The Use & Experience of Design: An Evaluation

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Introduction
In this project students were asked to explore the use and experience of design using two frameworks derived from the work of cognitive scientist Donald A. Norman: use and experience. The frameworks of use were affordances, constraints, and mapping. While experience of an emotional design was evaluated at the three levels of visceral, behavioral, and reflective.

Background
Use

Affordance
The idea of understanding what to do with a product and how to operate it is relative to the object's affordance. For example, when one goes up to a door to open it, they know that considering the size and shape of the handle if they are to pull or push the door open. This is the door's affordance which displays how it should be opened. Another example would be Lego pieces and how a child knows to connect the male and female parts of the pieces together in order to build something. An object's affordance is the visual part that is telling the user how to use the object. (Lidwell, et. al., 2003, 22)

Constraints
Constraints put a limit on the physical and emotional motions that can be performed on a specific structure. There are two types of constraints: physical and psychological. Physical constraints limit the actual physical motions in certain ways through uses of paths, axes, and barriers. An example of a physical constraint would be the air controllers in a car because they only allow the user to adjust the temperature to a setting that is shown on the control. Psychological constraints on the other hand limit the way people identify and object and imagine it. These types of constraints are shown by symbols, conventions, and mappings. An example of a psychological constraint would be the women's sign on a bathroom door in a public place such as a restaurant or a shopping mall. The women's sign contains an illustration of a person wearing a dress with the phrase “WOMEN” underneath. This limits the way men view the bathroom and they know that they must find the other restroom. (Lidwell, et. al., 2003, 60)

Mapping
Without mapping, the shown relationship between the controls and their specific functions such as movement and effects would make it difficult for people to operate certain objects. Mapping allows controls to represent what the effect of their function is. For example, the mapping of a stove's controls allow one to interpret which control turns on which burner. In order for this to work properly the stovetop controllers must be mapped according to the layout of the burners. Without mapping people would be confused on how to even adjust settings and controls in a car. (Lidwell, et. al., 2003, 152)
Experience
The meaning beyond the object itself that conveys feelings and emotions is the total experience recognized by the owner as well as others. These desirable qualities allow one to possess ownership of more than just a piece of jewelry per se, but to own this piece of jewelry for its particular qualities that draw the owner to it. This then in return allows the owner to possess a pride in ownership as well as the understanding and usability of the product. This experience of emotional design contains three levels: visceral, behavioral, and reflective. Information is given below to express the concepts of each level as described by Donald A. Norman.

Visceral
The visceral level is all about biology and why someone wants something and loves it when they own it. For example, Norman believes that people are drawn to bright colors because of their biological processing and for that reason people will be drawn to bright colored objects on a visceral level. From a design standpoint this can easily be shown through type fonts in advertisements which include color and font type. Another design example would be the 1963 Jaguar that is shown on the right. This specific model was known to be poorly constructed due to it falling apart easily, but surprisingly, the owners of this model loved it even though it was not the most reliable car. Noted from this example, it is easy to see that the visceral level is all about the “Wow, I’ve got to have that!” factor.

Behavioral
The middle level of experience is the behavioral level which mainly deals with what is going on in a consumer’s subconscious, the place where decisions are made without the person being aware of it. These subconscious decisions are made with the idea of feeling in control once they have ownership of a specific object. An example of this control, would be the Global Knives pictured on the left that Donald Norman uses in his “Three Good ways that Design Makes you Happy” YouTube video. This is a great example because the knives provide a sense of usability and understanding to the owner and they are able to fulfill a need by using these knives to prepare meals.

Reflective
The final level of emotional design and experience is the reflective level which is widely known as the little voice inside of the head saying “that’s good” or “that’s bad”. This level shows a sense in pride of ownership as well as an attraction to attention due to the product. People care about what others think of them and in order to impress them, someone may purchase an extravagant piece that is used as a status symbol. An example that Norman used was the Hummer. He mentioned this on a reflective level because he had spoken with an owner who said that they have had all different kinds of cars, but he received the most attention when he was driving the Hummer. On a reflective level, this example performed very well.
Case Studies
1. Use

Small Scale: iPhone
An iPhone was selected for the small scale case study because it easily fits in the hand and it is portable. This is an object that is used in one’s daily life and because of this it must be compatible to what the user what’s to accomplish with it. Due to containing higher technological advancements in the phone itself as well as its’ case it is a prime example of a small scale object that contains an affordance, constraints, as well as mapping. In the below, each framework is shown to visually demonstrate these areas as well as to understand them with their descriptions.

<table>
<thead>
<tr>
<th>Affordance</th>
<th>The affordance is found at the bottom of the phone’s case and is located at the flap that protects the charger portal from the harsh environment that it inhabits. This flap has a small slit that affords for the user to pull easily in order to charge the phone. Without this affordance it would be more difficult to access the charging opening of the iPhone.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraints</td>
<td>The constraint on the iPhone is a circle button that must be pressed in order to access and use the iPhone which is located in the black region at the bottom. Once this is pressed, the user is then directed to the screen showed and prompted to slide to unlock. If the user does not slide the phone correctly or at all then they will not be able to access the phone’s contents. These constraints allow for the phone screen to be more difficult to access so it does not turn on in one’s pocket or bag which could result in dialing a number without the owner being aware.</td>
</tr>
<tr>
<td>Mapping</td>
<td>The whole internal framework of the phone consist of mapping and the main mapping function of this phone is the main screen which includes options in small squares organized in an orderly fashion including: Messages, Calendar, Photos, Camera, YouTube, Stocks, Maps, Weather, Notes, Utilities, iTunes, App Store, Game Center, Settings, Contacts, Phone, Mail, Safari, and iPod. Those are all listed on the first screen, however with scrolling through the phone there are other pages with even more options. The set up of these categories guide the user to fulfill tasks and allow them to make a selection which will then take them to their destination.</td>
</tr>
</tbody>
</table>
Medium scale: Car Controls
Located in all vehicles are controls which enable the user to access and control specific functions dealing with the vehicle. For example all cars have controls that allow the operator to adjust the air-conditioning and heat inside the car. Other controls include: volume controls, radio stations, CD controls, and turn signals. Picture below are the thermostat controls of a Nissan Altima showing the affordance, constraints, and mapping of the design.

| Affordance | In order to fully operate the car’s internal temperature controls, there must be a way to adjust the temperature. In this particular model, long narrow knobs were designed as affordances to adjust the controls. These allow the operator to move the temperature from a range of: high to low, air-conditioning to heat, and max-air to defrost. Without these affordances the changes would not be able to be made. Most are acquainted with this technique of operating internal controls of a car which makes the operation easy to do. |
| Constraints | One of the forms of a constraint is the axes. In this instance, there are two examples of constraints that are both physical constraints containing axes. The first picture shown on the top limits the amount of ventilation allowed ranging from off to four. This is done through a rotary motion by the operator and is easy to adjust between the five different levels of ventilation. The picture on the bottom is also an example of an axes constraint; it however, limits the amount of air-conditioning as well as heat that can be ventilated. Again, the operator performs a rotary motion to adjust between the settings. These are both physical constraints because they restrict the range of physical motion. |
| Mapping | This car control allows an operator to make the decision of how the air will come in contact with the passengers. Shown by the diagrams the operator easily understands the mapping of the control. This shows a relationship between the actual control itself and the operation it performs. Without the mapping, the operator would be unaware of what the rotation operates. Depending on the setting, the effect will match the depiction on the control. |
Large scale: Expecting Mothers Parking Spot
Whenever parking outside of a retail business, everyone must park their vehicles in an orderly fashion in the parking spaces marked by yellow lines. In certain instances though, one may park in a space that is for the handicapped outlined in blue with a wheelchair symbol on the pavement. A handicapped parking space is not the only special form of parking spot though, expecting mothers also have specific spots reserved outside of many retailers. These spots allow women who are pregnant to park closer to the entrance due easy to accessibility to leave if a situation arises as well as to allow for a shorter distance to walk considering the state an expecting mother is in. Most people do not notice these parking spaces, but when noticed all three frameworks of use are visible. In the chart below affordance, constraints, and mapping have been analyzed.

| Affordance | The actual signage of the Expecting Mothers parking space is an affordance due to the fact that its physical characteristics demonstrate its function. The sign signifies that it is a reserved spot of some sort and with the information displayed on the sign it specifies whom the spot is reserved for. Not only does the information typed allow people to read the sign, but the depiction of a mother with children allows people to interpret that it is reserved for mothers. |
| Constraints | The particular colors of the lines restricting the parking space of blue and pink limit the actions that an operator of a vehicle can perform. This is a psychological constraint because people perceive this spot differently than a common parking spot because it is not outlined in yellow paint. The pink and blue allows people to recognize that this specific parking space is for expecting mothers. |
| Mapping | A good design of mapping illustrates an objects function with a similar layout. In this instance the function is to inform drivers that this spot is for expecting mothers while the layout is an illustration of a mother with children. This is a great mapping design because the layout is portraying the exact function of the parking space. Due to this mapping, drivers should not be confused about this unique parking space and they should easily know that they should not park here unless they are pregnant. |
2. Experience

**Michael Kors Watch**

Michael Kors is a well known designer of both men’s and women’s ready-to-wear, small leather goods, handbags, timepieces, tailored clothing for men, neckwear, and dress shirts (Infomat). His pieces can be found in a wide variety of department stores including Macy’s, Saks Fifth Avenue, Nordstrom, and Neiman Marcus. In 2004 he expanded his accessories line to include timepieces with chic yet luxurious designs to appeal to his target market. Michael Kors watches are known to share specific features such as stainless steel or leather straps, water-resistance, as well as being either chronograph or analog. Also in the design of his watches he only uses Swarovski crystals or mother of pearl on the dial faces which are plated over stainless steel in five different designs: gunmetal, rose gold, yellow gold, black, silver, or two-tone (Paiva). For my evaluation of experience I chose my Michael Kors watch because it reflects on all three levels of emotion design: visceral, behavioral, and reflective.

![](image1)

**Visceral**

For the past few years I have really mired and appreciated Michael Kors in the design world not only in the apparel aspect, but also as being a judge on Project Runway as well. Due to this appreciation, I have made quite a few purchases of his pieces including stable pieces such as jackets, blazers, pants, and my watch which is shown in the above three pictures. Since the visceral level is all about biology it is easy to say that I am attracted and drawn to Michael Kors’ lines. I received this watch for Christmas in 2010 because I had made it apparent that I wanted one of his watches. I absolutely love wearing this watch and putting it on every morning. I especially love the leathery smell I sense each time I put the watch on or take it off. The date on the watch is incorrect, but it doesn’t bother me because I love it anyway. I know this is an easy adjustment to make, however I love the watch even if it does not display the correct time because I appreciate the quality of the Michael Kors watch.

**Behavioral**

When wearing this watch I feel in control of myself and everything around me. It gives me confidence that is visible to others during the day, and it also gives me the confidence to tackle difficult tasks during the day. It allows me to communicate the powerful person that I am in a positive manner. This is all done through my subconscious automatically without me being totally aware. However, once my watch is put on I know that I am able to seize the day.

**Reflective**

My watch gives me a sense of ownership pride because not everyone can afford to purchase a Michael Kors watch. Also I have never seen anyone else wearing my particular watch which in return makes the watch more of a status symbol. My watch is viewed as a status symbol because it is expensive and designer which attracts attention. My watch goes beyond the meaning of just a timepiece to tell time, but it displays parts of who I am: an avid Michael Kors fan, someone who truly appreciates quality design concepts, and a confidence fashionista.
Conclusions
Through conducting the study of the use and experience of design, I now have a better understanding of why objects are designed certain ways: to provide ease of access and usability for future consumers. Due to this analysis, I am viewing everything around me in a different perspective by looking for their unique affordances, constraints, and mapping. Not only am I looking for these frameworks, but I am also looking for the three levels of experience as well: visceral, behavioral, and reflective. I am more accepting of these design elements because I understand that designers truly think about how their customers will use their products and want them to be satisfied by being able to operate and use their products efficiently.

I believe that my new awareness of emotional design will enable me to understand why I enjoy and love objects in my life such as my car, rings, watches, handbags, artwork, and apparel. Not only will this new awareness allow for me to analyze my current goods, but also my future goods that I will purchase. With this knowledge, I will be able to make informed decisions on a design level as to why I am attracted to certain products and if I should make a purchase. I can also use my new acquired skills and understanding of emotional design when making decisions on a business level in my future career. I may not know exactly where my future career will take me, but I do know that I would love to have the opportunity to work in the corporate headquarters of a prosperous retail corporation like TJX. With this career I believe that I could easily understand and make knowledgeable decisions about what products should go into the stores by analyzing the visceral, behavioral, and reflective levels of emotional design of the products. I now understand the biology behind a design decision, the feeling of being in control that consumers yearn for, and the attention and pride of ownership that consumers value as well. In the apparel industry this knowledge with allow me to gain a competitive advantage on making decisions which will in the end allow the future company that I am working for to be successful.
References


