

CULTURALISTIC DESIGN: DESIGN APPROACH TO CREATE PRODUCTS  
FOR SPECIFIC CULTURAL AND SUBCULTURAL GROUPS

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CULTURALISTIC DESIGN: DESIGN APPROACH TO CREATE PRODUCTS  
FOR SPECIFIC CULTURAL AND SUBCULTURAL GROUPS

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THESIS ABSTRACT CULTURALISTIC DESIGN: DESIGN APPROACH TO  
CREATE PRODUCTS FOR SPECIFIC CULTURAL AND  
SUBCULTURAL GROUPS

Brandon J. Allen

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Designers have a unique process for solving problems commonly referred to as design thinking. Design thinking, especially on a cultural level can be used to tackle a wide range of creative and business issues. Design thinking with true cultural infusion is known as “Culturalistic Design”, and can have profound and varying effects on product designs. It demands a different methodological approach: for at its core, it suggests that in order for design to really matter, designers need to think and know more about things besides design.

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Style manual or journal used:  
American Psychological Association

Computer software used:

Microsoft Word

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Adobe Illustrator

Adobe Photoshop

Rhinoceros 3-D Modeler

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## **THE PROBLEM**

### **INTRODUCTION**

#### **1.1 BACKGROUND TO THE PROBLEM**

The word culture comes from the Latin root *colere* (to inhabit, to cultivate, or to honor). In general, it refers to human activity; different definitions of culture reflect different theories for understanding, or criteria for valuing, human activity. Anthropologists use the term to refer to the universal human capacity to classify experiences and to encode and communicated them symbolically.

“Culture: spiritual, material, intellectual, and emotional features of a social group, that encompasses art, literature, lifestyles, and value systems, traditions, and beliefs (Sparke, 2004).” So when referring to culture in a design sense, one can refer to the values and identities that are constructed in and communicated by visual culture as one of the ways in which a cultural group produces and reproduces its particular character and individuality.

So what does this mean? Is it that our culture is only evident and visible through design? One phenomenon that has begun to appear is that the "Culture of Design" has become completely about branded culture. Within the Industrial

Design community it seems that all too often, designers are called upon merely to make things look good — rather than contributing to the evolution and communication of ideas themselves. This is an age-old criticism of design, but it seems especially relevant in today's state of design. It has become a common belief that the "Culture of Design" has become: culture that can be seen, that can be named, that can be bought sold and packaged; culture that is synonymous with style; culture that resonates with novelty and which, by assumption, dismisses history as mere nostalgia; culture that determines and drives the reactions to the constantly change pulse of modern life (Sparke, 2004).

The assumption is that designers influence just about everything — from toothbrushes to television titles, bridges to brochures. This influence is commonly referred to as branding, which can be defined as a product, service, or concept that is publicly distinguished from other products, services, or concepts so that it can be easily communicated and usually marketed. The emergent authority of design in branding is evident in everything from corporate culture, to world culture, to sports culture, to media culture, all adding up to something commonly called *popular* culture. But the future of design is everywhere and no longer confined to the role of branding. Design is increasingly finding itself on the minds of many CEOs, many of whom do not know how to make use of it.

Designers have a unique process for solving problems commonly referred to as design thinking. When most people think about design they tend to focus on the deliverables –the end results. Companies that view design as just making things pretty are missing the point. Design thinking, especially on a cultural level can be used to tackle a wide range of creative and business issues.

Further, there is a hope that creating brands is only one of the many potential outcomes of "designing." "Branding" is primarily a function of the designer's engagement with material culture: again, this is not the only culture there is, and it is not the only culture in which design can make a difference. Thus there is a need for a more critical discussion of these issues amongst product designer, especially student product designers. Such discussions are critical to a mature profession, and imperative if there is to be consideration and ultimately, contribution to the culture - or cultures - of design in the future. There can be a *different* view of culture. It demands a different methodological approach: for at its core, it suggests that in order for design to really matter, designers need to think and know more about things besides design.

## 1.2 STATEMENT OF THE PROBLEM

After examining the current trend in design a problem arose with the current social construction of consumer products. These products are being designed either not to offend, or to blend in with various cultures, and thus abandoning the culture from which they come from. Thus a comparison of the design of certain products across various cultures is warranted, with particular attention to the influence of culture on the design process, because of a belief that culture is important to consumers. This thesis is designed to illustrate that certain cultural traits have varying effects on different designs and the connection they have with consumers. This is an issue that is worthy of further explanation as well as a commitment from the Industrial Design community. Although exploring culture and its relationship with design may be difficult, ideas truly worth exploring are seldom easy. There is hope that research, and product development will yield the type of results that will warrant further investigation among others in the design community.



### 1.3 NEED FOR THE STUDY

Today the design of many consumer products has a powerful impact on the world, they create wants, satisfy needs, evoke emotion and mood, influence price and, not least, stimulate demand and sharpen competitiveness. Examples include the chaotic mornings of “Black Friday” (the day after thanksgiving), or the feeling one gets when he or she can finally purchase the luxury car of their dreams. One objective of this thesis is to explore the design of products across various cultures, with particular attention to the influence of sub-cultures on the design process. Subcultures are generally described as a group of people with shared customs and beliefs positioned within a larger, dominant culture. Many people mistakenly use such phrases as “American culture,” or “Western culture,” as if such large, common, and homogenous cultures exist in the United States today. These people fail to acknowledge the presence of cultural diversity, or the presence of multiple cultures and cultural differences within a society. In reality, many different cultural groups comprise the United States. Research as revealed that culture is an important factor in design, despite commonly held assumptions about the neutrality and objectivity of the design process. Thus, the intent of this thesis is to demonstrate

that true cultural infusion can have profound and varying effects on product designs.

## 1.4 DEFINITION OF KEY TERMS

**CULTURAL MARKERS:** Identifying cultural elements present on a specific product or design.

**SOCIAL CONSRUCTION:** noting or pertaining to activities designed to remedy or alleviate certain unfavorable conditions of life in a community, esp. among the poor. One example of a social construct is social status. Another example of social construction is the use of fiat money, which is worth more than the paper it is printed on only because society has agreed to treat it as valuable.

**ARCHETYPES:** An original model or type after which other similar things are patterned; a prototype: “‘Frankenstein’... ‘Dracula’... ‘Dr. Jekyll and Mr. Hyde’... the archetypes that have influenced all subsequent horror stories” (New York Times).

**INCONGRUENT:** inconsistent, Not congruent, Incongruous

**SUB-CULTURE:** A subdivision of a dominate culture or an enclave within it with a distinct integrated network of behavior, beliefs and attitudes.

**POPULAR CULTURE:** A shared set of beliefs that have attained global acceptance and which can be normally characterized by: being associated with commercial products; developing from local to national to global acceptance;

allowing consumers to have widespread access and are constantly changing and evolving.

**MATERIAL CULTURE:** Is the material means by which humans adapt to the world. Archaeologists think in terms of artifacts and features. These are the material objects that are used to: (1) help determine the sequence of events and dates, (2) formulate a reconstruction of many ways of life, and (3) help to provide some understanding of why human culture has changed through time.

**IMPRINTS:** Any impression or impressed effect: *He left the imprint of his thought on all succeeding scholars.*

**CULTURALISTIC DESIGN:** Is the creation of products which are functional, impact-full, cultural, and desirable to the consumer and profitable to the producer.

## 2.0 REVIEW OF RELATED LITERATURE

With the aid of the knowledge contained in the books that compose this literature review this study will examine innovative methodology, design, and construction of products that “push the envelope”, while retaining a viable place within the current state of product design. In particular, designs associated with culture, and subculture, and its ability to be united and or divided through design. It is to this end that a pursuit of specific studies that explore innovative product ideas that link cultural markets as well as satisfy the need to remain on the cutting edge of design is relevant. In today’s market product designs are in a constant mode of change and evolution.

As an Industrial designer there is an obligation to produce consequential designs, for a global marketplace. Today the design of consumer products has a powerful impact on the world. The goal is to understand the design of products across various cultures, with particular attention to the influence of culture on the design process.

Before there is an understanding about the process of designing products for a specific culture, one must understand the concept of visual culture.

According to Malcolm Barnard in his book *Approaches to Understanding Visual Culture* he contends that there is a range of meaning behind the phrase visual culture. Malcolm argues that there is a strong sense and a weak sense of visual culture. Used in the strong sense it stresses the cultural side of the phrase. The strong sense speaks to the values and identities that are created and communicated through visual culture.

The weak sense of 'visual culture' refers to the visual side of the phrase. It refers in part to the enormous variety of two and three dimensional products that people create and consume as part of their cultural and social lives. Thus visual culture makes it possible for the inclusion of all forms of art and design, such as physical expressions, fashion, and tattooing maybe included in visual culture (Barnard, 2001). The idea of visual culture is, however, even in its weak sense larger than both art and design, because it includes both, and the material that is often overlooked and or ignored. Visual culture is concerned with everything we see, have seen, or may visualize-paintings, sculptures, movies, television, photographs, furniture, utensils, gardens, dance, buildings, artifacts, landscape,

toys, advertising, jewelry, apparel, light, graphs, maps, websites, dreams-in short, all aspects of culture that communicate through visual means.

The overlooking and ignoring of some of these aspects of visual culture has given rise to the relationship between the industrial production of cultural forms and the consumption and of the forms produced. John Fiske, for example, separates the “financial economy,” where culture industries produce and distribute commodities for profit, from the “cultural economy,” where those commodities are appropriated and interpreted by consumers. “Popular culture” according to Fiske is what oppositional subjects produce out of the products manufactured by the culture industries (Fiske, 2007). The term “creative industries” is used to describe design, advertising, film, fashion, interactive technologies, popular music, and a host of other professions. In recent years some have even argued that these professions are driving more than simply economic growth, but that they necessarily encompass social and cultural development as well, thus becoming “Culture Makers” themselves.

So, what do “Culture Makers know about consumers? How can they use that knowledge to anticipate, shape, or create desires in consumers that will lead to the consumption of products and experiences? Or, do current culture maker’s themselves believe they have such powers (Ohmann, 1996)? There is a belief that

the culture makers do have these powers. “Current producers, designers, feel confident in a good deal of knowledge about how much consumers like or don’t like existing products; about who will or will not consume them; and about what groups of consumers want in a product or advertisement( diet drinkers, mainly women, want no calories, and don’t care about taste (Herbert, 1996); Europeans want “Spectacular bathrooms” in their resort hotels (Sonnabend, 1996); “British women don’t want to be talked down to by a little kid” in a Pillsbury commercial (Oakes, 1996 )(Ohmann, Knowing and Creating Wants, 1996).” All of this knowledge improves the sales of consumer products but does it improve the products themselves? In fact, equal effort could be spent on designing and producing products in a manner that would improve their cultural value to consumers. So, perhaps an increase in more meaningful products would also increase wants and desires, resulting in an increase in sales and profits. All the while dissipating the growing worry that the intensifying techniques of gathering consumer data and analysis are attempting to muscle in on the sacred corners of consumers lives, only to force feed them socially specific, yet shallow products.



## 2.1 OBJECTIVES OF THE STUDY

The Objective of this thesis is to explore culture and its relationship to design with the purpose of achieving a design model in which one could approach design research and methodology in a manner that would allow the design of a product that would successfully maintain the intended cultural identity and meaning of the product.

- This thesis will study the effect of culture on the product design process.
- Determine whether the culture from which a successful product is produced has left any identifying markers on that product.
- Research current trends in product design, branding and marketing.
- Determine why these trends are occurring.
- Develop an approach to design a specific product with the inclusion of culture on the design process.
- Create a product shows the theory in a 3D form.

## 2.2 ASSUMPTIONS

As an emerging designer there is an enormous amount that is unknown about design, world cultures, international competition, and current events.

Therefore there it is an inevitable fact that portions of the thesis and hypothesis is and will be based on assumptions. First and foremost there is an assumption that there is a consumer group that wants designs that share cultures. There is a fear that people would rather have designs that exhibit no evidence from the culture in which they came. If this is the case, then this thesis may be off base, and alone in design philosophy. With that being said, there is evidence to suggest that there is a trend in design of products void of cultural meaning and substance. This leads to the belief that the hypothesis is true and there are similar views of the future of American design and the global design culture.

Products should be beneficial to the producer in terms of sales as well as to the consumer in terms of meaning and function. Therefore it is assumed that the product that is to be created in conjunction with this thesis will be produced according to newly developed principles of "Culturalistic Design". Culturalistic design is the creation of products which are functional, impact- full, cultural, and desirable to the consumer and profitable to the producer. It is assumed that this product would be successful because it fulfills human needs for consequential

designs through deeper cultural and social research and less superficial mass cultural market research. These principals will be culturalistic because they will allow the consumer to reach a higher level of gratification through a product that is a reflection of their lives, while still fulfilling the basic functions for its intended use.

## 2.3 SCOPE AND LIMITATIONS OF THE STUDY

- Scope

The scope and limits represent the restrictions of the study. The scope is the extent to which the thesis will cover and what issues it may not specifically speak about. In pertaining the thesis there has been research of current market trends and past market trends. As well as a study of the history and influence of culture in product design, and the current influence of culture on product design. With this knowledge a approach will be illustrated in which one could research specific consumer cultures in order to create a culturalisitic product. Also, based upon these guidelines there is a furniture design using the newly created design approach.

- Limitations

The main limitation to this thesis is in proving is hypothesis in regard to product competitiveness. It will be hard if not impossible to truly determine whether a product design for this thesis could truly survive global competition; as well as maintain its effectiveness when it is mass produced. This limitation is due in large part to the restrictions of resources needed to create more than a single design, or to properly initiate a product into the global marketplace. Therefore

the data generated maybe limited to focus groups and restricted consumer feedback.

## 2.4 PROCEDURES AND METHODOLOGY

Procedure One:

- Research and study the level of impact culture has on successful designs in the global market place.

Method One:

- Identify a specific culture in which to study
- Research the thoughts of various industrial design professionals and various industrial design studios and schools.
- Conduct internet research
- Locate and explore various periodicals and articles pertaining to culture and design.
- Analyze results and draw conclusions.

Procedure Two:

- Determine whether the culture from which a successful product is produced has left any identifying markers on that product.

Method Two:

- Identify the cultural markers to be studied.
- Identify those cultural markers on the individual products.
- Analyze the data collected
- Draw conclusions from the Data.

Procedure Three:

- Research and document current design trends.

Method Three

- Research the current trend of creating designs that appear neutral, in the fact that they exhibit no signs or archetypes of one particular culture.
- Determine why this trend is occurring.
- Analyze the data collected
- Draw conclusions from the Data.

Procedure Four:

- Present a hypothesis or theory of how a designer from one culture can successfully introduce a product and compete in another culture without abandoning their cultural identity.

Methods Four:

- Create a model in which a designer can create wants, satisfy needs, evoke emotion and mood, influence price and, not least, stimulate demand and sharpen competitiveness with a single product.
- All the while introducing and maintaining a culture identity to that product.

Procedure Five:

- Develop a model in which an industrial designer can follow in order to create his or her own product based on a particular subculture.
- Create a product that shows the theory in a 3D form.

Methods Five:

- Define the design criteria for which the product will be designed
- Brainstorm for ideas that exemplify the goal of this thesis.
- Draw concept sketches
- Refine concepts
- Begin model making process
- Create prototype that proves or disproves my hypothesis
- Analyze the data collected
- Draw conclusions from the data.



## 2.5 ANTICIPATED OUTCOME OF THE STUDY

The anticipated outcome of this thesis is; to illustrate the premise to be correct. To show that a designer can design a product with distinctive cultural markers that can successfully evoke positive emotion from the target demographic. The cultural markers present on the product would be a reflection from that culture in which the product is to be sold. The goal is that this thesis will provide a way for a designer to move away from the current trend of designing to avoid culture, and instead once again embrace it.

The deliverable for this these will be an approach, or formula for which a designer can follow that illustrated how a particular product was design with the specific inclusion of culture. Also, to introduce a new product exhibiting all the characteristics that has been laid out in the design approach. The hope is that long term results of the thesis project will open the eyes to current and emerging designers from all cultures to the current trends in design and the cultural problems they present; moreover to spark the debate on how to correct these problems. Designers have a responsibility to consumers; there are many threats to the current state of consumer products within the society, which can be helped through design. There is more than just a threat to the environment. There is also a threat to our cultural identities

### **3.0 CULTURE RESEARCH**

#### **3.1 CULTURAL UNDERSTANDING**

The world today has become minuscule in the sense that, across the globe, people of different cultures and nationalities now work together either in the same physical space, or virtually through the internet. To achieve optimum design efficiencies, it is important to understand the differences in values, beliefs, nuances and subtleties of culture.

There is a trend, especially in the western cultures of “presuming sameness”. Due to the fact that some believe “the world is flat”, and that world cultures are merging into one. Culture is, as its Latin root suggest, about growth and change and typically emerges through the intersection of innovation and tradition. But rather than attempting to define, or in some cases narrow the understanding of what it is, it is surely better to consider the many things culture can be and the many forms it can take: national culture, popular culture, folk culture, high culture, low culture, and yes visual culture (World, 2006).

Designers must also pay close attention to subcultures, in that smaller cultural groups exist within but differ in some way from the prevailing culture. Also, though subcultures maybe smaller subsets of a much larger dominant culture, they can also grow to have greater numbers than the larger culture from which they are spawned. Due to the fact that many of the subcultures today are limited to the private yet unlimited virtual environment, in which a thirteen year old boy in Georgia and belong to the same sub cultural group as a 42 year old business woman in London. Examples of some subcultures include “Online Gaming” devotees, body-piercing and tattoo enthusiasts, motorcycle gang members, hip-hop legions, and fantasy football fanatics. Members of subcultures typically make use of distinctive language, behaviors, and clothing, even though they may still accept many of the values of the dominant culture.

Ethnic groups living in the United States—such as Greek Americans, Italian Americans, Irish Americans, Mexican Americans, and African Americans—may also form subcultures. Most of these adjust to mainstream America, but may still retain many of their cultural customs and in some cases their native ethnic language (Wiley, 2000-2008).

According to the theory of Clotaire Rapaille, author of *The Culture Code: An Ingenious Way to Understand Why People Around The World Live and Buy as They Do*, there are non verbal, non physical processes that are unique to various cultures and they can be codified, creating archetypes of each country's buying habits. "The Culture Code", writes Rapaille, " is the unconscious meaning that can be applied to any given thing, a car, a type of food , a relationship, even a country, by means of the country in which one is raised" (Rapaille, 2007). Rapaille believes these first, often forgotten experiences, he calls "imprints", determine the way consumers live and shop for the rest of their lives.

For example, the American experience with Jeeps relates to the frontier and wide-open spaces. Therefore, to sell a Jeep to an American, a marketer must trigger these impulses; By contrast, the cultural experience with jeeps in Europe is much different. Because the Jeep is connected subconsciously to World War II occupation and the subsequent liberation, the cultural connection Europeans make to Jeep is freedom. According to Rapaille's culture code, Jeep for Americans means "Horse" while the culture code for Jeep in Europe is "Liberator."

Rapaille is convinced this is the kind of deeply-embedded information that helps global companies market and sells to different cultures around the world.

He organized “imprinting” sessions around the world to find out how consumers related to such things as love, sex, and food. Eventually he realized that these powerful culturally learned imprints could be applied to marketing.

Rapaille explored several countries “cultural unconscious” and developed a system of codes that would help marketers understand how they could trigger the different shopping impulses in consumers around the world (Graham, 2007). Over the years his unconventional methods have been embraced by many fortune 100 companies. Every one of the companies wanted to know why a particular product or marketing scheme that worked in one country, seemed to fall flat in another. According to Rapaille’s theory, the answers could only be found in the collective subconscious of each culture.

The culture code closely resembles the goal of this project. In that, if designers could also somehow tap into some of the things that drive the buying habits and impulses of a particular culture, or subculture and translate that knowledge into every product designed and manufactured for mass production.

## 3.2 VISUAL CULTURE

**What is visual culture?** Visual culture is can be described as the visual method through which information, meaning, or gratification is received by the consumer through visual products of all kinds, as well as new and emerging technologies, and the beliefs, values, and attitudes represented in those products. According to Martin Irvine, Founding Director and Associate Professor Communication, Culture, and Technology Program Graduate School of Arts and Sciences at Georgetown University; Studying visual culture separates the "visual mediation" or "visual representation" for analysis. The "visual culture" approach acknowledges the truth of living in a world of *cross-mediation*--our experience of culturally meaningful visual content appears in multiple forms, and visual content and codes migrate from one form to another:

- print images and graphic design
- TV and cable TV
- film and video
- computer interfaces and software design
- Internet/Web as a visual platform
- Product design
- advertising in all media (a true cross-media institution)

- fine art and photography
- fashion
- architecture, design, and urban design (Irvine, 2004-2008)

Academic and Professional Disciplines Surrounding the Study of Visual Culture		
Media Studies	Art History and Art Theory	Semiotics
Cultural Studies	Film Studies	Visual Rhetoric, Graphic Design, Literary Theory
Visual Arts (painting, photography, video, sculpture, drawing, printmaking, all hybrids)	<b>Visual Culture:</b> Objectifications, Legitimized Subject Matter	Aesthetics and Philosophy of Art and Representation
Sociology and Anthropology of art, media, and communication	Architecture and Design	Museums and Art Curatorship
Communications (TV, film production, advertising, graphic design)	Institutional Theory and Social Network Theory	Mediology and Complexity Theory

Figure 1 Academic and Professional Disciplines Surrounding the Study of Visual Culture (Irvine, M. (2004-2008).

**So why understand visual culture?** Within the book, *Mind Set! Reset Your Thinking and See the Future*, by futurist John Naisbitt, there is a chapter titled "A Visual Culture is Taking Over the World," in which he argues that visual narrative is overwhelming literary narrative, and the trend will continue and grow deeper for the foreseeable future. Purchasing fine art has traditionally been the way the wealthy show they've made it, but now art museum attendance is higher than attendance at sporting events. According to an article Bob Mondello, *A History Of Museums, 'The Memory Of Mankind'*, if you add up the attendance for every major-league baseball, basketball, football and hockey game this year, the combined total will come to about 140 million people. That is a big number, but it is barely a fraction of the number of people who will visit American museums this year. Museums are big business, attracting billions of tourist dollars, advancing science, and educating and amusing more than 850 million people annually (Mondello, 2008).

Architects, such as Frank Gehry, are creating cutting-edge, highly creative structures that turn cities into artistic tourist destinations. Video games are now a larger industry than movies, further establishing a growing visual culture. In the book he points out that for ANY business or product to be successful in today's



marketplace, high-quality design is the most important factor. With so many of the same products available, the best design is what wins out (Naisbitt, 2006).

According to John Fiske professor of Communication Arts at the University of Wisconsin-Madison, visual culture speaks to the production and consumption of images, objects, and events from diverse cultures, across national boundaries, and within a global context. This means that consumers may be challenged to take in hand many different types of vision and perception, extending beyond simply the visual to cognition and perception. "Thinking across cultures requires that designers allow for what may seem like alien thinking (such as theater in India lasting all night) and fundamentally different notions of representation (such as the use of abstraction in the Islamic world) and markedly unfamiliar understandings of visibility (such as African concepts of the seen as markers for the spirit world) (Fiske, 2007). Thinking in intercultural terms includes radically revised views of "high" and "low" culture and a substantial change in the ways one practices history and anthropology. Because seeing is central to the understanding of cultural differences, much of the fundamental work in Visual Culture Studies is about the construction of identity through the mutually dependent elements of race, ethnicity, gender, sexuality, class, and ability" (Fiske, 2007).

This way of thinking can not only be useful in the ways the history and anthropology is practiced, but also in the ways designers create, and communicate the blueprint of the products and services they produce. As designers continue to look more into the everyday lives of consumers there should be an improved study into the visual, the aesthetic side in a less restricted fashion. In referring back to the definition of visual culture, that being everything we see, have seen, or may visualize-paintings, sculptures, movies, television, photographs, furniture, utensils, gardens, dance, buildings, artifacts, landscape, toys, advertising, jewelry, apparel, light, graphs, maps, websites, dreams-in short, all aspects of culture that communicate through visual means. "Anything visible is a potential object of study for Visual Culture, and the worthiness of any visual object or practice, as an object of study depends not on its inherent qualities, as in the work of art, but on its place within the context of the whole of culture" (Fiske, 2007).

### 3.3 SUBCULTURES

It is a common occurrence that Subculture and Counterculture are two terms that are used interchangeably; however they do differ from one another. A **counterculture** comes about in opposition to the norms and values of the dominant culture. Members of countercultures—such as hippies and protest groups—are generally teenagers and young adults, because youth is often a time of identity crisis and experimentation. In time many, but not all, members of countercultures eventually adopt the norms and values of the dominant culture.

As Ken Gelder notes, subcultures are social, with their own shared conventions, values and rituals, but they can also seem 'immersed' or self-absorbed. Gelder identifies six key ways in which subcultures can be understood:

1. Through their often negative relations to work (as 'idle', 'parasitic', at play or at leisure, etc.);

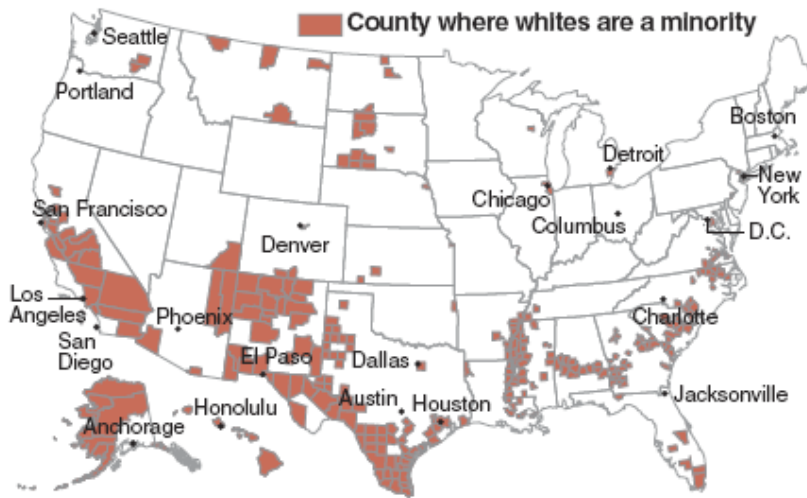
2. Through their negative or ambivalent relation to class (since subcultures are not 'class-conscious' and don't conform to traditional class definitions);
  3. Through their association with territory (the 'street', the 'hood, the club, etc.), rather than property;
  4. Through their movement out of the home and into non-domestic forms of belonging (i.e. social groups other than the family);
  5. Through their stylistic ties to excess and exaggeration;
  6. And through their refusal to obey the conventions of ordinary life
- (Gelder, *Subcultures: Cultural Histories and Social Practice*).

There is agreement in the marketing literature that culture greatly influences the way consumers perceive and behave (Hall 1977; McCracken 1988; Clark 1990). The remarkable demographic shifts that are occurring in the United States serve as a means to study how sub cultural differences affect consumption behavior (Wellner 2002). Many companies are discovering that success depends on utilizing opportunities to meet the needs of previously ignored sub cultural groups. Designers, in order to more effectively reach their target consumers, must have an understanding of how intra-national cultures impact product-specific purchases by consumers.

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## Minorities now in the majority

In 2006, non-Hispanic whites made up less than half of the population in about 10 percent of U.S. counties, a Census report found.



SOURCE: Census Bureau

AP

Figure 2 Map showing minority percentages in the U.S.

As subcultures, increase in size, designers must develop knowledge of consumer characteristics and group-level preferences to more effectively design and manufacture products to meet and exceed the growing needs of these markets. According to Schau, Hope Jensen author of *Exploring the Impact of Culture and Acculturation on Consumer Purchase Decisions: Toward a...* African-Americans, Hispanics and Asians make up the fastest growing groups in the United States. In 2003 Hispanics became the largest minority community in the United States. In some major cities, such as Los Angeles and New York City, the "minority" population outnumbers the "non-minority" population. The growth of ethnic subcultures in the United States is expected to continue. It is

estimated that by 2010, one in three American children will be African American, Hispanic or Asian (Schwartz and Exter 1989). Thus a full one-third of the U.S. market will be made up of ethnic subcultures (Schau, Hope Jensen, 2004). It is essential to know if these subcultures have the same consumption needs and buying habits as the dominant culture and respond to the same design techniques, because a large percentage of each culture also interacts in a separate virtual subculture. Different consumer needs and responses require different design approaches and in some circumstances, different design methodologies altogether. Thus there sub cultural differences which directly affect purchase decisions. To effectively understand and design for a subculture a designer must know who those consumers are.

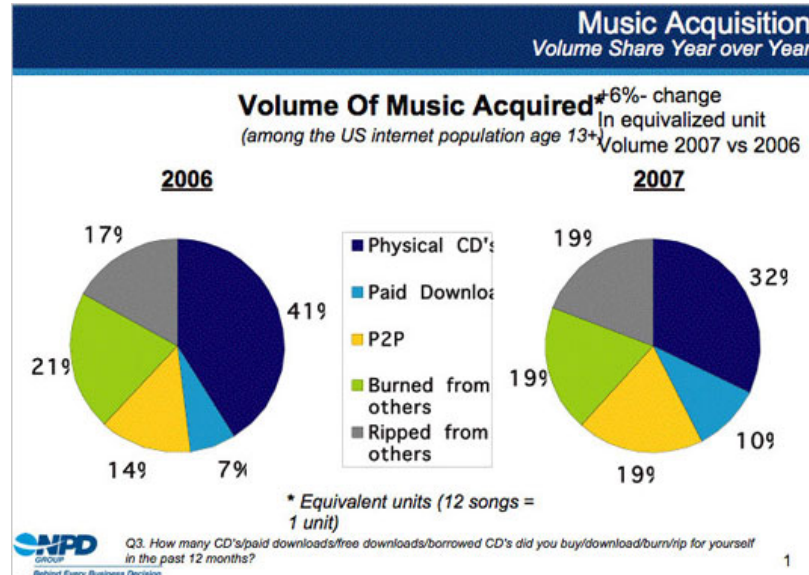
### 3.31 MUSIC AND INTERNET SUBCULTURE

There is also a significant sub cultural group of music and internet enthusiast comprised of young and older adults belonging to all previously mentioned sub cultural groups. With the recent growth of information and communication technologies like the internet, opportunities have emerged that enable individuals to participate in subcultures in which they otherwise might not participate. In a study by J. Patrick Williams, of the University of Georgia in Athens, titled: Authentic Identities Straightedge Subculture, Music, and the Internet, participants engaged in an internet forum, that revealed a new type of sub-culturalist is emerging—one whose sub cultural participation is limited to the internet. Through research it was revealed that there were at least two types of consumers present in the internet forum: those who used the forum as a *supplement* to participation in a face-to-face music scene and those whose internet use was a *primary* or *sole* source of sub cultural participation (Williams, 2006).

In everyday life, sub cultural youth often talk about themselves in independent terms. For example, they regularly claim to *be* real while charging others with simply *doing* sub cultural things, such as dressing speaking, or acting in certain ways in order to be cool or fit in (Widdicombe and Wooffitt 1990; Williams 2006). This is *social* identification: “Social identity . . . goes beyond any particular [context], for it places the individual as a member of a social category that differs from other categories. According to Williams experiences in cyberspace remain philosophical for many. As one cyber theorist wrote, **“The final point of a virtual world is to dissolve the constraints of the anchored world so that we can lift anchor—not to drift aimlessly without point, but to explore anchorage in ever new places”** (Heim 1993, 137). Heim is interpreted as suggesting not only that the internet offers new social spaces where identity can be re-negotiated but that a significant reason many go online is to experience new forms of social life. Indeed, research has shown that many internet users are not withdrawing from social interaction (Nie 2001), but are actively seeking it (Rheingold 2000; Wellman et al. 2001).



In William's Authentic Identities piece, music sub-culturalist repeatedly wrote about "the scene" as a necessary element in constructing a sub-cultural identity. Sub cultural theorists and sub-culturalists alike use the term *scene* "to signify some kind of . . . located and sub cultural space" (Bennett and Kahn-Harris 2004, 13). According to Straw (1991, 379), scenes "actualize a particular state of relations between various populations and social groups, as these coalesce around specific coalitions of musical style." People who regularly come together to consume music—in clubs, at parties, even through sharing purchased CDs—constitute a local scene. These scenes exist, in symbolic interactionist terms, as idiocultural manifestations of a larger subculture (Fine 1979). Current research conceptualizes multiple types of scenes, from local to trans-local to virtual (Bennett and Peterson 2004). Each type functions as a "framework that encompasses . . . material specificities of such things as global place building and urban experience" (Marchessault and Straw 2001, 5). Additionally, all three types share common denominators: shared space, a shared sense of purpose, and a shared sense of identity.



**Figure 3 Music Acquisition Chart** (Note: P2P refers to Person to Person file sharing)

One such place or scene that is currently expanding at rapid rates would be that of the media sharing networks such as Gnutella, Kazaa and Napster that have received enormous attention for their potential to disrupt conventional bodies of media distribution, and in turn, to threaten the profitability of popular music. The ongoing, high-profile legal campaign by the Recording Industry Association of America to nix file sharing applications, and to discourage Internet users from sharing music over networks, provides a great incentive for those who seek to rebel against the “norms and values of the dominate culture”. While the effect of this style of online MP3 file sharing on music consumption practices is probably very significant, other forms of music sharing take place in

a diversity of online ventures: Chat clients, message boards, and FTP posts, among others.

Music fans have actively sought one another out, through face-to-face communion in live music settings or record stores, through genre-specific dance clubs and events, through fanzines, through mix tape exchanges, and through online discussion groups, message boards, and MP3 Web sites. They have split into a number of social groups, identifying with particular styles and subcultures. Simply put, music sharing practices traditionally form a location for negotiations of meaning and identity among music fans. All of this translates into what is called a "scene", whether it is a physical space or a virtual chat room, or peer to peer file sharing site, the scene is where the members of this sub cultural group come to share and interact.

So the goal is for industrial designers translate this idea of a music and internet sub cultural "scene" into a product design worthy of those individuals amerced within theses sub cultural groups.

## 4.0 CULTURAL DESIGN PROCESS

### 4.1 IDENTIFYING EMERGING SUB-CULTURES



Figure 4; Images courtesy of [www.gettyimages.com](http://www.gettyimages.com)

The level of success for any innovative culturally based design depends on identifying emerging cultures before they emerge. Too often the process of finding budding sub cultures is hit or miss.

One of the best examples of an innovation for an emerging trend is the iPod, and Zune, and the digital music stores such as iTunes. These innovations are the result of the emerging trend of products becoming transcendent. People are less and less tied to the idea that things are

physically owned. **People are buying the experience not the object.** An example would be when, people purchase a song instead of an entire album, and to them it does not matter whether they have a file or a physical CD. People are now largely interested in purchasing the experience. This trend has changed the music industry and is changing the movie industry. It will eventually change other industries as well; though that will take more time. An emerging sub-culture will often times not follow along with the way things are and are done according to the rules of the dominate culture. So there is a need to adapt to the coming change. Before there is identification of an emerging sub culture one must realize there will be no sign that says “In three to five years this will be an aggressive and hungry consumer market”. According to a trend watching website, Innovation.com there are three ways in which one can identify and emerging culture.

### **Step One: Check the Current Trends**

One must know where things are now before they can know where they are going. **Assess current trends on a large scale.** Ask these questions:

1. What changes are occurring in the economy?
2. What changes are occurring in the political landscape?

3. What are current “hot button” issues?
4. What technologies are being developed or are in their infancy stages?
5. What is popular in mainstream culture?
6. What changes are occurring in various industries? As an example, the marketing industry has seen a new emphasis on product placement. Paid product-placement spending grew almost 34% to \$2.9 billion in 2007 and is projected to reach \$3.7 billion in 2008, a 28% growth (Media, 2008).
7. What trends have recently emerged or are emerging?

### **Step Two: Immerse in Culture**

The next step is to go deep into culture, past mainstream and into subcultures. If there is no connection this is difficult to do. There must **assess current cultural trends at a small scale**. When a designer is attempting to identify emerging cultural trends he or she should ask:

1. What is popular in the underground scenes?
2. What is popular with the DIY (do-it-yourself) crowd? This will probably help to identify currently emerging trends.
3. What is happening in various subcultures? The more that is known the better. Go out and find people who are culturally involved and talk to

them. See what they think is up and coming. Many companies actually pay young people who provide tips on emerging trends.

4. What has happened in the past that is being readopted by a subculture?

This is probably more a fad than a trend so watch out for these.

### **Step Three: Put the Pieces Together**

Look at what is known from the current trends and from sub cultural trends and see if there any parallels. Look for something in the subcultures that could be carried by a current trend to create a new trend. Now ask if that sub cultural trend became main-stream, what would change?

Also as a designer you must always stay current by tapping into various resources' typically used by the particular culture being studied. These resources can help confirm, test, and challenge emerging sub cultures.

1. TrendWatching.com - This website finds trends. They claim to have 8,000 plus trend watchers worldwide. They give free monthly trend briefings.
2. Gartner Emerging Trends and Technologies - Gartner research identifies trends arising from emerging information technology and assesses their

potential impact. These trends are focused on technology and therefore will tend to impact the implementation of business ideas.

3. Blog Searches – There are blogs on just about any topic these days.

Bloggers tend to be connected to culture and reveal what is truly happening. Read blogs to see what is happening and what is up and coming.

4. Conferences – Find and attend one key conference in the chosen area of study and one related to the area of expertise. The conference in this area will often give you access to emerging trends that have been identified by others in the elected field. While the conference related to ones field of expertise can give access to a trend in another field that will directly impact both various fields of study.

5. Demographics – Demographic trends are the easiest trends to identify.

These can help to find areas to innovate for. Ask what trends will come about because of demographics? If the mass of the population is aging (as it is in many countries currently) there will be an increase demand for health care, and retirement services.



## 4.2 IMPLICATIONS OF SUB CULTURE MARKET

Subcultures, mainly youth subcultures frequently are more knowledgeable about the electronic media, and developing trends and styles. Designers and marketers have a golden opportunity during the earlier stages of an emerging subculture to attract “Consumers in-training” (brand loyalty that starts early and may last a lifetime). Some of this youth market regularly become main shoppers for the home because of working parents; and will soon be starting families of their own. Furthermore in these particular youth subculture markets “word of mouth” begins to play a more dominant role in buying decisions. These groups tend to use products to express their identities, new found freedom, and to rebel against authority (Walker, R. 2006).

The size, growth rate, and characteristics of the different sub cultural markets create immense opportunities in: Product development, Media Targeting, Advertising Messages, Promotions, and Distribution. This is great for Industrial Designers, due to the fact that measuring and predicting the demographic patterns of promising subcultures is important to marketers for

two reasons. Different subcultures have distinct lifestyles resulting from a variation in age, religion, ethnic background, income level, gender, and community. These differences may result in different product preferences in different cultures (food, beverages, clothing etc). Growth rates in these different areas may vary dramatically. For many goods and services it is important to shorten the distribution channel as much as possible. Companies looking for new growth opportunities should focus on cultures expected to experience population increases.

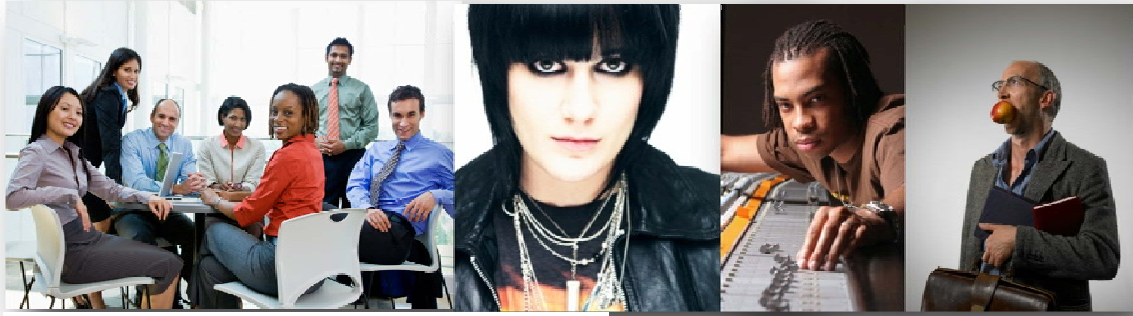
## 5.0 DESIGN APPROACH FOR A PRODUCT FOR THE INTERNET AND MUSIC SUBCULTURE

### 5.1 IDENTIFYING THE MUSIC AND INTERNET SUB-CULTRE

Following the steps outlined in the previous section, the emerging culture of the internet and music scene was able to be identified. After researching the current trends, in product design and consumer purchasing decisions, there was a definite influx of products designed to allow the consumer to stay connected at all times. “Staying connected” refers to the constant presence of the virtual world. This is evident through some of today’s most popular product designs, examples include:



Figure 5 Apple iPod Touch, BlackBerry Curve 8300, Facebook social networking website



**Figure 6 Members of the internet subculture**

Each of these products allow the user to connect to one another in a unique way that is not prohibited by a physical location, time, race, gender, or age. Whether the consumer is on the go, at work, at home, or enjoying leisure time, they can use these devices to connect and share with each other. These are products that can remain with the consumer and interact with the consumer in nearly every aspect of their daily life.

Also members of this particular subculture group maintain vast numbers, because of the versatility in ways they can stay connected, yet remain relatively private. All types of people from the dominate culture as well as the surrounding cultures can meet and interact in the VIRTUAL SCENE of the internet subculture.

After identifying the internet subculture as a possible demographic in which to design for, further research was conducted by reviewing blogs. Such as

those posted on [www.wordpress.com](http://www.wordpress.com), that have discussions about the freedoms involved in participating in this virtual world.

“ **A virtual world is free of social and cultural ties, free of the pressures of conformity, free from the confines of the social norm...**” (*Social Norms in a Virtual World..November 7, 2007 by Arcadia <http://scrapbookingwithwords.wordpress.com/2007/11/07/social-norms-in-a-virtual-world/>*)

This was further evidence of the possible viability of the internet subculture being a worthy demographic in which to design for. The next and final step in identifying a viable subculture is to research conferences covering the topic in question. For example, The 7th Chinese Internet Research Conference being held at the Annenberg School for Communication, University of Pennsylvania in May of 2009. Topics for this conference and others include, subjects such as;

- **The Internet and youth:** How do young people use the Internet and are there generational differences in Internet use? What cultures/subcultures emerge over the Internet? How are civic cultures formed through online cultural practices such as peer production, gaming, and social networking

in spaces such as Facebook, YouTube, and Myspace? What new cultures emerge in virtual worlds such as Secondlife and Hipihi, the blogosphere and other online spaces?

- **Entertainment, deliberation/opinion-formation and popular culture:**

How have the boundaries between news and entertainment changed and what effect does it have on deliberation and opinion formation? What is the role of entertainment in Internet use? To what extent are people addressed as consumers rather than citizens online? How are concepts such as "fun" and "play" applied in Internet use?

- **Chinese minorities, China Proper, Greater China or "Cultural China":**

How do Chinese minorities use the Internet? How are they represented over the Internet? How is the Internet used in other Chinese-language speaking areas, including Hong Kong, Taiwan and Singapore? How do Chinese Diasporas use the Internet? Is global Chineseness, if it exists, fostered through the Internet?

- **Research methodology:** What are the appropriate methodologies to study

the Chinese Internet and civil society in particular? What comparative models can explore the overlap and differences between the Chinese Internet and the global Internet?

The large number of conferences as well as the topics of discussion at these conferences was another indication that the internet subculture is worthy of moving to the next step in the design process.

## 5.2 A FURNITURE DESIGN FOR THE MUSIC AND INTERNET SUBCULTURE

The subsequent step in the design process is to determine a product in which to design for the chosen demographic. In this case furniture was chosen after outlining some of the central issues that are shared by members of the internet and music subculture. This was done through the use of the blogs, as well as research cited in previous studies into the internet subculture such as those mentioned in the piece by J. Patrick Williams, of the University of Georgia in Athens, titled: Authentic Identities Straightedge Subculture, Music, and the Internet. These issues being:

- The desire to comfortably connect and interact with others in the community.
- The desire to bring in elements from a traditional sub culture scene in to the virtual scene (Such as the aspect of face to face interaction.)
- The **need for uniqueness**. This makes an interesting **alternative model to mass customization**: Instead of co-designing an own product, a consumer may turn to one of your product designs to feel individual.

Also by choosing furniture the study is emphasizing the need for the designer to know as much about the sub culture and cultural design process as



possible. This is true for any type of design, but especially important when the designer will be laying a foundation in which future designers may choose to follow, and in an environment outside the designer's own culture. Furniture is often a lens into culture, due to the fact that it is repeatedly customized to fit the everyday needs of consumers. When furniture is designed without regard for its intended cultural market, it is over and over again without meaning, and it inevitably fails in the market.

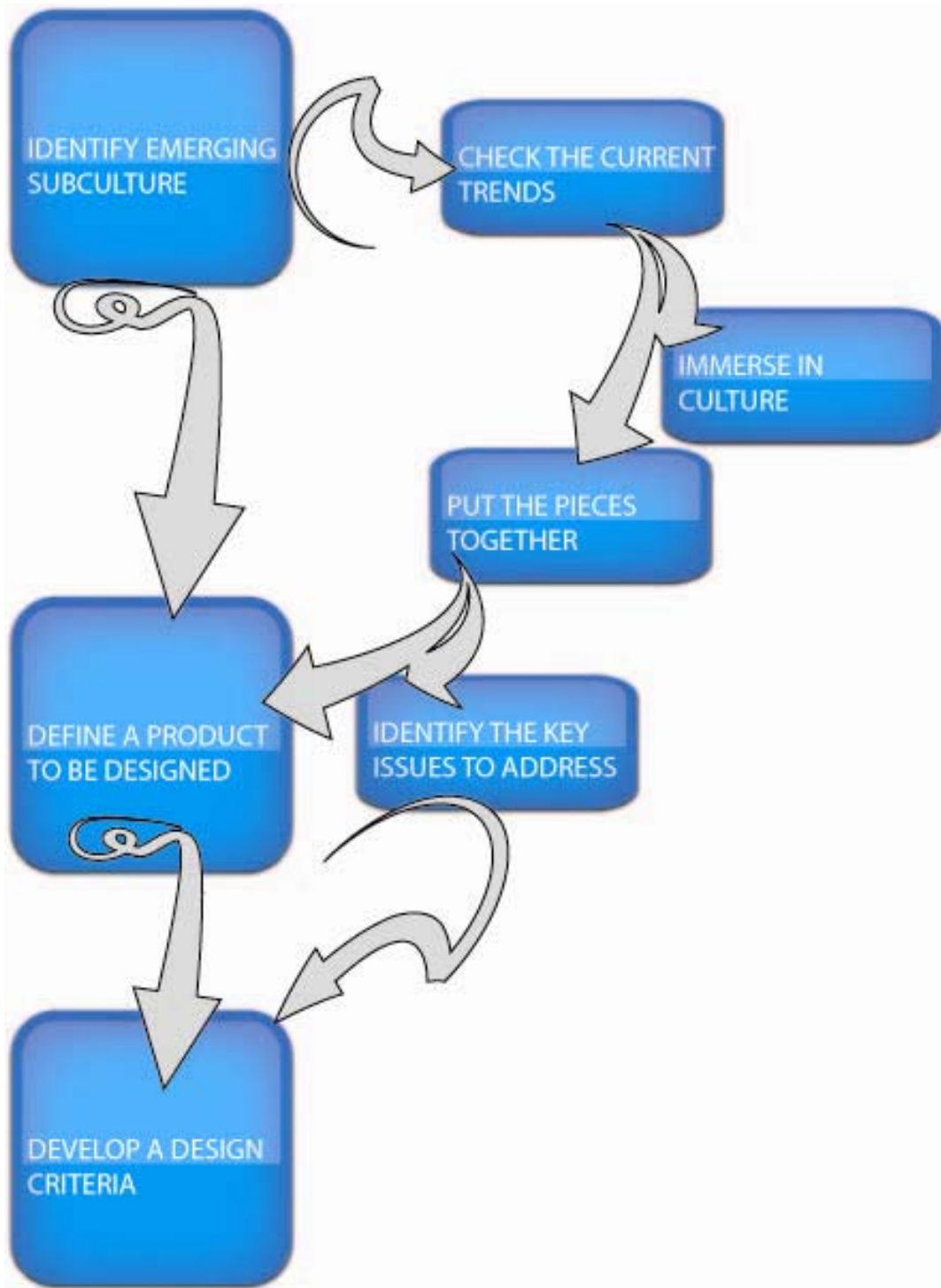


Figure 7 Flow Chart of Cultural Design Process

## 5.3 DESIGN CRITERIA FOR FURNITURE DESIGN FOR THE INTERNET AND MUSIC SUBCULTURE

### 5.31 AESTHETIC CRITERIA

The criteria listed below address the appearance of the furniture design and how it should be designed to appeal to members of the music and internet sub culture. The form and design of the furniture should be carefully considered. Details for every aspect of the furniture should be well thought all the way through the design process.

- Pay attention the overall design of the product, firstly, the furniture must be structurally stronger as the demands placed upon it are normally greater due to the fact that in maybe constantly moved, and rearranged to fit various need. Keep in mind that this product will be used for more than sitting and relaxing.
- Maintain the idea of “The Scene” by creating a product with multiple functions, (1) studying, reading, writing, (2) comfortable sitting for relaxation and contemplation, and (3) informal conferencing.

- Create a sense of individuality within the product design that will give the consumer the desired feeling of non-conformity.

### 5.32 ERGONOMIC CRITERIA

"Ergonomics (or human factors) is the scientific discipline concerned with the understanding of the interactions among human and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance (Cornell University)."

There is a myth of designing for the average person, since there are no people whose body dimensions are all at the 50th percentile. Body dimensions aren't linearly interconnected, so people with short arms don't necessarily have short legs, etc. While the use of the 5th and 95th percentiles on one body dimension may exclude 10% of the population, the use of these on 13 dimensions actually can exclude 52% of the population. According to the Ergonomics Department at Cornell University the human factor criterion should be as follows:

- **Seat Height** - Optimum seat height is controversial.

- **Traditional Criterion** - Seat height should be adjusted to support a knee angle of 90-degrees to prevent leg swelling.
- However 75% of leg swelling may be due to low leg muscle activity rather than chair.
- **Minimum Height** - should be 15" (38cm) which designs to the 5th percentile of women with 1" heels. The seat should adjust 9" (23cm).
- **Fixed Height** - should be about 17" (43cm). This is a compromise. A chair that is too high leads to increased pressure at the popliteal fold (underside of knees), decreasing blood circulation and increasing pressure on the nerve. A chair that is too low increases weight on the ischial tuberosities.
- **Seat Pan** -
  - **Seat Depth** - recommended is 16.5" for fixed seats and 14-18.5" for adjustable seats. If the seat depth is greater than the buttock-popliteal length (fifth percentile woman is at 17") then the user won't be able to use the backrest.
  - **Seat Pan Contours** - Half body weight is supported by an 8% area under the "seat bones" (ischial tuberosities). If the seat is hard and flat the pressures can be 85-100 p.s.i. Seat contouring and

cushioning can be used to distribute pressure over a larger area and rotate the pelvis forward to promote better posture.

- **Seat Cushioning** - recommended thickness at 1.5-2". Cushion should be firmer in back and thicker while less firm and thinner at front. Too much cushioning can cause the body to sink into a chair constraining movement. A soft chair may be comfortable at first, but as the body sinks blood circulation lowers, skin temperature rises in affected areas, and compression under thighs increases. These factors combine to increase discomfort.

- **Cushion Compressibility** - Compressibility is termed indentation load deflection (ILD) or indentation force deflections (IFD). An ideal combination is a soft top layer (25% ILD) over a firm bottom layer (65% ILD). Increased ratios between the two, greater than 2.6, leads to better quality support.

- **Seat Width** - around 20 - 22" to accommodate clothed persons. If seat has armrests then elbow to elbow breadth may be more relevant.

- **Seat Angle** - Positive seat angle helps user to maintain good contact with backrest. For most purposes a 5 to 10 degree angle is recommended.
- **Backrests** -
  - **Height** - Higher backrests give better trunk weight support. Three categories:
    - **Low-level backrest** - supports the lumbar region only.  
Depth of the lumbar curve of the backrest should be 0.6 - 2.0". Backrest heights of 5, 7, and 9" seem equally effective.
    - **Medium-level backrest** - gives full shoulder support (e.g. car seat, office chair) and may need to be about 26" high to accommodate the 95th percentile man.
    - **High-level backrest** - full support of head and neck (e.g. plane seat) and may need to be about 36" for a 95th percentile man.
- **Angle** - Optimal angle seems to be between 100-110-degrees (Cornell University).

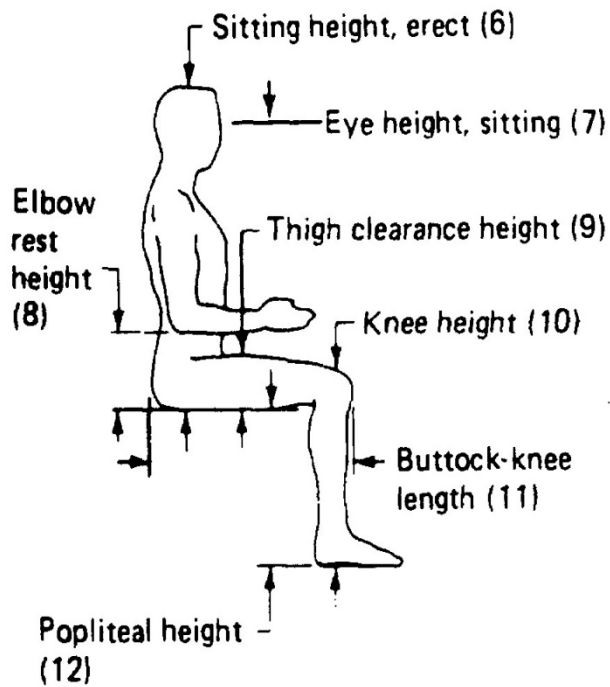


Figure 8, Seated Anthropometric chart (Cornell University)

Dimension, In	Sex	5th	50th	95th
<b>Body dimension</b>				
1. Height, sitting	Male	33.1	35.7	38.1
	Female	30.9	33.5	35.7
2. Eye height, sitting	Male	28.6	30.9	33.2
	Female	26.6	28.9	30.9
3. Elbow rest height, sitting	Male	7.5	9.6	11.6
	Female	7.1	9.2	11.1
4. Thigh clearance height	Male	4.5	5.7	7.
	Female	4.2	5.4	6.9
5. Knee height, sitting	Male	19.4	21.4	23.3
	Female	17.8	19.6	21.5
6. Buttock-knee distance, sitting	Male	21.3	23.4	25.3
	Female	20.4	22.4	24.6
7. Popliteal height, sitting	Male	15.4	17.4	19.2
	Female	14.0	15.7	17.4

Figure 9 Data of Seated Anthropometric chart (Cornell University)



### **5.33 PHYSICAL INTERFACE**

Products and parts which could be seen in any way as being weak put the safety of the consumer at risk, as well as any confidence they may have in the product or brand. The size of gaps and the position of corners, or edges can cause injury to people or damage to their clothing if not carefully considered.

### **5.34 MATERIAL CHOICES**

Materials such as, stainless steel, aluminum and some timbers can be used in a manner known as 'self-finish', that is without any secondary application such as painting or powder coating. This can help to increase a product's lifespan and enables easier maintenance in the case of any damage. Where secondary finishes are used, designers should give consideration to their durability and the levels of maintenance required to maintain their quality of appearance. Material durability combined with cost and ease of replacement will improve the performance of products. This combination will reduce the potential and probability of damage and the speed at which it can be replaced or repaired. A products appearance can be enhanced over time with careful consideration to the choice of materials, finishes and colors. Normal wear and tear is to be expected and the level of durability should be considered at the design stage.

### **5.35 HUMAN FACTORS**

User understanding and acceptance of a product will be improved if the product's user interfaces are carefully considered and logically set out. This approach improves the emotional comfort of people using what might otherwise seem to be an alien product in an unfamiliar environment.

The demographics should be clearly understood and considered at every phase of the design process. A product's design and the level of its features not only affect its suitability in use, but may also contribute to its visual character. Today's consumers have access to and are constantly informed by many products and environments. This helps to shape peoples' opinions of what is considered modern in terms of both technology and style. The design should embrace the long term trends as well as short term trends. Styling that is overtly fashionable will be perceived to date very quickly and should be avoided.

### **5.36 APPEARANCE**

A product's aesthetic appearance should be enhanced for two reasons: firstly to enable customers to avoid what may be a (necessary) intrusion into a space; and secondly to enable an easier understanding and use of a product. The clarity and ease of use of a product if designed with consideration for users with

disabilities will be to the benefit of all users. To aid simplicity, a color contrast between product features should be included. Differentiating between the floor and or walls and a product can also highlight a product's presence. Contrast can also be achieved in two other ways: firstly by specifying different parts of a product in different colors e.g. one color for a seat pan and another for the arm rest; secondly by including an element of reflective material, for instance, stainless steel against a dark wood color.

### **5.37 SUSTAINABILITY**

A product its lifespan does not end when it no longer performs its intended function. If considered at the design stage, disassembling a product may offer parts which could be used in other products and thus help save cost. Following disassembly, parts which cannot be reused may be able to be recycled. The use of parts which cannot either be reused or recycled should be minimized.

### **5.38 VISUAL COMMUNICATION**

How a product works must be clear and simple to understand. This should be investigated by the designer to provide a logical sequence of operations, perhaps enhanced by either pictograms and or numbers. The use of any words or pictograms should be carefully considered, any application that

might result in potential misunderstanding or unnecessary visual clutter should be avoided

## **6.0 DESIGN DEVELOPMENT**

This chapter will detail the exploration of concepts and explain the process of taking a concept to the final prototype. Each step will be explained and illustrated to document the approach taken. The method, style, and materials employed were selected due to a knowledge and familiarity of them. If another designer wishes to follow this example, be aware that this method is not universal and can be modified to fit the designer's own comfort and abilities.

### **6.1 IDEA SKETCHING**

Visual communication is a key component of any designer's abilities. Sketching allows the designer to illustrate his/her ideas. With all the research that has been done, one must be able to support an idea or a product will never be produced. Now that a type of product has been chosen, the sketching phase begins. A free and loose style of sketching is used to capture the feel of the product and how it will be used, without taking large amounts of time on one idea. The more sketches that are produced, generally correlates with the more ideas that are generated.

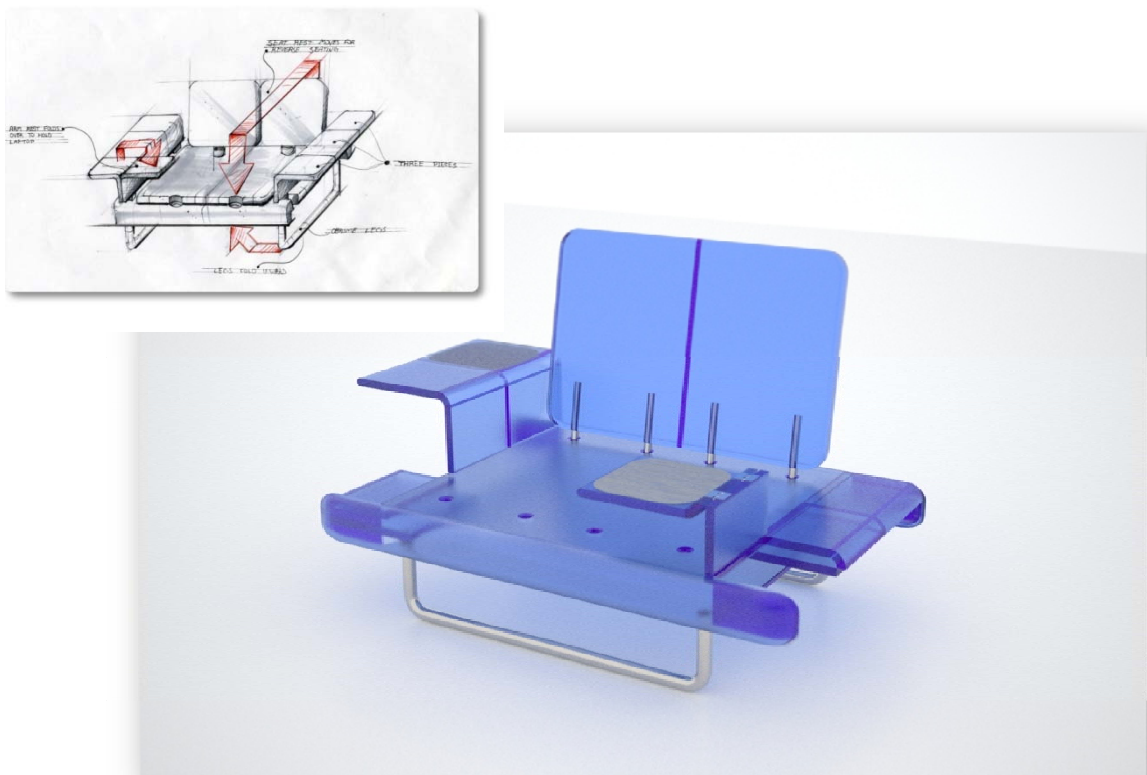
## 6.11 BRAINSTORMING



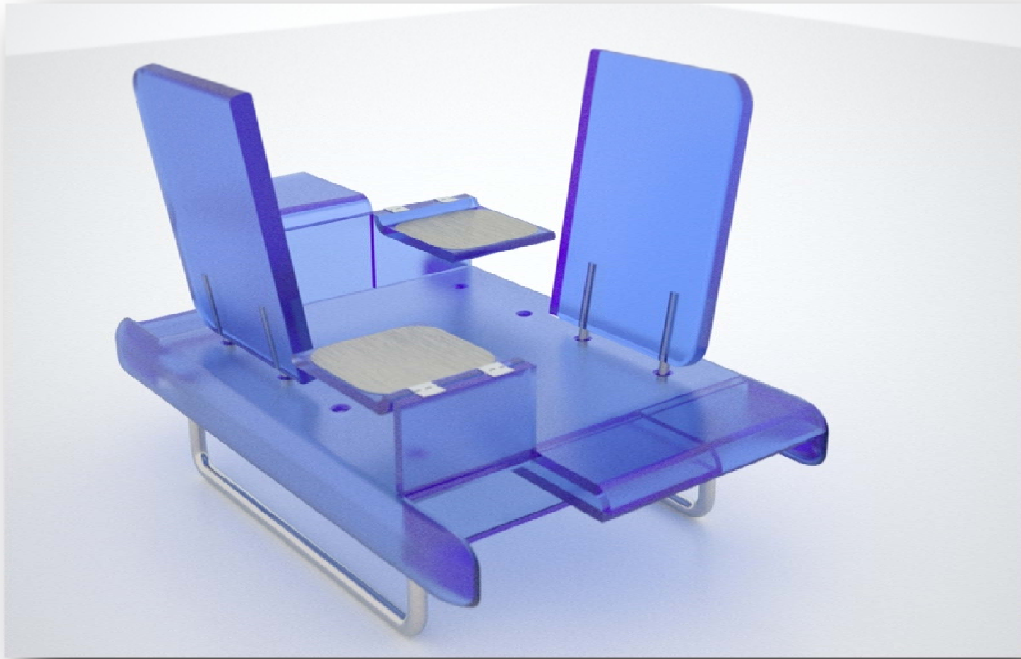
Figure 10, Brainstorming Sketches

## 6.2 FORM DEVELOPMENT

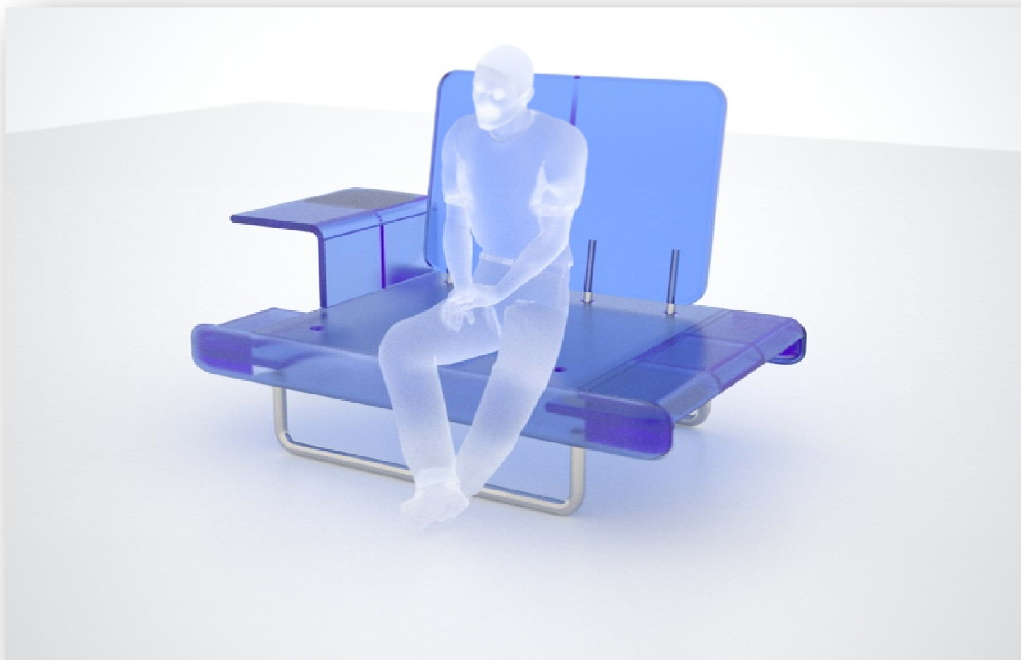
The concept sketches act as a guide in building the concept into a product. Once a sketch has been chosen to move forward in the process a computer model is made to better understand the design in three dimensions. After the model has been examined, the next step will involve refining the concept computer models. This design was chosen because of the versatility. The chair allows for several unique configurations, such as: the flipping of the arm rest to allow for laptop usage, the rotating of the back rest to allow for face to face interaction, and the folding down of all the arms individually to allow for more space.



**Figure 11 Sketch and initial computer model**



**Figure 12 Computer model, various configurations**



**Figure 13 Computer model, various configurations**



### 6.3 CONCEPT REFINEMENT

The next step in the process was the concept refinement stage. Based on consumer feedback from the initial concept sketches and models, revisions were made and a new computer model was generated. In this design softer lines were used with the intent of emulating many of the electronic gadgets that were now popular with the target demographic.

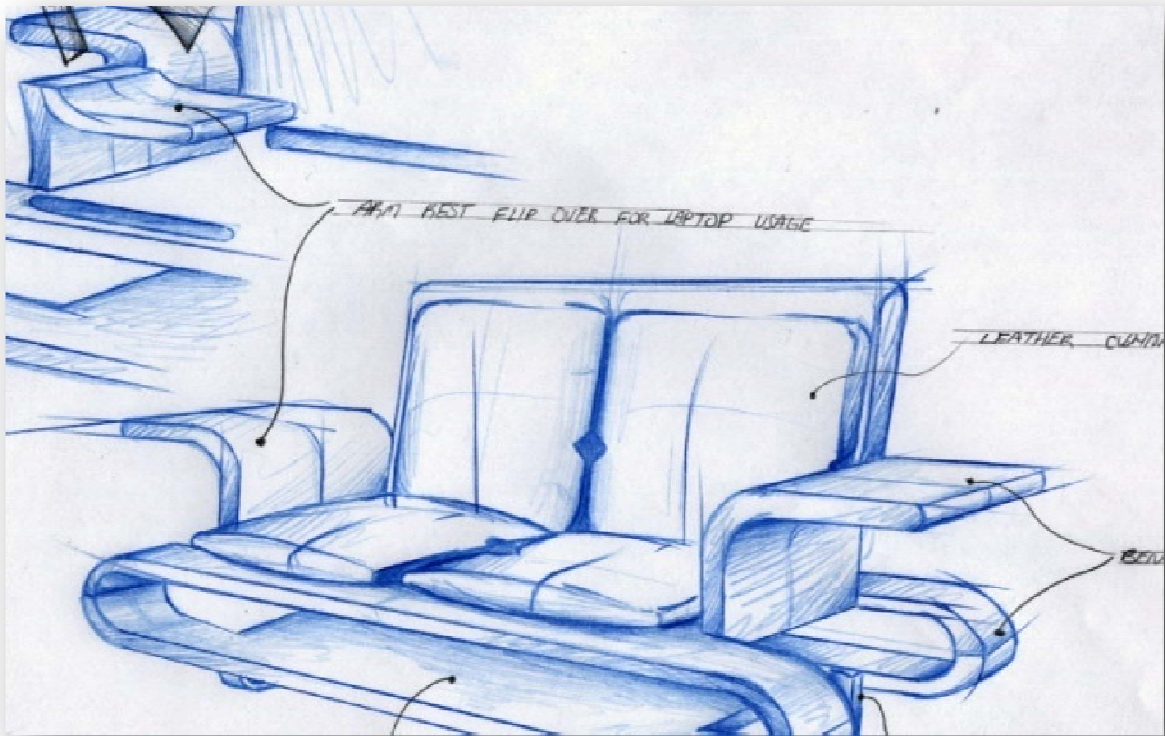


Figure 14 Sketch showing refinement in form

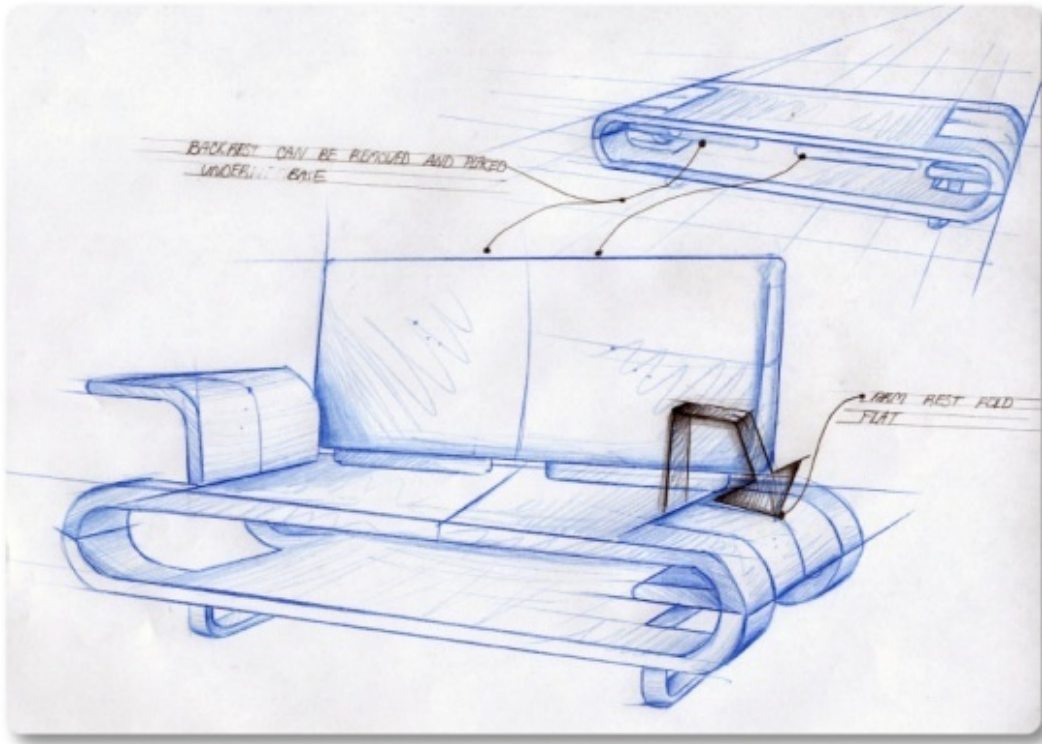


Figure 15 Sketch showing refinement in form

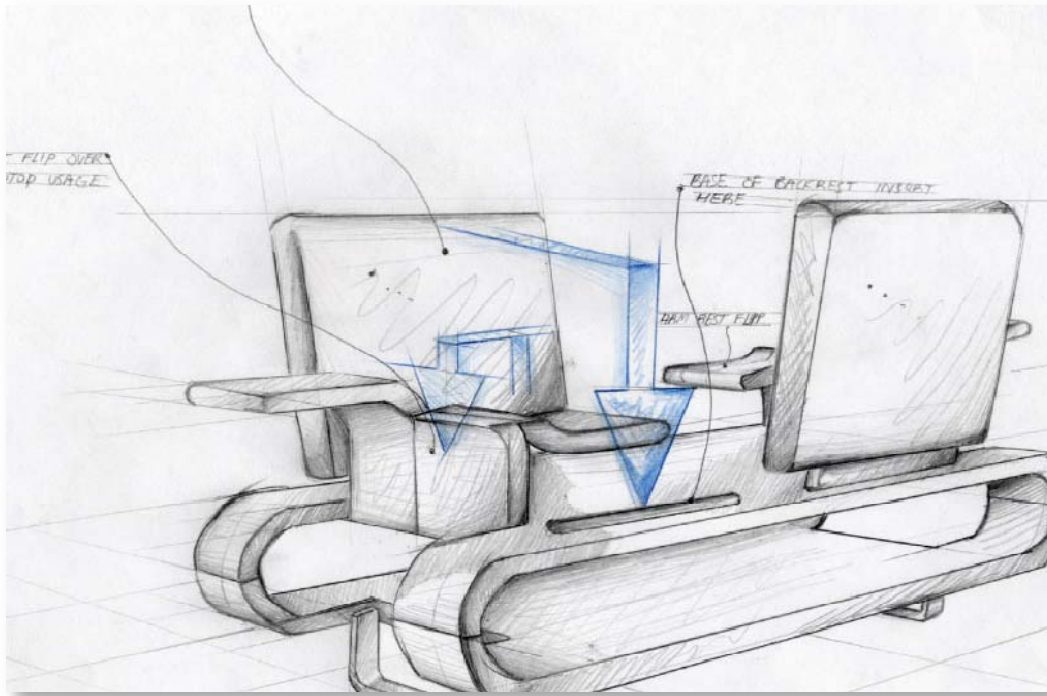


Figure 16 Sketch showing refinement in form

## 6.31 COMPUTER MODELS

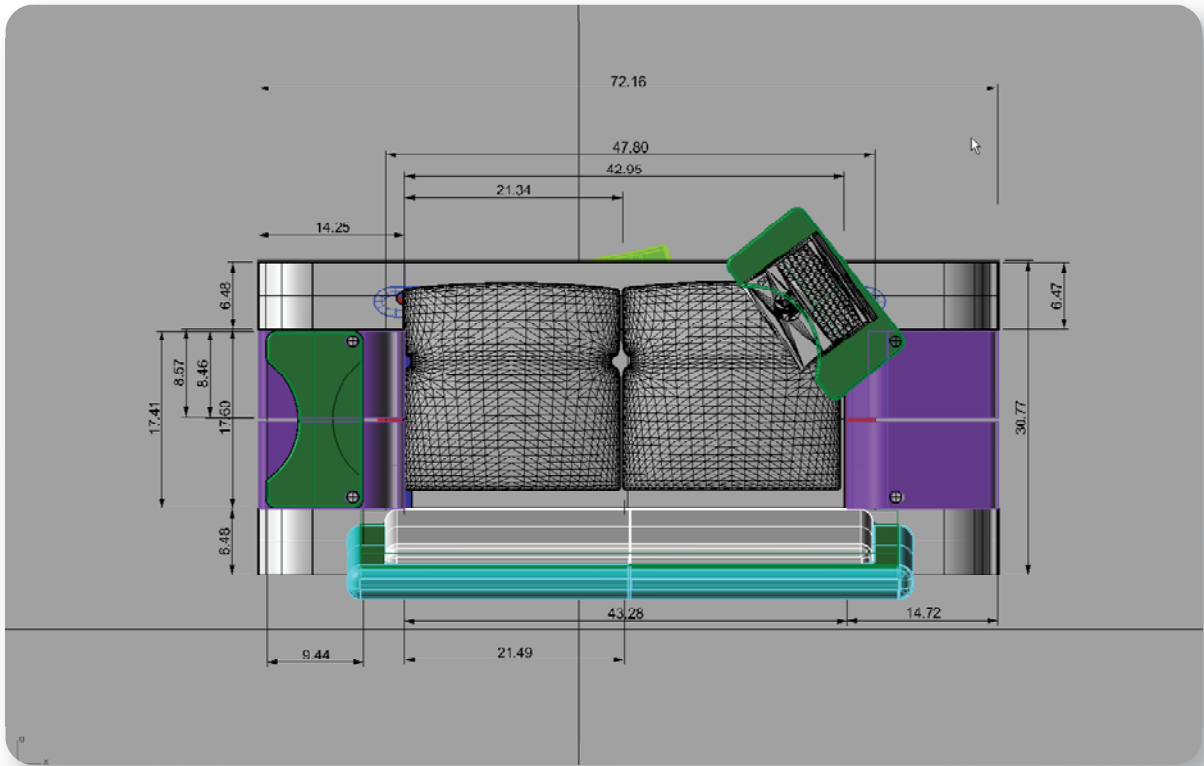


Figure 17 Computer model showing overall dimensions in inches

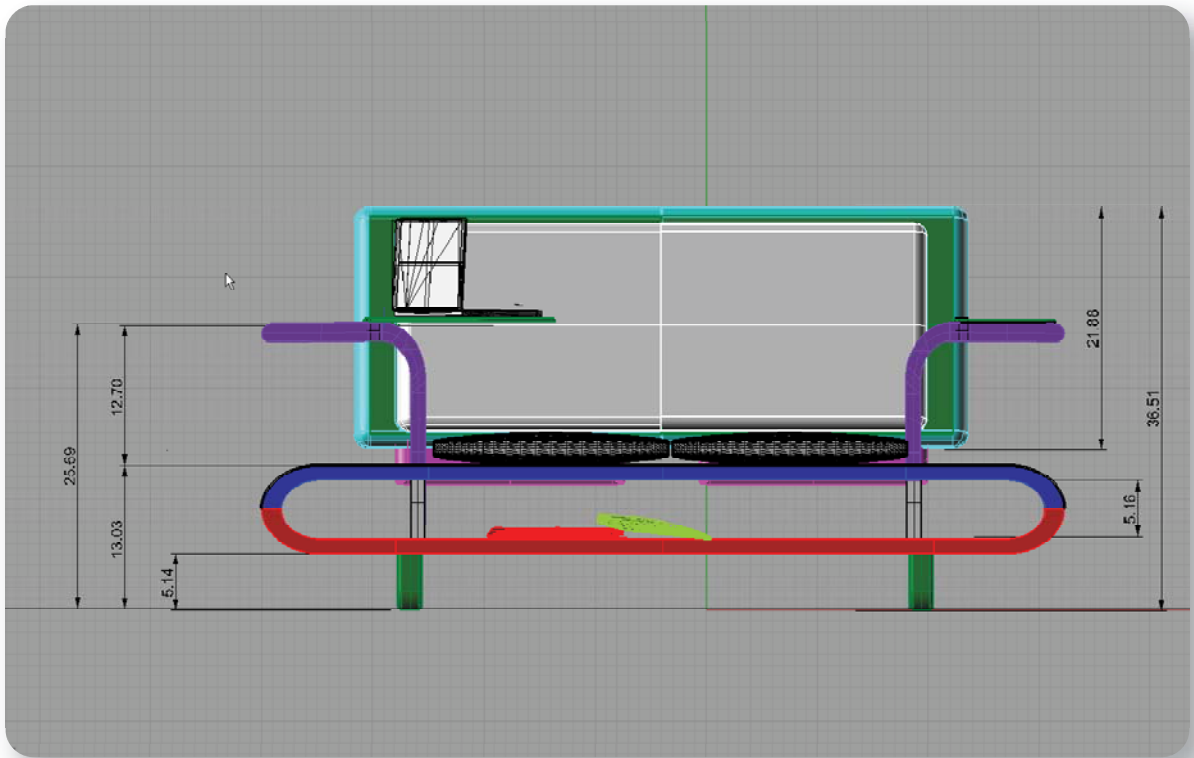
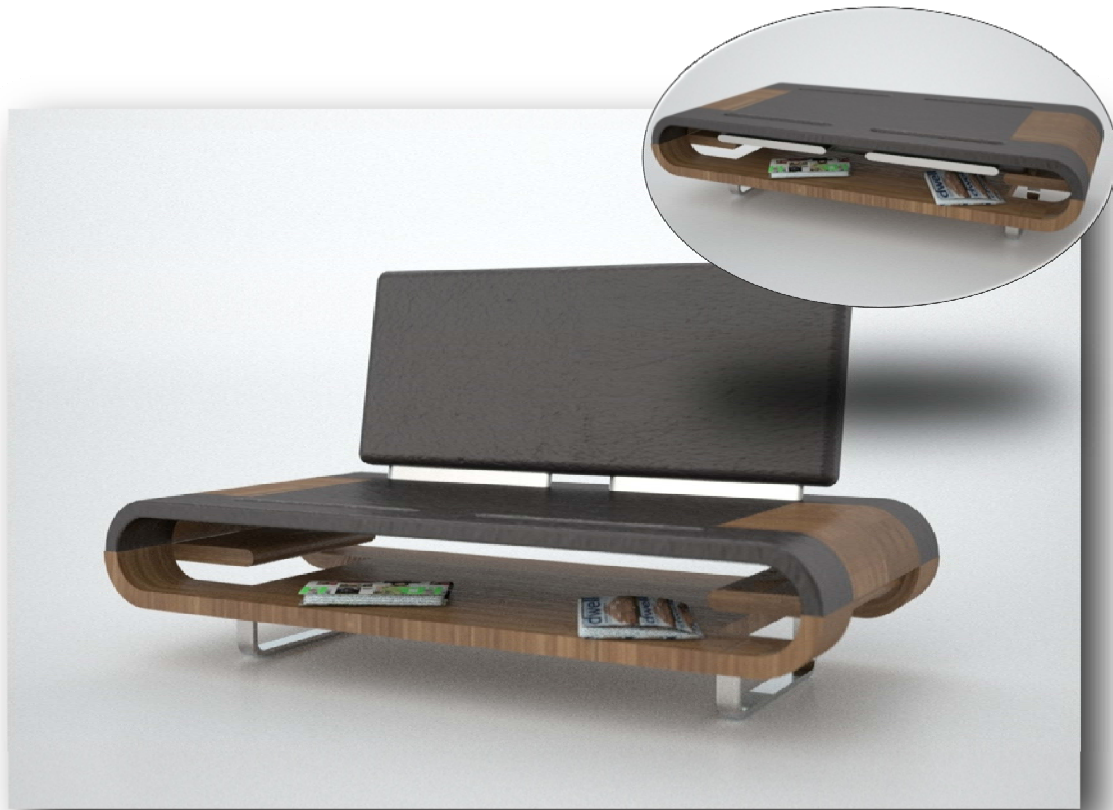


Figure 18 Computer model showing overall dimensions in inches



**Figure 19** Computer models showing refinement in form



**Figure 20** Computer models showing refinement in form

## 6.32 THE FINAL DESIGN



**Figure 21 Computer model of final design**

In the final design small revisions were made to increase to overall strength of the chair. First the arm rest were extended downward toward the base to allow for greater strength, next the backrest cushions were embedded into the backrest for increased potency and to make the user interface easier to understand and lastly the flipping of the armrest was eliminated due to structural weakness, and instead a rotating tray was added.



**Figure 22 Computer models of final design in various configurations**

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## APPENDIX

### REFERENCE LIST FOR SUB CULTURE WEB SITES:

<http://www.idonline.com/features/index.asp?goto=closead>

<http://www.idsa.org/>

<http://www.innovationjournal.org/>

<http://www.artandculture.com/cgi-bin/WebObjects/ACLive.woa/wa/movement?id=150&sel=mov&sub=a2z>

I:\Web-Sites\BraunPrize 2007 International Design Award [International competition to promote young designers].mht

I:\Web-Sites\DiversityWorking Commercial and Industrial Designers Diversity Jobs Minority Job Search.mht

I:\Web-Sites\Emerald FullText Article Workgroup productivity the implications of African-Americans' racial stereotypes for cooperative job designs.mht

I:\Web-Sites\The Black Aesthetic Revisited Cross-cultural Design Professional Resources AIGA.mht

<http://www.cliffsnotes.com/WileyCDA/CliffsReviewTopic/topicArticleId-26957,articleId-26854.html>

<http://www.nytimes.com/2006/07/30/magazine/30brand.html>

[http://mass-customization.blogs.com/mass\\_customization\\_open\\_i/2006/07/consumer\\_create.html](http://mass-customization.blogs.com/mass_customization_open_i/2006/07/consumer_create.html)

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<http://www.visualculture.wisc.edu/whatisvisualculture.htm>

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<http://scrapbookingwithwords.wordpress.com/2007/11/07/social-norms-in-a-virtual-world/>