebru Deniz
Group II: Ekin Birol – Deniz Yatagan
Group III: Mert Ozcan – Humanur Bagli

The workshop session started with the directions for the process. Students were already familiar with the text of Burnette and had a critical account of the area of Product Semantics theoretically before they came to the class by reading other text materials about the same area of study.

In this part, different meanings afforded by each of the objects students brought were discussed according to Brunette's (1995) seven dimensions of Product Semantics. The data gained from the personal interviews and some general clues were gathered under every dimension of the Product Semantics in order to help find criteria for the design ideation. The following is the documentation of the interviews and activities performed during the

workshop and the results of the design ideation process together with how the links between the survey and design were connected.

As Mert Ozcan, one of the students in the class explained in his report, students try to figure out the user's aesthetic taste, functional and behavioral expectations as well as her memories and dreams. Then they try to capture these elements and melt them in a pot forming the essence of another object. Briefly, what the user tells about an object was converted to another one with a totally different function, with the help of the representational methods of Product Semantics studies. Finally the outcomes of this study were transformed into an object that is well perceived and accepted by the user.

3.1. Group 1: Esra for Ebru
The student that Esra interviewed was Ebru. Ebru has chosen a specific Levi's wrist watch as an object of analysis (Figure 1). After the survey, Esra extracted some general clues about Ebru's orientations and tendencies. Referring these clues, the ways for designing of a memory stick for this user are considered and sketched.

Figure 1. *Ebru's wrist watch*

Figure 2. *Classical Haci Sakir soap bar*

3.1.1. Seven semantic dimensions of Ebru's watch
Esra summarized the interview she made with Ebru during the workshop session based on the semantic dimensions of Burnette as follows:

Emotional Dimension
As described earlier, this dimension includes the meanings derived from remembered experience and it is based on personal sensibilities. For Ebru, first of all, this watch is precious because it is a present from one of her close friends. Also, it is a pleas urable product for Ebru by means of its design and interface. The design is refined and minimal without any ornaments, an aspect which she likes. The interface is also simple; in the daytime, the images of growing flowers appear; and in the night, stars appear. She especially likes the stars.

Empirical Dimension
This dimension includes the meanings derived from direct experience based on perceptions, description and recognition. For Ebru, her watch means lightness, softness and doesn't make her sweat. The watch is so light that she doesn't even feel that she is wearing something on her wrist, a detail she enjoys because she doesn't normally like to wear accessories on her

body, fingers, wrist, etc. As she thinks she was grown up resistant to cold weather since her birth and also she thinks that she has a higher body temperature than normal people, wearing accessories makes her sweat, especially in the summer.

Cognate Dimension
Following the meanings derived from abstract association based on metaphors, analogies and relationships, this watch has some abstract associations with different objects for Ebru. First, the body of the watch resembles a Hacı Sakir soap bar for Ebru, a classical and traditional Turkish soap brand specialized in bath soaps and presented as a part of Turkish Hamam culture (Figure 2). The watch is white and planar just like the soap and has approximately the same volume and dimensions. It is a positive association for her because she likes the idea of being clean. Carrying soap on her wrist was a nice feeling for her.

Another association of the watch is the analogy with the Apple style. She thinks there is a resemblance between her watch and Apple products in general. Again this was a positive metaphor because she liked Apple products and their simple, minimal design. She would buy a MacBook if she had money, she said.

For her, this watch also resembles a refreshing mint candy. The blue light on the interface is a cool blue, which creates the impression of refreshment and coolness. This is very pleasurable for her because as mentioned before, she often needs to get cool and refreshed. Therefore, this blue light makes her feel like that with the analogy of a mint candy.

In this section, Ebru is asked to create a story about what this watch meant for her so that Esra can make metaphorical and symbolic associations with the product. The story of Ebru is as below:

'I was going to Bursa to eat Iskender Kebap by bus. The bus stopped for WC and other needs. I went to the WC and afterwards while I was washing my hands with Hacı Sakir soap, the soap bubbles were making a wrist watch on my wrist. The bubbles were glittering under the white lights of the WC in the night. The face of the watch got colored and lightened. Then I got on the bus and arrived at Bursa. After eating my Kebap, I touched my watch and my clean hand. The watch continuously created soap bubbles. I never wash my left hand (on which I wear my watch) as the soap bubbles are very light and refresh me. In the end, I compress the bubbles into a plastic container to protect them and wear it on my wrist.'

The analogy between the watch and the soap is very dominant and meaningful for Ebru. This derives from the cleanliness and hygiene concerns of Ebru. In fact, with this story, further clues are hardly found but it is understood that especially keeping her body clean outside really matters for her.

Contextual Dimension
This dimension is about the meanings derived from the situation of the referents based on orientation, groupings and circumstances. It refers to the meaning that exists within the context of the usage of the product. This watch has a meaning of being worn in specific circumstances and occasions. For example, she wears the watch only if it matches her clothes.

Also, she doesn't wear the watch when she wears something with long sleeves. In the summer, she only wears it at night. However, even this light watch is not light enough for her to wear on summer days when the heat makes her uncomfortable.

Functional Dimensions
"Functional Semantics" covers the meanings derived from making, doing and using based on behaviors, skills and affordances. Ebru uses this watch in limited time and circumstances but when she wears it, she can use it effectively as it has a basic interface, it is easily read, light in weight and doesn't make her wrist sweat. The flashlight feature of the watch is important for Ebru and creates another functional meaning for her. Also, this watch has a meaning derived from its usage as an accessory for Ebru. She doesn't very often wear accessories but wears this watch as one.

Evaluative Dimension
As the set of meanings derived through comparison based on judgments, measurements and valuations, for Ebru, this watch is lighter, easier (to read) and makes her sweat less than other watches. These are also the reasons why Ebru chooses this watch to wear. As the other watches in her life are heavier, more complicated and make her sweat more, she doesn't really have a habit of wearing watches. But she can wear this one.

Cultural Dimension
Based on traditions, human behaviour, trends and collective experience, it can be seen that Ebru doesn't belong to a 'time conscious' culture as she doesn't always wear a watch and takes it off when she sweats. She thinks that wearing a watch makes her stressed because she always feels the need to catch up with or get ready for something. So she tends to live on her time. She doesn't always like to be aware of time.

For Ebru this watch also signifies the Apple style and products. Apple is a legend for her in the world of computers. She thinks, Mac users underestimate the PC users. There are fans of Mac and Mac users sometimes degrade PC users. And the Apple Company tries to create an image that more sophisticated and visionary computer users prefer Mac rather than PC. This image is supported by its timeless and refined design. So in the computer world, Ebru says that there is the dominancy of this Mac culture. And for Ebru, this watch signifies that culture and style. This is also a positive signification because she really likes Mac products with its simple, clear and easy design.

Actually, this watch is a Levi's watch. But for Ebru, it doesn't signify Levi's culture. This is again a positive situation for Ebru, because she is not fond of Levi's culture and products.

3.1.2. Design ideation for Ebru
Esra highlighted some of the clues, concepts and words she found that she thinks will be helpful in her design process, based on her interview with Ebru, and summarized them as follows:
- simplicity
- light effects on screen
- lightness (when worn on the body)
- softness (when worn on the body)
- dislike of hot weather

- dislike sweating
- dislike carrying something on her body.
- hygiene
- Mac style
- refreshment
- cool blue lights
- soap form
- mint candy and refreshment
- harmony between accessories and apparel.
- simple interface
- flashlight
- live on her time
- dislike Levi's style and culture.
- glittering lights
- keeping up hygiene outside of the home

Esra, with a very systematic approach, ideated two different designs by emphasizing different concepts derived from the data she obtained from her survey. In this way, she proved that her methodological approach has the potential of variety in design, as well as creativity.

The first design she sketched was presented here to illustrate how Esra turned abstract and more material concepts into design. It is inspired mainly by the concepts of cleanliness and the form of soap. The significance of soap form to hygiene and cleanliness is very dominant as a consideration in her user's study. The nice feeling of having a soap-form product had been emphasized several times through the interview. So, as a designer, Esra decided to come up with an idea of a soap-like memory stick for Ebru (Figure 3).

Figure 3. *Soap-like memory stick*

The memory stick is designed for Ebru based on the rectangular prismatic form of soap (Ebru's analogy to Hacı Sakir soap). Esra thought that Ebru may also feel refreshed by an elliptical and curvy form of soap. But clues about this type of soap are stronger than other types of soaps and it has also a typological analogy with the Apple products that Ebru likes.

For the text engraved on the body of the device, written 'Data Traveler', the user's story about "trying to keep her body clean outside home" was taken as a clue. In the story, Ebru was very happy about carrying the soap bubbles

compressed in the plastic box on her wrist, in her story. In a similar metaphorical bond, she can carry the compressed information in this plastic box wherever she goes.

In the soap production technology, the texts are formed by molds making them embossed or carved. In this memory stick design, the text on the body also looks carved to support and strengthen the analogy of the soap.

The soap-like appearance was considered while designing the cap, too. The cap looks like a smaller bar of soap than the body. It has rounded edges and a similar form as a part of the whole. When the cap is closed, the memory stick looks like two bars of soaps in different dimensions (Figure 4).
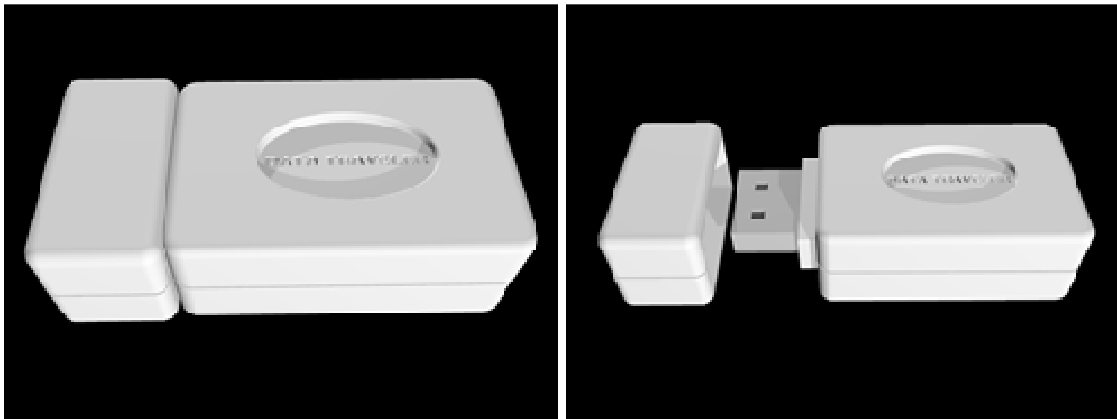

Figure 4. *The cap and the body*

3.2. Group II: Ekin for Deniz

Deniz, the student that Ekin interviewed, brought a key ring that was a gift from her brother. Ekin made an analysis based on the clues he found from this object by asking questions about it following the basic structure of Burnette (Figure 5)

Figure 5. *Deniz's key ring*

3.2.1. Seven semantic dimensions of Deniz's key ring
The thoughts of Deniz about her key ring as Ekin interviewed her based on the semantic dimensions can be summarized as below:

Emotional Dimension
The key ring is a gift from her younger brother, so it recalls memories about their common lives. Deniz thinks it is an emotional bridge with her brother and whenever she looks at this device she remembers her brother.

Empirical Dimension
The product functions as a key ring or a simple hanging lock. But, it is an item, which has a formal affordance to be played with. However, because the phases of the key ring are fixed, Deniz thinks that user involvement with the item is low. She prefers more user involvement in her objects.

Cognate Dimension
For Deniz, it dictates certain stereotypes of gender; because it works with the principle of completing the different parts of the images of human figures by turning small wheels of the object on each other, like a boxer, a woman etc. As an object category, it resembles a luggage lock, rather than a classical key ring, so it can be regarded as a metaphorical object.

Contextual Dimension
It is bought from a shop that sells playful items, so its playful aspect is dominant. It was designed at the same period with three dimensional puzzles, as a part of the same culture.
Deniz thinks, without its contextual environment (especially keys), the legibility of the product is reduced. That's one of the things that make this object original and full of surprises.

Functional Dimension
From the functional point of view, the user can easily understand how to use it, because it has the same typology with the luggage locks. The wheels are easy to turn and engraved lines make turning the rings with the pictures easier. It has a large chain, so many keys can be carried at once. It is durable because of its material (metal). Durability is important for Deniz with its relation to the strong bond with her brother. It has different phases of usages, that make it richer in the sense of functionality.

Evaluative Dimension
It is flexible compared to similar items because of its elastic texture of the chain.

It is simple but more attractive compared to other key rings because of its playfulness aspect. It is more user-involved than classical key rings with one type of usage.

Cultural Dimension
The figures engraved on the metal are derived from a cultural stock, because the figures are selected from the symbols of social status, sexual identity and social types. Completion of classical figures of woman, man, boxer etc. makes the key ring's opening possible. In this way, it emphasizes the clichés of gender and identity with a small mechanism. This is an aspect which Deniz doesn't like about the object. However, the metal and

prestigious look of the object creating a luxurious effect for Deniz, is a cultural quality which she likes.

3.2.2. Design ideation for Deniz

Ekin highlighted some dominant keywords and concepts that can be generalized in order to sketch a new object of design for Deniz. He ideated a flash disk following these keywords:

- family bonds
- recalling memories
- simple, but attractive
- user involvement
- playfulness
- surprises
- durability

Ekin's project is a simple flash disc with a cylindrical shape similar to the key ring Deniz likes, but its emphasized significance and connection with the values Deniz stated in her interview becomes visible only when it is connected to a computer. The hidden picture of a person you love (because of Deniz's attachment to her relatives like her brother) appearing when attached to the computer carries the factors of surprise, playfulness and recalling memories (Figure 6).

The project Ekin ideated from the concepts and keywords of Deniz's interview, transformed the idea of playfulness from the key ring into the context of computer use. It was successful in the sense that he evaluated the concepts not as a source of mere visual and aesthetic data, however as a basis for the scenario of use, or the ritual. The way he connected the ideas of family bonds, simplicity and playfulness could be regarded as a good distillation of the analysis from the data gained.

Figure 6. *Ekin's flash disc design*

3.3. Group III: Mert for Humanur

Mert made an interview with Humanur, based on a metal box she uses in her office for carrying tea bags, as one of her favorite objects at her working environment. Mert based his ideation of flash disc on the brief concepts on ideas and principles of Humanur that she mentioned during the interview about this specific object (Figure 7).

Figure 7. *Humanur's metal boxes*

3.3.1. Seven semantic dimensions of Humanur's metal box

Mert summarized the highlights of the research he did with Humanur based on the semantic dimensions of Burnette as follows;

Emotional Dimension
Humanur has a background in arts and design. Based on the questions about her daydreams and childhood memories, she says she used to and still spend most of her time painting and drawing. So, she thinks that she has a certain connection with this kind of past when choosing this object, especially the graphics printed on the box, which resembles to the children's pictures.

Empirical Dimension
She said she didn't like the sounds of metallic objects, however, dominancy of white and other basic colors, filleted edges, simple and primitive forms and graphics are desirable for her. This box reminds her of metal industrial lamps and trashcans as cult objects.

Cognate Dimension
For this part, Mert asked Humanur to tell a tale about the given object to capture the imagination style of her and metaphorical bonds she has about the product. Below is the summary of the story:

"...there's this hidden treasure that everybody's looking for in the village. They talk about a secret map that shows the place of the treasure and one day, a huge white metal box comes to the village, rolling around the town

through the narrow streets. The noise is unbearable. The folks of the town don't enjoy this newcomer as it makes this terrible noise. Children and their parents all start to throw stones and mock this poor creature. As they scratch the all-white surface of this box, however, out come some drawings that, when inspected closely, is recognized as the one and only secret map of the famous village treasure. Most of the people leave the town to in quest of this treasure and only a handful of those who think it is not fair what they did, stay with the box and try to heal it and be friends with it. As the days go by, the box opens itself (!) and reveals the real secret map of the treasure only to those who cared about the box. In the end, only those who cared about the box reach the treasure and those who left, found themselves in a big giant metal hole that they wouldn't be able to leave forever..."

This story is an outcome of a process of free association, and the act of personalization going on here was used as a source of inspiring keywords for the final design ideation.

Contextual Dimension
The box has a special place in her office. Whenever she thinks about tea, she remembers this box. It is a part of her ritual of drinking tea, when she gives a break in the class, or while she is working. She also regards it as a part of her resistance to the cafeteria which sells relatively expensive tea in the university she works in. Because the user's roommate doesn't use this object, she perceives it as a personal item. If the box wasn't present in the room, the user would feel the absence of it and the room would loose some aspect of its identity.

Functional Dimension
Humanur tells that; when closing the lid, there's a necessity to hold the box upwards which is a negative experience. The hinges and metal sound is absolutely not nice for her. The box would be better made of wood or a combination of wood and metal. There's a high tangible quality of the product. The proportions match well to hand ergonomics. The on/off state is not very clear. She cannot tell if the box is open or closed at the first look. She's annoyed with these analog in-between states. She wouldn't put food or beverages in the box. She wouldn't put anything that would make the metallic noise of something rolling on the metal of the box. She likes that there's no transparent part in the box. There's a surprise factor for what is left in the box. She also likes indexed pieces.

Evaluative Dimension
Humanur mainly made these highlights about the box when compared to other objects and experiences:

- The box is light in comparison with her heavy handbag.
- More compact when compared to the wider and plastic teabag box at home.
- Opaque, heavy, graspable and non-fragile.
- No feedback on the on/off state when compared to her other wooden handmade box at home.
- The surface graphics are nice but not very meaningful compared to the same wooden box at home on which a very nice engraved pattern is completed when closed.
- The geometry and the proportions are nice, simple and functional. She wouldn't like it if it were a rounded object.

Cultural Dimension

It signifies Scandinavian design as a design conscious culture. She likes IKEA and Swedish objects in general, because she finds them simple, functional, designerly, pleasurable and elegant.

3.2.2. Design ideation for Humanur

After Mert had a solid understanding of the Product Semantics about the given object, he tried to map these semantics onto another object, a flash disc device, designed solely for the user. The previous study of the design semantics led to a comprehensive user study and formed the basis of the design of the second object (Figure 8).
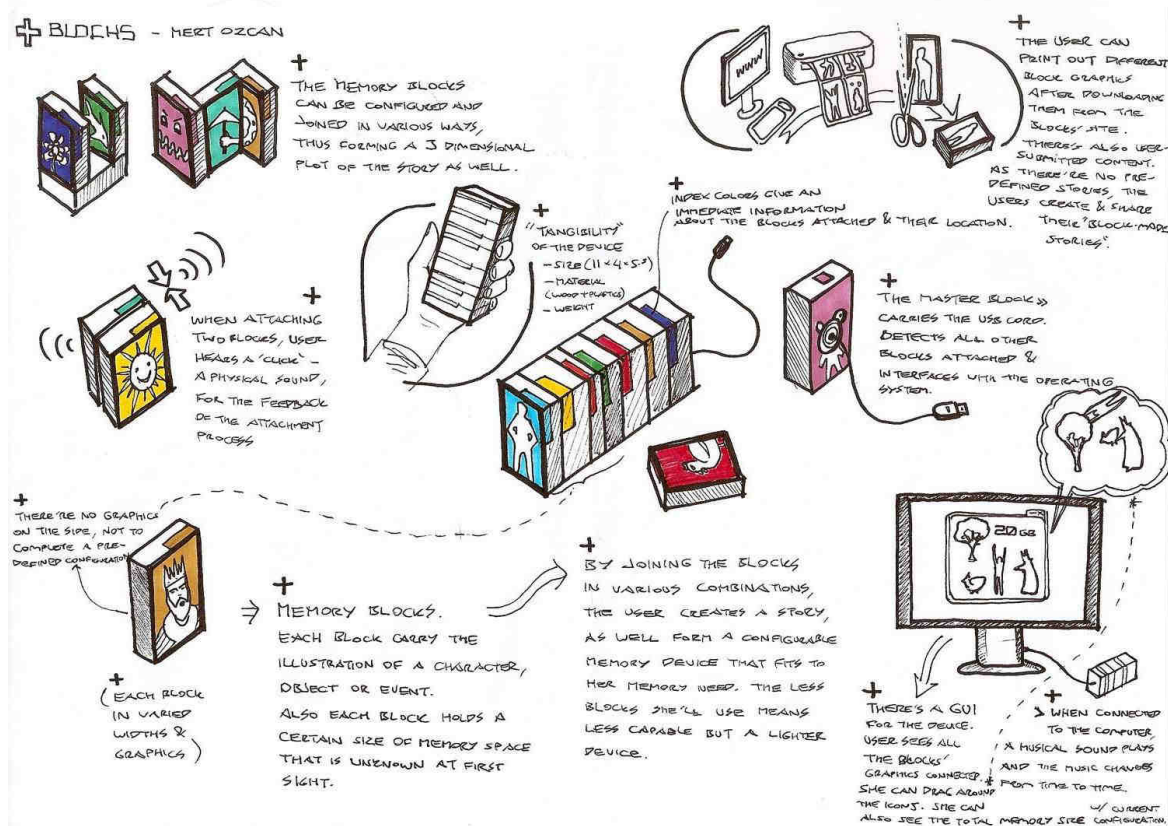

Figure 8. *Mert's ideation of flash disc*

Doing that, he highlighted these concepts and motives from his survey:
- simplicity,
- primitive form,
- basic colors,
- illustrations,
- high 'tangibility' factor, triggering the user's desire to hold and grasp it,
- action of manipulation,
- creating and playing,
- the object would hide something; an artifact or information of some sort,
- being a personal object not to be used by others,
- clear on/off states,
- dislike of metal sound,

- surprise factor,
- stackable, indexable,
- timelessness.

Rather than a classical one-piece flash disc, Mert designed a set of blocks that can be attached to each other, carrying different kinds of information on each piece. So the significance of the product does not only derive from its individual existence, but also relations with the other units, parts, computer and even the software on the computer as a part of a wider scenario. He made use of a variety of remarks and concepts that Humanur mentioned during her interview, such as tangibility, simplicity, playfulness etc., when designing it.

Like Ekin's USB device, Mert's project makes a point about usage as a ritual, because its main focus is not the form of the product, but how different modules are gathered to create a scenario of use. However, Mert's product has direct references to Humanur's remarks about the physical attributes like the geometry of the product, sound, color and tactility, (basic geometric shapes, graphic style, the sound of "click" etc.), the scenario part is more dominant.

The project developed for Humanur is also unique in the way that it is sensitive about different sensorial data extracted from the survey, because it used the data obtained not only directly from the object examined, but also how the interviewee expressed herself during the interview. The variety of the methodologies facilitated during the workshop can be seen as an advantage here. It was observed that the Humanur is a person who likes to express her feelings and ideas in the form of narratives. So, the emphasis of the narratives was facilitated as an aspect of design in the ideation and design process, as well as the data obtained from the remarks made about the semantic dimensions.

4. Conclusions

As a daily exercise, the workshop can be seen as a small illustration of how good old Product Semantics can be reevaluated as a new methodology with a direct relationship with the individual users. The one-to-one relationship of the researcher/designers and the potential users resulted in a process with rich data and original design ideas with different perspectives. Even the type of the final design object was an object with the same function for each group, storage of digital data; both the methodologies used in the research and the resulting ideations and sketches radically differed in terms of their forms, scenarios and approaches. This outcome itself can be seen as an initial sketch for the future prospect in design methodology.

However much user-centered approach dominated the general process of the study, the method used in the exercise was based on the principles of assigned meanings, or semantics. In other words, the sources and the concepts of the projects are derived from what users tell us, but in the transformation of the data into design, semantic representation (even semiotic) methods, like metaphors, analogies etc. are employed. So, it can be placed between the domains of semantics as a part of nominalistic philosophy and ethnography as a part of the paradigm of realistic philosophy, as different epistemological categories (Väkevä, 1989). This in-between-ness can be the source of the variety of the results of the activity,

stretching from pure formalistic and aesthetic interpretations (like the flash disk designed for Ebru) to the more scenario-based abstractions and metaphorical connections (designs for Deniz and Humanur).

It has also been observed that, seven semantic dimensions as put by Burnette, gave a chance to the potential users of the products to talk about their formal and functional choices as in the categories of functional and evaluative semantics, fantasies and desires when talking about cognate and emotional dimensions. The most important aspect of this session is people had a chance to express themselves in a way that they normally don't have courage to.

As an educational exercise, it was observed that, such workshops also have the power to introduce theory with practice and help understand and discuss the paradigmatic nuances found in different approaches to design. Also, working in pairs created the chance to be able to feel and understand the needs of each of the individuals in the group and emphasize the empathy, one of the main motives of participatory ethnographic methods.

Finally, considering the semiological "language/speech" dichotomy, such exercises with both a strong structure and also subjective richness creates a good tension to speak as various dialects as possible of the visual language of design.

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**Ürün anlambiliminin kullanıcı ile buluşması:
Eski paradigmaya yeni bakış getiren bir çalıştay**

Ürün Anlambilimi literatürü, temelleri göstergebilime dayanan, tüm kültürel görüngülerin dil gibi yapılandığını öngören bir paradigmadır. Dil, soyut bir farklar sistemi olarak görüldüğünde, dil sistemine bağlı göstergebilim ya da anlambilim gibi

nesnel yaklaşımların kullanıcı ve özne odaklı tasarım yaklaşımlarından belli ölçülerde farkları olduğu görülecektir.

Ürün Anlambilimi çalışmaları, genel anlamda 1980li yıllarda elektronik teknolojilerinin gelişmesi ve ürünlerin elekronik iç aksamlarının küçülmesinin etkisi ile doğmuştur. Ürünlerin biçimsel yapılarının içlerinde yer alan parçalarla bağlantısının kopmasına dayalı olarak, tasarım sürecinde biçimsel çalışmalar daha özgürleşmiş ve biçimin temsil ettiği anlamların biçim diline atanması konusunda yeni çalışmalar geliştirilmeye başlanmıştır (Julier, 2008).

Krippendorff'un ünlü sloganı olan 'Tasarım, şeyleri anlamlı yapma etkinliğidir' (1989) cümlesinin üzerine dayandırılabilecek bazı temel sorular bu çalışmanın ana tartışma zeminini oluşturmaktadır: 'Tasarım nasıl anlam oluşturur?' ve 'Bu anlam kime aittir?' gibi sorular Ürün Anlambiliminin odağını sosyal bilimlerin antropoloji, sosyoloji ve etnografi gibi alanlarına kaydırırken, 'kime ait' sorusu ancak kullanıcı odaklı tasarıma yakın bir anlayışla cevaplanabilir.

Bu makale, İTÜ Endüstri Ürünleri Tasarımı bölümü yüksek lisans öğrencileri ile yüksek lisans dersi kapsamında gerçekleştirilen bir çalıştayı merkeze almaktadır. Bu çalıştay, Burnette'in Ürün Anlambilimi literatürü içinde yer alan bir makalesinde önerdiği yedi farklı anlam kategorisini kullanmaktadır (1995). Burnette çalışmasında, kullanıcı odaklı bir anlambilimsel yaklaşımın gerekliliğinden söz etse de, bununla ilgili somut örnekleri ve gerçek kullanıcılar ile yapılmış çalışmaları gündeme getirmemektedir. Bu çalışma, Burnette'in getirdiği kavramsal ve metodolojik çerçevenin kısıtlanmış bir ortamda da olsa deneyimlenmesi ve açılımlarının gözlenmesi üzerine bir pilot çalışma olarak da değerlendirilebilir. Diğer bir deyişle bu pilot çalışma, tasarımın 1980li yıllarda ortaya çıkan görece eski bir yöntemsel paradigması olan Ürün Anlambiliminin kullanıcılarla ve kullanıcıların dünyayı nasıl gördükleriyle ilişkili olarak deneyimlenmesi olarak da görülebilir.

İTÜ Mimarlık Fakültesi, Endüstri Ürünleri Tasarımı bölümünde "Tasarım Anlambilimi" isimli yüksek lisans dersi kapsamında gerçekleştirilen bu çalıştay, öncelikle temelini Burnette'in makalesinden alan bu kuramsal çerçeveye dayalıdır. Çalışma, öğrencilerin Ürün Anlambilimi ile ilgili olarak diğer kaynakları da inceledikleri ve değerlendirdikleri kuramsal bir süreç ile başlamıştır. Öğrenciler, çalıştay öncesindeki bu süreçte Göstergebilim ve Ürün Anlambilimi ile ilgili bazı temel makaleleri okuyup, ders ortamında sunarak bu alana ilişkin farklı yaklaşımları tartışma şansı bulmuşlardır. İkinci aşamada, bu makalelere dair sınıf içi bireysel sunumlardan sonra kendilerinden, yapılacak çalıştayda kullanılmak üzere, sevdikleri ya da sevmedikleri, ama bir biçimde güçlü bir his duydukları bir nesne getirmeleri istenmiştir. Bu nesne yapılacak analiz ve bu analizin kullanılacağı tasarım sürecinin başlangıç noktası olarak belirlenmiştir. Son aşamada bu kuramsal çalışma ile bağlantılı olarak yüksek lisans öğrencileri tarafından uygulamalı bir tasarım geliştirme çalışması yapılmış ve yapılan eskiz ve değerlendirmeler sınıf içinde sunulmuş ve paylaşılmıştır.

Çalıştayın ilk kısmında öğrenciler ikili gruplara ayrılmış ve herkes grup arkadaşına, getirdiği nesneyle ilgili sıra ile karşılıklı sorular yöneltmiştir. Sorular, Burnette'in makalesinde sunduğu yedi anlam kategorisi olarak belirttiğimiz 'duygusal anlam', 'bağlamsal anlam', 'ampirik anlam', 'işlevsel anlam', 'yargısal anlam', 'kültürel anlam' ve 'kökteş anlam' kategorileri üzerine temellendirilmiştir. Bununla birlikte öğrenciler, Burnette'in makalesinde yer alan yaklaşım, yöntem ve önerilerle sınırlandırılmamışlardır. Bu kategorilerin temel tanımları, görüşmeler için sadece birer esin kaynağı ve yapısal çerçeve olarak belirlenmiştir. Bu yaklaşım yoluyla öğrencilerden, anlambilimsel yaklaşımdan kullanıcı odaklı, gözlem, görüşme ve etnografiye yaklaşan bir sürecin farklılığını ve açık uçluluğunu farketmeleri hedeflenmiştir.

Çalıştayın devamında öğrencilerden süreç içerisinde elde ettikleri bilgilerden faydalanarak bir "taşınabilir bellek" tasarlamaları istenmiştir. Bu nesne bütün çalıştay katılımcıları için standart bir işlev taşıyıcısı olarak seçilmiştir. Taşınabilir belleğin bir ürün olarak bu probleme yerleştirilme nedeni, işlevinden kaynaklanan ve biçimini değişmez bir biçimde etkileyen, (tekerlek, el arabası, tornavida gibi) baskın bir biçim

diline sahip olmamasıdır. Diğer bir deyişle taşınabilir bellek işlevi birçok farklı yaklaşımla farklı biçimler sergileyecek şekilde geliştirilebilecek bir niteliğe sahiptir. Farklı yöntemlerle yapılan araştırma, görüşme ve analizlerde elde edilen veriler doğrultusunda geliştirilmesi hedeflenen bu nesne, sürecin başında seçilen ve analizi yapılan nesneden işlevsel olarak özellikle farklıdır. Bunun nedeni, araştırma ve görüşmeler sonucunda elde edilen kavramsal verilerin bir tür anlambilimsel kaydırma ile başka bir nesnede nasıl görünür kılınabileceğinin irdelenmesidir. Bu anlamda yapılan çalışma, çalıştay sürecindeki görüşme ve etkinliklerin sonucunda, bu söz konusu ham verilerin nasıl farklı tasarım fikirlerine dönüştürüldüğünün ortaya konulması ve tartışması yönü ile de özgün olarak değerlendirilebilir.

Bu çalışmada sözü edilen çalıştayda yapılan beş farklı öğrenci tarafından sunulan beş araştırma ve sonucunda getirilen ürün fikir ve eskizlerinden üç tanesi detaylı olarak sunulmaktadır. Burada sadece üç örneklem seçilmesinin nedeni daha derinlemesine ve tanımlayıcı (descriptive) niteliksel bir çalışmanın hedeflenmiş olmasıdır. Ayrıca seçilen üç örneklemin birbirlerinden çalışma yöntemi, analiz ve tasarım fikri geliştirme anlamında farklılaşması da çalışmayı ve üzerinden yapılan tartışmayı zenginleştirmektedir.

Farklı analiz, yaklaşım ve yöntemlerinin farklı tasarım fikirlerine nasıl yol açtığının tartışıldığı çalışmada, ürün anlambilimi terimleri ile kullanıcı odaklı yaklaşımların birlikteliği hedeflenmiştir. Bu iki yöntemin yapısal ve yaratıcı potansiyelleri biraraya getirilmiş ve her üç farklı projede farklı süreçlere ve tasarım fikirlerine ulaşılmıştır. Bu fikirler, görüşmeye dayalı kullanıcı odaklı yaklaşımlarla elde edilen verilerin salt biçimsel değerlendirmelerle ortaya konduğu daha biçimci tasarım örneklerinden, kullanım süreci ve senaryolarını vurgulayan,ve kullanıcının motivasyonlarını anlamaya çalışan daha simgesel yaklaşımlara uzanan geniş bir yelpazeye sahiptir.

Göstergebilimin önemli ikili terimlerinden dil/söz diyalektiği içinde bakıldığında, bu çalışma klasik göstergebilim ve anlambiliminin önerdiği nesnel ürün dilinden, kullanıcılara dair öznel bir ürün söylemine geçişin bir denemesi olarak da görülebilir.