

ATEC 2384

Joe Freeland

The Semantic Turn Summary and Analysis

The first chapter of the book gives a history lesson on design and then gives a brief discussion on the authors hope for the future of design. The author discusses how he worked with numerous designers creating the ideas for product design, the study of how meanings are attributed to objects and how people interact with them, before putting it in the magazine Design Issues. He then goes on to describe how this new thought on design spread, from being brought up in workshops around the world and beginning to be taught in schools, to when emotions started becoming an important part of semantics. Then the principle form follows function is invoked, and how it applies to increasingly complex objects. For products, designers basically make them more pretty as they function as their producers want. For good services and identities, designers focus on marketability, trying to make the design seem safe, good, and trusting to the intended market. For projects, designers need to develop a way for the various people and groups to communicate and work towards a common goal. Other objects are also discussed. The book then goes into how the environments design relies on are changing. Society and its values change over time, and designers have to adapt. As Dr. Gregory House said, “yesterday's sluts are today's celebrities.” Technology is not only advancing, but the speed at which it does is increasing. Part of this rise in technology is not just new things for designers to work on, but new tools, specifically CAD programs that can help them design. The rise of micro-manufacturing is giving birth to new industries where unique designs for niche markets is becoming profitable. The last part of the chapter describes design as a discourse, a society that defines what it is and what it does. Design has numerous books and websites

on the subject, and millions of products it can show it's effect on. Designers can be recognized by their current understanding of the latest design principles. Design continually seeks to improve or create better ways of doing things and removes outdated and obsolete methods. Justifications are still lacking as there is not an effective quantitative measurements designers could use to measure meaning, and the boundary of design is vague as it is a part of so many jobs.

Chapter 2 focuses on human centered design. The subjects and people whose work lead to human centered design is discussed first, with an emphasis on the color perception which lead to the discovery that humans naturally experience aesthetics differently. This section also deals in the early work where people discovered designs could not work in theory or the abstract, that human interaction determined the success of a design. The next section tells how the meaning of your object is the most important part of the design. It also tells how this new thought differentiated designers from other jobs and gave them something they could justify their designs with. The third section details how people experiencing things. Sense is discussed, not the raw data people receive, but how their senses and brains interpret it, and how sense is always immediate, irrefutable, and personal. How meaning is perceived in perception, language, reading, conversations, representations. Context is brought up and how it both can clarify and limit possible meanings of design. The next section discusses the people designers should consider. Users are of course mentioned, but people are warned to learn the needs of many different possible users, instead of relying on the myth of THE USER. The book also brings up other people invested in the design; marketing, engineers, CEO, and how designers need to be able to handle office politics. Second order understanding is then brought up, the need for designers to not only understand the world, but how other people

understand the world. Or in other words, understanding not just the object but others understanding of it. The end of the chapter tells how our culture is shifting to one of design, where everyone wants to be a part of creating their environment and experience that joy of making. It ends telling designers that they need not just to make good designs, but allow others to participate, learn the new ways of design, or modify the designs themselves.

Chapter 3 deals with how specific people understand objects and why they interact with them the way that they do. First discussed is interfaces, the new item that has become the standard way of interacting with technology and which design principles are still being developed for. Interfaces represent complex systems with icons that are more easy understood by the user, who relates the meaning of the image shown to the purpose of the icon. Interfaces are also interactive, they need to responded to user actions and can be used to guide the user to desired tasks. If users see a representation of a button in an interface, the can make the jump of logic that the button is meant to be pressed. The next section deals with the types of errors that can arise when the meaning of your design goes wrong. These errors arise because the system acts in a way the user doesn't understand or thinks it should. A good example of this is adventure computer games. Many of them had puzzles that used bizarre logic to solve only really understood by the games creator. The book tells designers to try an make mistakes minimal problems, fixable, and a chance to teach the user your line of thought. Designers are told not to design the object so much as what it effects. The book then talks about how to design objects so that they are recognizable. Categories are groups of similar objects, so if your design is similar to others of it's kind, people can use the similarities to figure out what it is. Visual metaphors can used to show how to use one object by explaining it in the terms

of another unrelated project. Making an object attractive can help it stand out, although not enough to be distracting. Attractiveness should only help the product stand out when it is needed. Exploration details how designs can lend itself to users testing the product to see what it can and can do. The section discusses both how users figure out step by step of an object works, and well as designing in a way so users can figure out why it might not work as they thought it would. Reliance deals with designing an object so that once the user is pasted the learning curve, the object can be used in the same way with the exact same results for a long time, and the object can fade into the background so the user doesn't even have to think when using it. Finally the chapter list a number of techniques designers can use to convey meaning to the user and show of the design works is listed; including affordance, feedback, coherence, and robustness.

Chapter 4 talks about the different ways that language influences the meanings we associate to objects. First, several aspects of language and how they relate to design is mentioned. Language draws attention to both the object discussed and the attributes mentioned. How you talk about a subject colors how you view it. While language itself is not factual, the use of language can create facts. Language is relational, for it to succeed, both the giver and receiver have to accept what things means and which things are important. The book then explains how language by its nature creates categories. When a word is used to name something, any object that has that word as part of it's name or description is expected to share traits with the first object. The section on characters tells how descriptive words can affect the image of an object. The book lists the 5 categories of characteristics that can exists; objective, emotional, evaluative, social value, interface quality. The book then goes into the different methods you can use to find how users view the character of your design. The next part of the chapter explains how people use

the products they own to define their own identity. Items people can't live without and that they don't want others to have help define themselves. Special objects, uniforms, and particular places help people feel like a member of an institution. Having the same items as a particular group helps people feel like they belong to that group. Buying items that come from a certain place or brand make people feel that they stand for the same things that place or brand does. The chapter then deals with metaphors and how they can be used to acquire meaning. Metaphors are two completely different subjects that share a similar structure. Metaphors have entailments, which is basically saying you assume how one works is similar for the other. When people use metaphors, it is because they hold some truth to what is occurring or being felt. Eventually the metaphor leaves, and the meaning of it simply becomes common knowledge. Metaphors help designers create ideas by realizing a connection between two things and using the properties of one to create or improve their design for the other. Narratives are the next part of the chapter. Narratives share many traits with designs. They are human creations with givers and receivers and an implied understanding between two parties, with the purpose of helping people understand. If a designer can form a narrative of how their design is used, and incorporate it into the design so that one action flows easily into the next, it will greatly improve the usability of the product. The chapter finishes with how culture affects language. Culture produces its own type and style of objects designers must be aware of. Designers cannot change something as large as culture, and have to settle for hoping their designs are incorporated into it.

Chapter 5 deals with how just existing in the real world can affect the meaning of a design product. Design is continuous, and designers must be aware of changes that their designs go through. Design seems to be stuck in a problem-solving mind set for four

reasons. Designers confuse parts of their thinking for facts, they are still trying to find THE USER, they see objects as static instead of transitory, and a focus on the cause of something instead of the context. Different types of items have a general path or life cycle that they go through, with each part of the cycle affecting its meaning. Products have stakeholders they need to keep in mind when designing, including themselves. Stakeholders act on personal interests and their personal meanings. Each stakeholder changes the manifestation of the product. Stakeholders pursue their reality while aware of others. And they group with others who share their goals. In projects that rely less on new designs, designers have to be prepared for other peoples input. Products will change during their course, there is never one perfect design that will remain forever. A good designer will create a product that will go smoothly through these changes and have the next design ready to go when the last one is at it's end. There are no universal products, so designers have to work at increasing the size of their products communities. Some products are locked into one community while others jump from one group to the next. Product communities have to go beyond the people who make it for the product to be viable. And some products have to reject unsuitable users. The last section of CH. 5 warns people not to focus just on quantitative measurements to judge a products success. Is it easy to use, fun, interesting, attractive; these are all things to look at when judging a design.

Chapter 6 briefly talks about how putting objects together or arranging them in a certain way also creates meaning. Human beings have created an ecology, and one of the biggest changes to that ecology is technology. Unlike living ecologies, technological ecologies depend on humans for interactions. There are two ways to view how artifacts interact; diachronic which details how one product leads into or changes the next, and

synchronic, which examines how one group of products is dependent on the next.

Meanings in an ecology derive from how one object interacts with others, which can be cooperative, competitive, or independent. Artifacts are most likely to have a mutually cooperative relationship, so that they can share a common logic that is easy on designers and users. The different objects all work to form a system that helps to support each other. Ecologies survive because of the myths that form around them. People believe technology will continue to improve and solve the problems of the day, so designers continue to improve upon what's there.

Chapter 7 deals with the methods and science of design. The first section contrasts the old system of a science of design, which uses science to try and develop theories of design, with the new science for design, which tries to provide ways to develop new techniques or improve old ones, to achieve the best results. The new way is also marked by continued evolution of practices to keep practices up to standards. The next part of the chapter lists the three ways to develop ideas. Brainstorming is when a group of people comes together and records a list of all possible ideas that they then go back and refine. Reframing tries to generate ideas by taking a current object and putting it into a new context. Combinatorics uses parts that are then put together into every combination possible, with the results searched over for the desired traits. The book then lists ways to ask for people's ideas and reasons. What they hope to get out of it, surveys, interviews, focus groups, observing environments, ethnography, protocol analysis, triangulation of methods are all used. Having stakeholders is another option, but rarely used as they are not designers and can slow work down. The ways of designing that are human-centered are then featured. Taking an object and making changes to one of its traits can create viable new products. Designing products show that they show the inner workings can greatly

interest people who are curious about the product. Hearing people tell stories about their favorite products or the items that they just couldn't get right can also lead to designers coming up with new version of that item. There are some companies that have special practices the encourage a creative environment for people to think of things in. Google allows employees to use a certain amount of time at work to work on their own projects, many of which end up being used by the company. Then there is simply bring together the clients and designers to talk through ideas and what they both what or think should happen. Since what makes a good design is not something measurable, designers need I way to argue that their design is on the right track. Users can find the meaning of artifacts simply by exploring them, artifacts can be described in ways in sync with what the stakeholders wanted, the product goes through it's life cycle as predicted, and they interact with the items they are meant to without problems. The end of the chapter tells readers how they continue to learn more about design in general with literature and institutions, or on specific designs by continuing to study them after they are released to the public.

Chapter 8 details how the semantic turn is different from a number of other design approaches. Semiotics try to find what objects represent, instead of how meaning is applied to them. Semioticians wrongly believe they study signs objectively, that the human element can be removed from what something means. Semiotics believe that objects can represent anything, and only social institutions enforce specific meanings. They also try to place meanings into static categories, ignoring changes that occur. Also, semiotics believe there is one shared rationality that all humans accept. Cognitivism tries to explain how humans view things by the persons mental state that they try to explain computationally. It focuses solely on the person and not the artifact or the environment

they are in. Ergonomics tries to use scientific methods by studying large numbers of people to find the most effective means of use to the widest audience. However, ergonomists are in charge of the experiment and the options users have. This method views most errors as the users fault and looks down on users. Ergonomic work needs users to already know what the product is and what it can do for them for data to be able to be gathered. Aesthetics focus on why something is considered beautiful. Views on beauty that tend to last do so because social institutions needed and maintained them. When new views on aesthetics arise, it is usually a political matter and not something dealing with design. Aesthetics either removes the human element from what is good, or it is all personal experiences that others wouldn't necessarily share. The semantic turn goes for the middle, explaining why groups of people experience something in a certain way. Functionalism subscribes to the thought that what the object looks like is dependent and is derived from its function. The sub systems are derived from what would be best for the whole. Functionalism is another method where humans are ignored, function is their sole concern. Marketing is concerned with not will work or look the best for the design, but simply what design would be the easiest to sell. Marketing should only be one part of the design process, where a well designed product is tweaked and packaged so that it will have the most draw for potential users. Marketing also ignores people that the design may be well suited for but are unlikely to buy it. If markets were to make a product, they would simply make the thing that the highest number of potential users said they wanted, not what the best or most useful thing would be. Textualism deals with creating meanings in text. While a user can show their understanding of a product by using it, text can merely be interpreted, with no real way to show true understanding.

Chapter 9 of the book deals with some of the early men of design and how there

ideals helped to build the semantic turn. Max Bill was one of the first people that believed that the aesthetics of a design was not the most important aspect. Bill maintained that the technical, material, and production qualities of the item as to be addressed as well. Bense created the philosophy that reproductions and copies were entropic, gave no new information and thus loss their aesthetic appeal. New and fresh designs were a sign of order, giving new information and thus very appealing. Maldonado studied semiotics, or the signs and symbols attributed to objects. However, he did not account for how it was people that gave these items meaning and could experience the same object differently, instead simply trying to create a dictionary of symbols attributed to items. Chernyshevsky, was the designer that realized there is no one definition of beauty, and that it is people who decide what is or isn't pleasant. Fat used to be beautiful because it meant the person had access to food. Now it is ugly because it is a sign of bad health and a lack of self control. Rittol brought to light the new more scientific way of going about design. Performing unbiased tests and surveys to find what is needed and what is desired instead of using your own senses and judgment as come to define modern practices. The chapter ends discussing some of the problems still left after these changes and examples of designs where some aspect was ignored and problems arose.

Reading *The Semantic Turn: A New Foundation for design*, I found the book to be an excellent source of information not so much of designing, but how to be a designer. Many designers confuse themselves with artists, and create art for arts sake. Design is the creation or forming of something for a purpose, of which aesthetics are a part but by no means the sole concern. I was glad the book brought up the point that even when designing the look of an object, it should be done so with the thought of the items

function in mind, either to help the function of the object, or at least not to hinder it. The book also warns designers that they are still human, and will never be able to have perfect clarity that leads to flawless designs. That is about the point where the book introduces the scientific methods that designers should use to find what is necessary and desired from their design while removing themselves and their biases from the equation.

Many people learn how to do things by being told what to do, but since there is no one way to create great designs every time, that doesn't work as well for design. Many of my art classes were frustrating because they just taught technique and not why to do something. A good aspect of the book is that besides the processes and techniques that can help designs turn out well, the book also warns the common actions that designers take that can lead to bad designs. Having a vague or unclear way to go can leave someone unsure where to start, but telling designers what they shouldn't do, will send many of them trying to think of ways around these problems and give them something to build off from. The wrong path that stuck out the most to me was designing purely based on your own interests and forgetting the client. A number of groups in my interaction design class were given warnings because they were ignoring market trends and research and focusing on the ideas they wanted. Luckily I was working with a group on a project (a smart mirror GUI), that none of us were personally invested in, so we spent a lot of time researching both current and future technology we could use and asking both our fellow class members and people we knew personally on what types of features and options they would want from such a product.

Another aspect of the book that as an ATEC student I was very glad to see was the topic of designing the digital projects that art and design texts are still catching up on. Most of the art courses that are a part of the current degree plan deal with classic art and

do not truly help with the creation of virtual content that is the subject of interests to students like my self. The sections that specifically dealt investing meaning into what you design was especially interesting, as that is essential to the creation of digital objects. One of the reasons that computers were initially so hard to use was that you had to know programming to get it to do anything, and most people were unable or unwilling to learn. The use of graphical representations, where some sort of image hid the code and hinted at how the program worked is what made computers usable. It is this type of designing students like me need to learn, and I am glad the author included it. Even now a group that I am in is doing a website and we are trying to determine where content should go so that users could find it intuitively with our site navigation.

While I brought it up in the last paragraph, the amount and depth that the author goes into on the ways meaning is given, received, etc.. to objects is in my opinion the books greatest feature. The book deals with the importance of language, and how people talk about your design can effect it's meaning. The books details how a good design should lend itself to a story of how it is used. There are many objects where it is easier to use once you know it then it is to tell someone else to use it. If you can write a story of how a user would interact with your design, so that not only is it easy to understand but interesting, then it is a good sign that your design is heading in the right direction. How culture affects meaning is also discussed. Different kinds of people have different values, and if you don't know those values, your designs are not likely to have the appropriate meanings. I once read of an GPS like car system that completely failed when it's creators tried to export to china because they drove on the opposite sides of the road. Meaning is one of the most important things to nail down in design, whatever else, if you fail to get across your meaning to your users, you design will likely fail. Exploring the different

approaches and areas of meaning will help aspiring designers immensely.

While over all I liked the book, there were some areas that I could have done without. The strength of the book is when it goes in depth on what design is really like and what good and bad things designers do. The areas where the book goes into the history of something or talks about the people who came up with it, basically the parts that feel more like a classic textbook break the flow of the more interesting section and are not really helpful. The use of pictures could have been better. If pictures were just not used it would be one thing, but after pages and pages of text and then coming on a page with a dozen images together is jarring. These are minor complaints however and I would recommend this book to my design friends.