

**Culture in Design: The Analysis of Culture through Semiotics and its role in the  
Automotive Industry**

by

Matthew Paul Morley

A thesis submitted to the Graduate Faculty of  
Auburn University  
in partial fulfillment of the  
requirements for the Degree of  
Master of Industrial Design

Auburn, Alabama  
May 3, 2014

Keywords: industrial, design, culture, semiotics, automotive

Copyright 2014 by Matthew Paul Morley

Approved by

Tin-man Lau, Chair, Professor of Industrial Design

Shuwen Tzeng, Associate Professor of Industrial Design

Christopher Arnold, Associate Professor of Industrial Design

## Abstract

With over 60 million automobiles being produced in 2013, the amount of time and energy that goes into the automotive design process is extremely valuable. Billions of dollars are spent on research and development to ensure that new vehicles will be a success. With the emergence of new markets around the world this is a challenging task. Currently, many automotive companies are experiencing declining revenue and difficulty breaking into these new markets. One of the main reasons for this challenge is that the vehicles they are producing are not designed with specific cultures in mind, merely slightly modified vehicles built from one global design language.

The objective of this study will be to create a new design approach where culture takes a leading role in the design process. By researching cultures individually with the assistance of semiotics, the characteristics of any given culture will be broken down to its base level and then translated with semiotics into a tangible process to apply to design. By exploring the uniqueness of the chosen culture the outcome of this study will infuse this new design approach with the richness of cultural diversity.

The globalization of companies and information has been rapidly spreading since the birth of the internet in the late 1980s. This globalization connects different cultures all over the world, making all cultures susceptible to outside influences and trends. While larger companies and the media seem to tell the public what is acceptable and in style, this study is in juxtaposition and

aims to prove this trend irrelevant. By implementing this new design approach to the automotive design process, this study also stands to show how this culturally infused product will connect with the consumer on a more substantial level. This connection should establish a stronger bond between product and consumer, proving more meaningful in value and in turn increasing revenue.

## Acknowledgments

The author would like to thank Auburn University's Department of Industrial Design for its incredible support in all phases of research and conceptual development during this project.

Thank you to the faculty and staff of the Department of Industrial Design, especially the board: Tin-Man Lau, Chris Arnold and Shu-Wen Tzeng. Thank you for your knowledge and wisdom that you have bestowed upon me, making me a better designer and preparing me for my professional career. To my family and friends, thank you for the amazing amount of support and encouragement along the way. And a special thank you to my wife, Amanda. Without your unwavering support and love I could have not accomplished this milestone in my life.

## Table of Contents

Abstract.....	ii
Acknowledgments.....	iv
List of Figures & Illustrations.....	ix
1.0 Introduction	
1.1 Background.....	p. 1
1.2 Problem Statement.....	p. 11
1.3 Need for Study.....	p. 12
1.4 Objectives in Study.....	p. 14
1.5 Definition of Terms.....	p. 16
1.6 Assumptions.....	p. 20
1.7 Scope & Limitations.....	p. 21
1.8 Methods & Procedures.....	p. 22
1.9 Anticipated Outcome.....	p. 29
2.0 Literature Review	
2.1 Cultural Overview	
2.1.1 What is Culture?.....	p. 30
2.1.2 The Basis of Culture.....	p. 34
2.1.3 Cultural Influence.....	p. 39

2.1.4	The Self-Awareness of Culture.....	p. 45
2.1.5	High & Low Context Cultures.....	p. 47
2.1.6	Culture in Design.....	p. 52
2.2	Semiotics Overview	
2.2.1	Identifying Culture through Semiotics.....	p. 55
2.2.2	Identifying Culture through Patterns.....	p. 57
2.2.3	Semiotics in Use.....	p. 62
2.2.4	The Importance of Semiotics.....	p. 65
2.2.5	Semiotic Analysis.....	p. 67
2.3	Automotive Industry Overview	
2.3.1	The Current State of the Automotive Industry.....	p. 95
2.3.2	Globalization in the Automotive Industry.....	p. 96
2.3.3	United States Auto Industry.....	p. 99
2.3.4	European Auto Industry.....	p. 101
2.3.5	Japanese Auto Industry.....	p. 104
2.3.6	Emerging Markets.....	p. 107
2.3.7	Advances in the Automobile.....	p. 112
2.3.8	Automotive Design Process.....	p. 118
3.0	Development of Approach	
3.1	Approach to Identifying Culture.....	p. 130
3.2	Approach to Semiotic Analysis.....	p. 134
3.3	Automotive Design Process: Implementing Cultural and Semiotic Analysis.....	p. 150

4.0	Application of Approach	
4.1	Cultural Analysis.....	p. 157
4.1.1	Data Collection.....	p. 158
4.1.2	Analysis & Incorporation.....	p. 168
4.2	Semiotics Analysis	
4.2.1	Data Collection & Analysis.....	p. 177
4.3	Automotive Analysis	
4.3.1	Mission Statement.....	p. 204
4.3.2	Gantt Chart.....	p. 205
4.3.3	Location & Market Research.....	p. 206
4.3.4	Observations.....	p. 210
4.3.5	Product Comparison.....	p. 212
4.3.6	Flow Chart.....	p. 214
4.3.7	Target Demographic.....	p. 215
4.3.8	User Personas.....	p. 219
4.3.9	Performance Criteria.....	p. 222
4.3.10	Morphological Matrix.....	p. 223
4.3.11	Interaction Analysis.....	p. 224
4.3.12	Mind Map.....	p. 225
4.3.13	Summary.....	p. 226
4.4	Concept Design	
4.4.1	Initial Sketches.....	p. 228
4.4.2	Refined Sketches.....	p. 230
4.4.3	Final Concept.....	p. 233

4.4.4	Physical Model.....	p. 235
5.0	Conclusion	
5.1	Cultural Incorporation.....	p. 238
5.2	Semiotic Incorporation.....	p. 241
5.3	Automotive Incorporation.....	p. 242
5.4	Summary.....	p. 244
	References.....	p. 245



## List of Figures & Illustrations

FIGURE 1	Aristotle's triangular model of how a sign is composed.....	p.7
FIGURE 2	Population Increase. This figure shows the rapid increase in population due to cultural knowledge.....	p.31
FIGURE 3	Cultural Influence. This figure shows the six levels of influence.....	p. 39
FIGURE 4	Layers of Influence. This figure shows the four layers of influence.....	p.40
FIGURE 5	Saussure's signified/signifier model. This figure shows Saussure's relationship between the signifier and the signified.....	p.68
FIGURE 6	Types of Respresentamina. This figure shows Pierce's breakdown of representamina into qualisigns, sinsigns and legisigns.....	p.69
FIGURE 7	Object Representation. This figure shows Pierce's breakdown of representation into icons, indexes and symbols.....	p.70
FIGURE 8	Types of Interpretants. This figure shows Pierce's breakdown of interpretants into rhemes, dicisigns and arguments.....	p.71
FIGURE 9	Summary of Pierce's Model. This figure shows Pierce's overall thought process with his three models combined .....	p.71
FIGURE 10	Syntagmatic/Paradigmatic Relationship. This figure shows the basic structure of the syntagmatic and paradigmatic model.....	p.74
FIGURE 11	Syntagmatic Relationships. This figure shows the basic structure of the syntagmatic model.....	p.77
FIGURE 12	Proximity Images. This figure shows how the mind arranges objects based upon their proximity to one another .....	p.83

FIGURE 13	Similarity Images. This figure shows how the mind arranges objects based upon their similarity .....	p.83
FIGURE 14	Good Continuation Image. This figure shows how the mind connects objects most efficiently based upon predetermined visual paths.....	p.84
FIGURE 15	Closure Image. This figure shows how the mind can ‘close’ images off based on their relationship to other objects.....	p.84
FIGURE 16	Smallness Image. This figure shows how the mind quickly focuses on the smaller darker objects than the larger white objects.....	p.85
FIGURE 17	Symmetry Image. This figure shows how the mind focuses on the symmetrical areas faster than the non-symmetrical areas.....	p.85
FIGURE 18	Surroundness Image. This figure shows how the mind creates ‘figures’ out of surrounding shapes.....	p.85
FIGURE 19	Vanishing Point Image. This figure shows how the use of perspective can impact the viewer’s perception.....	p.90
FIGURE 20	Daphne & Apollo. This picture shows the various levels of shot techniques used in today’s media.....	p.93
FIGURE 21	‘Hunger’ image. This picture shows how the closeness of a shot can affect the emotional involvement of an individual.....	p.94
FIGURE 22	Domestic auto sales in the US. This figure shows the amount of vehicles sold in the US from 1980 to 2013.....	p.100
FIGURE 23	US Market Share YTD 2013. This figure shows the percentage of market shares associated with the listed auto makers.....	p.100
FIGURE 24	Passenger car production in the EU. This figure shows the amount of automobiles the EU produces.....	p.102
FIGURE 25	European Market Share. This figure shows the percentage of market share associated with the listed auto makers.....	p.103
FIGURE 26	Employment in the automobile manufacturing and related industries. This figure shows the automotive workforce and industry statistics in Japan.....	p.105
FIGURE 27	Employment 2012. This figure shows the automotive employment data in Japan for 2012.....	p.106

FIGURE 28	Predicted Car Sales for 2020. This figure shows the estimated future car sales for India, the US and China in 2020.....	p.107
FIGURE 29	2030 Light-duty vehicle stock. This figure shows the estimated growth expected in 2030 by the countries displayed.....	p. 109
FIGURE 30	Automotive Market Share for India 2013. This figure shows the distributed market share amongst the listed auto makers.....	p. 111
FIGURE 31	Routes to success. This figure shows the key areas of which future automobiles will have to overcome.....	p. 117
FIGURE 32	Current Design Model. This figure shows the current design process broken down into five phases.....	p. 119
FIGURE 33	Silhouette. This image shows a silhouette of a Porsche 911, highlighting its iconic shape.....	p. 120
FIGURE 34	Brand Language. These images show three different brand languages specific to each manufacturer, Mercedes, Audi and BMW.....	p. 120
FIGURE 35	Clay Modeling at BMW. This image shows a designer sculpting a clay model at BMW's design studio.....	p. 124
FIGURE 36	CAD Modeling at VW Group. This image shows the different types of tools used when developing a CAD model .....	p. 125
FIGURE 37	CAD Wind-tunnel Testing. This image shows how CAD modeling has developed over the years and is now incorporated into simulated wind-tunnel testing.....	p. 126
FIGURE 38	Drivetrain Testing. This image shows the in-house powertrain testing at Ford facilities.....	p. 127
FIGURE 39	Prototype Testing. This image shows prototype testing being done on a track by Lamborghini.....	p. 128
FIGURE 40	Universal Functions of an Artifact. This figure shows how the four functions are related to one another and combine to create the artifact.....	p. 129
FIGURE 41	Cultural Approach Overview. This figure shows how the cultural approach will start broad and narrow its focus to the automotive design process.....	p. 130
FIGURE 42	Edward T. Hall's Model. This figure shows Hall's model of the 10 categories used for cultural analysis.....	p. 131

FIGURE 43	Culture on a Functional Level. This figure shows how the 10 categories will be broken down into the four functions.....	p. 132
FIGURE 44	Old Spice Ad. This illustration depicts an Old Spice Ad, “Smell Like A Man, Man.”.....	p. 134
FIGURE 45	Old Spice Ad References. This illustration depicts the Old Spice Ad labeled for everyday references.....	p. 136
FIGURE 46	Old Spice Ad Signs. This illustration depicts the Old Spice Ad labeled for the identification of signs.....	p. 137
FIGURE 47	Sign Analysis. This illustration depicts the Old Spice Ad broken down into signs, then analyzed individually.....	p. 138
FIGURE 48	Old Spice Ad Metaphors. This illustration depicts the Old Spice Ad broken down into metaphors.....	p. 139
FIGURE 49	Old Spice Ad. This illustration depicts an Old Spice Ad, “Smell Like A Man, Man.”.....	p. 141
FIGURE 50	Old Spice Ad. This illustration depicts an Old Spice Ad, “Smell Like A Man, Man.”.....	p. 142
FIGURE 51	Old Spice Ad Semiotic Codes. This illustration depicts an Old Spice Ad with the semiotic codes identified.....	p. 144
FIGURE 52	Old Spice Ad. This illustration depicts an Old Spice Ad, “Smell Like A Man, Man.”.....	p. 147
FIGURE 53	Implementation of Culture and Semiotic Data into the Automotive Design Process. The figure shows the overview of the automotive design process and where the approach is implemented.....	p. 150
FIGURE 54	Initial Automotive Research Approach. This figure shows the model of the approach, phase one.....	p. 151
FIGURE 55	Initial Automotive Research Approach. This figure shows the model of the approach, phase two.....	p. 152
FIGURE 56	Initial Automotive Research Approach. This figure shows the model of the approach, phase three.....	p. 153
FIGURE 57	Initial Automotive Research Approach. This figure shows the model of the approach, phase four.....	p. 154

FIGURE 58	Edward T. Hall’s Model. This figure shows the ten category breakdown for implementation.....	p. 157
FIGURE 59	Trumpchi Car Advertisement. This figure shows the advertisement for Trumpchi depicting a traditional Chinese dragon.....	p. 177
FIGURE 60	Trumpchi sign analysis. This figure shows the breakdown of the signs for the ad.....	p. 178
FIGURE 61	Subaru Car Advertisement. This figure shows advertisement for Subaru depicting traditional koi fish and lotus flowers .....	p. 183
FIGURE 62	Subaru sign analysis. This figure shows the breakdown of the signs for the ad.....	p. 185
FIGURE 63	BMW Car Advertisement. This figure shows advertisement for BMW depicting a traditional Peking opera mask.....	p. 190
FIGURE 64	BMW sign analysis. This figure shows the breakdown of the signs for the ad.....	p. 192
FIGURE 65	Mini Car Advertisement. This figure shows advertisement for Mini depicting the car breaking the world record for amount of people inside a car.....	p. 197
FIGURE 66	Mini sign analysis. This figure shows the breakdown of the signs for the ad.....	p. 199
FIGURE 67	Gantt Chart. This figure shows the Gantt chart used for the thesis study.....	p. 205
FIGURE 68	Geographical Location. This illustration depicts where the Liaoning province is in China.....	p. 206
FIGURE 69	Top Selling Cars in China 2013. This illustration depicts the top 10 selling cars in China and the current price markup for luxury vehicles.....	p. 209
FIGURE 70	Public Transportation. This illustration depicts the taxi, bus and high speed train use in Shenyang.....	p. 210
FIGURE 71	Public Transportation. This illustration depicts the subway and scooter use in Shenyang.....	p. 210
FIGURE 72	Public Transportation. This illustration depicts the climate variation in Shenyang.....	p. 211

FIGURE 73	Transportation Comparison. This illustration depicts the breakdown of all the forms of public transportation on a detailed level.....	p. 212
FIGURE 74	Transportation Assessment. This illustration depicts where all the public transportation falls in consideration of efficiency and price.....	p. 213
FIGURE 75	Flow Chart. This illustration depicts theoretically how each form pf public transportation is used in Shenyang.....	p. 214
FIGURE 76	User Persona One. This figure shows characteristics of a fictional person living in the Shenyang area.....	p. 219
FIGURE 77	User Persona Two. This figure shows characteristics of a fictional person living in the Shenyang area.....	p. 219
FIGURE 78	User Persona Three. This figure shows characteristics of a fictional person living in the Shenyang area.....	p. 220
FIGURE 79	User Persona Four. This figure shows characteristics of a fictional person living in the Shenyang area.....	p. 220
FIGURE 80	User Persona Five. This figure shows characteristics of a fictional person living in the Shenyang area.....	p. 221
FIGURE 81	Performance Criteria. This figure shows the performance criteria for the proposed vehicle.....	p. 222
FIGURE 82	Morphological Matrix. This figure shows the different options for various features of the proposed vehicle.....	p. 223
FIGURE 83	Interaction Analysis. This figure shows the interaction analysis of the vehicle, determining where the most important areas of the vehicle will be.....	p. 224
FIGURE 84	Mind Map. This figure shows the exploration of various factors that could contribute to the success of the proposed vehicle.....	p. 225
FIGURE 85	Concept Placement. This figure shows where the concept vehicle will be place based on the previous methods of automotive analysis.....	p. 226
FIGURE 86	Initial Concepts. These illustrations show the initial concepts for evaluation.....	p. 228
FIGURE 87	Initial Concepts. These illustrations show the initial concepts for evaluation.....	p. 229

FIGURE 88	Refined Concepts. These illustrations show the refined concepts of the proposed vehicle.....	p. 230
FIGURE 89	Refined Concepts. These illustrations show the refined concepts of the proposed vehicle.....	p. 231
FIGURE 90	Refined Concepts. These illustrations show the refined concepts of the proposed vehicle.....	p. 231
FIGURE 91	Refined Concepts. These illustrations show the refined concepts of the proposed vehicle.....	p. 232
FIGURE 92	Final Concept. This illustration shows the front perspective of the final concept vehicle.....	p. 233
FIGURE 93	Final Concept. This illustration shows the rear perspective of the final concept vehicle.....	p. 234
FIGURE 94	Final Concept. This illustration shows the interior of the final concept vehicle.....	p. 234
FIGURE 95	Physical Model. This figure shows the front perspective of the final concept vehicle.....	p. 235
FIGURE 96	Physical Model. This figure shows the front perspective of the final concept vehicle.....	p. 235
FIGURE 97	Final Concept. This illustration shows the front perspective of the final concept with labels for incorporation reference.....	p. 236
FIGURE 98	Final Concept. This illustration shows the rear perspective of the final concept with labels for incorporation reference.....	p. 236
FIGURE 99	Final Concept. This illustration shows the interior of the final concept with labels for incorporation reference.....	p. 237
FIGURE 100	Final Concept. This illustration shows the side orthographic view of the final concept for incorporation reference.....	p. 242

## **1.0 Introduction**

### **1.1 Background**

“If I’d asked people what they wanted, they would have said a faster horse.” – Henry Ford. Since the early 1900s the transportation industry has evolved rapidly. The automobile has become a major staple in our lives, beginning as a means of effective travel that has transformed into a personal and social statement as well. The first time the buyer sees the vehicle he or she will either make or break their decision to purchase it. Therefore, the aesthetic design of an automobile can now be regarded as one of the most important aspects of the design process. Thus the user has taken control of the design process, forcing an evolution of the techniques companies use to produce what is ideal for the masses. With so much emphasis and effort to determine what the user will like and buy today, many companies are taking on a global viewpoint in their design process to appeal to everyone. Fueled by the media and the internet’s ability to reach billions of people at any moment, current design trends are pushing towards the globalization of products, a unification of cultures. Is globalization the right move? Or will this design trend have permanent consequences on cultures around the world?

#### **What is Culture?**

Before looking at culture in design, one has to understand what culture is. Since the early 1700s culture has been regarded to as the characteristics that compose an individual’s or society’s means of living and also as the self-improvement of humankind, the pursuit of perfection. Being knowledgeable about all matters that concern us, the search for meaning, has been a driving force in self enlightenment for centuries. “Enlightenment is man's emergence from his self-incurred immaturity” (Immanuel Kant, 1781). Being cultured was to fill one’s mind with



academia, to pursue a noble effort to form his or her own opinions on past and present events. Initially an elitist view, this pursuit of knowledge still stands today in some cultures and social classes. Throughout history many other theories of culture have risen from anthropometrical standpoints, in addition with other fields.

“In the 20th century "culture" emerged as the central and unifying concept of American anthropology, where it most commonly refers to the universal human capacity to classify and encode human experiences symbolically, and to communicate symbolically encoded experiences socially” (“Culture”, 2012, para. #14).

This encoding of human experiences symbolically refers to the world’s diverse amount of languages.

“Language and culture then both emerged as a means of using symbols to construct social identity and maintain coherence within a social group too large to rely exclusively on pre-human ways of building community such as for example grooming”(“Culture”, 2012, para. # 58).

This construction of social identity and sense of belonging in large social groups is what eventually evolved into the creation of societies and nations. These distinct cultures can be identified and distinguished on sub-cultural levels, such as interaction, learning, defense, play, exploitation, territoriality, etc. With so many different fields defining what culture is, most researchers and theorists today believe that culture consists primarily of the symbolic, ideational, and intangible aspects of human societies.

“The essence of a culture is not its artifacts, tools, or other tangible cultural elements but how the members of the group interpret, use, and perceive them. It is the values, symbols, interpretations, and perspectives that distinguish one people from another in modernized societies; it is not material objects and other tangible aspects of human societies. People within a culture usually interpret the meaning of symbols, artifacts, and behaviors in the same or in similar ways” (Banks, 1989).

So why is culture important? Culture is what binds us together as a society. It is what defines our patterns of human activity. Through our different societies, cultures manifest themselves, resulting in the development of our unique sub-cultural traits. A society’s culture establishes how its people live. These cultural values act as our founding principles and influence our mindset. Without culture there would be no diversity among peoples. Culture is an integral part of living and should be treated as such. Removing culture from our lives would result in the regression of our society as a whole, as suggested by Frank Lloyd Wright (1893), “Lack of culture means what it has always meant: ignoble civilization and therefore imminent downfall.”

### **Our Cultural Identity**

Currently humanity is headed towards a global “cultural acceleration” driven by the expansion of international commerce, mass media, and most importantly the population explosion, amongst other factors. Nationally, the current state of culture in America seems to be following suit and is one of popular culture. Popular culture is the entirety of ideas, perspectives, attitudes, images and other events that are preferred silently within the mainstream of a given culture. This popular culture seems to derive especially from our American culture, starting in the mid-20th century and moving towards global mainstream in the late 20th and early 21st century. Heavily

influenced by mass media, this collection of ideas acts like a virus spreading into the everyday lives of our society.

Popular culture is often viewed as being trivial and dumbed-down in order to find mass appeal throughout the mainstream. As a result, it comes under heavy criticism from various non-mainstream sources which deem it superficial, consumerist, sensationalist, and corrupt. This sense of popular culture being lower class seems to contradict the original definition of culture itself, in that it is not contributing to a higher learning and self-betterment, presumably moving in the opposite direction.

“In this sense, whilst the application of design is multiplying exponentially, it is also losing its validity as an authentic cultural icon. It has become synonymous with cloning the face of global culture itself, more often representing the uniformity of mass globalization, rather than reflecting the facets of cultural difference and diversity” (Carlson, 2011).

This movement towards popular culture is spreading from Western culture and into the global mainstream with the help of mass media and technology, fueled by the internet. This current global movement to have the same desires and wants is projected from major companies like Apple, Nike, etc. With the continuation of globalization in a media based society, the values society will project are in turn those which the media is projecting to us. Thus the media is controlling what is important to society without any regard or concern for society other than monetary gain. This new society will ultimately be artificial, having no real substance. If the bombardment of mass culture from the media continues, the public will be separated and alienated from their traditional cultures that mirror who they are. Social dissolution is foreseeable, leading to no sense of belonging within social groups.

How is this important to the design world? Without culture, diversity in design will disappear.

“Designers are interested in culture. But sometimes they treat it in a way corporations used to treat design: something consulted too little, too late...it’s odd when we consider how often designers have shaped Culture” (McCracken, 1999). With the majority of most company’s shareholders making the decisions on what the company produces, profit is the main goal. Minimizing cost and maximizing profit typically throws many good ideas away, possibly including cultural factors, thus resulting in a product that lacks any real value or substance.

With the number of products in our society and the importance the public puts on them, it is perplexing why the majority of products designed are forgetful and unsustainable. This may be due to the product life cycle, compounded by the fact that the public seems to believe that it needs the latest and greatest gadget. Alternatively: Instead of innovating, companies imitate their competitors. This act of imitation is nothing new, actually stemming back to our past as a developing human race.

“This is called "the ratchet effect:" innovations spread and are shared by a group, and mastered by youngsters, which enables them to remain in their new and improved form within the group until something better comes along” (Michael Tomasello, 1985, p.34).

Embracing culture and applying it to design creates something more than just a product, but a reflection of the society it is mirroring. Though this might not keep the product out of the trash, it at least has some significance behind it. Culture should be a starting point when initializing the design process, not an afterthought or something to glance over.

## **Semiotics**

As stated before, culture is made up of many different areas. Though difficult to pinpoint, identifying these traits are key to understanding how cultures are unique to one another.

Researchers and scholars employ the study of semiotics to reveal these unspoken differences.

Semiotics, or semiology, is the study of signs, symbols, and signification. It is the study of how meaning is created, not what it is. For example not studying the tool itself, but the reasons behind why it was shaped and used in a particular fashion. Semiotics is often broken down into three branches: 1. Semantics - The relationship between signs and the things to which they refer or their meaning 2. Syntactics - The relations among signs in formal structures 3. Pragmatics - The relations between signs and the effects they have on the people who use them.

“All that can fall within the compass of human understanding, being either, first, the nature of things, as they are in themselves, their relations, and their manner of operation: or, secondly, that which man himself ought to do, as a rational and voluntary agent, for the attainment of any end, especially happiness: or, thirdly, the ways and means whereby the knowledge of both the one and the other of these is attained and communicated; I think science may be divided properly into these three sorts” (Locke, 1682).

From these three branches semioticians ask themselves three main questions when deciphering signs: 1. What does something mean? 2. How does it mean what it means? 3. Why does it mean what it means?

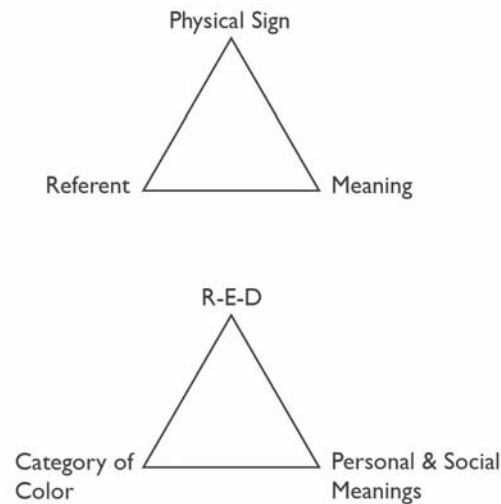


fig.1

Aristotle's model of what a sign is composed of is one of the first diagrams created to explore our fascination with meaning. Ultimately, signs assist individuals in actively remembering and allow people of the same culture to be able to talk and know about a particular thing, thus the passing on of knowledge.

“Signs are a result of the need that human beings the world over have to understand the world around them in conceptual ways. That is the central characteristic of the human species, which is called, not uncoincidentally, the sapient species (*Homo sapiens*)” (M. Danesi & P. Perron, 1999, p.47).

### **Applying Semiotics to Design**

If these relationships and codes transpire into the roots of culture and the way people act, then observation is key. Apparent today, American culture is obsessed with the future and constant change rather than the past. This may be due to the fact that America is relatively young compared to other cultures, lacking rich history and structure, as shown in Asia and the Middle East. An example of this differentiation of time between cultures is how most Americans think

that 5 to 10 years. is a long duration, while Asian cultures consider this a short stint. “Not only do we Americans segment and schedule time, but we look ahead and are oriented almost entirely toward the future. We like new things and are preoccupied with change. We want to know now to overcome resistance to change” (Hall, 1973). Our Western culture seems to drive our desire for change, almost ignoring traditions, thus promoting popular culture to the masses.

Designers tend to design for themselves first, then the client. By incorporating the study of semiotics, along with other outside factors, designers should be able to achieve a more meaningful understanding of their target market. The roots of the underlying culture in study will be exposed, enabling the designer to specifically tailor his or her design process to the target culture. Reversing this trend should open new doors to innovation and creativity, thus spawning new designs and inspiring future creativity. Not only should this process be explored in our culture but to other cultures around the world. “We are not only almost totally ignorant of what is expected in other countries, we are equally ignorant of what we are communicating to other people by our normal behavior” (Hall, 1973). By using this new design approach, this ignorance can be transformed into enlightenment and our cultural differences celebrated instead of being suppressed.

### **The Automotive Industry**

As part of the overall trend of globalization and rapid advancements in technology, the transportation industry is following suit. American transportation companies are moving away from designing models for specific cultures to vehicles with global appeal. “As a business, we’ve come to the conclusion that sex sells and understand that this is a fashion industry” (Schiavone, 2007, para.2). This statement, though true to an extent, is shallow in nature. While aesthetically

pleasing vehicles sell more than “uglier” ones, to what length is the car appealing to all cultures? With so many differences between cultures it seems quite ignorant to say a particular car will sell well because it looks good.

This also reveals most automotive companies views on planned obsolescence and sustainability. Fashion changes every year, more so every season. Treating transportation as such seems just to appeal to the publics’ taste for the latest and greatest rather than responsible business practices and efforts towards designing sustainable products. Current design and production methods enable auto makers to refresh models about every 5 years. Technology and the advancements in 3D printing will only make this process faster, eventually enabling auto makers to change or create an entire vehicle on a much smaller time scale. While the rate of which a vehicle is produced might not be in the designer’s control, how and why the vehicle is produced is in their power. “As much as you want to make everything swoopy and look as sexy as possible, there are vehicles where the hierarchy is equal between design and package. Eighty-percent of the time we’re now in the mindset where design is the priority” (Mays, 2009). With design now being the major priority it is essential to understand the market being designed for.

By following globalization trends, individual cultures seem to be forgotten, replaced by one product for everyone. Considering there are so many different economic and structural differences, e.g. roads, population, civil engineering, etc., in addition to cultural differences, it does seem ignorant to say there can be one car for the masses. By ignoring these factors, transportation companies are making a significant mistake, essentially missing more markets than what they were aiming for. For example, in China’s urban areas, where the population is extremely dense and the streets are narrow, an American mid-sized car, designed with global



intentions, will still have no place in the Chinese culture due to its size. It is only by identifying these cultural differences that the transportation industry can cater to these markets, especially unproven emerging markets.

### **Culture in Design, a Catalyst for Change**

“When you bring aesthetics and strategy together you have the tools to create products that can be catalysts for change, both from an economic standpoint and from a socio-cultural perspective” (Smith, 2009). Looking outside of the box and seeing a vehicle as more than just a mode of transportation, but this catalyst for change, is what implementing culture into design can bring. A global brand can still be achieved, though the underlying designs for different cultures by incorporating product variation must exist. This should result in increased brand power and more importantly creating a product that will be more open to acceptance and meet the target culture’s needs.

In many emerging markets having a vehicle is more than just a means of transportation, but a social statement as well. Signifying progress, attainable personal transportation inspires confidence within the users having an exponential effect on their quality of life and their contributions to society. By using semiotics to identify these cultural traits, transportation designers can apply these findings to their research and designs, thus reaching a larger audience than before while producing more meaningful vehicles.

## **1.2 Problem Statement**

With the majority of today's societies currently following and absorbing popular culture, in addition with the spread of globalization, the cultural diversity that made us unique is being eroded. This one-size-fits all mentality is hindering creative growth, lacking innovation and anything of substance. Companies are focusing on trends that last little more than a year, hence why the average life span of a product is nine months, focusing their research on short-term targets instead of long-term goals. One area of industry that is leading the push is the automotive sector. The majority of automotive companies are merely taking existing models and modifying them for certain cultures. As shown by vehicle sales in these emerging markets, specifically China and India, this marketing and production scheme is failing.

One way to resolve this problem is to make culture a major part of the design process. By researching and more importantly developing an understanding of culture, these automotive companies will be more equipped to provide a vehicle that meets the needs of specific societies. The cultural design process will ignore popular short term trends; instead extracting subconscious values that most individuals are completely unaware of. By following this new design process, automotive companies should have a greater impact in emerging markets, not only in sales but by also contributing to the society's economic and cultural advancement.

### **1.3 Need for Study**

For the first time in history, automobile production will exceed 60 million vehicles in a year. Globally, there are now over one billion vehicles in existence. With billions of dollars being spent each year by automotive companies for research and development, the ends must justify the means. According to OCIA (2014), Toyota leads worldwide vehicle production with 8.56 million units; GM is second with 8.5 million units and Volkswagen third with 7.3 million units. Though these automotive giants are leading in production, their sales in some emerging markets are struggling.

While the majority of vehicles are produced in China, only 150 out of 1000 people in China own a vehicle. Compared with the average of the seven major markets where 700 out of 1000 own vehicles, China is positioned to become the largest market for growth into the future. GM and Volkswagen make up the majority share of sales in China with a combined 30%, while the combined total of all other automotive brands is less than 25%. The battle for market share in China will be intense as auto makers tailor their strategies to meet the needs of the new consumers.

One emerging market that is specifically challenging for GM and Ford is India. “Cars designed for customers and segments in other countries have failed to capture the hearts of India’s demanding car buyers, leaving companies like G.M., Volkswagen and Ford with lots filled with ill-suited models and falling use of capacity at their plants” (Reuters, 2012, p. 1). GM is currently only moving a third of its plants capacity in India and Ford moving half its capacity. This global design practice and one car for the masses mentality is obviously headed in the wrong direction.

By implementing a new design process where culture is the main focus, specific models can be created and effectively marketed to these emerging markets with a higher rate of success instead of auto companies modifying existing models or purchasing other brand's vehicles for re-badging. Currently most of GM's lineup for India is based on existing vehicles from Daewoo. "G.M.'s Aveo sedan and Aveo U-VA hatchback, based on Korean designs and first introduced without diesel models, mustered a combined 3,328 sales in 2011. Toyota Motor's India-specific Etios and Liva — direct competitors to the Aveos in both segments — sold a total of 63,500 in the same period" (Reuters, 2012, p. 3). From this statistic it is clear that the car developed specifically for India sold more than the modified car made for other cultures.

While designing for specific cultures might seem like the obvious solution, most car makers today are following irrelevant trends in the hopes of meeting the public's future desires. By focusing efforts on revealing the hidden meanings in cultures and making these unique aspects tangible, automotive companies can create vehicles that not only meet consumer demands but also reach them on a subconscious level.

## **1.4 Objectives of Study**

By researching the relationship between culture, semiotics and the automobile industry, the author plans to develop a design process that emphasizes the importance of culture in design, applied in this case to the transportation field. From analyzing culture and implementing it to design, the goal is to make cultural aspects tangible, applying them to a vehicle that takes into consideration more than just current trends. By accomplishing this the vehicle should encompass its target culture as a whole, thus making it extremely appealing and more importantly a vessel for change.

Applying semiotic analysis to culture, this study also aims to expose what makes up culture as a whole and identify these specific signs to be transferred and applied to the design process. These unspoken signs and patterns establish our unique cultures, separating us from other groups, thus ultimately making us a diverse human race. By revealing these unique aspects, a set design research process can be created and implemented to better understand cultures and their thought processes.

Understanding the current automotive industry will be the third aspect of this study. Revealing automotive companies financial states, trends they are following and design processes, will give valuable insight to how they operate their businesses. This analysis will show where to implement the cultural research in the design process most effectively. Ultimately this implementation will be a seamless fit, complementing these company's pre-established processes, promoting innovative ideas and solutions.

Overall, from this study of culture through semiotics a new design approach will be created by implementing these findings into a tangible process. Applying this approach to the automotive

industry's design process and establishing new guidelines will be the last step. Selecting a target culture and implementing these findings will be the final goal, resulting in a distinctly unique vehicle suitable for the chosen culture.

## **1.5 Definition of Terms**

Agriculture – the science or occupation of farming

Anthropology – a: the science of human beings; especially: the study of human beings and their ancestors through time and space and in relation to physical character, environmental and social relations, and culture b: theology dealing with the origin, nature, and destiny of human beings

Consumerism – a: the theory that an increasing consumption of goods is economically desirable b: preoccupation with and an inclination toward the buying of consumer goods

Culture - a: the integrated pattern of human knowledge, belief, and behavior that depends upon the capacity for learning and transmitting knowledge to succeeding generations b: the customary beliefs, social forms, and material traits of a racial, religious, or social group

Denotation - direct specific meaning as distinct from an implied or associated idea

Dissolution – a: the act or process of dissolving or the separation into component parts b: decay, disintegration, death c: termination or destruction by breaking down, disrupting, or dispersing d: the dissolving of an assembly or organization

Emerging Markets – a: nations with social or business activity in the process of rapid growth and industrialization; the economies of China and India are considered to be the largest

Enlightenment – a: the state of having knowledge or understanding; the act of giving someone knowledge or understanding b: the Enlightenment: a movement of the 18<sup>th</sup> century that stressed the belief that science and logic give people more knowledge and understanding than tradition and religion

Environment – a: the conditions that surround someone or something b: the conditions and influences that affect the growth, health, progress, etc., of someone or something

Ergonomics – a: a science that deals with designing and arranging things so that people can use them easily and safely b: the parts or qualities of something's design that make it easy to use

Globalization – a: the act or process of globalizing b: the state of being globalized; especially the development of an increasingly integrated global economy marked especially by free trade, free flow of capital, and the tapping of cheaper foreign labor markets

Linguistics - the study of human speech including the units, nature, structure, and modification of language

Philosophy – a: the study of ideas about knowledge, truth, the nature and meaning of life, etc. b.: a particular set of ideas about knowledge, truth, the nature and meaning of life, etc. c: a set of ideas about how to do something or how to live

Pragmatics - branch of semiotics that deals with the relation between signs or linguistic expressions and their users

Popular Culture – is the entirety of ideas, perspectives, attitudes, memes, images and other phenomena that are preferred by an informal consensus within the mainstream of a given culture, especially Western culture of the early to mid-20th century and the emerging global mainstream of the late 20th and early 21st century. Heavily influenced by mass media, this collection of ideas permeates the everyday lives of the society



Prototype – an original or first model of something from which other forms are copied or developed

Psychology – a: the science or study of the mind and behavior b: the way a person or group thinks

Recession – a: the act or action or receding: withdrawal b: a period of reduced economic activity

Semantics - branch of semiotic dealing with the relations between signs and what they refer to and including theories of denotation, extension, naming, and truth

Semiotics - general philosophical theory of signs and symbols that deals especially with their function in both artificially constructed and natural languages and comprises syntactics, semantics, and pragmatics

Sensationalism - empiricism that limits experience as a source of knowledge to sensation or sense perceptions

Signified – a concept or meaning as distinguished from the sign through which it is communicated

Signifier – one that signifies: a symbol, sound, or image (as a word) that represents an underlying concept or meaning

Simulation – something that is made to look, feel, or behave like something else especially so that it can be studied or used to train people

Standardize – to change (things) so that they are similar and consistent and agree with rules about what is proper and acceptable

Subconscious – existing in the part of the mind that a person is not aware of: existing in the mind but not consciously known or felt

Sustainable - a: of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged b: of or relating to a lifestyle involving the use of sustainable methods

Syntactics - branch of semiotics that deals with the formal relations between signs or expressions in abstraction from their signification and their interpreters

Tradition – a: an inherited, established, or customary pattern of thought, action, or behavior (as a religious practice or a social custom) b: a belief or story or a body of beliefs or stories relating to the past that are commonly accepted as historical though not verifiable c: the handing down of information, beliefs, and customs by word of mouth or by example from one generation to another without written instruction d: cultural continuity in social attitudes, customs, and institutions

## **1.6 Assumptions**

By establishing an improved design process for the automotive industry where culture is the main focus and exploration, there are multiple assumptions in this study:

Culture's definition and its composition defined by anthropologists will be assumed to be correct, as well as the notion of culture influencing all of us on different levels, thus defining who we are as people and as a society.

For semiotics the general definition is assumed to be valid as is how semiotics is used and analyzed by professionals. Semiotics is also assumed to be one of the main keys to understanding culture.

The automotive industry's current trend towards globalization and the specific future goals they have made public are perceived to be correct. The design processes these companies use are assumed to be current and correct.

For the author's personal beliefs about the study, he believes that the globalization of the majority products is the wrong direction for product trends, and that the current culture prominent in the west is one of a media-based popular culture. The author believes that our traditional cultures need to be maintained and displayed as a positive. He believes that cultural products can inspire design, further promoting innovation more than non-cultural products. This use of culture in design should also be used for more than just sales, but also for the enrichment of the public's lives. It should inspire confidence and inspiration while progressing culture in a positive way.

## **1.7 Scope & Limitations**

In this study of developing an improved design process where culture is implemented into the automotive industry, there are specific scopes and limitations that will apply.

For the automotive portion of study only the three major automotive markets, the United States, Europe and Japan, as well as the top two emerging markets, China and India, will be reviewed.

The research of the current automotive design process will also be limited in that many automotive companies are secretive about their processes and most will have to be generalized.

The research and study in all of the factors that go into developing a car will be limited in that they cannot all be studied equally due to time constraints.

China will be used as the target market with an additional subculture chosen for study. Due to monetary and time constraints, traveling to China for observations and research cannot be achieved. The extent to which the Chinese culture will be studied will be limited to books and online resources. The amount of cultural aspects studied will also be limited due to time. For this reason a smaller group within the Chinese culture will be targeted. Testing for the final product will also be limited in that obtaining a Chinese opinion will be difficult due to the location of the study. Online and University resources will be used in this area.

## **1.8 Methods & Procedures**

### **Culture Overview**

1. Identify what culture is - How it is defined
  - a. Library, online resources
  - b. Origin of culture: Evolution of the human race
  - c. Culture as an adaptive mechanism
  - d. Summarize findings and present in an understandable way
2. Identify the Basis of Culture – Break down to its root form
  - a. Library, online resources
  - b. Show Edward T. Hall's method and breakdown
  - c. Show definitions and examples
  - d. Summarize finding and list why these 10 categories are important
3. Identify Cultural Influences
  - a. Library, online resources
  - b. Show the progression of influences on culture; break down
  - c. Describe values, rituals, heroes and symbols
  - d. Define and show examples of these areas
  - e. Summarize how these layers are the base of semiotic study
4. Describe the Self-Awareness of Culture
  - a. Library, online sources

- b. Show how culture is relevant on an individual level
  - c. Describe ethnocentrism; Mindset to complete a cultural study
  - d. Summarize and further show how culture needs to be addressed in a serious manner
5. Define the High & Low Context Cultures
- a. Library, online resources
  - b. Show the differences between cultures on a contextual level
  - c. Describe culture in America and its current status; Popular culture and the three types of learning processes
  - d. Establish need for cultural exploration
6. Identifying Culture in Design
- a. Library, online resources
  - b. Show cultures role in design; Examples
  - c. Effect of globalization in design
  - d. Establish the role of the designer

## Semiotics Overview

1. Identifying Culture through Signs
- a. Library, online resources
  - b. Introduction of semiotics: Definition, composition and breakdown
  - c. Provide reader with understanding of what semiotics is

## 2. Identifying Cultures through Patterns

- a. Library, online resources
- b. Show how cultures base is through patterns and codes
- c. Define the three types of patterns
- d. Show Edward T. Hall's three laws binding patterns: Order, selection and congruence

## 3. Identify Semiotics in Use

- a. Library, online resources
- b. Brief history of semiotics: Show Saussure's and Pierce's models
- c. Show and establish how mass media uses semiotics inappropriately in today's society

## 4. Identify the Importance of Semiotics

- a. Library, online resources
- b. Establish why semiotics is important when discussing culture
- c. Provide the reader with an understanding of why semiotics must be analyzed for this study

## 5. Show the Breakdown of Semiotic Analysis

- a. Library, online resources

- b. Breakdown of semiotics: Signs, Modality, Modes, Paradigms, Syntagms, Rhetorical tropes, intertextuality, Codes, Mass Media & Codes, Modes of Address
- c. Define and show examples of these aspects
- d. Provide a sense of understanding to the reader of what composes semiotics

## Automotive Overview

1. Identify the Current Status of Automotive Industry
  - a. Library, online resources
  - b. Identify the current state of the automotive industry
  - c. Role of Globalization in the automotive industry
    - i. Show how this has changed the way auto makers do business
    - ii. Describe globalizations effects on auto design
  - d. Depict the state of the US auto industry: Sales, market share, business structure, etc.
  - e. Depict the state of the European auto industry: Sales, market share, business structure, etc.
  - f. Depict the state of the Japanese auto industry: Sales, market share, business structure, etc.
  - g. Show how important the emerging markets are, specifically China and India
  - h. Statistics - Sales, projected sales, production figures, etc.
  - i. Provide the reader with a understanding of these different markets and their current state; where they are heading



## 2. Identify Advances in the Automobile

- a. Library, online resources
- b. Depict the current state of the automobile
- c. Show the different types of areas in vehicles that are changing rapidly:  
Electronics, drivetrain, materials and manufacturing
- d. Show the reader the numerous aspects and factors that go into producing an automobile

## 3. Identify the Automotive Design Process

- a. Library, online resources
- b. Illustrate the current model of the automotive design process
- c. Provide an overview of this model and breakdown by section
- d. Breakdown into steps: Brief, Initial Concepts, Virtual Development, Prototype Development, Manufacturing
- e. Provide the reader with a sense of the amount of work and detail that goes into designing an automobile/manufacturing an automobile

## Approach

### 1. Approach to Identifying Culture

- a. Create approach and methodology
- b. Create visual models to show new process
- c. Establish guide to evaluating cultural data

## 2. Approach to Semiotic Analysis

- a. Create approach and methodology
- b. Create visual models to show new process
- c. Provide example to help with analysis

## 3. Approach to Automotive Analysis

- a. Create approach and methodology
- b. Create visual models to show new process
- c. Illustrate where the cultural/semiotic analysis will be implemented
- d. Show the reader why the new analysis will be placed here

## Implementation

- 1. Create a vehicle for the Chinese culture by using this new design process
  - a. Analysis of Chinese culture
  - b. Analysis of semiotic data pertaining to the Chinese
  - c. Identify tangible aspects that can be applied to the design
  - d. Incorporate findings into the design, i.e. aesthetically, systems, etc.
  - e. Produce concepts

## Conclusion

### 1. Cultural Incorporation

- a. Show where the cultural data was incorporated
- b. Provide figures for reference

## 2. Semiotics Incorporation

- a. Show where the semiotic data was incorporated
- b. Provide figures for reference

## 3. Automotive Incorporation

- a. Show where the automotive data was incorporated
- b. Provide figures for reference

## **1.9 Anticipated Outcome**

By researching and analyzing culture by itself and through semiotics, culture should be effectively broken down to its basic elements. Further exploring these basic elements a design process will be created in order to establish a tangible way of applying culture to design. These cultural findings should reveal that societies are not based on our current popular culture, but on values and beliefs richer in meaning and history. By identifying these traits and translating them into an understandable context within the product, innovative design should be the result.

Using this process, applied to the automotive industry in this case, will generate a vehicle or vehicles not based on current trends or fads, but a means of transportation that will connect with the buyer on a subconscious level. Connecting on this level should make the vehicle more desirable to the target market by emphasizing that cultures needs and underlying traits. Making the vehicle something more than just a way to get around but a sign of progress, pride, etc. should also have positive effects, e.g. quality of life, contributions to society, on the culture itself. More importantly, the goal of the vehicle is not to reflect or influence the society's culture negatively, but to emphasize and promote its growth.

These results will stem from the creation and implementation of this new design approach where individual cultures are the focus. By inserting different cultures into the process the findings should all be uniquely diverse, thus resulting in different forms of transportation for different cultures.

## **2.0 Literature Review**

### **2.1 Cultural Overview**

#### **2.1.1 What is culture?**

At first glance, culture reveals itself as the way people around the world live, such as their clothing, food, religion and beliefs, music, language, etc. It is not these characteristics that make up a culture but it is why these cultures have these characteristics, the back story behind their unique actions. Culture today has many different meanings, from the pursuit of knowledge to micro-organisms on a Petri dish used by biologists, but culture is most widely known amongst anthropologists and behavioral scientists as the full range of learned human behavior patterns. This term was first used by English anthropologist Edward B. Tylor in 1871. Tylor (2010) states that culture is “that complex whole that includes knowledge, belief, law, art, morals, custom, and any other capabilities and habits acquired by man as a member of society.” Amongst the numerous characteristics of culture, anthropologists most repeatedly agree on 3 things: 1. It is not innate but learned, 2. The various facets of culture are interrelated; you touch a culture in one place and everything else is affected and 3. It is shared and in effort defines the boundaries of different groups.

Originally the process of survival passed on between early humans, an adaptive mechanism, culture has evolved from basic tasks to complex languages and knowledge. The first humans existed in tropical and subtropical regions 2.5 million years ago. These humans gradually spread outward and eventually inhabited every geographical region, no small feat considering the human body was accustomed to warmer climates. What made humans able to survive in these extreme climates was their adaptations to change. The discovery and evolution of hunting skills,

clothing, use of fire, warm housing and agriculture allowed the human race to prosper all over the globe. The evolution of different cultures is very apparent in that the world's population grew from just less than 10 million after the Ice Age to nearly 7 billion today, only 10,000 years later. A side effect of this is the decrease in natural selection. With cultural and technological progress rapidly changing, our biological progress has been slow to react. As a result our bodies do not change to adapt to the climate we live in because we now have other means of surviving, i.e. clothing, advanced living structures, commerce, etc. Another effect is the rate in which our population is growing. Due to the advances in agriculture and technology, massive numbers of people can be fed without problem and in turn spurs the growth of more people. This back and forth issue of food supply and population growth will continue to be the major issue throughout our lifetime and into the future.

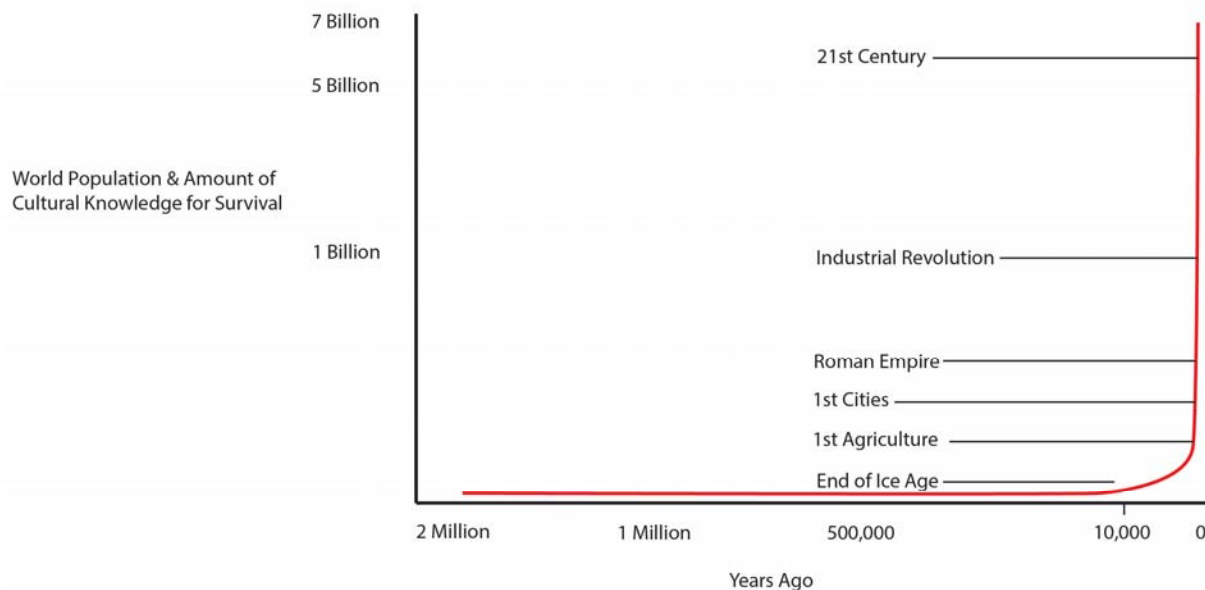


fig. 2

## **Culture is Learned**

Culture is not instinctive, but acquired and taught, though not on the same level that language is taught. Culture exists among us subconsciously and without any cultural knowledge one could not survive. However, one is genetically inclined to rapidly learn and apply these skills. A product of our environment, since culture is not instinctive and there is no one way to learn it, a new born could be placed in any culture around the world and would learn that culture's unique characteristics as its own.

Since our cultural ways only exist in our minds, newer and more efficient ways of doing things replace and become the new culture we teach future generations. Therefore, culture is cumulative. An example of this is mathematics to which high school students are now exposed to the same insights and solutions ancient Greek scholars struggled with. It is in this progress where newer generations are learning more and more and where the past generations are being left behind. This contributes to the distress and confusion of the elderly where the world they grew up in is no longer present. This is also known as culture shock, or the event that many people experience when they move to a different country. Culture shock is merely a removal or distortion of many of the familiar cues one sees at home and the substitution for them of other cues which are unfamiliar.

Culture does not continuously accumulate though. New cultural traits are added while older ones that are not applicable anymore are discarded. The rate at which cultural change is present, while never being static, varies amongst cultures. Considering that culture controls behavior in deep and persisting ways, some cultures are more hesitant to accept cultural change while others

welcome it. These changes in culture are attributed to innovation, technology and the diffusion of other cultures into their own.



### **2.1.2 The Basis of Culture**

Based upon Edward T. Hall's book, *The Silent Language* (1959), there are several separate kinds of human activity that make up his "Primary Message System." This Primary Message System is a concrete set of criteria that a culture is composed of, and they are:

#### **1 – Interaction**

Interaction's basis stems from organisms on a basic cellular level to humans. To interact with the environment is to live, and to fail is to die. An example of interaction on a more sophisticated level is speech. This entails a tone of voice as well as gestures in order to communicate with other people. It is our adaptation to the environment and the need to survive in which all else grows.

#### **2 – Association**

Association is the natural hierarchy or recognizable patterns that all living things arrange themselves. These patterns persist over long periods of time and are only modified in cases of environmental change. Some examples of these patterns are schools of fish, packs of dogs, herds of livestock, etc. Social classes are the patterns in which humans arrange themselves. These patterns are very evident in the military where higher ranking officers have different ways of talking and acting in front of individuals of lesser rank.

#### **3 – Subsistence**

The need for food, or nutritional requirements, goes back to the beginning of life. Humans can still be classified today by what they eat and how they go about getting this food. Included in subsistence is not only how people are classified by diet but also that society's economic

characteristics, or how that particular economy survives. An example of this would be the socio and economical differences between how a lower class individual would provide for his/her family compared to an upper class individual and the taboos associated with it. Furthermore, Americans do not have a problem working with their hands and do not see it as being of lesser status, in contrast to Latin America, where working with your hands is considered lower class, reserved for those without an education.

#### 4 – Bisexuality

In order to overcome environmental changes and populate successfully, bisexuality is best described as the process in which a variety of genetic backgrounds can be created. Without sex, only one genetic line is followed and maintains one set of characteristics. With the world's population fast approaching 7 billion, genetic variations and possibilities are almost endless. Within these variations are the characteristics that make every human unique, i.e. physical build, physical traits, health, behavioral attributes, etc. It is from this in which our behavior progresses and is evident between societies. This would include gender roles, concepts of masculinity and femininity and proper age for sexual maturity.

#### 5 – Territoriality

“Territoriality is the technical term used by the ethnologist to describe the taking possession, use, and defense of territory on the part of living organisms” (Hall, 1959, 44). With the world's population growing rapidly, the balance of space and life is one of utmost importance. While most people think of hunting or breeding grounds for wildlife as the definition of territory, people everyday exhibit signs of territoriality. Some examples of this would be the route

policemen follow, designated areas for salesman, property lines, etc. This instinctive will to defend and manage our space is one of the essential components of life.

## 6 – Temporality

Temporality is the cycles and rhythms in which we operate everyday. From biological rhythms, like our heart beat, to societal rhythms, such as the way we work from 9 to 5 (in Western culture), these patterns date back to our ancestral times. These cycles also expand into the ways societies separate their age groups into different segments, e.g. grade levels in schools, classifying someone as middle-aged or elderly, etc.

## 7 – Learning & Acquisition

Associated first with the bodies adaptation for environmental change, these changes first started on a biological level and then on to a psychological level. This adaptive mechanism started to flourish when language originated. Instead of action being required to learn a task, language bridged the gap for faster learning. The rate of which different societies learn and how they go about teaching varies all over the world. “This is because, in the process of learning they have acquired a long set of tacit conditions and assumptions in which learning is embedded” (Hall, 1959, 47). It is because of these preset conditions and assumptions that learning to learn differently is key when understanding different cultures. It is from the way we learn that our culture is shaped, reflective of our understandings and thought process.

## 8 – Play

Play is closely interwoven into all of the cultural criteria. As there are times and places for play, play is also intimately related to learning. Some games, like chess and checkers, are almost

entirely a function of a specific type of intellectual development. Although not apparent, play also exists in the military with their “war games”. The purpose of this is to use humor to hide or protect any vulnerabilities that may come up, making their mistakes a learning opportunity.

Competition is also considered to be an aspect of play. While different cultures have different types of competitions, the underlying goal is the same: to teach the individuals playing key aspects of that culture’s morals, values, etc. This lighthearted atmosphere when playing games seems to mask the learning aspect, making learning ‘natural’ and effortless.

## 9 – Defense

In humans and animals a fight or flight mentality is extremely important. Much like fish school together to confuse predators or a rattlesnake shakes his tail as a warning, humans have also established defensive techniques. Such examples as complex warfare, religion, medicine and judicial organizations have been established to defend us from those outside our society, within our society and as well as ourselves. The degree in which we value and rank the importance of these defense methods varies across every culture. For instance, the Navajo regard medicine, entertainment, sports and science all as religious activities, as to where American culture has almost completely compartmentalized religion from all other social functions.

## 10 – Exploitation (Use of Materials)

In order to exploit the environment all organisms adapt their bodies to match their conditions. An example of this would be Darwin’s research and the different variations of the same species of animals he found all while living in close proximity of each other. This variation was of course due to the different environments on the islands and the resources present. Early humans on the other hand had taken a different approach and began making tools. These tools have evolved

over time, such as: currency, transportation, TVs, phones, computers, etc. Tools are essentially an extension of our hands and are extremely important in the learning process, as well as serving as visual aids for our language. The process of learning how to use these tools is thought to be the origin of language, one individual teaching another how to use the tool properly.

In summary it is important to note that culture is not defined by just one of these traits. All of these traits make up the different cultures around the world, just in varying levels of interaction. It is also important to add that these traits all go back to the beginning of human life, that these traits are deeply embedded in ourselves on a biological level. This storage of traits, language and technology translates into knowledge and then is effectively passed from one generation to the next.

### 2.1.3 Cultural Influence

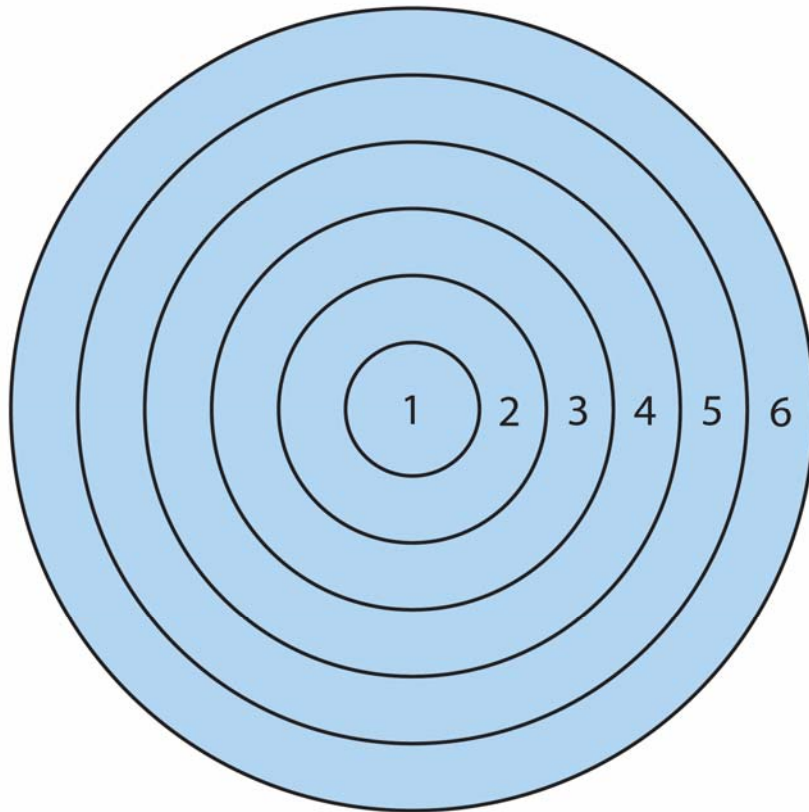


fig. 3

1 – Individual

2 – Family

3 – Community

4 – Local

5 – National

6 – Human (Universal)

As shown by the diagram, culture starts on an individual level and works its way out to universal norms. Being products of our society, we are all influenced culturally on multiple levels, the

most influential being our individual and family culture. Here our values, rituals, heroes and symbols are established, passing along our ancestral ways as well as the evolution of new ideas.

### **Layers of Influence**

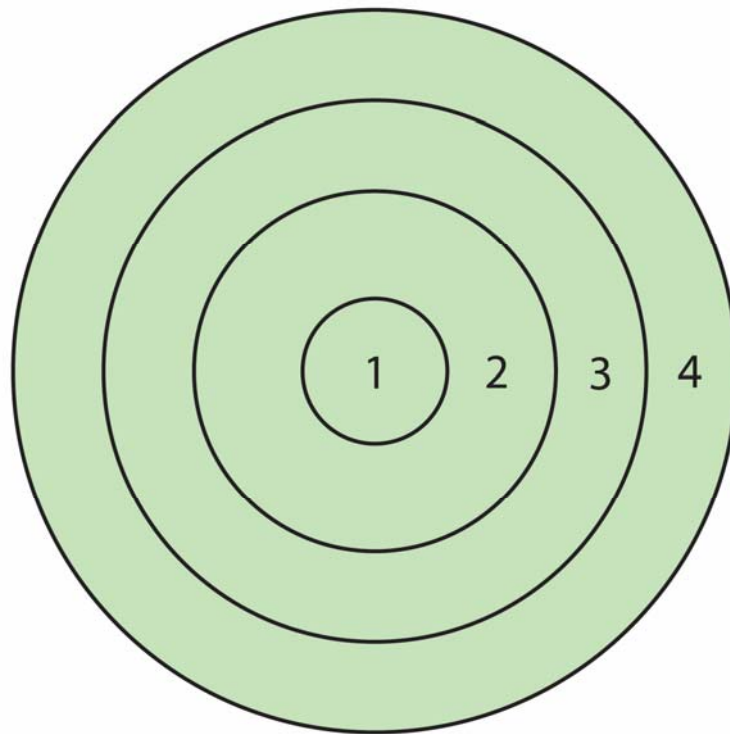


fig. 4

1 – Values

2 – Rituals

3 – Heroes

4 – Symbols

## 1 – Values

Values are the center piece of culture and are the assumptions of which can be the basis for ethical action. Values are typically broken down into two categories: Personal Values and Cultural Values. According to Hall (1959), personal values are those in which are imprinted on us in the beginning stages of our lives, typically from birth to 21. These personal values are our internal voice which dictates right from wrong. These values in turn affect our behavior and how we interact with society. Without these values there would be no cultural reference against which to measure the virtue of individual values and would prohibit culture from forming.

The second category, cultural values, are those that the individual experiences living in different societies. Different societies demonstrate their own unique cultures. This entails the basic laws for governing the people, social norms and expectations, the degree to which individuals value certain ideas and objects, etc. Being a part of society, in a positive or neutral role, requires a degree of conformity in which these cultural values stem from.

## 2 – Rituals

Rituals are a particular form of behavior demonstrated by individual societies that demonstrate their traditions, past and heritage. Derived from the Latin word, *Ritualis*, ritual means that which pertains to rite. Rituals are typically a proven way of doing something or practiced customs in the individual society. In a study by Victor Turner (2013), Turner describes what rituals encompass:

"A ritual is a stereotyped sequence of activities involving gestures, words, and objects, performed in a sequestered place, and designed to influence preternatural entities or forces on behalf of the actors' goals and interests. Rituals may be



seasonal, hallowing a culturally defined moment of change in the climatic cycle or the inauguration of an activity such as planting, harvesting, or moving from winter to summer pasture; or they may be contingent, held in response to an individual or collective crisis. Contingent rituals may be further subdivided into life-crisis ceremonies, which are performed at birth, puberty, marriage, death, and so on, to demarcate the passage from one phase to another in the individual's life-cycle, and rituals of affliction, which are performed to placate or exorcise preternatural beings or forces believed to have afflicted villagers with illness, bad luck, gynecological troubles, severe physical injuries, and the like. Other classes of rituals include divinatory rituals; ceremonies performed by political authorities to ensure the health and fertility of human beings, animals, and crops in their territories; initiation into priesthoods devoted to certain deities, into religious associations, or into secret societies; and those accompanying the daily offering of food and libations to deities or ancestral spirits or both."

From Turner's description it is clear that these rituals come forth first on a family level and then a community and local level. Rituals are presented to individuals as soon as birth, the same as values, to begin grooming us to interact successfully with our family and also society. It is these rituals that set us apart from others and also pass down traditions from our ancestors. As mentioned before, culture is ever evolving, in which these passed down rituals and traditions slowly change over time, shaping and bringing forth new cultures.

### 3 – Heroes

Heroism, the act of heroic conduct as exhibited in fulfilling a higher purpose or attaining a noble end, dates back to the ancient Greeks. Greek culture extensively used mythology to inspire and serve as moral examples. Heroes and heroines were commonly described as characters who in the face of danger, adversity or from a position of weakness, display courage and the will for self-sacrifice for the greater good of all humanity. Although these stories are mainly used in an educational setting, heroes and heroines still serve as a major influence on culture today. The heroes of today do are not half-god half-man, but are the athletes, musicians, world leaders and other influential individuals that strive for perfection and the greater good of humanity.

"You must admit that the genesis of the great man depends on the long series of complex influences which has produced the race in which he appears, and the social state into which that race has slowly grown....Before he can remake his society, his society must make him"(Spencer, 2005).

Spencer's quote illustrates that there is a long line of influences instilled upon an individual while being raised, in which these influences have a great effect on how the individual will behave and what they will in turn contribute to society. It is important to continue these stories of heroism and have positive heroes while growing up to demonstrate to the individual that they have the power within to succeed. This power of choice is what leads ordinary individuals to strive to become heroes, thus bettering humanity.

### 4 – Symbols

Symbols are an object, act or sound having cultural significance and in its capacity excite or warrant a response. An example of this would be a stop sign. Even with the word "Stop"

removed, a red octagon remains and still causes the individual to recognize the symbol for stop. Other examples of symbols specific to each culture are gestures, colors, clothes, art, etc.

“Human cultures use symbols as a means to express their specific ideology, social structures, and to represent characteristics of their specific culture. Thus, symbols carry different meaning depending upon one’s cultural background. The meaning of a symbol is not inherent in the symbol itself, but is culturally learned” (Womack, 2005).

It is important to note that symbols are learned and since specific cultures dictate what their symbols mean, most symbols are not universal thus differentiating cultures even more. The study of these symbols, or the unwritten language, will be the basis of discussion and analysis in the following chapter on semiotics.

#### **2.1.4 The Self-Awareness of Culture**

From being raised in the same culture and never experiencing cultures outside our own, most people are unaware of their cultural traits. Their way of life seems natural to them and only when they meet someone of different culture do they recognize the differences. It is common for people to think highly of their own culture, known as ethnocentrism, and look down upon or criticize other cultures. One example of this is the way American or European women dress compared to the Muslim culture. Muslim societies think American and European women project themselves as immoral and immodest while their own women are covered head to toe, in their minds a display of modesty and conservatism.

Putting aside this ethnocentrism and adopting a cultural relativity approach is the only way to effectively experience someone else's culture, that is, trying to learn and interpret the various aspects of that culture rather than comparing it to our own. This approach is very useful for diplomats and world leaders in understanding where other cultures are coming from for different issues as well as their own culture. The research of the selected culture, outlined later on, will also take this approach of cultural relativity in order to achieve the best possible outcome and understanding.

Culture is relative. "When people are born the world doesn't exist in an absolute sense, but just a model of reality" (Davis, 2009). What Davis means by this is that when a person is born into the world they are born into a predetermined culture, made in part by the family and community. This newborn will never know of other cultures, other than reading about them or perhaps from world travels in the future, and is thus a product of his or her society. When studying and observing other cultures a degree of ethnocentrism takes over and makes us skeptical of cultures

we find less appealing. It is important to understand that these other cultures are not failed attempts, but rather just other ways of being and doing. While we all exist in this world in the present, these thousands of different cultures reflect varying realities of how to see the world differently and live in it.

### **2.1.5 High & Low Context Cultures**

Culture has many different functions in an individual's life, one of which is to serve as a barrier between the individual and the outside world. This barrier designates what we pay attention to and what we ignore, thus separating and distinguishing the numerous cultures around the world. The ultimate purpose of this barrier is to protect the individual from an information overload. An example of this overload would be culture shock when visiting a foreign culture or a situation in which an individual has too many daily events going on and mentally breaks down. The way to effectively process this information is to delegate and establish priorities. In other words, by eliminating and simplifying the information given to us, we reduce the amount of stress on our minds and can now effectively operate in the world around us.

The difference between high context and low context is the degree and amount of detail in communication. High context communication is when most of the information is either in the situation at hand or internalized in the person while very little detail is expressed through words. This would involve a higher degree of knowing the surroundings and knowing that individual on a deep personal level. An example of this would be the way twins talk to each other. They speak vaguely to each other because they know each other's intellectual limits. In other words, high context communication is economical, fast and efficient. Low context communication is the opposite where numerous numbers details are included through words because the individuals involved have little understanding of their surroundings or each other. An example of this would be the way a lawyer speaks in court, lawyer to lawyer and lawyer to jury.

“The level of context determines everything about the nature of the communication and is the foundation on which all subsequent behavior rests (including symbolic behavior)” (Hall, 1959).

This means that high and low context cultures, and those in between, all deal with information differently. It is in this processing of information that their behavioral traits and actions reflect their thought process. This range of context also encompasses the way cultures react internally, native to native, and externally, native to foreigner. While high context cultures ultimately rely on past knowledge and are harder to adapt and change, lower context cultures show the opposite characteristics and can be changed easily and quickly. An example of this would be the rate at which technology changes versus the rate in which religion changes. Technology is low context in that it is not deeply rooted to the past and is susceptible to rapid change, whereas religion is high context and has a deep history and slowly, if at all, evolves.

### **Culture in America**

To understand the current culture of America one must go to the beginning of how culture is learned in America. Edward Hall's (1959) research and observations state that there are three types of ways people learn. They are formal, informal and technical.

Formal is in general a black and white approach. The teacher will verbally respond to the student with either "yes, that is correct" or "no, this is the correct way to do this." The learner tries, makes a mistake and is corrected.

Informal is learning by observation, usually out of awareness. An example of this would be a parent telling a child "Don't ask questions, look around and see what people are doing." This process basically mirrors what others are doing, a self-teaching process.

Lastly, technical learning emphasizes the knowledge and skill of the teacher. Usually there is a set of instructions created by the teacher and they are given to the student to perform. These instructions have been previously reviewed and logically thought out in order to achieve the

expected results from the student. An example of this would be how the military teaches and instructs its recruits.

America's learning process is an informal one, in which we do not invest in tradition with the same emphasis as other cultures do. Formal cultures are more likely to be influenced by the past than they are by the present or future. As a result of our informal learning process and low context culture in America, the rate of change in which our society evolves will likely lead to instability and ultimately an information overload. This increased complexity will move us to seek a more stable model in the future, one of a high context culture. When we will arrive at this understanding is uncertain though as current conditions in America show no sign of slowing down and still emphasize the need for change. America's informal process has led us to ask questions and place a greater emphasis on the future through our understanding of time.

The perception of time is an important aspect of how our nation was shaped and continues to operate. Time is so thoroughly integrated and learned early on in American culture it is treated as though it were the only natural and logical way of organizing life. "As a rule, Americans think of time as a road or a ribbon stretching into the future, along which one progresses" (Hall, 1959).

Time in America is compartmentalized and viewed as extremely precious, to waste it is viewed as impractical and irresponsible. In other words American culture has made time tangible, an example of this is the scheduling of meetings. It is common courtesy to arrive early to a meeting in that this translates to being respectful and responsible. Other cultures do not keep time as in high regard as we do, such as some Latin countries. Here having a five minute delay is not significant and it is not uncommon to wait past 45 minutes for a meeting and is still considered acceptable. I believe that America's obsession with time and the future is due to the fact that we are a relatively young country in origin when compared to Middle Eastern and Asian



cultures which are thousands of years old. Here “a long time” means centuries as American’s associate “a long time” with 15 to 20 years.

“But in the realm of business, which is the dominant model of United States life, tradition is equated with experience, and experience is thought of being very close to if not synonymous with know-how. Know-how is one of our prized possessions, so that when we look backward it is rarely to take pleasure in the past itself but usually to calculate the know-how, to assess the prognosis for success in the future” (Hall, 1959).

While America’s techniques of learning and obsession with time have no doubt attributed to the infrastructure for this nation and given us so many positive characteristics such as our ingenuity, pride, generosity, etc., it has also led to this nation’s views of only seeing in black and white and makes it almost impossible for the country to do any long term planning. Due again to the fact that Americans quantify time and to fail to do so is unthinkable. Another characteristic of how America sees time is our natural tendency to try and link events together. Conversely, events that are too spaced out by time make it difficult for us to connect these events together in our minds.

Variety is another concept Americans use to distinguish time intervals, i.e. a short duration and a long duration, or a long duration and a very long duration. Remaining stagnant is to be considered wasteful, where as in Japanese culture “just sitting there” is still considered to be doing something. We not only look for this variety or movement in our occupations, careers and hobbies but in also our materials things. An example of this is our meal scheduling. Most Americans cannot say what they will have for dinner in three days let alone a year from now while other cultures know what they will be having because they have it everyday without

change. For Americans it is a matter of importance to have variety. With our economy fixated on growth, variety is viewed to be the only way to keep our industry expanding. Regardless of technology, our culture's simple understanding that wasting time is deemed unforgivable drives us as a nation to want more variety and focus on the future.

It is because of our cultural upbringing with time and the emphasis of importance we put on it does our vision of current events diminish. The American concept of time prohibits the individual from seeing the larger picture and alienates us from ourselves. If we were to take a step back and try to take all the events in on a wider sense, we would possibly find a more meaningful and accepting approach to living our lives.

### **2.1.6 Culture in Design**

Culture in design can be seen in every product. While designers might be unaware that any cultural aspects are being implemented into their design, the designer's upbringing and experiences in his or her own culture are subconsciously being reflected into the creation of the product. These reflections could be from the way they are taught to conduct research or their thought process to the technology prevalent in their society. "As a result, many of our activities are determined by the technologies we use, such as the automobile, computer, cell phone, train or airplane, or by the need to interact smoothly with other countries and cultures across the world. Once the technology determines the activity, the influence of culture dissipates" (Norman, 2012). Norman suggests that because of the standards of uniformity and that technology is the same all over the world that the technology is actually dictating how things are designed.

While there might be "set" guidelines for doing things, it is left to the designer to incorporate his or her own processes for implementing culture. It seems there is a sense of leaving the things the way they are and not challenging the process or simply making small changes. This might be due to the overwhelming movement of globalization and the presence of the media (advertisements, branding, etc.). Of course this hasn't been a change that has occurred over night, initially beginning with the spread of connectivity across the globe.

The amount of this cultural influence will vary though throughout each product. For products with global production in mind, less cultural influence will be noticeable. An example of this would be a television or cell phone. Here the product is assumed to be used the same way as the designer's culture, therefore little change in the design will be needed to meet the needs of

multiple cultures. Mass production of these global products is also a factor in that small changes cannot be typically implemented or production numbers and efficiency will fall.

While it is more feasible to produce stronger culturally influenced products in smaller numbers, obviously since global production is not a goal, it is also important to note that globally mass produced items could lead to the degradation of cultures around the world.

“It is important to distinguish mass-produced, industrial design from crafts. Crafts reflect centuries or millennia of customs and behavior, and as a result, items produced by craftspeople are apt to be close fits to the demands of the culture. But the subtitle of the marvelous book by Ranjan and Ranjan of the National Institute of Design in Ahmedabad, India, *Crafts of India: Handmade in India*, indicates the reason for this distinction. The critical word is "Handmade." Handmade crafts reflect the needs of the people for whom they are crafted. Mass-produced products are intended for use by millions of people around the world” (Norman, 2012).

The role of an industrial designer is to create a product that meets the needs of an individual and can be successfully manufactured for mass production. In other words, production for as many individuals in a target market as possible. This in itself seems to contradict designing for a specific culture, unless of course the product is for a specific culture. To reach as many as possible tends to set aside cultural differences and focus more on the individual as a human in general or an anthropometrical point of view. While it is important to focus on these anthropometrical studies, a balance needs to be implemented to ensure that the globalization of a product does not have negative cultural effects.

Simply assuming that all cultures use the same products in identical fashion is ignorant, though these thoughts could be unintentional in that most people are unaware that their subconscious cultural traits affect the way they operate and think in everyday life. As unintentional as they may be, being aware of the effects of globalization need to be a staple in the design process in order to keep cultures around the world intact. Globalization has given other cultures easy access to view how other cultures are “supposedly” living, “supposedly” because the images and thoughts they are viewing are projected from the media, not the majority of the population. It is important to remember who is sending the message and what the message actually contains.

## **2.2 Semiotics Overview**

### **2.2.1 Identifying Culture through Semiotics**

Originally from Greek origin, *sēmeiōtikos* is the observation of signs, or a more modern definition being the general philosophical theory of signs and symbols that deals especially with their function in both artificially constructed and natural languages, while being comprised of syntactics, semantics, and pragmatics. Separated into these three areas, syntactics, semantics and pragmatics, Hall (1959) states that semiotics ultimately reveals the hidden meaning behind why cultures have specific characteristics, i.e. their actions, beliefs, tools, etc. It is in these hidden rules that cultures are unknowingly bound, until one realizes these boundaries through educating one's self. Chandler (2013) goes on to describe these three areas to their basic definition, they are:

Syntactics is the formal relations between signs and symbols, more specifically the way they deal with the rules that govern how words are combined to form words and phrases. An example of this would be the way sentences are structured.

Semantics is the relationship between signs and the things to which they refer or their meaning. Another example of this would be words, phrases, signs and symbols and what they stand for, their denotation. Most commonly used to describe a misunderstanding of word selection, semantics have long been the source of many problems with communication between different cultures. Not only does semantics include the denotation of words but also how they sound, the facial expressions involved with the word and body language. In the written language this would encompass paragraph structure and punctuation.

Pragmatics is the study of the relationship of the words in context to the user and environment in which they are spoken. More specifically, pragmatics is the way in which people produce and comprehend meanings through language. An example of this would be the way an individual talks in certain social settings. Knowing what is socially acceptable to talk about, and what isn't, shows how the individual understands the environment and the appropriate time to talk about certain topics. Thus revealing specific characteristics of that culture, for this particular example social standing, social taboos, etc.

### **2.2.2 Identifying Cultures through Patterns**

Within each culture are patterns that remain constant and define one culture against another.

There are thousands of patterns, such as behavior, linguistics, temporality as described previously, that define what a culture is and how it acts. It is within these patterns that specific cultural characteristics arise. In order to be a pattern the set of actions must be a meaningful arrangement shared by a group.

Patterns are only meaningful when broken down on their own level. An example of this would be the way a mechanic sees a car as compared to the way an everyday individual sees a car.

While the individual might just see the brand and color, an experienced mechanic will see and notice other details such as engine noise, tire size, alignment, suspension, horsepower, how to assemble and disassemble interior panels, diagnostics, paint condition, computer settings and tuning. It is obvious that there are quite a few more details that go into a car but only seen by an experienced mechanic. It is through these patterns which enable individuals of a group to see the same thing and this is what separates one group from others. Also important to note is that patterns are anchored when they are being learned and remain forever after in the behavior of groups and institutions.

As described before by Hall (1959) with the three types of learning, the three types of patterns are the same: formal, informal and technical.



## **Formal Patterns**

Like the right and wrong way to do things in formal education, formal patterns consist of two known ways to complete actions. An example of this in American culture would be that when we are happy we laugh and when we are sad we cry. To Americans these actions are not questioned in this context and are considered natural. In Japanese culture laughter might mean a completely different thing, embarrassment in this case. Formal boundaries are well known amongst individuals of the same culture and as long as they are not violated there is a good amount of variation allowed. It is from these formal patterns in which our decisions and future actions are determined and also explains why individuals are so resistant to change because of the past notions they have towards the right way and the wrong way of doing something.

## **Informal Patterns**

Gathered and learned from observation, informal patterns are the most difficult to be aware of. These patterns exist in the individual on a subconscious level and are only noticed when something is out of place. They are either familiar and comfortable or unfamiliar and wrong. These patterns can be quickly learned and brought to awareness though when they are put into words since they have already been acquired unknowingly by individuals of the same culture. An example of this in American culture is the way we talk about time informally. "I'll be there in a minute." or "It'll take years to do that." doesn't actually mean a minute or years, just an exaggeration of how long it will actually take. These informal phrases and actions only work within cultures because of the unconscious understanding individuals have of these phrases and actions in context with the other individual. The context in which the word is used reveals its associated pattern.

## **Technical Patterns**

Technical patterns are typically spelled out. Like technical learning, these patterns are concrete and rigid. An example of this would be that there are 365  $\frac{1}{4}$  days in a year and even broken down more so into the different types of years. Technical patterns are usually described as scientific understanding.

According to Hall's research, these patterns are bound by known three laws: order, selection and congruence.

### **Order**

Order is present in all cultures from sentence structure to social order such as birth order and order of arrival. Some examples of this order might be the order in which meals are served, breakfast, lunch and dinner, as well as the order in which we expect service at a restaurant. Typically in America the first one to sit at a table receives the first service where as in other cultures the order of service is decided on social standing or that individual's level of importance. It is important to understand that all societies will order the people, or the situation, or the station in life but not all three at the same time.

### **Selection**

Like culture, selection changes over time. This selection controls the combinations of sets that can be used together. An example of this is when we say *a* girl or *an* apple. There is no logic to selection it just exists at certain times throughout different situations. Another example of this would be the way the English drive on the left side of the road while Americans drive on the right or how fashion has changed over the years for men and women. Like the order of meals,

selection is also a part of the pattern. This would include what each meal consists of and the variances of these foods geographically. For instance an American southern breakfast might consist of biscuits and gravy while an Irish breakfast might contain blood sausage, potatoes and eggs.

While playing a major part in the patterns of social relations around the world in a variety of ways, it is easiest to determine if selection applies by noting if there is something bound to something else by custom when any number of other items could logically serve the same function. However, once this selection has been chosen in culture it is arbitrarily binding.

### **Congruence**

While order and selection have to do with the patterning of sets, congruence is considered to do with the patterns of patterns. This congruence is what most people try to achieve in life, an agreeable and consistent quality of state. An example of the lack of congruence in certain cultures is the borrowed architecture from the Greeks, specifically how their columns and their intricate detail show up on modern mansions today. The issue is that one culture only takes the sets and not the patterns from the other culture, thus the lack of congruence. While people strive for this congruence, perfect congruence is seldom achieved. “True artistry exists when congruence is so high that everything appears simple and easy, when it communicates so clearly that people wonder why they didn’t say it themselves” (Hall, 1959). This perfect congruence seems to exist when the object of examination is made clear of miscommunication and nothing comes between what is being communicated and the audience. Underlining this need for congruence is the basic need for people to understand something with the utmost clarity and

ease. It is in the confusion that lies the anger and frustration between cultures and issues within cultures.

### 2.2.3 Semiotics in Use

Ferdinand de Saussure (1857-1913), the Swiss founder of linguistics, established the first research on semiotics. Initially only applied to linguistics, semiotics has gradually expanded its base to the behavioral and social fields. Saussure's original role for semiotics was to investigate the nature of signs and the laws governing them. Around the same time, pragmatist philosopher and logician Charles Sanders Pierce (1839-1914) was completing his model of semiotics. The current theories and models for semiotics are built upon both Saussure's and Pierce's work and will be the basis of discussion in this study.

As a major approach to researching culture in the 1960s, semiotics gained popularity due to the work of the French linguist Roland Barthes (1915-1980). "Semiology aims to take in any system of signs, whatever their substance and limits; images, gestures, musical sounds, objects, and the complex associations of all of these, which form the content of ritual, convention or public entertainment: these constitute, if not *languages*, at least systems of signification" (Barthes, 1967). Essentially the study of how meanings are made, semiotics aims not only to analyze communication but also with the construction and maintenance of reality.

With the numerous forms of media today the human experience is inherently multisensory, although these experiences are constrained by the limits of the medium involved. An example of this would be that we cannot represent smell or taste over a television ad or radio spot. Different media and genres provide different sensory experiences that try to encapsulate these sensory experiences. The manipulation of this medium is where semiotics comes into play. The more and more exposure the message receives the more transparent and accepted it becomes to the public.

The means are now chosen to suit the user's end, where the creator is now in charge of what the user sees or their reality.

“The semiological approach... suggests that the meaning of an ad does not float on the surface just waiting to be internalized by the viewer, but is built up out of the ways that different signs are organized and related to each other, both within the ad and through external references to wider belief systems. More specifically, for advertising to create meaning, the reader or the viewer has to do some 'work'.

Because the meaning is not lying there on the page, one has to make an effort to grasp it” (Leiss, 1990).

Leiss's observations show that the ad is just the vessel which carries the message. Based upon our cultural upbringing we absorb and translate the message to our preconceived notions already established in our minds. The message in which not all the facts are present also takes into consideration that the masses watching already know the back story and are informally aware of what is trying to be told.

Contemporary cultural theorists, as well as Chandler (2013), believe that the increase in visual media has also played an important role in semiotics as it is believed to taken a more prominent influence over linguistics. Visual media takes a more interactive approach with the viewer in that it requires their attention by presenting movement and action. Written media is the least personal in which it shows no personality, in a visual or auditory sense, to the reader. It is from this required attention that the messages in visual media work more effectively in influencing the viewer than those of print. With the spread of the internet and visual media worldwide the influence it is having on the public is now more important than ever. For the messages Western

culture is sending is not just seen on a local level, a worldwide audience is now watching. In this globalization of media it is also important to note that these messages can be misinterpreted by other cultures. The previous assumption that the viewer has done their “homework” no longer applies, leaving these messages open to interpretation and criticism, in turn leaving our culture open to interpretation and criticism.

Including the analysis of mass media, semiotics also represents a large range of studies through many areas, such as art, literature and anthropology. Those involved with these studies include linguists, philosophers, psychologists, sociologists, anthropologists, literary, aesthetic and media theorists, psychoanalysts and educationalists. While widely studied across genres, semiotics is still much of a theory and has numerous approaches of analysis. The underlying basis for study though is linguistics because of Saussure’s original work and due to the fact that language is the most powerful means of communication. The human languages are a unique type of communication that possess semantic universality, that is human language can convey information about all aspects, domains, properties, places, past events, present or future, whether actual or possible, real or imaginary.

#### **2.2.4 The Importance of Semiotics**

“Semiotics makes us aware that the cultural values with which we make sense of the world are a tissue of conventions that have been handed down from generation to generation by the members of the culture of which we are a part. It reminds us that there is nothing 'natural' about our values; they are social constructs that not only vary enormously in the course of time but differ radically from culture to culture” (Schroeder ,1998).

By analyzing the hidden rules and messages in the signs of our culture one can begin to understand that the reality we live is often perceived on a subconscious level. The information projected on us is not contained in the words or visual media, but the meaning is actively created within us. It is our interpretation of these codes or conventions that distinguish and separate one culture from another. Becoming aware of these coded messages can be empowering and overwhelming at the same time, for the majority of us are unaware of these subconscious influences. It is from these messages that we learn our culture is based through the organization of patterns that only an individual of our culture can understand.

Through the study of semiotics we become aware that these signs are transparent in nature and disguise our task in analyzing them. Living in a world full of visual signs and an increased presence of the media, we need to become aware that the most realistic signs are not what they appear and that they contain these hidden messages. It is also in these hidden messages that reveal who is privileged and who is suppressed, in essence leaving others in control of the signs and messages projected upon us. This self-awareness will in turn make us more perceptive and neutral to influence, thus potentially reshaping the way the individuals and the media



communicate, resulting in a greater cultural understanding of our own culture and those other cultures around the world.

### **2.2.5 Semiotic Analysis**

When analyzing a 'sign' for its hidden message there are a series of steps one must take in order to see the meaning in its entirety. For the purpose of this study, only Saussure's and Pierce's definitions and techniques will be further broken down and shown in linguistic fashion to effectively communicate how semiotics is researched and analyzed. Another reason why this study will focus primarily on Saussure's work is that the majority of other theories and scholars base their work off of his initial findings and theories, including Pierce.

#### **Signs**

In order to make sense of what is happening around us the human species is quick to make meaning of all things. Anything can be a sign when it is interpreted to signify something else other than itself. An example of this would be in the way Native Americans find significance in the nature around them. Birds, fish, trees, all have a meaning other than what they are generally defined as. Signs are found in the physical form of words, images, sounds, acts or objects (also known as the sign vehicle). Signs have no intrinsic meaning and become signs only when users invest them with meaning with reference to a recognized code. In the field of semiotics there are two general definitions of what a sign is and those are from Saussure (1916) and the philosopher Charles Sanders Pierce (1931).

Saussure (1916) defines a sign as two parts:

1. the Signifier – the form in which the sign takes
2. the Signified – the concept it represents

The sign is in turn the association of the signifier with the signified.

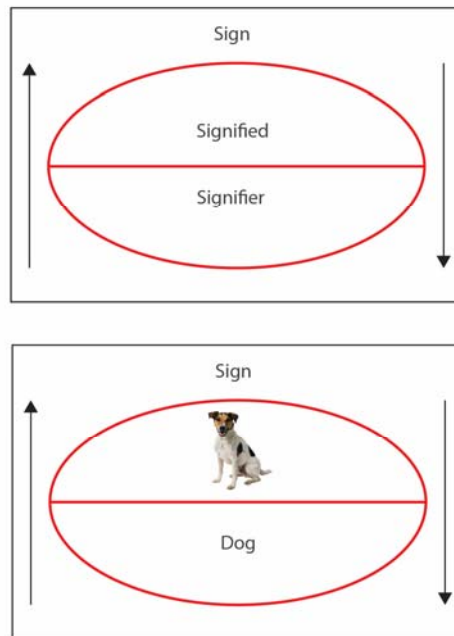


fig. 5

Saussure's (1916) model shows that the relationship between the signifier and the signified is referred to as 'signification', and this is represented by the arrows. The horizontal line marking the two elements of the sign is referred to as 'the bar'. An example of this would be the word 'dog', when it is assumed to have meaning by someone who encounters it, it is a sign consisting of:

1. the signifier – the word 'dog'
2. the signified – the physical definition of what a 'dog' is

According to Saussure (1916) a sign must have both a signifier and a signified in order to have meaning. While his model was based the concept that words only take the meaning we give to them, today the signifier is more commonly described as the material or physical form of the sign while the signified is the concept perceived by the individual creating meaning from the signifier in context. It is from this association individuals have between the signifier and the

signified do differences in culture present themselves. Much like patterns within cultures, signs only have significance when they are amongst signs of the same relation.

Opposed to Saussure's model, in which the sign is considered to be independent of human variability, i.e. a purely conceptual means of knowing, Pierce's model describes a sign as being only a means of discovering the meaning intended on the basis of personal and social considerations, relevant sources and historical factors.

Pierce's (1931) three models: Types of Representamina, Object Representation and Types of Interpretants visualize these thoughts.

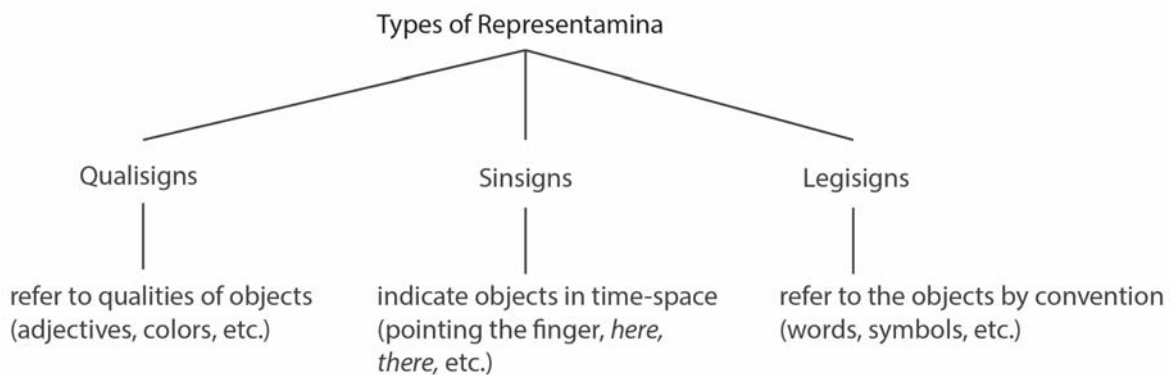


fig. 6

Here a qualisign is a representamen that calls attention to, or singles out, some quality of its referent. An example of this is an adjective since it calls attention to the qualities (sound, shape, size, etc.) of referents. A sinsign is also a representamen that calls attention to, or singles out, a particular object in time-space, e.g. pointing at an object. Lastly, a legisign is a representamen that assigns something by convention, e.g. words referring to abstract concepts, symbols, etc.

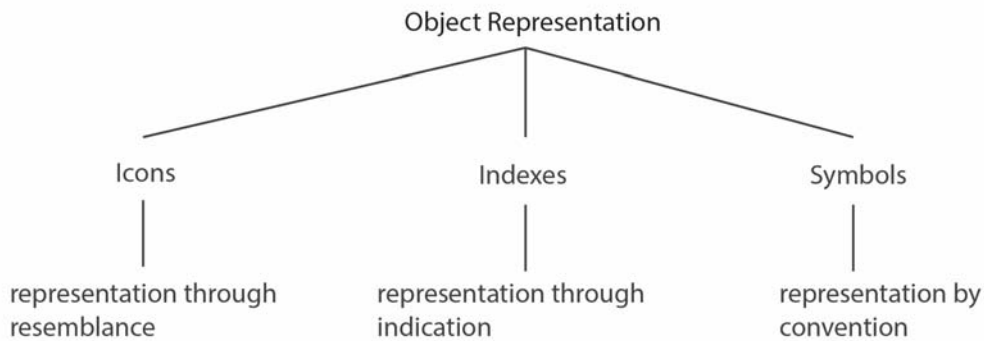


fig.7

Breaking down objects into three categories, icons, indexes and symbols, Pierce (1931) further defined his model. Considering icons to be the most basic of signs, Pierce called them *firstness* signs because they are tied to sense-based representation. These signs can be physical substitutes for the referents themselves, but important to note that these icons differ across cultures. *Secondness* signs, or indexes, are not substitutes for their referents. Symbols are the third type of signs, linking the user and the referent together by historical and social convention.

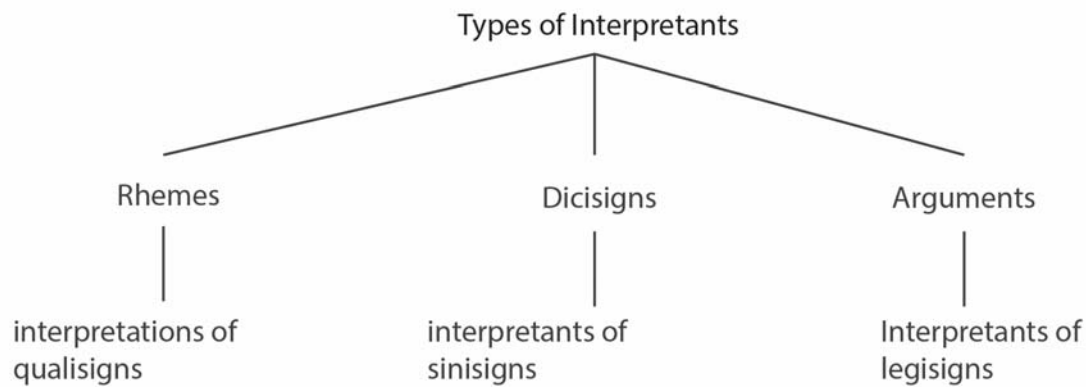


fig. 8

Pierce's (1931) third model, types of interpretants, explains what the sign-user or sign-interpreter understands through the sign. Rhemes are interpretants of qualisigns, dicisigns are interpretants of sinsigns and arguments are interpretants of legisigns.

Mode of Representation	Types of Representamen	Relation of the Sign to its Referent	Type of Interpretant the Sign Evokes
<i>firstness</i>	qualisign	iconic	rheme
<i>secondness</i>	sinsign	indexical	dicisign
<i>thirdness</i>	legisign	symbolic	argument

fig. 9

In summary, Pierce's thought process and models can be summarized in the chart shown above.

## Modality

Based on Chandler's (2013) studies, modality refers to the reality that a sign, text or genre presents and claims. This is essentially when an interpreter of the message makes a modality

judgment about its contents. The interpreter assesses what is being described as plausible, reliable, credible, truthful, accurate or factual based upon their knowledge of the subject and their social codes. More simply put they assign the message to fact or fiction. Further self-analysis determines if the message is live or recorded and also the plausibility of the events depicted or the claims made from the message. These judgments are made in part with reference to cues within texts which semioticians call modality markers, i.e. the plausibility, reliability, etc.

“A social semiotic theory of truth cannot claim to establish the absolute truth or untruth of representations. It can only show whether a given 'proposition' (visual, verbal or otherwise) is represented as true or not. From the point of view of social semiotics, truth is a construct of semiosis, and as such the truth of a particular social group, arising from the values and beliefs of that group” (Kress and Van Leeuwen, 1996).

Modality will not be the same amongst cultures due to the fact these markers are all constructed in relation to a specific cultures beliefs, ideals, experiences, etc. Reality is relative. The signs prevalent in Western culture will have a different meaning in Eastern culture and vice versa. It is in these perceptions about truths and falsehoods do cultures separate themselves further apart from one another. The importance of understanding that each culture has varying levels of modality markers is crucial when trying to reach that specific audience.

According to Chandler (2013), the specific type of media is also important in establishing modality. The majority of people see a photograph as more real than a painting due to their perceptual codes. This also holds true for signs on television and film. It is important to note that all media texts, however 'realistic', are representations rather than simply recordings or

reproductions of reality. Some studies show that viewers can create a psychological or emotional realism with television shows in that they 'see' part of themselves in the characters and storylines, thus creating a generic realism. This generic realism in time forms into 'actual' reality as the repetitive scenes on the television become natural to the viewer or a reflection of reality. These repetitive signs, in conjunction with the global presence of mass media, are in effect influencing and changing the reality of those watching to a degree unknown amongst professionals.

### 3 Modes of Signs

The three types of modes described below, Chandler (2013), rank in order from lowest modality to highest modality, or least fictional or non-fictional to most fictional.

**Symbol/symbolic:** a mode in which the signifier does not resemble the signified but which is fundamentally arbitrary or purely conventional - so that the relationship must be learned: e.g. language in general (plus specific languages, alphabetical letters, punctuation marks, words, phrases and sentences), numbers, Morse code, traffic lights, national flags;



**Icon/iconic:** a mode in which the signifier is perceived as resembling or imitating the signified (recognizably looking, sounding, feeling, tasting or smelling like it) - being similar in possessing some of its qualities: e.g. a portrait, a cartoon, a scale-model, onomatopoeia, metaphors, 'realistic' sounds in 'program music', sound effects in radio drama, a dubbed film soundtrack, imitative gestures;





**Index/indexical:** a mode in which the signifier is not arbitrary but is directly connected in some way (physically or causally) to the signified - this link can be observed or inferred: e.g. 'natural signs' (smoke, thunder, footprints, echoes, non-synthetic odors and flavors), medical symptoms (pain, a rash, pulse-rate), measuring instruments (weathercock, thermometer, clock, spirit-level), 'signals' (a knock on a door, a phone ringing), pointers (a pointing 'index' finger, a directional signpost), recordings (a photograph, a film, video or television shot, an audio-recorded voice), personal 'trademarks' (handwriting, catchphrase) and indexical words ('that', 'this', 'here', 'there').



## Paradigms and Syntagms

Chandler (2013) describes paradigmatic analysis is a structuralist technique that identifies the various paradigms which underline the structure of a text. This analysis employs a consideration of the positive or negative connotations of each signifier and the existence of underlying thematic paradigms, whereas syntagmatic relations are possibilities of combination, paradigmatic relations are functional contrasts or they involve differentiations. A visual explanation of this would be:

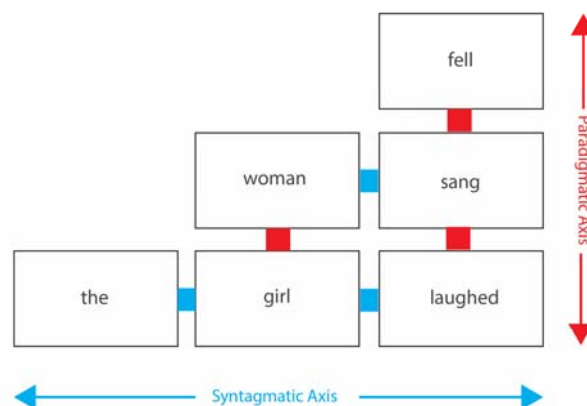


fig. 10

While syntagmatic relations refer intratextually to other signifiers co-present within the text, paradigmatic relations refer intertextually to signifiers which are absent from the text. The 'value' of a sign is determined both by its syntagmatic and paradigmatic relations and provides the structural context to which a sign makes sense.

A paradigm is a set of like signifiers or signifieds which are all members of some defining category, but in which is each different. An example of a paradigm in the grammatical sense would be sets of verbs or nouns. In a given context, one member of a paradigm set is replaceable with another. Thus, the use of one signifier, a particular word in a set, rather than another from the same paradigm set shapes the preferred meaning of a text. An example of a paradigm set in media would include the ways of changing a shot, such as a fade, cut, dissolve or wipe, and also the type of medium and genre of the message.

A syntagm is a combination of interacting signifiers that form a meaningful whole within a text. These combinations are made within a set of syntactic rules and conventions. Linguistically, a sentence is a syntagm of words, as are paragraphs. They are created by the linking of signifiers from paradigm sets which are chosen on the basis of these rules and conventions. Syntagms can also contain other syntagms. An example of this would be the way a printed advertisement is a syntagm of visual signifiers. These syntagmatic relations are the various ways in which elements within the same text may be related to each other.

While it appears that syntagmatic relations compose the structure, or form, of the message and the paradigmatic relations compose the content of the message, or choice of subject matter, it is also important to note that form is still subject to paradigmatic choice.

A more thorough example of syntagm and paradigm relationships was outlined by David Lodge (1977).

“1. She selects signs from three *paradigms* (i.e. sets of possible signs - upper body garments, lower body garments, and footwear). Each paradigm contains a possible *set* of pieces from which she can choose only one. From the upper-body-garment paradigm (including blouses, tee-shirts, tunics, sweaters), she selects one. These items share a *similar* structure, function, and/or other attribute with others in the set: they are related to one another on the basis of similarity. She further selects items related by similarity from the lower-body-garment and footwear paradigms. A socially defined, shared classification system or code shapes her selections.

2. She *combines* the selected signs through rules (i.e., tee-shirts go with sandals, not high heels), sending a *message* through the ensemble – the *syntagm*. Selection requires her to perceive similarity and opposition among signs within the set (the paradigm), classifying them as items having the same function or structure, only one of which she needs. She can *substitute*, or select, a blouse for the tee-shirt - conveying a different message. The combination, tee-shirt–jeans–sandals, requires her to know the 'rules by which garments are acceptably combined... The combination... is, in short, a kind of sentence” (Lodge, 1977).

### **Syntagmatic Analysis**

Syntagmatic analysis of a text, as mentioned before with Chandlers (2013) studies, involves studying the structure and the relationship between the text’s parts. This study reveals the

conventions or rules of combination that underlie the composition and interpretation of these texts, i.e. the grammar of a language. It is in the use of these varying syntagmatic structures within a text that meaning creates itself.

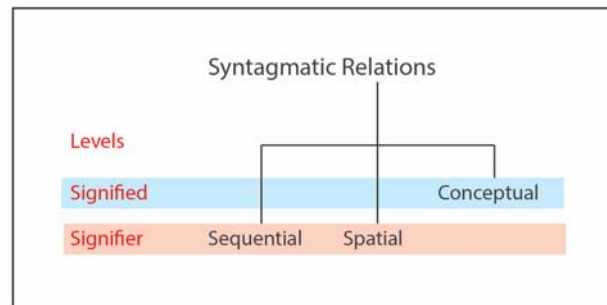


fig. 11

Chandler (2013) states that there are mainly three syntagmatic forms that make up syntagmatic structure.

1. Sequential Relationships - Narrative sequences. Semiotic narratology encompasses both fictional and non-fictional work, literary and non-literary and verbal or visual modes. The most basic narrative syntagm is composed in three phases: a beginning, a middle and an end. The events in the beginning cause those in the middle and the events in the middle cause those in the end. This type of structure is typically seen in classic film, though the order today varies. The purpose of the narrative is to provide continuity to a story that ends with closure. This story telling goes back to the human species primal urge to make meaning out of everyday occurrences, thus becoming notable 'events'.

2. Spatial Relationships – Juxtaposition or location. While mostly found in photography and art, they are no less important than television and cinema. These relationships include: above/below, in front/behind, close/distant, left/right, north/south/east/west, and inside/outside. These structural relationships are not semantically neutral and often are found in key concepts of

culture. An example of this would be the way European countries mainly read from left to right unlike Arabic, Hebrew and Chinese. This left to right navigation subconsciously influences the mind to analyze a piece of art in the same direction. Vertical association is also of importance. In English usage Up takes the meaning of more and Down with less. An example of this would be religious artwork in that the angels are positioned at the top of the media signifying goodness, virtue, happiness, etc. while the less unfortunate are positioned at the bottom signifying badness, depravity, sickness, etc.

3. Conceptual Relationships – Exposition or argument. Exposition relies on the structure of argument or description. The structure of an argument involves three basic elements: a proposition or series of propositions, evidence and justifications. It is by maintaining this structure that the sense of the argument as coherent is reinforced. “But competent academic writers typically learn to create an illusion of completeness which amounts to an attempt to prevent the reader from 'butting' in. Conventional academic textual structures frame the issues and guide the reader towards the author's resolution of them” (Chandler, 2013). This technique is very apparent in media today, especially advertising. In a sense the viewer is not supposed to question the material that is being presented since it already has been established why it is important and its truthfulness. It is in fact that the media is dictating what the public is supposed to agree with.” Those who would learn from semiotics should search for structural leaks, seams and scaffolding as signs of the making of any representation, and also for what has been denied, hidden or excluded so that the text may seem to tell the whole truth” (Chandler, 2013).

## **Paradigm Analysis**

As briefly explained before by Chandler (2013), paradigmatic analysis attempts to identify the various paradigms which underlie the content of texts. This involves a consideration of positive or negative connotations of each signifier, revealed through the use of one signifier over the use of the other, and the existence pre-existing thematic paradigms. These paradigmatic relations are the oppositions and contrasts between the signifiers that belong to the same set from those of which were used in the text. This analysis of what is 'absent' from the text or why one signifier is used instead of the other is a main focus of semioticians. It is from this analysis of what is missing that the true and underlying messages presented by the origin reveal themselves. There are typically two types of absences: those that go without saying or common sense and those that are obvious by their absence. An example of this would be the way a worker wears a uniform to work. Here the worker is assumed to be conforming to his/her work environment to fit in with the rest of the workers. While if the worker wears a t-shirt and jeans to work, he/she is making a statement.

It is from these absences that paradigm analysis stems itself. By substituting different paradigms of the same set within the message, one can measure the significance of the choices made. This analysis can be applied to any medium or genre and ultimately reveals the 'value' of the message at hand. For example if an individual arrives at a party driving a Toyota Corolla, it sends a different message than that of an individual arriving in a Mercedes S Class, then the transportation is a paradigm. The same as mentioned before with the worker wearing a uniform versus a t-shirt and jeans, again the clothing of choice is the paradigm.

This paradigm analysis and focus on opposites stems itself from the role of dualism in cultures. While there are not opposites in nature, dualism lends itself heavily in human categorization. "... binary opposition is a child's first logical operation" (Jakobson, Roman & Halle, 1956}. Essentially this is the way cultures separate right from wrong, male from female, species from species, edible from inedible, etc. Fundamentals created from dualism can be traced back to Aristotle whose studies in physics established the four elements (believed to be opposed in pairs): earth, wind, fire and water. For more than two thousand years these oppositional pairs were believed to be the fundamental structures under surface reality. While dualism exists throughout all cultures it is important to note these oppositions are also uniquely different throughout each culture, varying in degree and relativity. Hence, the analysis of paradigm relations will not be congruent throughout every culture and messages will be interpreted according to preset cultural influences and norms.

## **Rhetorical Tropes**

Rhetoric is the art of communicating effectively. This applies to speech as well as writing. Rhetorical tropes, or figures of speech, play an important role in communication and find their way back to ancient Greek times. The art of persuasion, language is revealed not to be a neutral medium. "Rhetoric is not simply a matter of how thoughts are presented but is itself an influence on ways of thinking which deserves serious attention" (Chandler, 2013). Facts are not facts until they are defended and presented in a manner that makes them exist. It is in this analysis of rhetorical tropes that the influences and agendas behind the presented messages take light.

Figurative language, a representation of what is being described, is only understood amongst the culture using it. This translates to a member of the culture understanding ‘how’ things are represented rather than ‘what’ is represented. As defined before in the cultural study, these rhetorical tropes are part of an informal setting, one individuals pick up by observing others of the same culture. This in turn leads to the same societal beliefs and shared assumptions. Figurative language typically involves metaphors and metonyms to create imagery of what is being described. It is from this imagery that one interprets and sees the sign based on these preset assumptions, ultimately assigning a level of validity to the message.

### **Intertextuality**

Intertextuality focuses on the various links in form and content which bind a text to other texts. Thus, each text exists in relation to others. While these relations may not be acknowledged, texts owe more to other texts than that of their makers. Intertextuality also analyzes the boundaries of a text i.e. where does it start and end? Genres, original authors and plagiarism all fall under this study. One of the theories behind intertextuality is that text is based upon preconceived facts, therefore these texts merely mirror what has already been established and are not original ideas.

“No-one today - even for the first time - can read a famous novel or poem, look at a famous painting, drawing or sculpture, listen to a famous piece of music or watch a famous play or film without being conscious of the contexts in which the text had been reproduced, drawn upon, alluded to, parodied and so on. Such contexts constitute a primary frame which the reader cannot avoid drawing upon in interpreting the text” (Chandler, 2013).



It is from these preconceived notions that textual conventions are formed and provide contexts within which other texts may be created and interpreted. The formation of genres serves to group texts together with these like conventions, establishing certain expectations and norms to the public. Gone unnoticed, the majority of what we ‘know’ and ‘learn’ about the world is derived from what we have read in books, newspapers and what we see on TV and the cinema. Hence our lives are derived through text on a much larger scale than we are aware of. Intertextuality goes on to argue that these experiences we have are not first hand, just copies of the original and the world as we know it is merely its current representation.

### **Semiotic Codes**

As one of the fundamental concepts in semiotics and described by Chandler (2013), codes provide the framework for which signs make sense. A sign has no meaning when it is isolated; only when they are in relation to each other does the underlying meaning reveal itself. Codes are interpretative in which each culture will have a different way of drawing conclusions about the sign(s) in question, in essence an interpretive community. The familiarity with certain codes is again related to social position, such as class, ethnicity, nationality, education, occupation, age, gender and sexuality. It is our current perception of these signs that is controlled by our past experiences and observations that preset these thoughts subconsciously. These codes can be divided into social, textual and interpretative codes, as well as sub-codes, such as stylistic and personal codes.

At the base of these codes is perceptual organization, the way our mind sees ‘figure’ and ‘ground’. Figure is defined as the dominant shape and ground as the background. This study of

perceptual organization depends upon the laws or guidelines of Gestalt theory. Some examples of how our minds decode these images and the laws are:

Proximity- features that are close together are associated. For the first image the columns are associated together and when the image is flipped on its side the rows are now associated with each other.

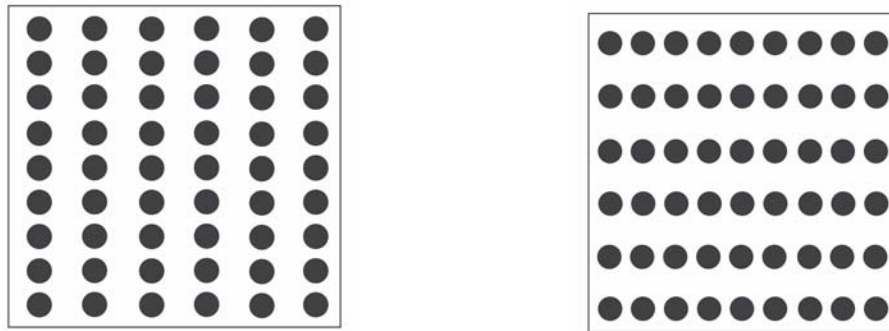


fig. 12

Similarity- features that look similar are associated. Here the columns differentiate from one another because of the alternating circle and square shapes.

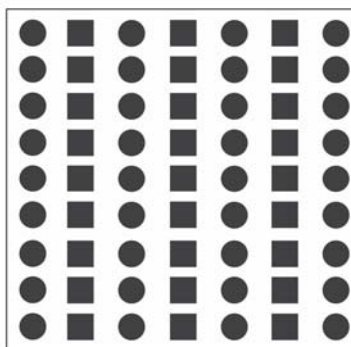


fig. 13

Good Continuation- contours based on smooth continuity are preferred to abrupt changes of direction. The crossing lines from A to D and B to C will be more apparent than those of A to C and D to B.

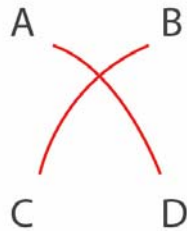


fig.14

Closure- interpretations that produce closed images are favored more than those of open images.



fig. 15

Smallness- smaller areas tend to be seen as figures against a larger background. In this image we tend to see the black rather than the white.

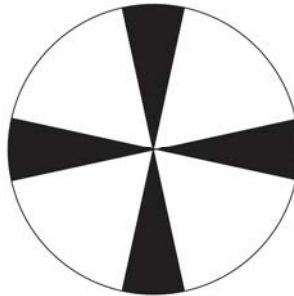


fig. 16

Symmetry- symmetrical areas tend to be seen as figures against asymmetrical backgrounds.

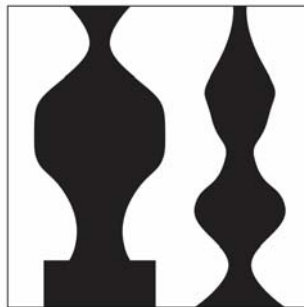


fig. 17

Surroundness- areas which can be seen as surrounded by others tend to be perceived as figures.



fig. 18

These laws of perceptual organization lead to the overarching principle of *pragnanz*, favoring the simplest and most stable interpretations. What this also suggests is that our minds are predisposed towards interpreting images one way over another by universal principles.

In terms of semiotics, codes are “a set of practices familiar to users of the medium operating within a broad cultural framework” (Chandler, 2013). These codes serve to organize signs into meaningful systems which transcend single texts, linking them together in an interpretative framework. When creating texts, signs are selected and combined in relation to the familiarity of codes in order to limit the range of possible meanings that are likely to be generated when interpreted. Thus, codes make it simpler for signs to be understood and establish meaning. When interpreting a sign, the sign usually has contextual cues for which codes to use to properly extract the message. The choice of medium can also affect these codes. With familiar codes the mind operates on a subconscious level and there is usually no awareness that we are even interpreting the sign. This cueing is part of the metalingual function of signs.

When analyzing codes for the tactic rules and constraints, semioticians have found it convenient to break these codes into different groups. These groups have been narrowed down to the least number of groups deemed necessary by structuralists. According to Chandler (2013) these following groups are the most widely present in communication, media and cultural studies, and they are:

**Social Codes** (All semiotic codes are social codes)

- Verbal language: phonological, syntactical, lexical, prosodic and paralinguistic sub-codes
- Body language: bodily contact, proximity, physical orientation, appearance, facial expression, gaze, head nods, gestures and posture
- Commodity codes: fashions, clothing, automobiles

- Behavioral codes: protocols, rituals, role-playing, games

### **Textual Codes** (Representational codes)

- Scientific codes: including mathematics
- Aesthetic codes with the arts: poetry, drama, painting, sculpture, music
- Genre, rhetorical and stylistic codes: narrative, plot, character, action, dialogue, setting, etc.
- Mass media codes: photographic, television, film, radio, newspaper, magazines, etc.

### **Interpretative Codes**

- Perceptual codes: visual perception
- Ideological codes: codes for encoding and decoding texts that are dominant, negotiated or oppositional. These also include 'isms', i.e. individualism, feminism, racism, materialism, etc.

These three types of codes correspond broadly to three key kinds of knowledge required by interpreters of a text, namely knowledge of:

1. The world (social knowledge)
2. The medium and genre (textual knowledge)
3. The relationship between 1 and 2 (modality judgments)

When analyzing culture, Chandler (2013) and the majority of semioticians identify signs as any object(s) or action(s) that have meaning to the members of that cultural group. Understanding these codes, their relationships and the contexts in which they are used defines what it means to be a part of a culture. These codes in a sense are what enable members of a culture to interpret reality in the same way, to connect with themselves, each other and their surroundings.

Within a culture, social differentiation is determined by these codes, some more apparent than others. On the surface, clothing, the work we do, the way we talk, hairstyles, eating habits, our living environments and transportation all give cultural cues to our upbringing and our social identity. While verbal and non-verbal cues vary amongst cultures, so does their level of significance or prominence change over time. A good visual example of this would be fashion trends. Obviously what was popular to wear in the 1960s has changed significantly to present times. Codes change and develop over time, though the rate at which they evolve is determined by the specific culture they stem from. We see the world through these codes and conventions which ultimately gives us an identity. “The most important constancy in our understanding of reality is our sense of who we are as an individual. Our sense of self as a constancy is a social construction which is 'over-determined' by a host of interacting codes within our culture” (Berger & Luckmann, 1967).

### **Mass Media & Codes**

With mass media’s reach worldwide, more and more codes are now openly accessible than before. Defined by Chandler (2013) these worldwide codes are referred to as broadcast codes, or codes targeted to a mass audience. Inversely, narrowcast codes are codes that reach only a limited audience. An example of this would be pop music, a broadcast code, versus classical

music, a narrowcast code. The difference here is that broadcast codes are learned through experience while narrowcast codes typically involve further investigation and exploration. The very definition of ‘cultured’ encompasses this narrowcast code and the pursuit of knowledge.

A defining characteristic of broadcast codes include high redundancy, serving to emphasize and reinforce preferred meanings. Conversely, narrowcast codes have a great deal of sophistication and detail, exhibiting minimal redundancy (e.g. poetry). Mass media and today’s popular culture exhibits this redundancy, attempting to sway the public’s opinion by ‘giving them the facts’ instead of letting the public investigate the message themselves. By repeating these codes over and over the message itself becomes ‘natural’, establishing itself as normal to the public. This type of influence and coding is considered ‘lowbrow’ or for the majority. ‘Elite’ codes, those used by the minority, are deemed to be more original and unpredictable.

The continuation of broadcast codes used by the mass media ultimately does the thinking for the public, in turn influencing the public on a subconscious level. Popular culture is driven by these codes, determining what the ‘cool’ thing is to buy and promoting a constant state of change. A side effect of this repetition is the unoriginality coming forth from businesses and more importantly the way it is shaping people’s lives. Exploration and discovery by one’s self is not encouraged, leading people to expect the answers from someone else instead of themselves. This creates dependency, disempowering the individual and empowers the mass media and larger companies.

### **Modes of Address**

When creating and presenting a text there are certain ways to position the reader to become an ‘ideal’ reader. This positioning is called the mode(s) of address, or the implicit and explicit ways



in which the style, structure and content of the text affect the reader. ‘Seeing’ the author’s intended message has been a topic of discussion for centuries. One such accomplishment of this perceptual process was the introduction of linear perspective in 1425 by Filippo Brunelleschi, or more commonly recognized today as the vanishing point. It is important to note that this style was not present in artistic work preceding it and was deemed the most accurate way to see a truthful representation of pictorial work.



fig. 19

This establishment and now common practice of using a vanishing point, at times multiple vanishing points, gives the viewer a sense of privacy and individuality, as if they are the only one viewing the picture.

These ‘ideal’ viewers are perceived as subjects. The initial individual is a product of nature while a subject is a product of culture. It is through the use of signs and codes that a subject is created, not an actual person but existing only in relation to the interpretation of texts and signs used. In order for a person to understand a text, the person must create a subject-position to relate to it. Thus, to understand an advertisement we would have to adopt the identity of the target consumer.

Genre is an important part of the primary textural code that is involved in forming a subject.

Serving as a 'neutral' base, genre functions to make the conventions of the text more transparent to those familiar, establishing a foreground of 'norms'. Genre also serves as a point of reference to the reader, helping to identify, select and interpret these texts. These different genres can be seen to embody certain values and ideological assumptions, changing over time to reflect newer cultural views and ideas of the moment.

These modes of address within a code have three inter-related factors according to Chandler (2013):

- Textual Context: the conventions of the genre and of a specific syntagmatic structure
- Social Context: the presence or absence of the producer of the text, the scale of social composition of the audience, institutional and economic factors
- Technical Constraints: features of the medium employed

The process at which individuals become subjects is the rate of synchronicity, or the ability of the participants to communicate in real time without delays. Again according to Chandler (2013), this feature ties together the presence or absence of the producer and the technical features of the medium.

- Synchronous Interpersonal Communication: through both speech and non-verbal cues (direct face to face interaction, video links); through speech alone (telephone) or primarily through text (internet chat systems)
- Asynchronous Interpersonal Communication: primarily through text (letters, fax, email)

- Asynchronous Mass Communication: through text, graphics and/or audio-visual media (articles, books, television)

The way the modes of address are presented to the individual also differs. Directness, formality and their narrative point of view all make up the underlying structure.

In literature the various narrative points of view, defined by Chandler (2013), are:

- Third-person narration
  - Omniscient narrator
    - Intrusive
    - Self-effacing
  - Selective point-of-view of character(s) presented by self-effacing
- First-person narration: narrated directly by a character

In film and television the omniscient narration is usually used. Here, camera treatment is subjective, showing us events as if in a particular person's visual point of view.

Directness also varies from medium to medium. This directness is the amount in which the subject is explicitly addressed. In literary work this is quite rare and is more prevalent in film and television. An example of this would be the way an actor or actress looks at the camera, connecting with the viewer on a personal level. This directness is rare in cinema because of the

illusion that the medium is trying to create. Cinema depends upon the fact that the participants do not know they are being watched. Documentaries and commercials also exhibit directness with the use of a voice over. Here the moderator is speaking directly to the audience, telling them what they need to know, of course decided upon by the producers of the message. This directness reflects the power of the addresser, usually displaying a sign of authority. A good example of this is the Presidential address or when a leader addresses the public.

Formality is the level of explicitness the message is presenting to the viewer. There are typically three kinds: intimate, social and public (impersonal). Intimate language depends largely on non-verbal cues and is minimally explicit while public language is the opposite.

This is demonstrated by distance in visual media, for instance the varying types of camera shots.



fig. 20

Again the level of formality is demonstrated by the physical distance to the object. The long shot representing public formality, the mid shot social and the close up intimate. This physical distance often attempts to encourage feelings of emotional involvement or detachment.



fig. 21

## **2.3 Automotive Industry Overview**

### **2.3.1 The Current State of the Automotive Industry**

Much like the spread of globalization fueled by the internet and media, the automobile industry is in a boom of its own. With population numbers increasing so does vehicle ownership. Since 1970 world population has expanded from 3.8 billion people to almost 7 billion today. According to Ward's Automotive (2014) an estimated 250 million vehicles existed in 1970 and that number quickly doubled to 500 million by 1986 and 1.015 billion in 2010. Experts predict that these numbers will grow to almost 2 billion by 2020. Partly in due by the rapid increase in population, distribution of new wealth and advances in technology, i.e. infrastructure, road building, manufacturing efficiency, material choice, etc., automobile sales will continue to climb as more and more people can financially obtain them.

### **2.3.2 Globalization in the Automotive Industry**

In a report detailing the effects of globalization in the automotive industry, Sturgeon (2009) focuses on several key areas. The automotive industry is distinct in itself in that there are 11 major companies from only three different countries, Japan, the United States and Germany that dominate production in the main markets. This in turn gives these larger companies much more power over the smaller companies.

This high concentration of power gives these companies greater influence on suppliers and manufacturers, in turn creating an imbalance of power and thus preventing industry standards from being created. With automotive parts not being universal and even varying within a company's fleet, highly specialized products must be produced. This ties suppliers to these companies, resulting in the suppliers becoming dependent on the larger companies to survive as all of their resources are allocated towards these products.

Another revelation due to globalization is that the final assembly of vehicles has moved to the auto makers target markets. This 'build where you sell' practice has relocated numerous manufacturing facilities along with factory jobs. As a result there are more countries that now produce automobiles than there were 30 years ago. In the US alone there are now over 13 automakers that have production facilities. Since 1982 nearly every major automotive company has had production facilities in the US. According to the United States government commerce website (2014) the US automotive industry accounts for 4 to 5% of the national GDP and employed over 700,000 people in 2011.

Along with extensive manufacturing facilities, automotive suppliers are also abundant and account for 3% of total US manufacturing, over \$171 billion in 2011 and provide close to 3.3

million jobs (the most in any sector). While globalization has caused US auto makers to relocate facilities, in turn reducing employment, other foreign automakers are now migrating their operations to the US, in turn increasing job opportunities.

Along with manufacturing, globalization is now taking over design efforts. Companies now seek to design vehicles with cross-regional appeal in order to gain a larger market share. While production is now globally based, design is still typically located at the company's headquarters (usually overseas). This almost seems to contradict this globalization effort as designers from the US, for instance, are designing vehicles that Indians, Chinese and/or Europeans would purchase. Some regional design efforts are being made, but most of the design changes have to do with physical features on the vehicles such as left vs. right hand drive, larger gas tanks or suspension differences. As a one-size-fits-all vehicle, cultural differences are ignored and auto makers seem to assume that everyone looks for the same characteristics when purchasing a vehicle.

An example of how globalization has hurt certain economies, Hill (2013) illustrates how Detroit stands out from the rest. Even with Ford, GM and Chrysler being reborn and profiting in the past four years, Detroit has not experienced the same rebound. When car manufacturing began in the early 1900's, Detroit was a major hub in trade and trans-American travel with the St. Lawrence River providing the necessary means to transport cars between the US and Europe. As time progressed, the 1960s started the decline of automobile manufacturing in the US due to rising union costs, manufacturing costs and labor expenses. Manufacturing jobs were outsourced to other countries and factory jobs declined.

Today GM has factories in over 19 foreign countries. Simply put, Detroit is no longer relevant to the global automotive sector. It is far more feasible to open a factory in the country they are



selling automobiles to than to produce them in Detroit and ship them overseas. As a result of the exodus of business and jobs, the population of Detroit has fallen from 2 million in 1950 to about 700,000 today, as well as being a contributing factor to the City of Detroit filing for bankruptcy.

### **2.3.3 United States Auto Industry**

Even with current record sales and production at an all-time high, it was not long ago that Ford, GM and Chrysler filed for bankruptcy. US automobiles were associated with poor quality, being over-sized and guzzling gas. There are many theories on why the Big 3 failed, from the unions to the price of oil, but one thing that is clear is that the Big 3 are not operating the same way they did prior to 2008. Post-bailout the Big 3 are seeing new life, posting quarterly profits instead of losses, and changing the perception of their brands.

By restructuring their approach to building automobiles, US manufacturers are now competing with European brands known for their refinement and style. Focusing on build quality, innovation and fuel efficiency, US automobiles are overtaking European alternatives and setting new standards.

According to Ward's Automotive (2014) there are an estimated 247 million light vehicles on US roads with the average age hitting an all-time high of 11.4 years. Since the recession, Americans are keeping their vehicles longer and spending money in other areas. An expected boom of new car sales is expected in the next few years, fueled by the deterioration of these older cars as well as the improving economic conditions.

Illustrated in figure 20, domestic auto sales topped out at 17.3 million vehicles in 2000 and then declined rapidly in 2008. Since then light vehicle sales have steadily increased with nearly 15.6 million vehicles being sold this past year. These figures are predicted to increase the next following years and maintain sales above 15 million units.

The majority of light vehicles bought in the US are manufactured by four companies: GM, Ford, Toyota and Chrysler. These companies make up 59.6% of the market share, shown in figure 21,

with three out of the four being US based, illustrating how important domestic markets are. The remainder of this market share is led by Japanese and Korean companies with European companies rounding out the bottom.

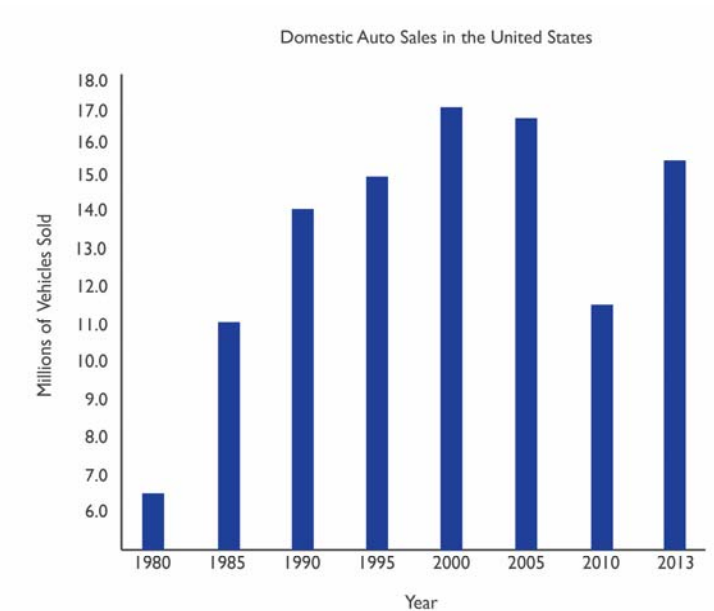


fig. 22

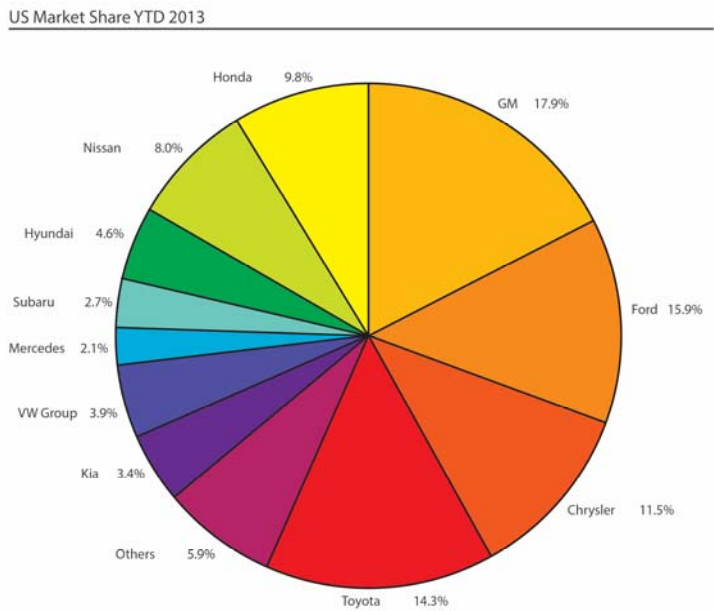


fig. 23

### **2.3.4 European Auto Industry**

With the housing bust marking the start of the recession in America in 2008, the aftermath of these events trickled over to Europe. As a result of the financial institutions being connected, Europe has experienced a recession of their own with several nations requiring bailouts. Europe's nations are in greater turmoil as numerous countries are dealing with government restructuring, growing poverty levels and high unemployment.

The auto industry is no exception, taking a larger hit than the US has experienced. While US auto sales have been steadily increasing, European auto sales are decreasing. "According to a study by the consulting firm AlixPartners more than half of all European car plants are currently working at an unprofitable level" (Weller, 2013, para.2). This means that European auto plants are not working at the capacity they need to maintain, typically 70-80% capacity, in order to produce a profit. As a result, plants are being closed and factory workers laid off. Most economic forecasters are opposed to bailing these companies out, implying that the market will self-correct itself. This entails that the weaker companies will close with the remaining companies filling the lower demand from the public. This restructuring is also resulting in auto companies moving some of their factories out of Europe, relocating them in the countries they are selling to, again the 'build where you sell' method.

While the European auto industry is declining it is still a significant source of employment. There are currently 12.9 million jobs in the sector with an additional 3 million jobs in manufacturing, according to the ACEA (*The Automobile Industry Pocket Guide*, 2013). The auto industry makes up 5.3% of the EU's employed population as well as being the largest investor in the research & development sector, investing over 32 billion Euros. With Europe containing 23%

of the world's light vehicles and producing 23.2% of the world's light vehicles, shown below in figure 22, the auto industry will remain a key factor in its economic stability and success.

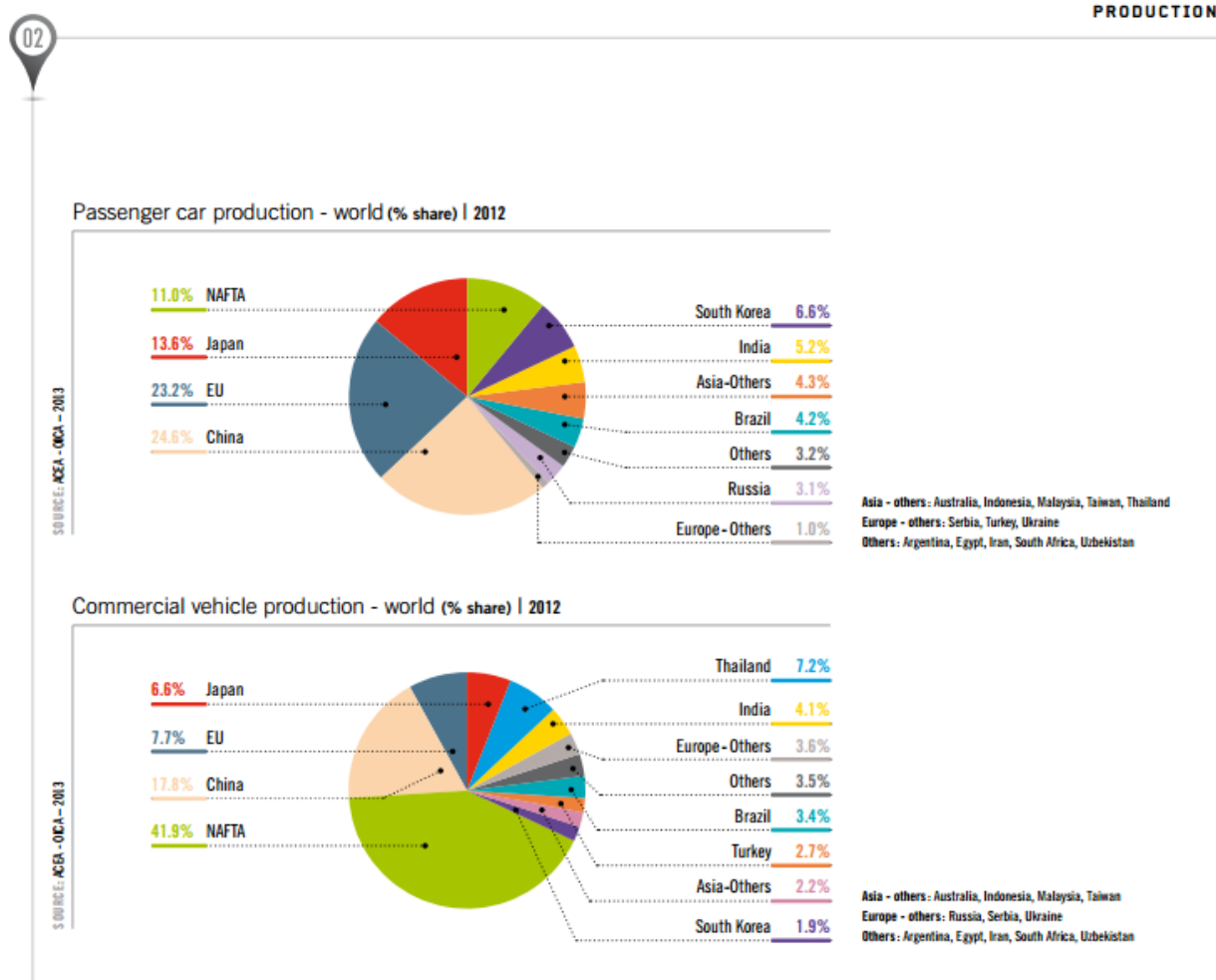


fig. 24

With Europe containing 23% of the light vehicles in the world, this illustrates how important domestic markets are. The ACEA (*The Automobile Industry Pocket Guide*, 2013) also reports that German auto maker VW Group led the European market share in 2012 with 23.6%. French auto makers PSA Group (Citroen and Peugeot) is second with 12.4 % and then Renault in third

with 9.5%. Currently German automakers have a firm hold on domestic market share, close to 32%, capitalizing on the disparity of the other failing auto companies. With auto registries and sales numbers decreasing, the fight for market share in Europe has been intensifying. Different strategies are being created and explored, though most auto companies are looking towards emerging markets to fill the void.

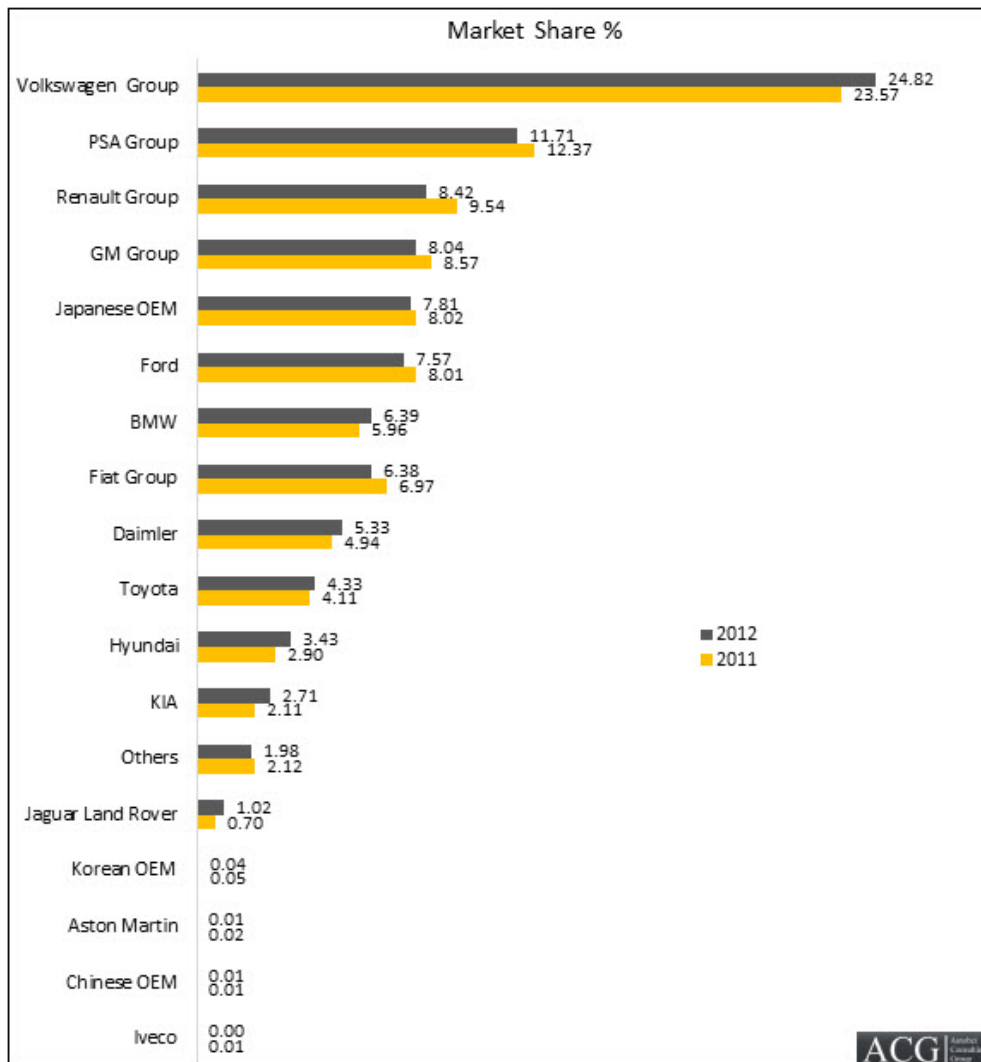


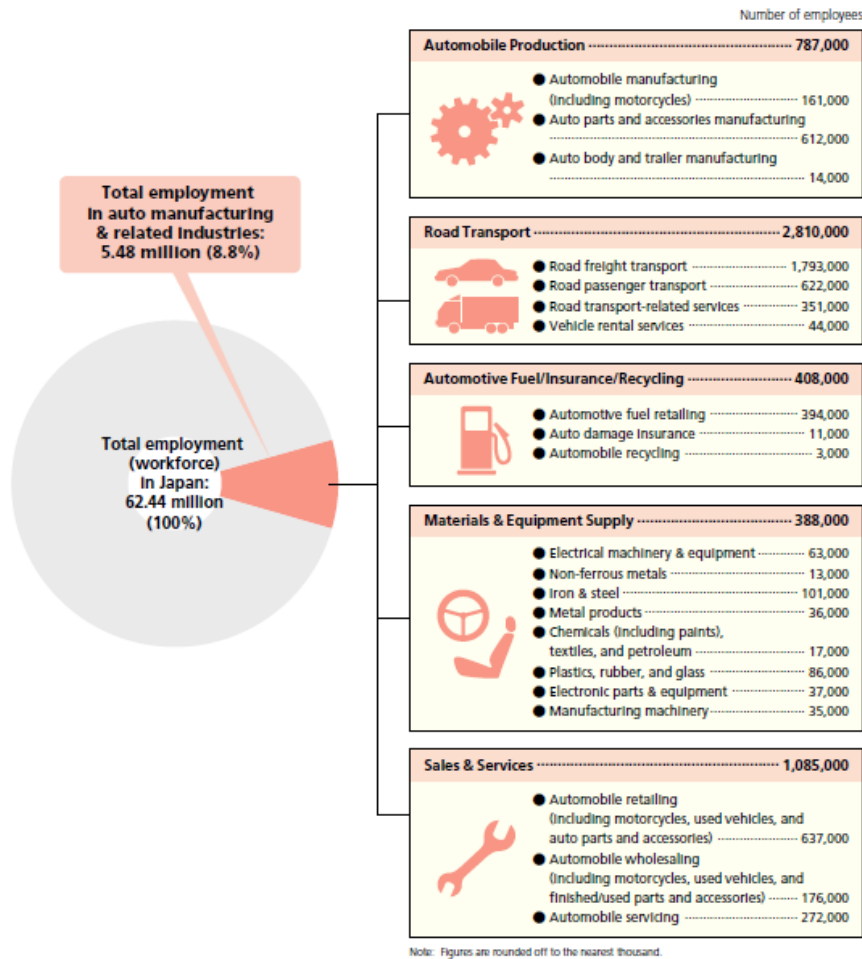
fig. 25

### **2.3.5 Japanese Auto Industry**

Experiencing a shallow recession of its own, Japan's economy has also been undergoing changes in order to promote growth and decrease deflation. These factors as well as other issues, such as government subsidies for fuel efficient vehicles expiring, have Japanese auto makers struggling to make a profit. While sales have been declining over the past few years, Japanese auto makers are still running over capacity, looking to export their excess to emerging markets to cover losses. While this strategy is still unproven long-term, the majority of auto makers see emerging markets to be a solid investment for the future. Japanese car sales in China saw an increase of 16% over last year's sales, indicating short-term that this approach is working.

Even with the recession, Japan's auto sector is still an important factor in their economy as a whole. According to JAMA's (2013) studies, the Japanese Automotive Manufacturers Association, the auto industry provides nearly 5.5 million jobs and composes 20.2% of the Research & Development sector. With Toyota sparring with GM and VW for the world's number one auto manufacturer, the auto industry in Japan is a symbol of pride and success to its citizens.

# ● EMPLOYMENT IN THE AUTOMOBILE MANUFACTURING AND RELATED INDUSTRIES



Sources: Economic Census, Labor Force Survey, Input-Output Tables for Japan, Census of Manufactures, Ministry of Internal Affairs and Communications' Statistics Bureau, Ministry of Economy, Trade and Industry

fig. 26

As well as being a large part of the economy in Japan, Japanese auto makers are also making an impact in the US. Investing more than \$35 billion (JAMA, 2013), Japanese auto makers have 26 manufacturing plants in the US (as of 2012), providing close to 1.4 million jobs for Americans in the automotive sector. This foreign presence also contributes to the US's GDP, in turn helping the US's economic status. A new trade agreement underway, the TPP or Trans-Pacific-Partnership, is set to provide a free trade agreement between the US and Pacific based countries. This will spur new entry to markets, promoting new growth and spending between nations.



### Employment (Number of Employees in 2012)

	Automakers	New Vehicle Dealers	Total
Manufacturing	57,939		
R&D	4,196		
Distributors	18,899		
<b>Subtotal (Direct Employees)</b>	<b>81,034</b>	<b>327,477</b>	<b>408,511</b>
Suppliers (Intermediate)	218,000	106,000	324,000
Spin-off	383,000	245,000	628,000
<b>Grand Total</b>	<b>682,034</b>	<b>678,477</b>	<b>1,360,511</b>

Source: Japanese Automakers/Professor Thomas Prusa, Rutgers University

Note: Supplier and spin-off employment are estimates.

fig. 27

### 2.3.6 Emerging Markets

With domestic auto sales typically only increasing at a small percentage every year, 1% in the US and 1 to 2% in Europe, many automotive industry professionals and Wards (2014) believe the next automotive boom will take place in China and India. With massive populations and rapidly improving economic conditions, China and India are projected to grow 2 to 8 times faster than American and European markets in the next 9 years.

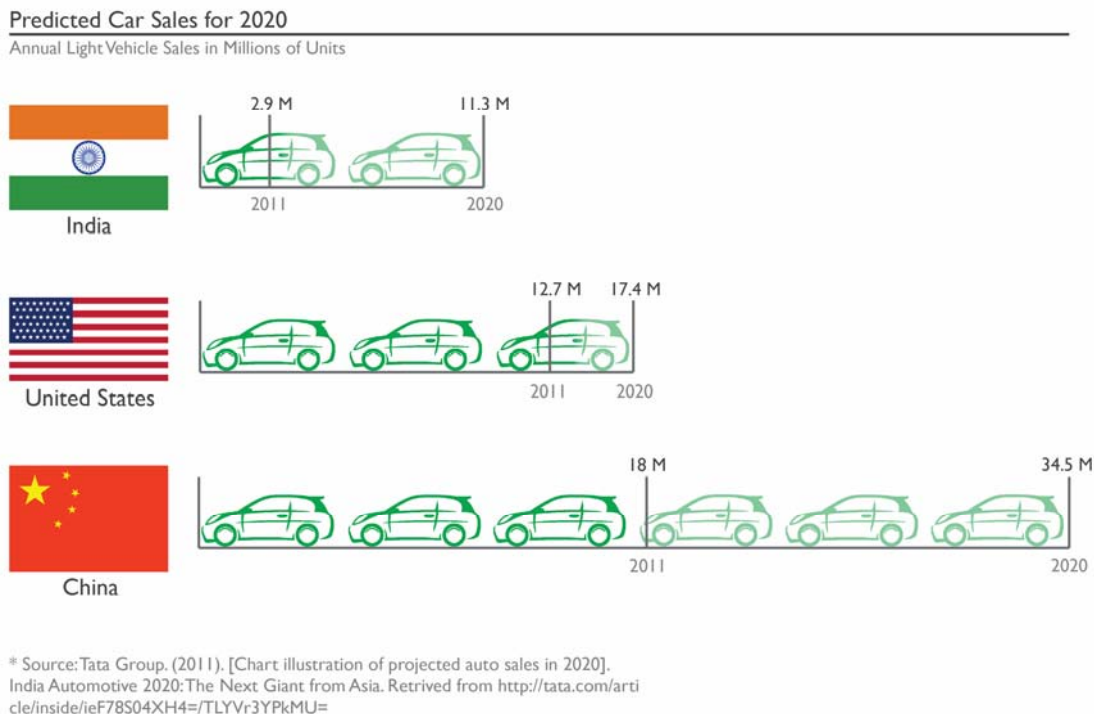


fig. 28

### China

Surpassing 20 million light vehicles bought in 2013, the most vehicles ever sold in a year, China is expected to be the largest automotive market in the foreseeable future. Due to China's rising

middle class and redistribution of wealth, car sales mirror economic growth and millions of Chinese can now afford to purchase personal vehicles. By early as 2018, KPMG (Meyer, 2013) predicts China to make up 41-50% of global car sales.

As a new market, consumers in China do not reflect the same tastes in automobiles as more mature markets such as Japan, the US and Europe do. They are quite the opposite as the Chinese currently prefer larger sedans and SUVs to smaller, compact cars. These larger sedans make up 67% of the vehicles sold with SUVs becoming the fastest growing segment. Since wealth is a new concept for many, displaying it is fashionably popular. Global sales for luxury brands are number one in China with many auto makers depending on China to make up a substantial portion of their sales. Bernhard Maier (*Porsche sales boss expects China to top U.S. as brand's No.1 market*, 2014), head of sales and marketing for Porsche, predicts that China will be Porsche's number one market. Maier would like to see a balance of sales across regions, expecting a 1/3, 1/3, 1/3 split between the US, Europe and Asia. Clearly the Asian markets are here to stay, becoming a permanent target for foreign auto makers.

With KPMG (Meyer, 2013) reporting that 47% of the Chinese market share consists of domestic auto makers, these figures are dropping rapidly. Chinese auto makers are relatively new to the industry, lacking the same infrastructure and financial backbone as established Japanese, US and European auto makers. Foreign brands are quickly gaining strength due to their better build quality, luxury standards and styling. Even so, Chinese auto makers are making gains in reputation, looking to enter foreign markets to increase profits. Chinese car maker BYD, backed by US investor Warren Buffet, is expected to enter the US market by late 2015. This will be the first of many Chinese auto makers entering US soil, bringing with them a new wave of low-cost vehicles and alternate options to other brands currently in the US. This will result in new

competition between brands, prompting veteran auto makers to provide lower cost vehicles to compete with Chinese brands.

## 2030

Light-duty vehicle stock (+/- variation 2010 and 2030)

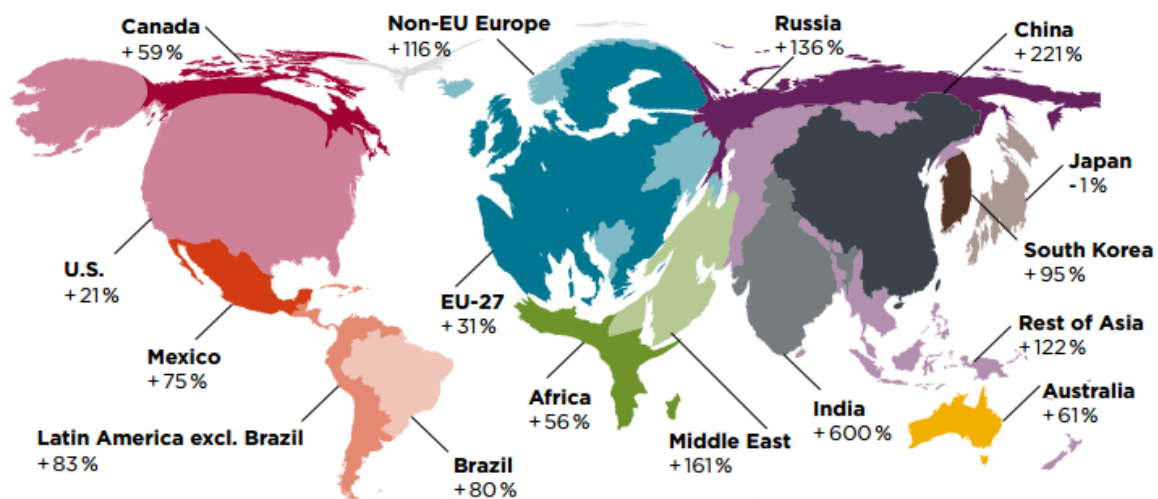


fig. 29

## India

As researched by Sehgal (2011), strategists expect India to be the world's third largest auto market by 2016, behind China and the US. Though 2013 marked the first slump in sales in over a decade, vehicle sales have still tripled since 2002. With its growing middle class, auto sales are dependent on how the economy impacts these buyers. There are about 100 vehicles for every

1000 residents in India, compared to 150 vehicles for every 1000 residents in China and nearly 700 cars for every 1000 residents in the US. These figures are expected to drastically change for India and China as their economies improve.

The Indian auto market is much different from the Chinese market in that the majority of Indian purchasers prefer much smaller and less expensive vehicles. The micro car and subcompact car segments in India lead sales in which more established auto makers, such as Toyota and GM, do not have nearly as many cars in this segment to offer. Dominant market share is held by domestic auto maker Maruti, holding a 44% share (Top 10 Automobile Brands in India 2013, 2014). This wide variety of subcompact vehicles is also enhanced by the number of dealerships and service locations in India. Indian buyers are conscious of the fact that their vehicles will require service, opting for a brand that has a strong domestic presence. This gives the current edge to domestic auto makers but foreign auto makers are expanding their presence.

### Automotive Market Share for India 2013

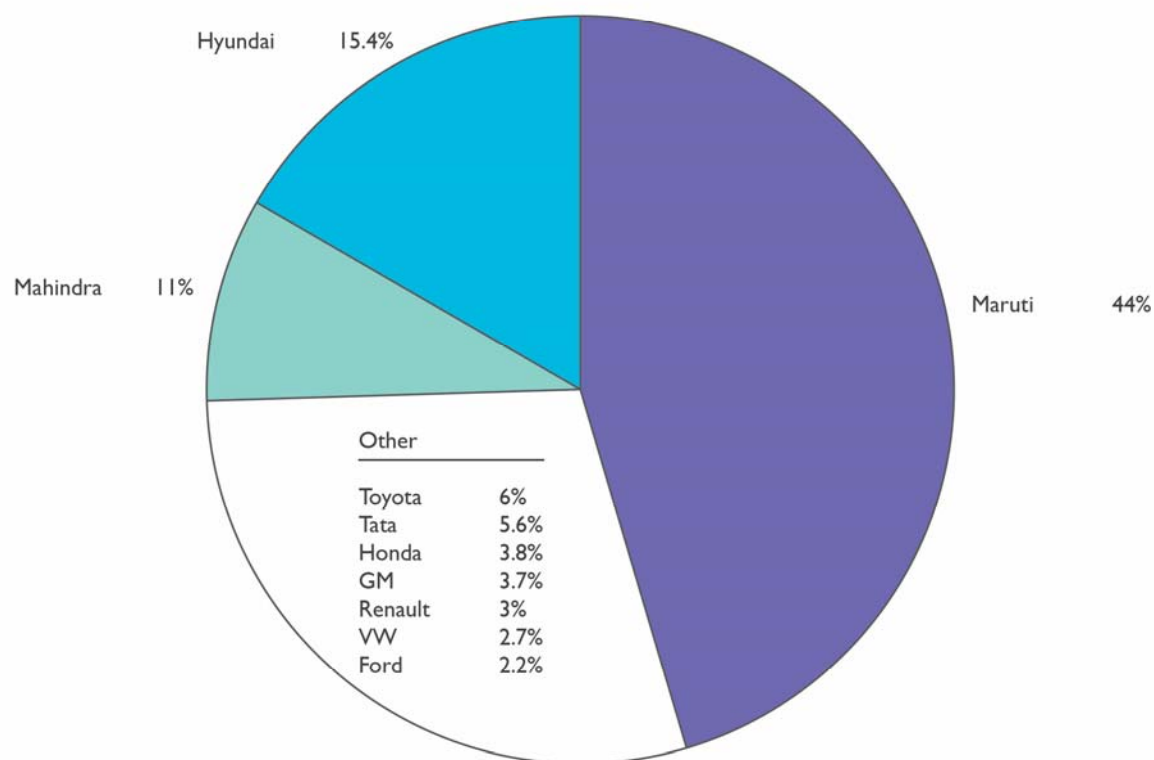


fig. 30

### **2.3.7 Advances in the Automobile**

#### **Vehicle Technology**

A driving force in the advancements and production of automobile is the rate at which technology is developing. Today's automobiles contain more computers and software than did the original US spacecraft launched into orbit. With stricter regulations in safety, fuel consumption and greenhouse gas emissions, vehicles today are far more efficient than their past counterparts. For example the average car in 1980 had a mpg rating of about 24 and today the average car achieves about 33 mpg. CAFÉ standards demand that by 2016 most passenger cars must achieve 39 mpg. These regulations will help reduce fuel consumption as well as emissions. As time progresses so will the advancements of technology in vehicles, ultimately paving the way for future trends and standards. In a study done by KPMG (Meyer, 2013) the following areas will be key in driving automotive progress.

#### **Electronics**

Prior to the wave of electronic gadgets, individuals who wanted to be social and stay connected with each other required automobiles to achieve this goal. The automobile was a symbol of freedom, an unbound vessel for travel. With the emergence of the cell phone, now smart phone, this symbol of freedom has changed from the automobile to technology. Individuals are now connected with each other when they so choose to, with current trends highlighted by social networks such as Facebook, Twitter, Instagram, etc. The automobile is now just a means of travel with current automotive sales numbers with the millennial generation, individuals born from early 1980 to the early 2000s, reflecting this. Raised with this rapid growth of technology, millennials are changing the way vehicles are designed with auto makers providing connectivity

and internet access in current models. Most vehicles today are showcases of advanced technology with complex electronics allowing for personalization, a key selling point in the future.

## **Drivetrain**

As gas prices rose so did the demand for more fuel efficient vehicles. Today's power plants are smaller in displacement, looking to compression boosting methods such as turbocharging and supercharging to increase power levels while maintaining optimal fuel consumption. Lighter and stronger engine materials have also been employed to help reduce friction, in turn improving engine wear and longevity.

Other methods to increase fuel efficiency include direct fuel injection and start-stop functions on automobiles. Direct fuel injection injects fuel directly into the engine's cylinders instead of mixing the air/fuel ratio prior to entering the cylinder. This eliminates excess fuel as electronic sensors can better determine what the engine needs. Stop-start functions turn off the motor when the vehicle comes to a complete stop while driving and restarts the motor when the gas pedal is applied. This eliminates fuel consumption while resting, more practical in a city setting, as well as reducing unwanted emissions.

The most common method to increase fuel consumption by auto makers today are advancements in transmissions. Instead of previous five and six speed transmissions, seven and even eight speed transmissions are being used. This allows for a larger ratio of gearing, providing an extra tall gear for highway speeds. This means that the automobiles engine will turn at a slower speed when cruising, again resulting in better fuel efficiency.



Fuel types have also been expanding recently as the demand for electric and alternative powered vehicles increases. While the electric car is still in its infancy, advances in battery size, durability and capacity will be the major turning point in the near future. Diesel fuel is also seeing a rebirth as advances in emission reductions have more and more auto makers using these engines. While more popular in Europe, US models will start to see diesel options and availability shortly. Other fuel sources such as hydrogen and water are still being explored, suggesting that the future will entail emission free vehicles with superb fuel efficiency.

## **Materials**

Early automobiles were constructed almost entirely out of steel. While strong and durable, steel is extremely heavy. A major contributor to fuel efficiency is weight; the lighter the vehicle the less work the engine has to do to move it. Therefore, lighter vehicles are typically more fuel efficient than heavier ones. With advances in materials and production methods, stronger and lighter steel is being used as well as aluminum and composite materials.

As vehicle technology advances so do safety requirements. Standards in crash ratings typically require automobiles to be reinforced in key areas, resulting in increasing the weight of the vehicle. To counter this, new structural patterns are being developed in order to provide strength while reducing excess material.

Composite materials, such as carbon fiber, will be the wave of the future. Originally used in aerospace and auto racing applications, advancements in production methods and the mass production of the material across auto makers will eventually drive the cost down to be available in almost every vehicle produced. In an automotive executive survey conducted by KPMG

(Meyer, 2013), “80% of survey participants expect lightweight materials to be in mass production within 10 years.”

## **Manufacturing**

With the birth of the assembly line in 1913 by Henry Ford the manufacturing process was changed forever. This new approach rapidly increased the volume of production while requiring less skilled workers. As a result, cars were cheaper to build, making them more accessible to the common individual. Fast forward to today and Nissan is leading production times with it taking less than 24 hours to build a car.

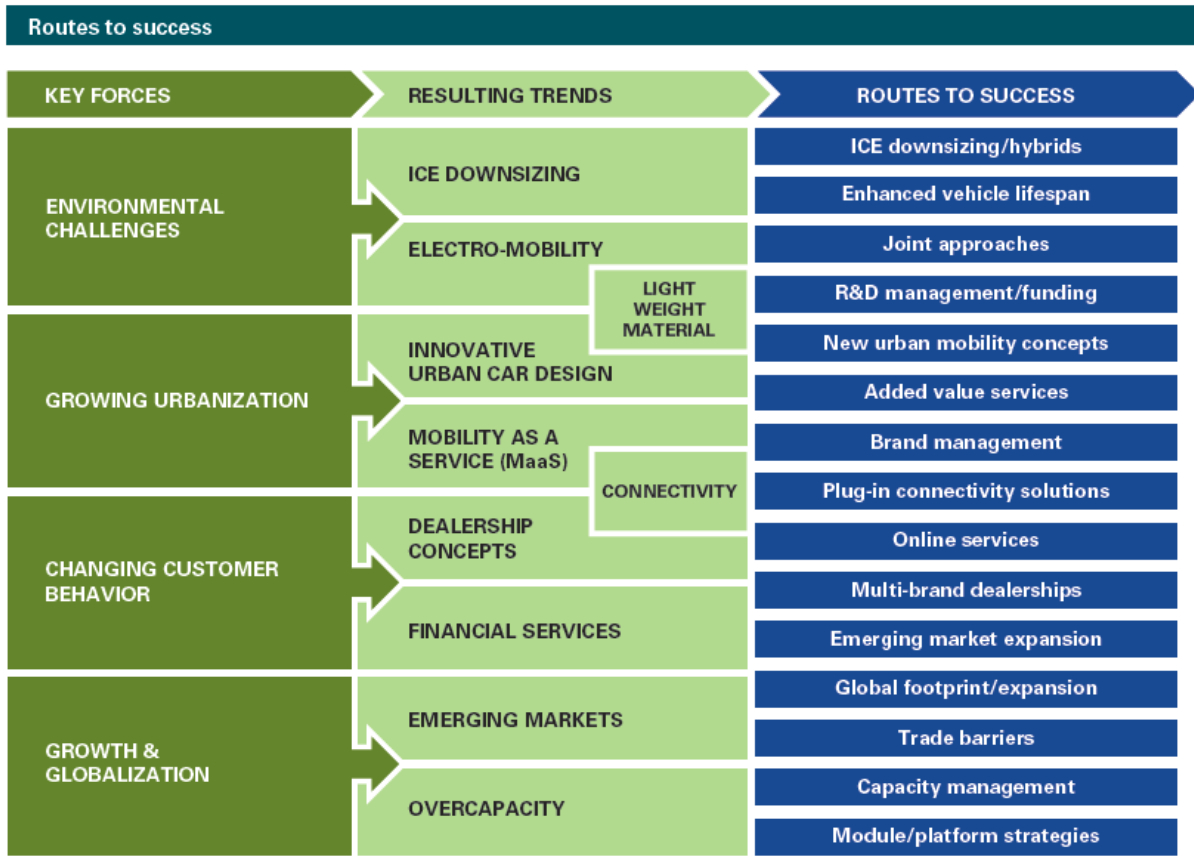
The development and evolution of 3D printing will also revolutionize the auto industry. By building a part by adding material instead of removing it, production times will rapidly decrease as well as greatly reduce the amount of wasted material. 3D printing will allow auto makers to quickly prototype parts and analyze them for any problems or issues. This in turn will lead to faster times to market, enabling auto makers to rapidly change auto parts or the entire vehicle itself.

3D printing will also do away with costly tooling and manufacturing machinery. Practically any size or shape part will be able to be produced by the same machine, eliminating various types of machinery needed in current production methods. Overall, 3D printing will streamline the production process, enabling automobiles to reach market faster and be altered faster. Instead of major refreshes every five years, auto makers will be able to potentially alter their entire fleet whenever they choose.

## **Overview**

The business model of old, where auto makers produced, distributed and marketed cars at home and overseas is no longer relevant. With rapidly changing global conditions there are now numerous variables to take into consideration. As shown by figure 29 outline by KPMG (Meyer, 2013), urbanization, advances in technology, consumer behavior, etc. now all require the same level of respect.

Along with these factors is the overshadowing development of the emerging markets. Not only will established auto makers need to exploit these vast sales opportunities but they will also have to be aware of increasing competition on home soil. Business models will need to adapt to these new conditions in order for auto makers to succeed, demanding specialized expertise in new areas. With the changing global automotive market, auto makers will ultimately need to decide whether to enter new markets or become key players in niche markets. Both of these will determine whether auto makers thrive or become history.



Source: KPMG's Global Auto Executive Survey 2013

fig. 31

### **2.3.8 Automotive Design Process**

#### **Automotive Design**

Why change a vehicle's design? Vehicles, like other products, are continually being assessed and improved upon. With advances in technology driving most of this change, auto makers are constantly trying to find ways to improve a vehicle's attributes while lowering production cost and time. It is important to note that while auto makers only appear to produce quality and stylish vehicles for the benefit of the public, underneath they are still a business with profitability being the number one goal.

Of course there are other trends and factors that drive these changes, such as sustainability, fuel efficiency, alternate materials, styling changes, etc. Most industry professionals agree that trends can only be predicted 5 to 10 years out, hence why vehicles are re-engineered every 5 to 10 years from the ground up. A reflection of current times and culture, the automobile will continue to transform in the future, with past models acting like time capsules of what was. Surveying seven auto makers, BMW, Chrysler, Ford, GM, Honda, Toyota and Volkswagen, the following research summarizes and focuses on key factors of each manufacturers design models and processes.

# Current Design Model

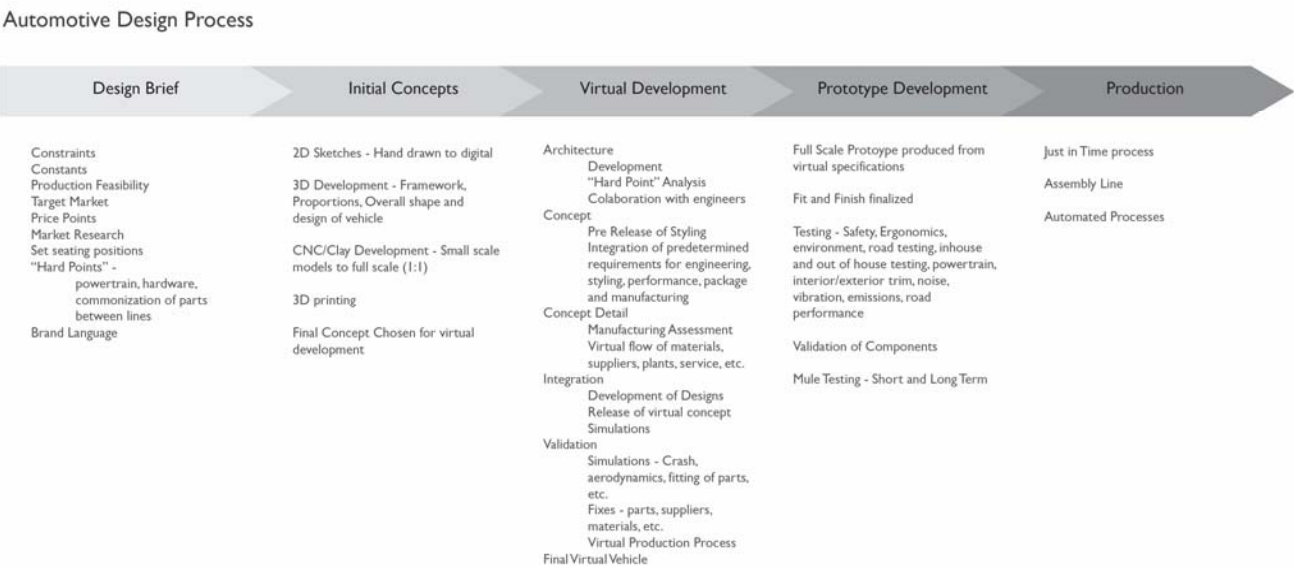


fig. 32

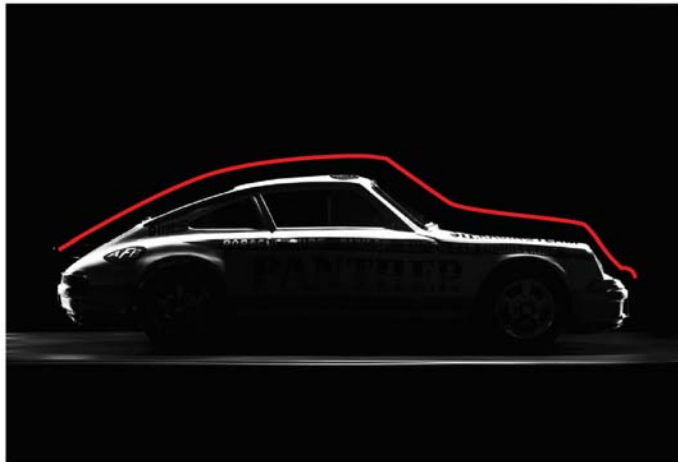
## Step 1: Design Brief

The same for any design firm or company, auto design starts with a design brief. This brief highlights specific data necessary for the designers to reach their end goals while providing constraints and constants to be followed, keeping the design team on track through each design process. Here cross-disciplinary communication is key. Engineering, design, marketing and production teams all need to be on the same page and in constant communication with each other in order for the entire design process to run smoothly. Some of the other factors listed in the brief are:

**Brand Language** – All auto makers have a distinct brand language and visual cues that help consumers identify their vehicles. This can entail the vehicles overall silhouette or physical

features on the exterior or interior of the vehicle, for instance the headlights, grill shape, pillars, etc.

## Silhouette



Demonstrated here, the side profile of the car is very distinguishable. Resembling an upside down bathtub, the classic Porsche 911 shape is unmistakable amongst other vehicles.

fig. 33

## Brand Language



The 3-pointed star badge for Mercedes took shape in the late 1800s. Expressing their universal ambition of motorization on land, water and air, the star was born.

Integrated as a stand alone fixture above the grille and at other times the main piece of the grille, the star is a key brand cue.



The trapezoidal single-frame grille of Audi is now a continuing trait across their entire line. Their goal was to create a grille that encompassed structural, functional and symbolic traits all at the same time.

The four rings badge is also an Audi trademark and symbol.



The double-kidney shaped grille of BMW originated in the early 1900's and has been a staple of their design ever since.

While slightly changing proportions and shape over history, the grille still pays homage to its heritage.

fig. 34

This brand language can also evoke an emotional or opinionated response from the consumer. Such luxury brands like BMW, Mercedes and Audi, are usually associated with the higher class or wealthy. Evoking an envious response from those less fortunate to own these vehicles, the public sees these brands as a symbol of status. On the opposite end, brands like GM, Ford and Chrysler (before the 2008 depression) were branded as gas guzzlers, over-sized and having poor quality. The Big 3 have worked tirelessly to reverse this image as the public's opinion ultimately changed their design structure.

Another auto maker changing their design language is Toyota. "We created cars that out of 100 people, nobody hated," Fukuichi (Toyota's Global Design Chief) said. "I want ones that 10 people love and say, 'I want that'" (H. Greimel, 2013, para. 35).

Known currently for their non-offensive design language, Toyota is taking more progressive steps in order to give their vehicles an edge. Fukuichi attributes their prior "watered-down" designs to the unnecessary revisions made by upper management.

By establishing set guidelines and decision processes prior to new production, auto makers can streamline their actions for efficiency and cost effective results. A model of this is Toyota's lean manufacturing system, emphasizing waste reduction from the start and focusing on attention to detail. This eliminates redundancies and problems early, preventing them from causing costly issues further into the production process. Toyota's creation of this system improved customer satisfaction, decrease time to market and decreased costs.

**“Hard Points”** – These points are constants before the initial concept phase, serving as an underlying structure for the exploration ahead. These will include powertrain specifics, vehicle architecture, seating positions, suspension details, hardware and any communization of parts



between vehicle lines. The pre-establishment and standardization of parts from engineering given to the designers in the early stages of concept development helps reduce production issues down the line. This also helps integrate design seamlessly into engineering and then to production.

**Research** – Making up the largest portion of the R&D sector, auto makers spend millions of dollars every year preparing for future vehicles. Launching a new vehicle is a billion dollar gamble, one of which the auto makers do not want to lose. Therefore the amount of research they do is extremely extensive, covering a wide range of data and calculated possibilities.

With more and more auto makers building new facilities in foreign markets, their goal is to gain valuable insight on their target consumer. Target market research takes a look at these countries' economic conditions, government policies, cultural aspects, infrastructure, etc. in order to better predict which vehicle will be best suited for production.

Competition and existing vehicles are also researched, revealing which designs sell and the reasons why they sell. A healthy competition between auto makers ensures that future vehicles will be built to better standards and meet the expectations of the demanding market. This drive to have the largest market share spurs innovation, pushing the development of vehicles along at a rapid pace.

These are just a few examples of the numerous research areas analyzed by auto makers, but the end goal is always the same: to produce a vehicle that connects on an emotional level with the buyer.

## **Step 2: Initial Concepts**

After the brief has been reviewed the design team starts with two-dimensional sketches. These sketches can be done by hand though more and more auto makers are switching to virtual medium in an effort to increase efficiency. These first sketches done in the concept phase are typically very explorative, reflecting what each designer interprets as the brand's design language. BMW's concept stage is unlike any other as they break their concept phase into three segments (H. Boeriu, 2012, para.1):

Fundamentals – Design brief, standards, constraints and architecture is established for the design team to follow. Designers then produce the overall proportions for the concept, silhouettes to 1:1 scale drawings. Here technical and structural constituents are laid out, making the integration of key components easier. At the end of this segment, sketches start to be converted into 3D models.

Competition – Unique to BMW, the in-house designers will compete against each other for exterior and interior designs to be chosen. Clay models will then be produced and whittled down to 2 final models. Then a winner will be chosen.

Detail Work – After the final concept has been chosen, specialists will fine tune the exterior and interior surfaces. When finished, the final clay model will be scanned and converted into a CAD model.



fig. 35

### **Step 3: Virtual Development**

After the sketches have been explored 3D virtual models will be created. Use of CAD programs are standard in today's automotive design process as this enables designers to edit their work much faster and efficiently. With time to market and lowering costs key, CAD programs have significantly helped reach these goals. As the vehicles architecture and framework are established ("Hard Points"), advanced CAD programs can let the design team use animation to see how parts fit together to resolve any issues before the physical model is produced. Making changes late in the design process is costly while also slowing development time; these virtual corrections let designers fix problems instantly.



fig. 36

As the concept develops, styling is reviewed by upper management with the integration of predetermined requirements for performance and manufacturing double-checked. After these areas have been approved the concept will enter the specification phase. Here the virtual model will be broken down with every part analyzed and dimensioned. After these parts have been modeled the results will be sent to the engineering team for review.

With every part finalized, virtual manufacturing assessments will begin. Here the manufacturing process, as well as other tests, will be simulated from beginning to end. Materials, suppliers and factories will all be virtually integrated into the full production process in order to calculate if any problems will arise. This virtual process greatly reduces the number of late changes, identifying any production problems before they hit the vehicle assembly line.

Other virtual testing includes crash simulations, safety, ergonomics, environment, wind tunnel, durability, etc.

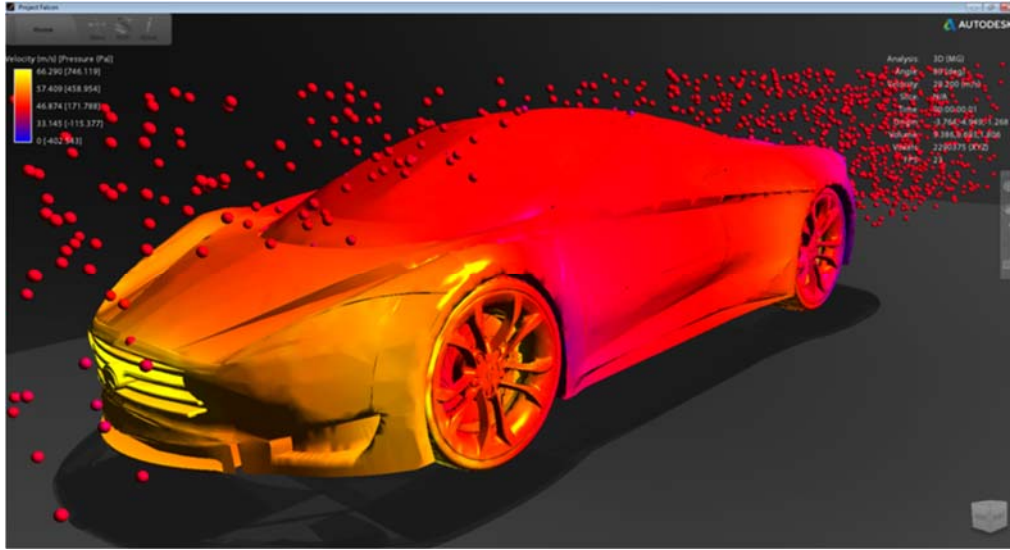


fig. 37

After these simulation models are run the concept will be validated for production and the final virtual concept will be ready for prototyping.

With rapidly changing trends the product life cycle has been significantly reduced. This requires auto makers to shorten development time frames, developing new processes to help increase efficiency and reduce waste. These CAD programs have revolutionized the way vehicles are built, successfully assisting auto makers to meet these new goals. Virtual simulations that cover the entire production process are a must and will continue to be crucial in the future.

#### **Step 4: Prototype Development**

To bridge the gap between virtual concepts and the production line, prototypes will be built next. While these “test mules” are expensive to produce, they are necessary prior to production finalization. Prototypes validate the virtual components, ensuring that they perform to the auto maker’s standards and expectations. Part fitment, clearance, alignment and other details will be assessed and finalized.

In-house and real world testing will also be implemented as these tests will serve to iron out any final issues. Some examples of these tests will be powertrain simulations, road performance, environment (simulated and real world), emissions, noise, vibration and safety.

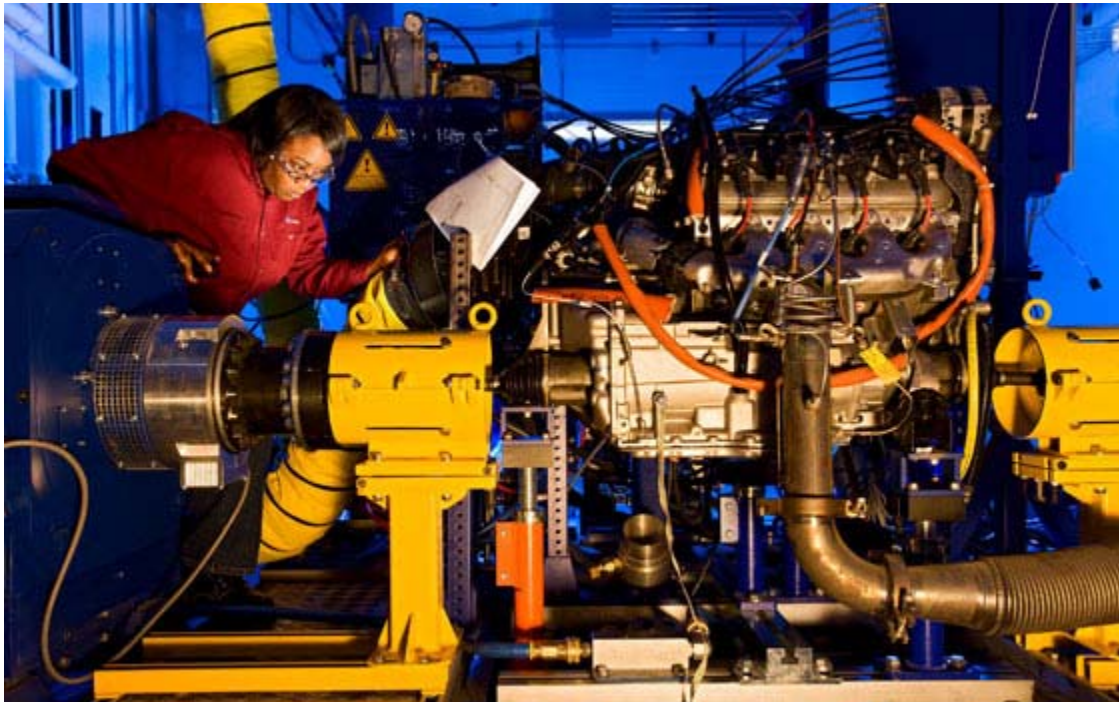


fig. 38

Long term testing will also occur, as disguised prototypes will be given to employees to assess real world conditions, wear and durability.





fig. 39

After the tests and alterations have been completed the prototype will be finalized and production will begin.

### 3.0 Development of Approach

The overall purpose of this approach is to add value to the existing design process, create an emotional connection between the product and the target culture and to satisfy the needs of that culture simultaneously. By supplementing existing research and analysis with this new approach, new cultural and semiotic data will be applied to the four functions of an artifact, or vehicle in this case.

Universal Functions of an Artifact

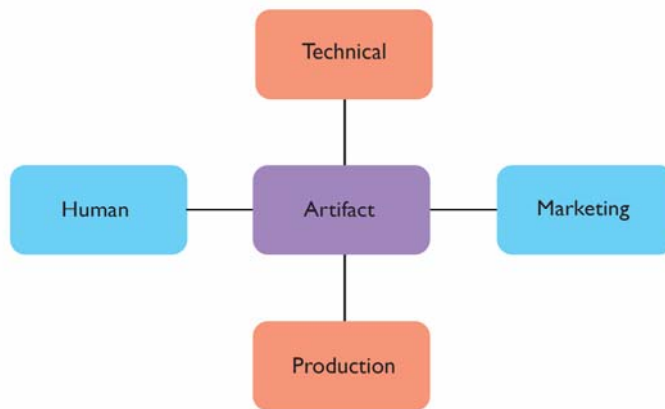


fig. 40

Since analysis of a target market is the main study, the human and marketing functions will benefit the most from this new approach. Implementation of specific cultural traits of the target culture will serve to guide certain methodology in the design process, influencing the outcome and benefits of the vehicle.



### 3.1 Approach to Identifying Culture

There are many different ways of learning the underlying structure of culture and as long as the study is consistent in what is being observed there is no exact entry point. A multitude of basic cultural systems and subsystems can serve as the focus for the observation and they are material culture, business institutions, marriage and the family, social organizations, language, the military, sex and the law. It is important to note that when understanding a different culture it is necessary to learn how things are organized and how ones goes about learning them in that specific culture.

The following steps and models will provide a framework for which a chosen subculture will be analyzed and broken down.

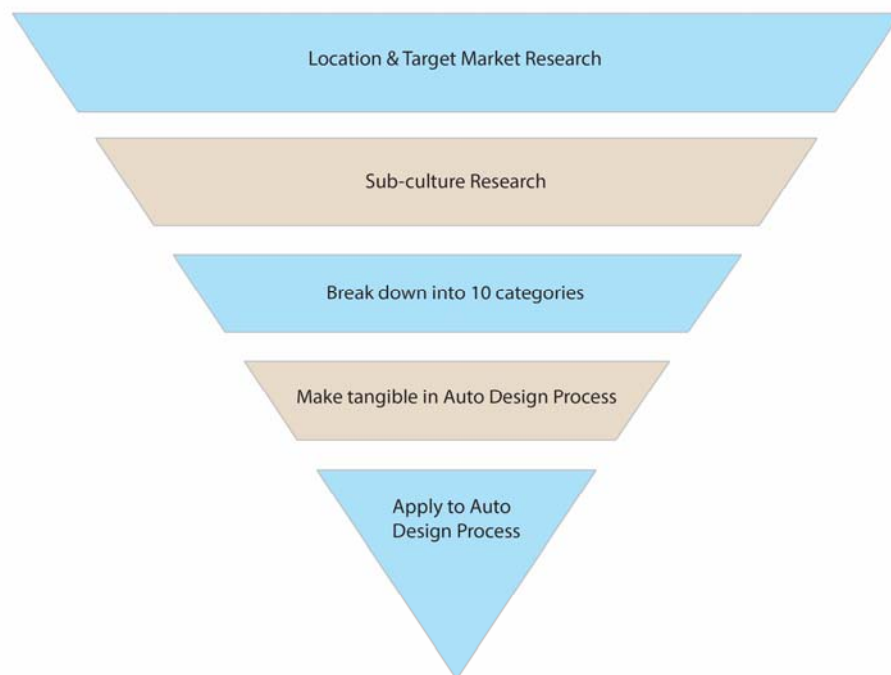


fig. 41

Step 1: Select the location in which the target market resides.

Step 2: Within this location there will probably be one than one culture present (in most instances). Further narrow down this analysis by identifying the subculture targeted. E.g. If the main location is America, further breakdown the focus to the subculture's predominant location. For example if studying Cuban-Americans, focus on the geographical region, South Florida, then further narrowed down to Miami where the majority resides.

Step 3: Analyze the subculture. Gather data about the subculture, such as: material culture, business institutions, marriage and the family, social organizations, language, the military, sex and the law. Use library resources, online resources and/or first-hand observation if possible.

Step 4: Break down the data into the ten categories identified by Edward T. Hall (1959) to identify the roots of the culture. Hall's chart will provide the framework for analysis:

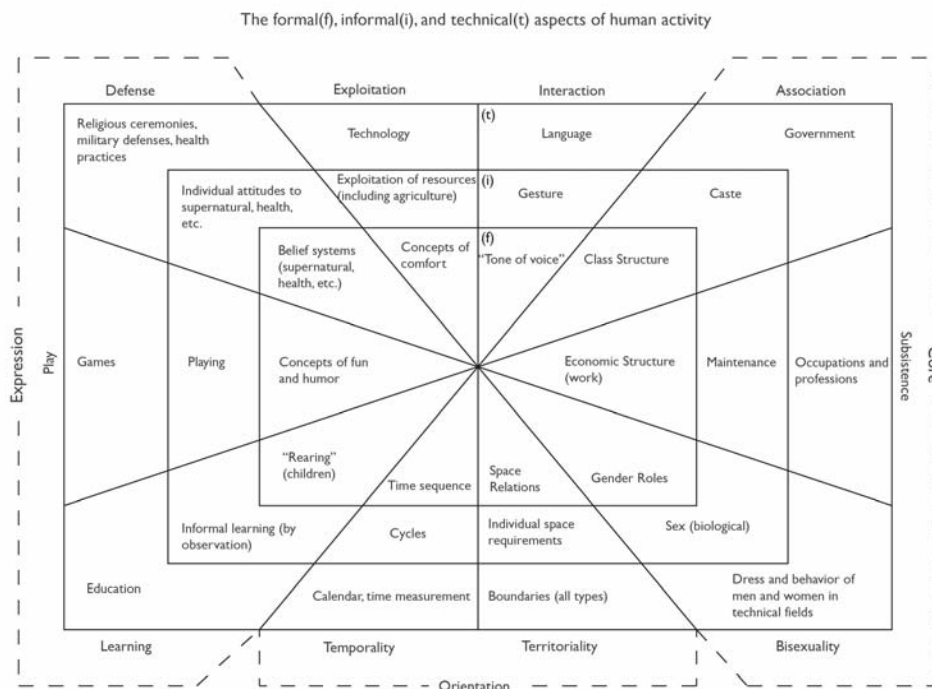


fig. 42

Step 5: By separating the data into the ten categories, tangible aspects can be extracted and applied to the design of the product. Each category is broken down by the questions shown on the chart and then further separated into functional levels. Identifying where the data should be implemented properly will ensure that the product being designed will mirror these cultural aspects. The following chart will help assist in this area:

Cultural Base	Functional Level	Design Implications
Interaction	Human, Marketing	How will the target cultures language characteristics influence the product? On what level? (Human, technical, production and/or marketing)
Association	All Levels	What will the product's function be? What is the product's target market? Based on class structure, where the target market falls, how will the product be priced, marketed, etc Will the product serve to increase positive personal identity? How so? Who will want to be associated with this product? E.g. will it provide a sense of wealth, poor, etc.?
Subsistence	Human, Technical, Production	What does the individual need/want from the product? How will the product be used? E.g. commuting to work (agriculture or industrial), leisure, etc. What is the average wage for the target worker, m/f, in the area? Will the individual be able to afford the product? Who will be using the product more? E.g. male or female?
Bisexuality	Human, Marketing	What do men/women specifically want in the product? Physical and emotional characteristics for individuals: Traits, health, etc. Will the emotional characteristics effect the way the product is designed? How will men/women use the product? Gender roles – Will more males use the product than females? Vice versa. Who will make the purchasing decision? How will the product look aesthetically? E.g. modern, traditional, professional, luxurious, etc. Will the product be affected by any outside influences? E.g. Western trends, etc Will the product be aesthetically pleasing to either sexes or just focus on one type
Territoriality	Human, Technical	Will the product be used by only one user or serve many? Will the product's design have to be altered in order to accomplish this level of use? How will the product interact with its environment? (space wise) Where will the user store the product? Is their available room for this storage?
Temporality	Human, Technical, Production	How often will the product be used based on the individuals schedule, daily routine, outside activities, etc.? What characteristics of the product will enable the user to accomplish these tasks? E.g. durability, value, quality of parts/materials, etc Will the product's use be seasonal or affected by the seasons?
Learning & Acquisition	Human, Marketing, Technical	Will the product be intuitive? Will the use of the product be determinant on the users past learning/ways of learning? How will the product be perceived by the consumer? Will the products characteristics create an emotional attachment to the user by playing on past experiences/values/beliefs instilled on the user at an early age? Will the product be used to experience/learn new things?
Play	Human, Marketing	Will the product be a tool for learning or intellectual development? Will the product be a concept of fun and/or humor? Will the product be used for a type of play?
Defense	Human, Marketing	How will the user's beliefs/morals effect the product's design? Will there be any religious/spiritual/medical attachment to the product from the user? Are there any beliefs/taboo's that will affect the design/marketing of the product?
Exploitation	All Levels	Will the product feature modern technology? (if applicable) Would less modern technology/features be appropriate? Will the product be a sense of comfort for the user? What characteristics will provide/say this?

fig. 43

Step 6: Incorporate the findings into the new automotive design approach. This data will be used and applied in the third and fourth phase of the automotive phase approach.

### 3.2 Approach to Semiotic Analysis

The overall goal of semiotic analysis is to look past the presented texts to the hidden messages or distinctions operating within them, to establish the underlying conventions and identify significant differences and oppositions. The analysis will attempt to model and breakdown these texts in a system of categories, relations (syntagmatic/paradigmatic), connotations, distinctions and rules of combination. The results will also serve to supplement the existing design process and provide unique data to implement into the four functions, specifically human and marketing.

The next steps will be the approach to follow when analyzing signs.

Old Spice Ad: American Company



fig. 44

1. Analysis of the sign (textual: advertisement, poster, etc.)

Describe the medium, genre and context in which the sign was found. Is this a copy (e.g. a poster) or an original (e.g. a painting)? Does this influence your perception of the sign?

The example image is a digital advertisement found on the digital trends website. At first glance the image appears real but upon closer inspection of the bottle it clearly is fake.

General Questions: What is the message? What is the sign/message really trying to say?  
Why did I choose this sign/message?

From reading the text, “Smell like a man, man.”, the message is trying to tell the viewer to purchase the product if they want, and should want to, smell like a man. The sign was chosen to illustrate the process of analyzing an ad from semiotic perspective.

### **Modality Specific**

What claims are being made by the text?

The text claims that men should smell like men.

Does the sign come off as fact or fiction?

Old Spice produces men’s toiletries, so the text describing the product could come off as factual.



fig. 45

What references can be identified from everyday experience?

The beach scene, horse, man and men's apparel, labeled 1-4 above, can be identified from everyday experience.

What modality markers are present? E.g. references to cues – plausible, reliable, etc.

The markers present that lend to the ad being perceived as plausible are the man himself and the horse he is riding.

How do you use such markers to make judgments about the relationship between the text and the world?

The text would imply that not all men smell like men and this is looked down upon in American culture. This would also imply that smelling like a man is something for a man to strive for.

What type of mode is present? Symbolic, Iconic or Indexical? To whom might it appear realistic? The modes present are iconic in that they serve as metaphors.

This might appear realistic to those accustomed to American culture.

2. Identify all of the signs in the message

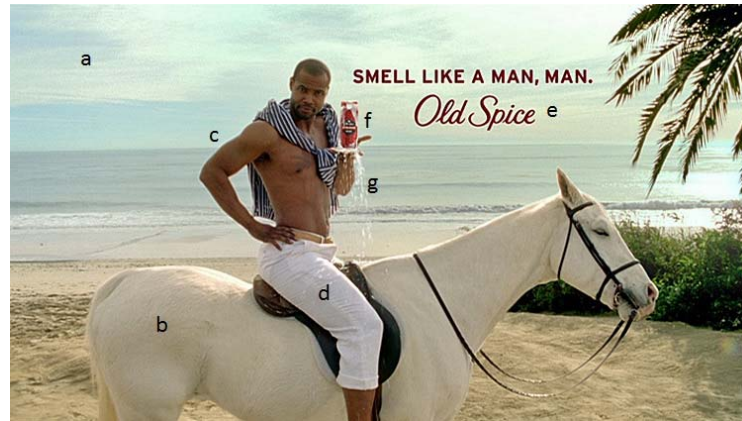


fig. 46

The signs are identified by the letters A-G above.

3. For each sign break down into the signifier/signified





fig. 47

### Paradigmatic Specific

To which medium does the text belong? Will a change in medium affect the meanings generated? Digital ad. Changing the medium to an illustration might make the ad less plausible or truthful.



fig. 48

Why was each signifier chosen from the possible alternatives with the paradigm set? What values does the choice of each particular signifier suggest?

A – The beach seen was chosen because of its natural beauty and it appearing to be a desirable place. Thus somewhere the viewer would like to be. Other environments could've been chosen though it makes the most sense with the shirtless man. Hence, men do not wear shirts at the beach.

B – The horse was chosen because of its qualities, power, majestic, prestigious, etc. Wealthy men are also associated with owning horses in Western culture. Again the horse is included in the scene because of the context. It is very common to ride horses on beach, not so much other forms of transportation.

C – The shirtless man suggests masculinity, power, athleticism, all qualities that describe the 'typical' Western culture male or what the Western culture male should aspire to. A woman or a more 'average' male would take away from the masculinity of the message and not compliment the text.

D – The male attire also has certain values associated with it. The striped sweater wrapped around the neck of the man is a trend associated with the wealthy and sophisticated. The white linen pants also compliment the sweater and serve as Western culture casual beach attire. Replacing these with apparel of less status or quality could also take away from the truthfulness of the message.

E – The message itself, “Smell like a man, man.” can also be analyzed. If the text were to say “Smell like a woman, man.” the outcome would puzzle Western culture. Why would a man want to smell like a woman? Again going back to Western cultures views of masculinity.

F – The bottle in his hand represents the product and what the viewer would use to “smell like a man”. If the bottle was replaced with an item that did not make the viewer “smell like a man”, then confusion would ensue.

G – The digitally imposed water coming from the bottle also has meaning, representing freshness, purity, etc. Also referencing what the viewer would use to cleanse themselves. Again if this were a different substance the viewer might call into question the ad’s message.

What signifiers from the same paradigm set are noticeably absent?

The signifiers noticeably absent would be those which represent the opposite of what the ad is trying to say and what the images represent in Western culture.

Is there a central opposition in the text?

That smelling like a woman is not manly and is frowned upon in Western culture.

### Syntagmatic Specific



fig. 49

Identify and describe syntagmatic structures in the text which take form, e.g. narrative, argument or montage.

The syntagmatic structure of the text is an argument. It uses existing meanings and/or symbols to establish what the product signifies and provides no refuting evidence.

How does one signifier relate to the others? E.g. Do some carry more significance than others?

The man stands out from the rest due to his position and that it appears he is looking at the viewer. The digitally imposed water also draws your eye it due to its movement.

How does the sequential or spatial arrangement of the elements influence meaning?

The man is established as being the focus of attention and is the one giving the statement.

Are there any shared syntagms? The visual syntagms or images.

4. Identify the underlying theme(s) e.g. wealth, beauty, power, etc., that are common to the signs.



fig. 50

### Rhetorical Tropes Specific

What tropes (metaphors and metonyms) are present?

Beauty, masculinity, power, wealth, purity, class, prestige and athleticism.

Reference the descriptions of A-G stated previously.

How are they used to influence the preferred reading?

They are all used in conjunction with each other to influence the viewer that the man depicted is the man the viewer should aspire to be because of his qualities and that he is Western culture's definition of a man.

5. Identify the main genre and ideology constant throughout the text

### **Intertextuality Specific**

Does it allude to other genres? Does it allude to or compare with other texts within the genre?

Perhaps a traditional painting of a man on a horse.

Does one code within the text serve to support another? If so, how? E.g. A linguistic caption supporting an image.

The image serves to support the text.

6. To whom is this text targeted?

The text is targeted to a male audience. Most likely younger males 18 – 25 that are concerned with self-image.

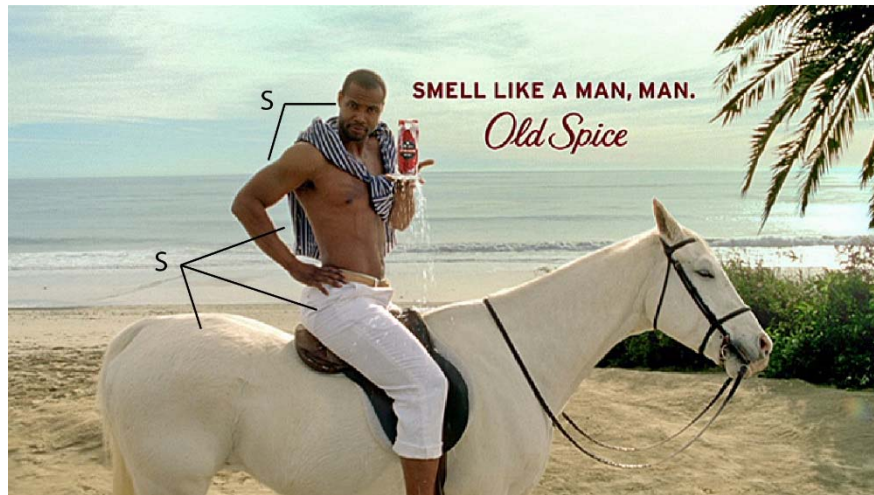


fig. 51

### Semiotic Code Specific

Which conventions of its genre are most obvious in the text?

The product is shown front and center with supporting images and text around it.

The text is short and simple, as well as the amount of images supporting the message.

Which codes are specific to the medium? Which codes are shared with other media?

The social codes, depicted in the image above, are: Body language and commodity. The textual codes are mass media and the fact that it is an advertisement. The interpretative codes include the visual perception of the viewer and the ideological codes present for interpreting the metaphors.

How do the codes used relate to each other?

They all complement one another in convincing the reader that the message is plausible and truthful.

Are the codes broadcast or narrowcast?

Broadcast, intended for a wide audience.

What relationships does the text seek to establish with its readers? How direct is this mode of address? How would you describe it?

The text tries to establish a social relationship with the viewer and is very direct.

The message plays off of Western culture 'norms' and uses a variety of metaphors to achieve this.

What cultural assumptions are called upon? To whom would these codes be most familiar?

The cultural assumptions that are called upon are based on Western culture and that men should not be feminine and strive for an elevated self-image.

What seems to be the preferred reading? Does this reflect or depart from cultural values?

The preferred reading is the text first then the supporting image. It reflects current Western cultural values and does not take into consideration any outside cultures.

How 'open' to interpretation does the sign seem to be?



The text states an argument and then supports the statement with the images, not leaving it open to interpretation.

### **Social Semiotics Specific**

What does a purely structural analysis of the text downplay or ignore?

The text ignores that fact that the viewer could “smell like a man already”, but who is to judge? Also ignores that this might not be the only way for the viewer to “be a man”.

Who created the sign? E.g. company, marketing, etc.

Old Spice or the advertising company working for Old Spice.

Whose realities does it represent and whose does it exclude?

Includes those who only know Western cultural practices and excludes those who are unfamiliar.

Who is the sign for? How might different people interpret this sign?

The sign is for the intended target market. Other cultures might question what a man is supposed to smell like or might have a negative association with the way a man smells.

How might a change of context influence this interpretation?

A change of context might steer the viewer away from the product or question the messages truthfulness and in turn the company's truthfulness.

## 7. Summary



fig. 52

What is the text revealing and/or hiding?

The text is revealing that men should not smell feminine, or anything less like a man, and should aspire to the stereotypical male image.

What is the producer of the text trying to tell/convince the reader? What is the producer of the text hiding?

The producer of the text is trying to convince the reader to purchase the product by implying that the viewer doesn't smell like a man. Also, that the viewer might mirror the man depicted in the ad after purchasing the product. The producer of the ad is hiding the

fact that the viewer still might not “smell like a man” after purchasing the product or mirror the image of the man depicted in the ad.

What is the producer trying to ‘naturalize’ in the text?

The producer is trying to naturalize the masculinity of Western culture males and the stereotypical characteristics attributed with it.

What insights can you construct from this analysis?

Based upon the analysis and techniques used it can be concluded that Western culture focuses on self-image and the producer depends upon the fact that the viewer has self-image issues. Also the assumption most individuals in Western culture strive for power, wealth, beauty, etc. and suggests that by purchasing the product these traits will be bestowed upon them.

From the gathered data, what aspects can be transferred to assist the human and marketing functions?

From the analysis there several key aspects that can be applied to the human and marketing functions. Aesthetics wise it can be concluded that Western culture likes aesthetically pleasing things that express symbols of beauty, power, wealth, etc. These aspects can be analyzed and applied to marketing, like the ad in this case, or the human function, transferring these symbols into physical aspects of the product. Specifically in this example it has been revealed that men in Western culture should act like men and like “manly” things. This will translate to the aesthetic of the product by making it more

appealing to men through the shape, color, etc. Social and cultural factors, also part of the human function, can be determined by analyzing the metaphors used in the ad, then applied to the product.

Overall, by analyzing the hidden messages with semiotic analysis it can be determined what the producer of the message is really trying to say or hide based upon his or her perception of the target market. This perception reveals aspects of culture, playing off these traits in order to convince the viewer that the message is truthful and ultimately purchase the product. By understanding the target market on a subconscious level, semiotic analysis can provide new data and value to the existing design process, assisting the development of the artifact on a variety of functional levels.

### 3.3 Automotive Design Process: Implementing Cultural and Semiotic Analysis

The following steps and models will assist to incorporate the new approach into the existing general automotive design process. Here all of the gathered data will come together and serve to assist the four functions, ultimately influencing the development of the vehicle.

In the first segment, the design brief, of the automotive design process the cultural and semiotic research and analysis will be incorporated into the third and four phase of the user and vehicle market research shown below in the arrow figure.



fig. 53

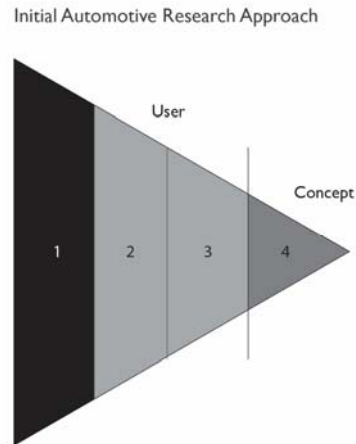


fig. 54

Step 1: Following the initial automotive research approach, User Phase 1 will be broken down into five tasks.

1. Mission Statement – The purpose of the mission statement is to outline the expectations of the study along with identifying key objectives. This is done to provide a clear understanding between the designer and client.
2. Project Plan Template – Establishing a time frame of goals and objectives is key to keeping the design process on track. The use of a Gantt chart in this case, allows the team to see how long each task should take and when to start/end each task.
3. Location & Market Research – Analysis of the location will be the next step with general information about the automotive status in the area being researched. This will include sales trends, modes of transportation, infrastructure, popularity of vehicles, market share, etc. The purpose of this analysis will be to achieve a general feel of the target market and establish a base to build off of. This information will serve to assist all four functions, human, marketing, technical and production.

4. Observations – Through library resources, online resources and/or first-hand observation, the target market will be observed in order to reveal key areas of limitations and opportunities. Current modes of transportation, popular vehicles and infrastructure will be further analyzed. This will allow the designer to explore design problems, consumer needs, user life style and product opportunities.

5. Product Comparison – To establish the area(s) of opportunity within the modes of transportation and popular vehicles used, a product comparison chart will be implemented. This will also reveal market competition and how to create better value to consumers. The chart will display the strengths and weakness of each product in four functional areas: human, technical, production and marketing.

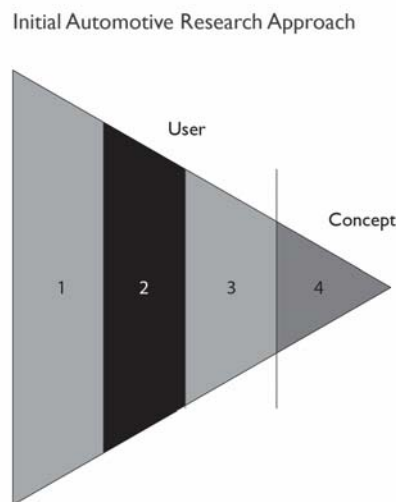


fig. 55

Step 2: User Phase 2 will be broken down into 3 tasks.

1. Surveys – After identifying the target market, a survey will be constructed and given out to establish user facts and opinions. General questions will be asked first with

emotionally charged questions being avoided. Overall the questions should lead the respondent to answer truthfully and without bias.

2. Interviews – Simply talking to an individual in the target market can lead to new insights not seen by the designer. The purpose of the interview is to explore problems, functions, product related knowledge and product opportunities in a different perspective from that of the designer.

3. Flow Chart – Visually mapping out the processes involved with the product in use can serve to identify other areas of problems and opportunities. The flow chart shows the order in which the product might be used by using a variety of shapes to illustrate the process.

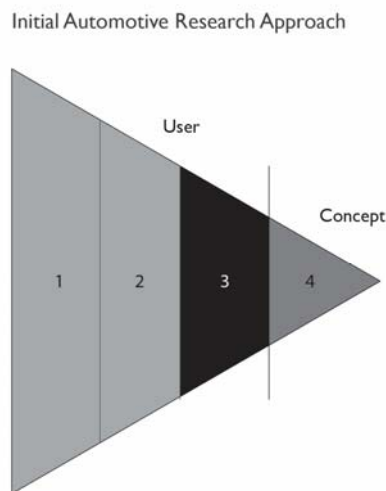


fig. 56

Step 3: User Phase 3 will be broken down into 2 tasks. Here the cultural and semiotic data will be incorporated.



1. Target Demographic – The cultural and semiotic data will serve to be the basis for the target demographic. Here the subculture will be fully analyzed with the tangible data being applied.

2. User Personas – Establishing which types of individuals within the subculture for which the product will be designed will be the next step. These personas are fictional bios, illustrating the ‘ideal’ user in a variety of descriptions. Cultural and semiotic data will be the base to build off of for these fictional characters.

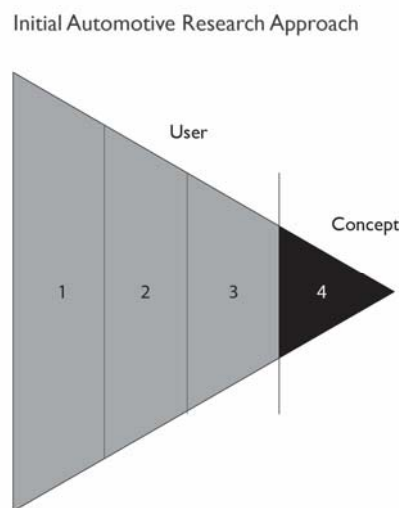


fig. 57

Step 4: Concept Phase 4 will be broken down into 4 tasks. Here the cultural and semiotic data will also be incorporated.

1. Performance Criteria – A set of specific parameters and criteria, the performance criteria will breakdown the requirements and expectations of the product into the four functions. The chart will list any design objectives, constraints and research, serving as a critical guide to keeping the design process on track. Here the cultural and semiotic data

will take priority in the parameters and criteria, ensuring that an emotional connection and the needs of the target culture are met. It is important to note that even ignoring one of these criteria could be the key to the product failing or succeeding.

2. Morphological Matrix – Created to study an organized system or form, morphological matrices serve to provide a variety of alternative solutions. This visually explores and expresses all options and limits the amount of combinations to those that are most feasible or attractive. Again, the cultural and semiotic data will influence the outcome of these solutions.

3. Interaction Analysis – Serving to conduct a systematic search for connections between product elements and design factors, the interaction analysis will identify these key factors: Where to start the problem solving, what parts to focus on more, which parts deserve higher priority and what other parts need to be changed if one part is changed. By identifying these key areas it can be determined where the cultural and semiotic data can be incorporated best.

4. Mind Map – Incorporating a full range of cortical skills, such as words, images, numbers, logic, rhythm, color and spatial awareness, mind mapping identifies the problems, performs an analysis, shows alternative solutions and identifies the best solution. Here cultural and semiotic data can be explored freely and creatively, hopefully leading to new solutions and opportunities.

Step 5: Here the focus will turn to the second segment, Initial Concepts. Sketches will be created based upon the design brief and new cultural and semiotic data. Exploration will be the main focus, consisting of unrefined 2D sketches.

Step 6: Sketch refinement and further development of concepts.

Step 7: Selection of final concept for 3D modeling.

Step 8: Production of a scale 3D model.

Step 9: The third segment in the automotive design process, Virtual Development, a 3D model will be produced and explored. Here validation of the cultural data represented through the visual cues of the vehicle will be tested on the target market. After these tests the data will be reviewed and modified if necessary.

## 4.0 Application of Approach

### 4.1 Cultural Analysis

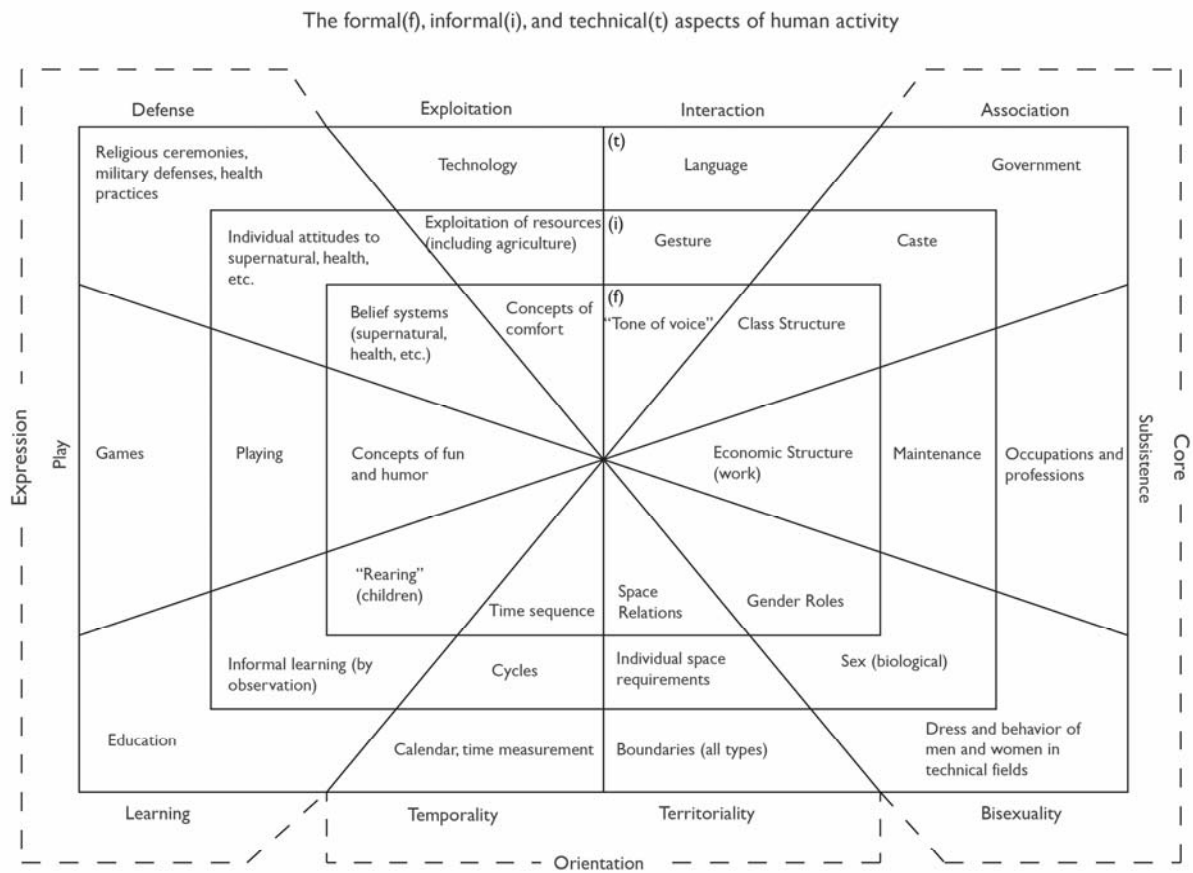


fig. 58

#### **4.1.1 Data Collection**

##### **Interaction**

(t) Language (Jin-Long, 2014)

Manchu-Tungusic group of the Altic language.

Based on Mongolian alphabet

The language is nearly extinct with only an estimated 50 to 100 people still speaking the dialect.

Almost all Manchu now speak Mandarin.

(i) Gesture (Zhiling, 2014)

No strong hand movements during speaking.

Laughing – Sign of nervousness or embarrassment with Women; inconvenient request or sensitive issue.

Feet – Feet are considered to be dirty; avoid touching objects with them. It is also impolite to point one's feet at other individual.

Pointing – Considered to be rude or accusatory. The Manchu use an open hand when 'pointing' at an object.

To call someone over the Manchu extend their arm with the palm facing down and waving the fingers towards them.

Holding a hand up near the face and slightly waving means 'no'.

The Manchu slightly lower their heads and bend slightly when showing respect to elders.

Shaking Hands – The Manchu only shake hands with people they know, not strangers;  
this gesture is not used between individuals of different status.

(f) “Tone of Voice” (Jin-long, 2014)

The Mandarin language uses four inflections ranging in pitch.

## **Association**

(t) Government (The Central People’s Government, 2012)

The People’s Republic of China is broken into four branches:

Legislative – National People’s Congress

Executive – State Council

Judicial – Supreme People’s Court

Military – People’s Liberation Army

(i) Caste (Ancient Civilizations, 2014)

The traditional caste system used in Manchu culture was separated into five segments  
with one being the most powerful and respected and five being the least:

1 – Brahmins: Priests

2 – Kshatriyas: Warriors and Rulers

3 – Vaisyas: Skilled traders, merchants and minor officials

4 – Sudras: Unskilled laborers

5 – Pariah: Outcasts or ‘untouchables’

(f) Class Structure (Yi, 2012)

With the Manchu highly integrated into Han culture the social class structure is a current representation of the current status in China.

Many migrant workers are switching from farming to industry, rural to urban, because of the increasing wages. With income levels rising the lower class is gaining a more positive identity and moving up in class structure. This restructuring of classes is also noticeable with education expanding at a rapid rate on the post-secondary level.

Currently 43% of the working population in China is in agriculture with the other 57% in industry related jobs (35% blue collar/22% white collar).

**Subsistence**

(t) Occupations & Professions (Doing business in Liaoning, 2014)

The Liaoning province is the most industrialized province of Northeast China. Some examples of the industry are: Petrochemicals, metallurgy, electronics telecommunications, machinery for pig iron, steel and metal cutting, textile and clothing, automotive, automotive suppliers, ship building, IT and finance.

(i) Maintenance (Doing business in Liaoning, 2014)

Performed by People’s Republic of China.

(f) Economic Structure (work) (Doing business in Liaoning, 2014)

Both men and women work in Manchu culture.

Minimum Wage: 650 – 900 rmb/month

Avg. Manufacturing Wage: 2560 rmb/month

**Bisexuality**

(t) Dress & Behavior of Men & Women in Technical Fields (Williams, 2014)

Men – conservative suits with subtle colors.

Women – modern dress involving many Western elements. Conservative attire: Long sleeve blouses and low heel shoes.

Traditional Manchu Attire (Chinese dress, 2014)

Women dressed their best for their husbands and in-laws. The traditional dress was called a qipao. Other details included: Handkerchief to show politeness, a silk scarf to show beauty, a headdress with a flower in the middle and horse heel shoes to show beauty and feminism.

(i) Sex (biological) (Howington, 2008)

Average height and weight: Male 5'8"/145 lbs, Female 5'3"/125 lbs.

Northern Chinese Stereotypes: louder, more animated, free spirited, honest and loyal.

Physical Stereotypes: Taller, broad body type, smaller eyes, fairer skin and longer faces.



(f) Gender Roles (Manchu People, 2008)

The family name is carried by the male.

Men and women hold equal power in the family.

Usually one to three generations of family living under one roof.

Traditionally men do the farming and women do the field and housework.

Monogamy is still practiced.

Children give formal respect to their elders regularly.

**Territoriality**

(t) Boundaries (all types) (Manchu People, 2008)

Modern Manchu families typically live in one story flat style housing. Traditional housing was an 'L' shape consisting of three rooms.

(i) Individual Space Requirements (Williams, 2014)

Close personal space; closer than Western standards.

Physical contact is common between members of the same sex, while avoided between members of the opposite sex (casual and business settings).

No excessive physical contact, e.g. bear hugs, etc.

(f) Space Relations (Manchu People, 2008)

Little space between family members. With one to three generations under one roof, space is limited and privacy is non-existent.

## **Temporality**

### **(t) Calendar; Time Measurement (The Chinese Calendar, 2014)**

The Manchu follow the current Chinese calendar with the New Year occurring between January 21<sup>st</sup> and February 20<sup>th</sup>. They also employ the use of the Imperial calendar for selecting dates for weddings, funerals, opening a venture and relocation.

Specific to the Manchu they use red, yellow, blue and red banners when celebrating the New Year.

### **(i) Cycles (The Chinese Calendar, 2014)**

Agriculture is based on the solar cycles.

Tides and astronomical phenomena are also charted based on the lunar cycles.

Chinese culture keeps Western hours and scheduling. Typical work hours are Monday through Friday from 8am to 6pm with a two hour break in-between, from noon to 2pm.

Chinese culture is very punctual, arriving to work and meetings on time or early.

### **(f) Time Sequence (The Chinese Calendar, 2014)**

Days are based on the Lunisolar calendar with days spanning midnight to midnight and are divided into Western standards of hr/min/sec.

## **Learning & Acquisition**

### **(t) Education (Doing business in Liaoning, 2014)**

Run by the Ministry of Education. All citizens must attend nine years of education (compulsory) with the option to continue on to secondary and post-secondary education.

There has been an increase in educational spending from the government recently with education becoming the fastest growing sector.

From 1995 to 2005, 5x's more students enrolled in post-secondary education. This will have effects on class structure as well as income levels in the future.

### **(i) Informal Learning (observation)**

With access to new technology, specifically the access of the internet, informal learning will increase. Whether this learning will be positive or negative will be dependent on the messages being sent and who is sending the messages (outside influence of Western culture, etc.).

### **(f) “Rearing” Children (Dewar, 2012)**

Emphasis on effort, not innate ability.

“Authoritarian” style – stricter parenting, threat of punishment.

Parents want to promote inner confidence and discipline; refrain from criticism.

Promote hard work and persistence.

## **Play**

### **(t) Games (Manchu People, 2008)**

Ice skating, singing, dancing, chess and soccer.

Traditional games: Horse racing, archery and puppet shows.

### **(i) Playing**

No data found.

### **(f) Concepts of Fun & Humor (Manchu People, 2008)**

Storytelling

## **Defense**

### **(t) Religious Ceremonies, Military and Health Practices (Manchu People, 2008)**

Traditional Manchu – Religious and medical practices were performed by a Shaman, a medium between humans and god.

Singing and dancing was part of the ceremonies for weddings, festivals, birthdays, expeditions and celebrations. Most of the interpretive dance was based off of hunting and fishing movements.

Some traditional practices for the birth of a child were to place a small bow and arrow on the family's gate if a boy was born or a strip of cloth for a girl.

For funerals the coffin was not brought out through the door, used only for living spirits, but through the window. Before the funeral a post was erected in the courtyard with cloth hung on it. During the funeral the family members would take the strips of cloth and take them home to make them into clothing for the children. This was thought to protect the children from harm.

(i) Individual Attitudes to the Supernatural, Health, etc. (Cultural Taboos in China, 2014)

The number four in Chinese sounds like the word death. Like Western culture and the number 13 it is avoided. Other things associated with death are clocks and the colors white, blue and black. These things are also avoided.

(f) Belief Systems (Manchu People, 2008)

Traditionally the Manchu practiced Shamanism, worshiping ancestral, heroic, nature and animal spirits. Overall this was a promotion of well-being, focusing on strength, healing and love.

Now integrated into Han culture, the national stance is one of atheism, with only a select few other religions being allowed to be practiced.

## **Exploitation**

(t) Technology (Doing business in Liaoning, 2014)

Chinese culture uses a wide range of modern amenities and technology.

Some areas where Chinese culture excels in technology are: Water and delta, animal husbandry, materials, nanotechnology, automotive, IT/Software, engineering and information.

(i) Resources (with agriculture) (Doing business in Liaoning, 2014)

Mining, quarrying, smelting and pressing of ferrous metals (iron ore and coal), petroleum, natural gas, maize, sorghum, cotton, soybeans, apples, peaches, pears, apricots and plums.

(f) Concepts of Comfort (Manchu People, 2008)

T.V. in the evenings, movies, karaoke, gardening, pet birds, storytelling, crafts, carving and cooking.

Spending time with family.

#### 4.1.2 Analysis & Incorporation

##### Interaction

**How will the target cultures language characteristics influence the product? On what level? (E.g. Human, technical, production and/or marketing)** The marketing of the vehicle will have to take into consideration the Manchu's language characteristics. The advertisements messages and illustrations will have to translate effectively to their 'tone of voice' and gestures. Since most are fully integrated into the Han culture the marketing messages will resemble each other closely.

##### Association

**What will the products function be?** The majority of workers in China are switching from agriculture to industrial types of jobs. Currently about 43% of the employment workforce in China is involved with agriculture while the other 57% is in industry. This trend is continuing to increase and will result in a restructuring of classes as well as income levels. The majority of Manchu now live in industrialized areas as well, mirroring this trend.

With the population increasing steadily in urban regions, like in Shenyang, vehicles adapted to city conditions are now the focus of the automotive industry. The role of the vehicle will be for work commute, city driving and travel on the weekends.

**What is the products target market?** Based on class structure, where the target market falls, how will the product be priced, marketed, etc. The majority of Manchu living in Shenyang are involved in industrial jobs. The majority of these jobs do not pay well with many of them only

paying the minimum wage requirements. In order for the vehicle to reach the target market it will have to be priced accordingly. The product placement map will help illustrate this.

**Will the product serve to increase positive personal identity? How so?** In order for the vehicle to serve as more than a means of transportation it must brand itself as a symbol of progress. It will do this by creating a sense of accomplishment, something to aspire to, by branding and marketing, as well as the overall aesthetic of the vehicle.

**Who will want to be associated with this product? E.g. will it provide a sense of wealth, poor, etc.?** An example of this in the automotive industry would be how Mercedes is branded. Through branding and aesthetics the vehicle will give a sense of quality, elegance and professionalism, effectively meeting the desires of the target market.

### Subsistence

**What does the individual want/need from the product?** With the majority of Manchu working in the city the vehicle will be a means of transportation to and from work. The vehicle will also serve as a means of travel and leisure on the weekends. The vehicle must be reliable, durable and fuel efficient with low maintenance.

**How will the product be used? E.g. commuting to work (agriculture or industrial), leisure, etc.** Commuting to work (majority), leisure when applicable.

**What is the average wage for the target worker, m/f, in the area? Will the individual be able to afford the product (maintenance, insurance, registration, etc.)?** With the majority of workers only making the minimum wage the vehicle will have to be priced accordingly. Getting



a license and registration of the vehicle is also costly, usually several thousand dollars due to demand. Insurance is also required.

**Who will be using the product more? E.g. male or female?** Considering the equal power of men and women in the Manchu household it is assumed that the vehicle will be used by both equally.

### Bisexuality

**What do men/women specifically want in the product? Sporty, luxury, value, quality, etc.**

Current trends of the types of vehicles most popular in China are compact sedans and SUVs. Several models of VWs lead sales due to their build quality, aesthetics and reputation. With income levels rising, most drivers like to show their wealth with the type of vehicle they drive. This is demonstrated by their choices to buy European brands over American, Japanese and Chinese brands.

**Physical and emotional characteristics for individuals: Traits, health, etc. Will the emotional characteristics effect the way the product is designed?** The vehicle will be designed to accommodate the 5% female to the 95% male, following ergonomic standards. Emotional characteristics, how they ‘feel’ about the car, will also be very important. The design of the vehicle will be the first point of eye contact, a make or break decision. Therefore, the design must connect emotionally with the user, mirroring their subcultural traits.

**How will men/women use the product?** Gender roles – Will more males use the product than females? Vice versa. Who will make the purchasing decision? Unique to the Manchu culture, as opposed to Han, the females have equal power in the family. This means that the financial

decision on what type of vehicle is purchased is most likely shared. The vehicle will have to exhibit a balanced aesthetic, appealing to both men and women.

**How will the product look aesthetically? E.g. modern, traditional, professional, luxurious, etc.** Creating a balanced aesthetic that appeals to both men and women will be a challenge. The target age group will consist of young to older aged laborers, 18-65, involved in the current social class restructuring and experiencing new wealth (relative to that class). The aesthetic of the vehicle must encompass these factors, exhibiting a modern look that suggests professionalism and elegance.

**Will the product be affected by any outside influences? E.g. Western trends, etc.** Modern dress, in technical fields, for men and women in China is influenced by Western trends. For example most men wear conservative suits with subtle colors. Women dress conservatively, as showing too much 'skin' is frowned upon, typically wearing long sleeve blouses and short heeled shoes. This example of professionalism and conservatism will be captured in the aesthetic of the vehicle, as will current Western trends.

**Will the product be aesthetically pleasing to either sexes or just focus on one type?** As mentioned before the Manchu men and women hold equal power in most cases, therefore the vehicle will have to appeal to both sides.

### Territoriality

**Will the product be used by only one user or serve many?** With up to three generations living under one roof the vehicle will most likely be used by more than one family member. This entails that the vehicle must be durable and stand the wear of multiple users and activities.

**Will the product's design have to be altered in order to accomplish this level of use? E.g.**

**For the automotive application: Size of the car, amount of seats, storage space, etc.** With the current infrastructure of Shenyang the vehicle will have to be compact in size. To meet the wide variety of needs by the larger Manchu families the vehicle will most likely have seating for at least 5 individuals with ample space for storage.

**How will the product interact with its environment? (Space wise) E.g. For the automotive**

**application: If roads are narrow and parking is limited, how will this affect the vehicle's size?** Would also have to take into consideration the amount of traffic. Again this will reduce the size of the vehicles dimensions.

**Where will the user store the product? Is their available room for this storage?** If a garage

is not available the vehicle will most likely be parked in the open elements when not in use. This will increase the amount of exterior wear the vehicle experiences, suggesting that high quality and durable materials be used for the exterior construction. This would include the material choice for the hood, bumpers, quarter panels, roof, trunk, paint, etc.

### Temporality

**How often will the product be used based on the individuals schedule, daily routine, outside**

**activities, etc.?** (Analysis of typical Chinese work schedule, calendar, etc.) The typical work

week in China is Monday through Friday, 8 am to 6 pm with a 2 hour break in-between from

noon to two. If the vehicle is only used for transport to and from work, the vehicle will be unused the remainder of that time.

Traveling on the weekends is also assumed as the vehicle will most likely be used for leisure and other everyday uses. A characteristic of the use of time in China is the social norm to be on time or early to a meeting, work, etc. This suggests that the vehicle must be dependable, requiring little to no maintenance.

**What characteristics of the product will enable the user to accomplish these tasks? E.g. durability, value, quality of parts/materials, etc.** Again, constructing the vehicle out of high quality materials and parts must be stressed. Along with strict manufacturing techniques and quality control, the vehicle must meet the consumer's demands and expectations.

**Will the product's use be seasonal or affected by the seasons?** Shenyang's climate experiences all four seasons. Since the city is in the north east, snow is expected every winter. The amount of rainfall in the summer is also high with the current infrastructure not being able to drain excessive amounts of water; flash floods do occur.

### Learning & Acquisition

**Will the product be intuitive? Will the use of the product be determinant on the users past learning/ways of learning?** Current methods of raising children in China emphasize discipline and hard work. Here, persistence is key with parents focusing on effort over innate ability. Some experts call this an 'authoritarian' method, seen as overly strict and controlling when compared to Western methods. The operation and controls of the vehicle will be intuitive none the less, enabling the majority of users to quickly adapt and use the vehicle effectively with no ill effects.

**How will the product be perceived by the consumer? Will the products characteristics create an emotional attachment to the user by playing on past experiences/values/beliefs**

**instilled on the user at an early age? E.g. Chinese approach to raising children.** Will the user be more inclined to purchase the product if it is a symbol of confidence? The same confidence instilled upon the user in childhood. More than a mode of transportation the vehicle intends to be this object of confidence, inspiring individual and social change. As a symbol for progress the vehicle aims to promote hard work, enabling the individual to obtain a goal within reach. This in turn will hopefully inspire the individual to keep working hard and set new goals.

**Will the product be used to experience/learn new things?** While technology is the replacement for the symbol of freedom instead of the vehicle in Western culture, it is unknown if this is the same in Chinese culture. For every 1000 people in the US, 700 have a vehicle, compared to China with only 150 people having a vehicle out of a 1000. Here the vehicle is more of a status symbol and a display of wealth in some cases. While the vehicle in China might not be a symbol for freedom and experiencing new things, the rapid class restructuring and redistribution of wealth is playing a key role in developing China's symbolism of the vehicle, one of which will be a driving force in the world's most rapidly growing markets.

### Play

**Will the product be a tool for learning or intellectual development?** As a goal to promote the confidence of the consumer, the vehicle could have an effect on intellectual development. Serving as an accomplishment in the consumer's life the vehicle could spur confidence in other areas, e.g. at work, home, etc.

**Will the product be a concept of fun and/or humor?** With a high interest in sports and games the vehicle will have a sense of fun about it. This could be literal, focusing on a sportier suspension and powertrain, or figurative, focusing on a more playful aesthetic.

**Will the product be used for a type of play?** The Manchu are well known for their equestrian skills and racing. This might translate into a possible interest in auto-racing.

### Defense

**How will the user's beliefs/morals effect the product's design?** The Manchu traditionally believed in Shamanism, worshiping ancestral spirits, heroic spirits, nature and animal spirits. Overall their beliefs focused around the promotion of well-being, strength, healing and love. The vehicle will have to encompass these ideals, maintaining a balance and harmony on all levels of design.

**Will there be any religious/spiritual/medical attachment to the product from the user?**

Based on the gathered research no such attachment is foreseen.

**Are there any beliefs/taboo that will affect the design/marketing of the product?** In the Chinese language the number four sounds like the word for death. Like the number thirteen in Western culture, the number four is also avoided in Chinese culture. Another taboo is the association of the colors white, blue and black with death. The vehicle will avoid these color options and focus on more subtle hues.

## Exploitation

**Will the product feature modern technology? (If applicable) Would less modern**

**technology/features be appropriate?** The Manchu are very integrated into modern Chinese society with nearly 80% of the entire Manchu population living in the Liaoning province. The vehicle's technology will mirror this with modern features and options standard. In order to keep the vehicle at the target price point though, many technological features in higher tier vehicles, like navigation, heated seats, etc., will not be available.

**Will the product be a sense of comfort for the user? What characteristics will provide/say**

**this?** The Manchu enjoy a wide range of activities that provide a sense of comfort, such as: karaoke, gardening, having pet birds, storytelling, crafts, carving, cooking, watching television and going to the movies.

## 4.2 Semiotic Analysis

### 4.2.1 Data Collection & Analysis

Trumpchi Ad: Chinese Auto Maker



fig. 59

1. Medium – Digital Ad, presumed copy. Found on google > search: Chinese automotive advertising

Does this influence the perception of the sign? No, not an artistic piece of work or actual photo denoting originality

What is the message? What is the sign/message really trying to say? Why was the ad chosen?

You should purchase this car because it will bring you good fortune, happiness and luck. Other



people will think you have power. Chosen to reveal what aspects the auto companies deem important. Why the consumer must value these aspects. Try to naturalize the message.

## Modality

What claims are made by the text? “Purchase for happiness (or good luck).” The consumer must value good fortune, happiness and power if they purchase the car.

Fact or Fiction? Based upon opinion the ad comes off as fact. Chinese car companies are considered to contain Chinese spirits, outside companies do not. This comes off as if you purchase the car you will gain these traits.

References from everyday experiences? Golden Dragon, color red

Modality markers? Dragon – power, Text- good fortune, Red – celebration, happiness (China, 2014)

Type of Mode? Iconic. The ad would appear realistic to the Chinese that are very spiritual.

2. Signs in the Message - Golden Dragon, color red, vehicle itself

3. Breakdown into signifier/signified:

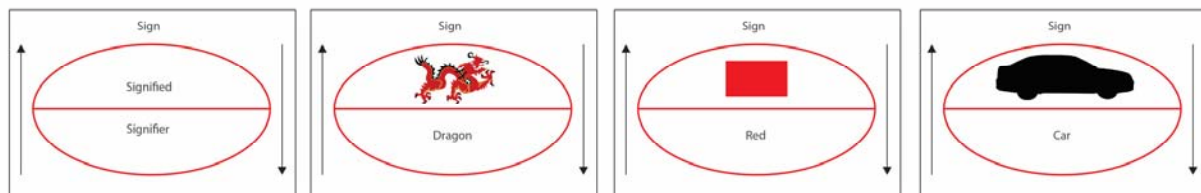


fig. 60

## **Paradigmatic**

Medium? Will a change of medium effect the meanings? Digital Ad. If the ad was a painting it might seem more authentic, though the meanings would be the same.

Why were these signifiers chosen? What values do these suggest? Positive signifiers were chosen. Again focusing on Chinese spirituality with an emphasis on freedom and excitement in life. Bad fortune/luck is frowned upon/avoided in Chinese culture. Luck in the future is something to look forward to while past luck is irrelevant. (China, 2014)

What signifiers are absent? Signifiers associated with negative meanings are absent.

Is there a central opposition in the text? Possibly, if you don't purchase the vehicle you will have bad fortune?

## **Syntagmatic**

Identify and describe syntagmatic structures in the text which take form – Argument. Using existing symbols or meanings to establish what the car signifies.

How does one signifier relate to the others? Do some carry more significance than the others?

The dragon is at the top of the hierarchy in meaning and visually, e.g. size, color, etc.

How does the sequential or spatial arrangement of the elements influence meaning? Draws your attention to the dragon first. The viewer identifies the meaning and then relates it to the vehicle.

Are there any shared syntagms? The visual signifiers.

4. Underlying themes: power, happiness, royalty, spirits and good fortune.

## **Rhetorical Tropes**

What tropes (metaphors or metonyms) are present? The dragon and the color red.

How are they used to influence the preferred reading? See above

5. Identify the main genre and ideology: Advertisement. Good fortune or luck is something that should be obtained and strived for.

## **Intertextuality**

Does it allude to other genres? Could allude to traditional Chinese artwork.

Does one code within the text serve to support another? Relies on the fact that the target market will know what the dragon, colors and text means without further information.

6. Target Market? Men, businessmen, leadership women, business women/ higher class, young professionals

## **Semiotic Codes**

Which conventions of its genre are most obvious in the text? The product is front and center with an image being used to describe the meaning of the product without words.

What codes are specific to the medium? Social – commodity, Textual – representation of the arts, Interpretive - Symbolism

Narrow or broadcast? Broadcast

What relationships does the text seek to establish with its readers? How direct in this mode of address? How would you describe it? Social context/Direct/Plays off an established 'norm' or symbol/Intended for mass use

Cultural Assumptions? That the Chinese are very spiritual and pursue happiness and good fortune in their lives. Also plays off the fact that the dragon is the most popular of the Chinese New Year symbols.

Preferred Reading? Text first then picture

How 'open' to interpretation does the sign seem to be? Not very 'open' to interpretation. Dragon is established within the culture.

### **Social Semiotics Specific**

What does a purely structural analysis of text downplay or ignore? The varying degrees of good fortune. Why is bad fortune looked down upon in Chinese culture?

Who created the sign? Either a marketing firm or the auto company created the sign.

Whose realities does it represent and whose does it exclude? Includes the realities of those who believe in good fortune, looking for power. Exclude those who do not. Also those who don't believe in fortune/luck.

Who is the sign for? How might different people interpret this sign? Only those who know what the dragon stands for/ those who put meaning into the textual message.

How would a change of context influence the interpretation? The meanings of the cultural signs would have no meaning in cultures with no understanding of the dragon/text and what they stands for or mean.

## 7. Summary

What is the text revealing and/or hiding? Revealing that the automaker believes that the Chinese market favors good fortune and power. Relying on the fact that their target market will purchase this vehicle to obtain these traits.

What is the producer of the text trying to tell/convince the reader? What is the producer hiding? Producer trying to convince the reader that if you purchase the car you will receive these things. Hiding that you may not achieve these traits if you purchase the car.

What is the producer trying to 'naturalize' in the text? Trying to 'naturalize' that the pursuit of power and good fortune is something to aspire to. That you must purchase this car in order to achieve this.

Other insights? That good fortune is something to look forward to/strive for in Chinese culture. The dragon symbolizes this and is used regularly to help define objects.

From the gathered data, what aspects can be transferred to assist the human and marketing functions?

Human – Aesthetic wise the ad suggests that Chinese culture prefers powerful or strong characteristics based on the metaphors of the symbols. The use of these symbols also connects the viewer with Chinese heritage and establishes an emotional connection.

Marketing – The use of the Chinese traditional symbols, the dragon and colors, reveals the strong ties that are still present with the viewer's and nation's heritage. This gives a sense of belonging and also establishes that the company's knows its audience. Use of Chinese culture in advertising seems very popular and effective.

## Subaru Ad: Japanese Automaker



fig. 61

1. Medium – Digital Medium, Advertisement, Google search> Chinese automotive advertisements

Does this influence the perception of the sign? No

What is the message? What is the sign/message really trying to say? Why was the ad chosen?

“Living life with freedom, this coming year you will have more excitement than you expect.”

The message suggests that if you purchase the vehicle you will gain more personal freedom and have more excitement in your life. The ad was chosen to show how the automotive industry relies on hidden meanings to sell their vehicles.

## **Modality**

What claims are made by the text? That the traits described can be yours if you purchase the vehicle.

Fact or fiction? Again since many Chinese are spiritual this might come off as a fact. Though since the auto manufacturer is Japanese it might be called into question.

References from everyday life? The Koi fish, the lotus flower, the depiction of beautiful scenery.

Modality markers? The car is depicted resting on top of a body of water. This is not plausible.

The flowers and fish serve as metaphors to suggest that the car contains other traits.

Judgments between the text and the world – That current life can be restricting and somewhat mundane.

Type of mode? Iconic. The ad would appear realistic to the Chinese culture or those who understand the symbolism of the images.

2. Identify all of the signs in the message: Koi fish, lotus flowers, color orange, scenery in general

3. Break each down to the signifier/signified

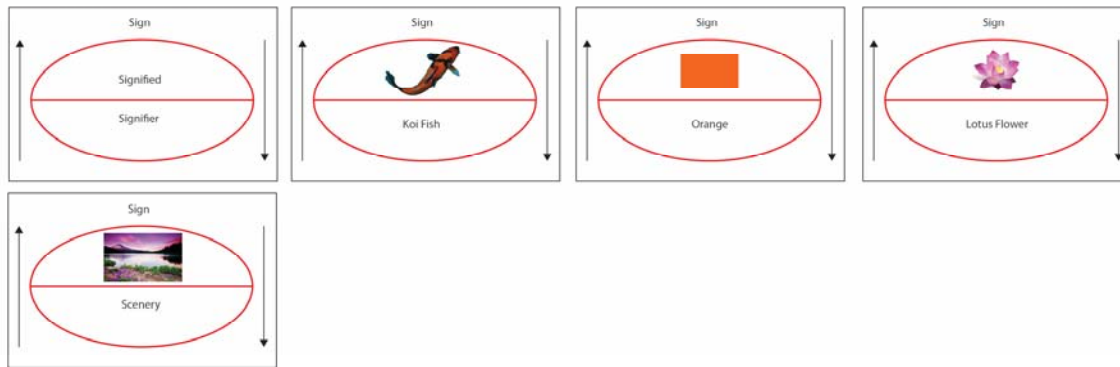


fig. 62

## Paradigmatic

Medium? Will a change in medium affect the meanings generated? Digital. If the scenery and fish were more realistic the ad might seem more plausible.

Why were these signifiers chosen? What values do these suggest? Positive signifiers were chosen. Again focusing on Chinese spirituality with an emphasis on freedom and excitement in life.

What signifiers are absent? Negative symbols of Chinese culture.

Is there a central opposition in the text? No.

## Syntagmatic

Identify and describe syntagmatic structures in the text which take form: Argument. The ad uses metaphors from the symbols to describe what the car is. Does not present any alternative choices.

How does one signifier relate to the others? Do some carry more significance? They relate to each other by being commonly used in Chinese culture or symbols. The vibrant colors in the koi fish carry a little more weight than the flowers. This emphasizes the importance of their message.



How does their arrangement influence meaning? The fish are more dynamic than the flowers and catch your attention first.

Shared syntagms? The visual signifiers.

4. Identify the underlying themes that are common to the signs: Good luck, freedom, excitement

### **Rhetorical Tropes**

What tropes are present (metaphors/metonyms)?

Lotus Flower – loyalty, quality. Although born in a dirty environment the lotus flower still rises up and is considered a thing of beauty. Relates to the Chinese and their aspirations to better themselves daily. (China, 2014)

Koi Fish – bring good luck

Jumping action – freedom, sense of surprise (China, 2014)

Scenery as a whole – somewhere to travel to on the weekends, spend time with family in the country side (China, 2014)

How are they used to influence the preferred reading? The symbols focus on positive aspects of Chinese culture, subconsciously creating a positive mind set for the viewer. Draws attention away from the negative aspects of life.

5. Identify the main genre and ideology constant throughout the text: Advertisement. The ideology focuses on Chinese traditions and spirituality. Emphasizes striving for a higher place in life.

## **Intertextuality**

Does it allude to other genres? Could allude to traditional Chinese artwork.

Does one code within the text serve to support another? The text supports the images by restating what the symbolism of the images mean.

6. To whom is this text targeted? Individuals who have a family. Individuals who travel to the country side on the weekends, who are active, etc.

## **Semiotic Codes**

Which conventions of the genre are most obvious in the text? The product is shown front and center with images around it describing the product through metaphors.

What codes are specific to the medium? Social – commodity, Textual – representation of the arts, Interpretive - Symbolism

Narrow or broadcast? Broadcast

What relationships does the text seek to establish with its readers? How direct in this mode of address? How would you describe it? Social context/Direct/Plays off an established ‘norm’ or symbol/Intended for mass use.

Cultural Assumptions? The Chinese strive for reaching goals. Look for individual freedom and excitement.

Preferred Reading? Analysis of the picture first then the text.

How 'open' to interpretation does the sign seem to be? Not very 'open' to interpretation. The Koi fish and the lotus have set meanings that have been used for hundreds of years in Chinese culture.

### **Social Semiotics Specific**

What does a purely structural analysis of text downplay or ignore? Ignores that some people's lives might not be that boring or strive for freedom.

Who created the sign? Either a marketing firm or Subaru created the sign.

Whose realities does it represent and whose does it exclude? Includes those who know and practice traditional Chinese culture. Excludes those who do not.

Who is the sign for? How might different people interpret this sign? Only those who know what the coy fish and lotus flower stand for or those who put meaning into the textual message.

How would a change of context influence the interpretation? The meanings of the cultural signs would have no meaning in cultures with no understanding of the dragon or text and what they stand for or mean.

### **7. Summary**

What is the text revealing and/or hiding? Revealing that the automaker believes that the Chinese market favors freedom and excitement. Relying on the fact that their target market will purchase this vehicle to obtain these traits.

What is the producer of the text trying to tell/convince the reader? What is the producer hiding? Producer trying to convince the reader that if you purchase the car you will receive these traits. Hiding that you may already obtain these traits.

What is the producer trying to 'naturalize' in the text? Trying to 'naturalize' that the pursuit of freedom and excitement is something to aspire to. That you must purchase this car in order to achieve this.

Other insights? Overall the ad and the messages play off the assumption that the Chinese market is very traditional. The images all play off of Chinese culture and symbolism, revealing that the Chinese hold their values, beliefs and spirituality in very high regard.

From the gathered data, what aspects can be transferred to assist the human and marketing functions?

Human – Like the first ad, Subaru plays off of traditional Chinese culture. Here the use of the Koi fish and lotus flowers suggest that the target market prefers objects that bring them good luck and fortune. On the aesthetic side these symbols could reflect the quality and sense of surprise the viewer is looking for.

Marketing – Effectively connecting with the audience through the use of traditional Chinese symbols the auto maker establishes a bond with the viewer and subconsciously influences them. The natural beauty of the scenery and sense of freedom the fish symbolize translates to the vehicle, establishing what the vehicle can be used for and ultimately what traits it will provide to the purchaser.

## BMW Ad: German Auto Maker



fig. 63

1. Medium – Digital Medium, Advertisement, Google search> Chinese automotive advertisements

Does this influence the perception of the sign? The ad is obviously not meant to be plausible.

What is the message? What is the sign/message really trying to say? Why was the ad chosen?

“Happiness. Musicians play different types of music but they all have the same goal to lead to happiness.” The message suggests that if you purchase the vehicle you will obtain more happiness in your life with this specific vehicle or “instrument.” The ad was chosen to show how the automotive industry relies on hidden meanings to sell their vehicles.

## **Modality**

What claims are made by the text? That the traits described can be yours if you purchase the vehicle.

Fact or fiction? Again since many Chinese are spiritual this might come off as a fact.

References from everyday life? The Peking opera mask, the color choices

Modality markers? The car is depicted as being part of the Peking opera mask with its dynamic design characteristics. The mask and colors serve as metaphors to suggest that the car contains other traits.

Judgments between the text and the world – That happiness is an important quality of life and there are many different tools that help you achieve this.

Type of mode? Iconic. The ad would appear realistic to the Chinese culture or those who understand the symbolism of the images.

2. Identify all of the signs in the message: Peking opera mask, red, blue, black

3. Break each down to the signifier/signified

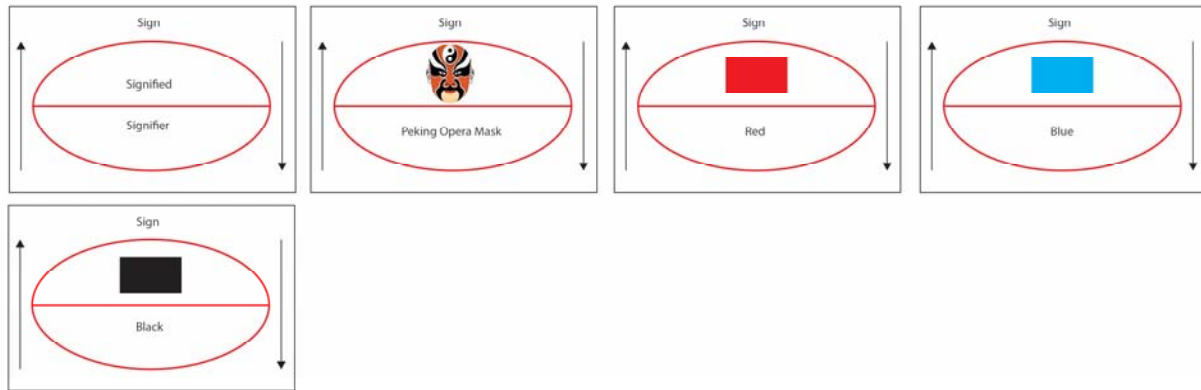


fig. 64

## Paradigmatic

Medium? Will a change in medium affect the meanings generated? Digital. If the mask used was an actual photograph it might give more plausibility to BMW's claims.

Why were these signifiers chosen? What values do these suggest? Positive signifiers were chosen. Again focusing on Chinese spirituality with an emphasis on happiness.

What signifiers are absent? A mask that might give off a negative symbolism, along with the colors.

Is there a central opposition in the text? No.

## Syntagmatic

Identify and describe syntagmatic structures in the text which take form: Argument. The ad uses metaphors to describe what the car is. The ad does not present any alternative choices.

How does one signifier relate to the others? Do some carry more significance? The mask is the major signifier with the color red being more dominant than the blue and black. The color red is one of the most significant Chinese colors, meaning honesty and integrity.

How does their arrangement influence meaning? The arrangement of the colors emphasizes the red.

Shared syntagms? The visual signifiers.

4. Identify the underlying themes that are common to the signs: Happiness, quickness

### **Rhetorical Tropes**

What tropes are present (metaphors/metonyms)?

Peking Mask: Represents different characteristics of people. (China, 2014)

Color Red – honesty, integrity (China, 2014)

Color Blue – less meaningful, used for aesthetic reasons (China, 2014)

Color Black – power, royalty, courage, success (China, 2014)

How are they used to influence the preferred reading? The symbols focus on happiness. The viewer will analyze the mask and determine what kind of character it is depicting, and then associate these traits with the vehicle.

5. Identify the main genre and ideology constant throughout the text: Advertisement. The ideology focuses on Chinese traditions and spirituality, emphasizing the pursuit of happiness.

### **Intertextuality**

Does it allude to other genres? Alludes to traditional Chinese operas and art.



Does one code within the text serve to support another? The text supports the images by re-stating what the symbolism of the images mean.

6. To whom is this text targeted? More mature audience. Individuals who have the ability to purchase different tools to pursue happiness.

### **Semiotic Codes**

Which conventions of the genre are most obvious in the text? The product is shown front and center with images around it describing the product through metaphors.

What codes are specific to the medium? Social – commodity, Textual – representation of the arts and Interpretive - Symbolism

Narrow or broadcast? Broadcast

What relationships does the text seek to establish with its readers? How direct in this mode of address? How would you describe it? Social context/Direct/Plays off an established ‘norm’ or symbol/Intended for mass use.

Cultural Assumptions? Chinese culture is actively pursuing happiness and trying different tools or ways to reach this goal.

Preferred Reading? Analysis of the picture first then the text.

How ‘open’ to interpretation does the sign seem to be? Not very open to interpretation with the Peking opera becoming popular in the late 18<sup>th</sup> century, establishing the distinct character traits depicted in the ad.

## **Social Semiotics Specific**

What does a purely structural analysis of text downplay or ignore? While it describes how musicians obtain happiness it does not specifically state what other tools or ways might obtain this.

Who created the sign? Either a marketing firm or BMW created the sign.

Whose realities does it represent and whose does it exclude? Includes those who know and practice traditional Chinese culture. Excludes those who do not.

Who is the sign for? How might different people interpret this sign? Only those who know what the Peking opera mask stands for or those who put meaning into the textual message will understand the message.

How would a change of context influence the interpretation? The meanings of the cultural signs would have no influence in cultures with no understanding of the Peking opera or colors.

### **7. Summary**

What is the text revealing and/or hiding? The text is revealing that the automaker believes that the Chinese market favors happiness. They also rely on the fact that their target market will purchase this vehicle to obtain these traits.

What is the producer of the text trying to tell/convince the reader? What is the producer hiding? The producer is trying to convince the reader that if you purchase the car you will achieve personal happiness and hiding the fact that you may already have happiness or that no happiness will come of the purchase.

What is the producer trying to 'naturalize' in the text? The producer is trying to 'naturalize' that the pursuit of happiness and that purchasing a vehicle is one way to obtain this.

Other insights? Again, overall the ad and the message play off the assumption that the Chinese market is very traditional. The images all play off of Chinese culture and symbolism, revealing that the Chinese hold their values, beliefs and spirituality in very high regard.

From the gathered data, what aspects can be transferred to assist the human and marketing functions?

Human – Continuing the trend, BMW, a German automaker, is aware of its target market's influences and plays off the traditional Peking opera mask. Here the colors provide the aesthetic traits, suggesting that the viewers are most interested in power, uniqueness and quickness. This sets the tone for the physical characteristics of the vehicle.

Marketing – Effectively representing the characteristics of people, the Peking mask shows that BMW is marketing the car by establishing that the vehicle represents honesty, integrity, courage and success. This reveals that BMW believes that the Chinese culture pursues these traits, giving a sense of the value structure practiced in China.

MINICHINA.COM.CN

# 别小看MINI， 特别是它的内涵。



MINI COOPER

 **BE MINI.**

**中国刷新MINI 25人装人世界纪录。**有事没事就挑战世界纪录的MINI，自2000年英国伯明翰18位MINI粉丝挤进一辆经典Mini以来，就对装人纪录一破不可收拾。2004年希腊奥运会时21人，2009年新西兰24人，到2010年5月25日中国突破25人，各国人民用实际行动证明，不是人更瘦、更多、更挤，而是MINI的车内空间犹如宇宙黑洞。世界纪录的承认远远不够，现在，让我们为MINI和中国喝彩！

fig. 65

1. Medium – Digital Medium, Advertisement, Google search> Chinese automotive advertisements

Does this influence the perception of the sign? The image is very photorealistic, therefore it could be plausible.

What is the message? What is the sign/message really trying to say? Why was the ad chosen?

“Don’t look down to Mini, it’s what’s inside that counts.” The ad is saying that even though the Mini is small in size, there is plenty of room inside. The ad was chosen to show how the automotive industry relies on hidden meanings to sell their vehicles.

### **Modality**

What claims are made by the text? The text claims that you can fit more than you think you can inside the car.

Fact or fiction? The text in the box states that Mini broke the world record for the amount of people in a car so the statement is factual.

References from everyday life? Party favors, facial expressions of the people in the car

Modality markers? The car is depicted with too many people inside of the car, shown by their proximity and facial expressions. This compliments the text and proves it factual.

Judgments between the text and the world – You shouldn’t judge a person by their size, but by what the person is inside.

Type of mode? Iconic. Even without the text a wide variety of cultures could understand the ad.

2. Identify all of the signs in the message: Discomfort, party favors
3. Break each down to the signifier/signified



fig. 66

## Paradigmatic

Medium? Will a change in medium affect the meanings generated? Digital. If Mini showed the actual picture of the world record attempt it would probably make the ad more plausible.

Why were these signifiers chosen? What values do these suggest? The signifiers were chosen to show that the car is bigger on the inside than expected and is also fun to own. The values suggested are having your own personal space and having fun.

What signifiers are absent? Images showing that the inside of the vehicle could be unpleasant.

Is there a central opposition in the text? No.

## Syntagmatic

Identify and describe syntagmatic structures in the text which take form: Argument. The ad uses metaphors and facts to describe what the car is. The ad does not present any alternative choices.

How does one signifier relate to the others? Do some carry more significance? The text carries a good amount of significance since it is trying to state a fact and provide truth with the image.

How does their arrangement influence meaning? The text has the higher visual hierarchy, suggesting that viewer read the text first and then look at the car. In a sense reading the statement and then seeing that the statement is true by the image.

Shared syntagms? The visual signifiers.

4. Identify the underlying themes that are common to the signs: Positive attitude, fun

### **Rhetorical Tropes**

What tropes are present (metaphors/metonyms)?

People in the vehicle: Facial expressions imply discomfort

The number of people implies that are too many inside the vehicle.

How are they used to influence the preferred reading? The metaphors are suggesting that the people in the car are having fun trying to break the record, while also showing the size of the interior space.

5. Identify the main genre and ideology constant throughout the text: Advertisement. The ideology focuses on a positive attitude and fun.

### **Intertextuality**

Does it allude to other genres? No

Does one code within the text serve to support another? The image supports the text by re-affirming the statement.

6. To whom is this text targeted? Individuals can have a larger attitude and personality than what their size implies. Also those who want to have fun, most likely a younger audience.

## **Semiotic Codes**

Which conventions of the genre are most obvious in the text? The product is shown front and center with the text setting the tone.

What codes are specific to the medium? Social – commodity and Interpretive - Symbolism

Narrow or broadcast? Broadcast

What relationships does the text seek to establish with its readers? How direct in this mode of address? How would you describe it? Social context/ Direct/ Plays off an established ‘norm’/ Intended for mass use.

Cultural Assumptions? Assumes that the Chinese culture favors personal space and an aspect of fun.

Preferred Reading? Analysis of the text first then the picture.

How ‘open’ to interpretation does the sign seem to be? Not very ‘open’ to interpretation with the text describing the world record event and thus providing factual evidence.

## **Social Semiotics Specific**

What does a purely structural analysis of text downplay or ignore? While it describes how the Mini is larger than expected inside it ignores the fact that you could just purchase a larger vehicle.

Who created the sign? Most likely Mini.



Whose realities does it represent and whose does it exclude? The realities of those of which are included are individuals that have a larger than life attitude. This then tends to exclude individuals larger in size or stature.

Who is the sign for? How might different people interpret this sign? Intended for the group of people mentioned before. People from other cultures that do not read Chinese could view the image and deduct that there is insufficient room inside the vehicle.

How would a change of context influence the interpretation? Without the text it might imply that there is insufficient room inside the vehicle. If the text was present and the people were not in the vehicle as shown, the statement may not be as factual.

## 7. Summary

What is the text revealing and/or hiding? The text is revealing that you shouldn't judge a person by their size and suggesting the large interior size of the vehicle while providing a sense of fun.

The text hides the fact that there might be other vehicles out there that will provide the same benefit.

What is the producer of the text trying to tell/convince the reader? What is the producer hiding?

The producer of the image is trying to tell the reader that if you're small in stature the Mini would be a great choice for you because it has a big attitude inside. The producer is hiding the fact that the Mini might not give the user this suggested attitude.

What is the producer trying to 'naturalize' in the text? The producer is trying to 'naturalize' that you shouldn't judge a person (or vehicle) by their outside appearance.

Other insights? The producer of the image is assuming that individuals of Chinese culture have large personalities and like expressing themselves.

From the gathered data, what aspects can be transferred to assist the human and marketing functions?

Human – Aesthetic wise the party favors and world record statistic reveal that the target market will prefer a fun looking vehicle with substantial space inside. This also hints that a more sophisticated interior might be appropriate.

Marketing – Playing off of a well-known saying, “It’s what on the inside that counts.” Mini establishes that the interior of the vehicle is much roomier than the outside suggests. This also plays to the audience that feels like they have a bigger personality or attitude than their physical makeup suggests, a “larger than life” mentality.

### **4.3 Automotive Analysis**

#### **4.3.1 Mission Statement**

By researching the relationship between culture, semiotics and their roles in the current automobile industry, the objective of this study is to develop a design approach that emphasizes the importance of culture in design, applied in this case to the transportation field.

From analyzing the Manchu culture in Shenyang, the capital city of the Liaoning province, decoding it and applying it to design, the goal is to make their distinct cultural characteristics tangible by applying them to a vehicle that takes into consideration more than just current trends.

Along with the Manchu's culture, other outside factors will be taken into consideration, such as economic conditions, current environment, infrastructure, feasibility, etc.

By accomplishing this, the vehicle should encompass its target culture as a whole, thus making it more appealing and more importantly a vessel for change.

## 4.3.2 Gantt Chart

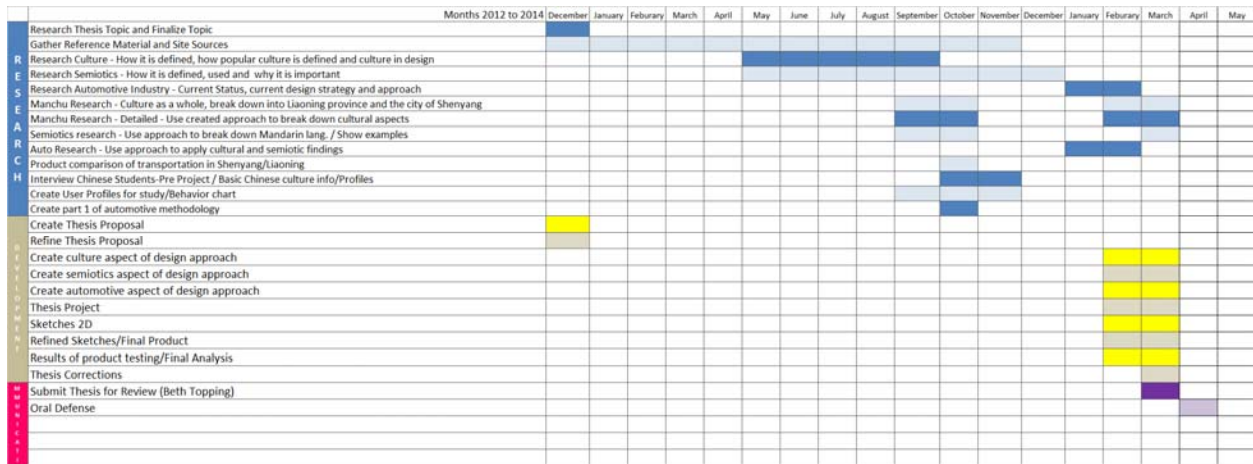


fig. 67

### 4.3.3 Location & Market Research



fig. 68

#### Liaoning

##### **Geography & Population** (Northeastern Region, 2014)

The Liaoning Province is located in the southern part of China's Northeast, bordering the Bohai Gulf and Yellow Sea to the south and the Korean Peninsula to the southeast. In the southeast, the Yalu River and the city of Dandong mark the Liaoning/North Korean border, across which 70 percent of all official trade between China and North Korea passes.

The capital of Liaoning is Shenyang, also the largest city. Other major cities include Anshan, Dandong, Fushun, Huludao, Jinzhou, Liaoyang, Tieling and Yingkou.

In 2012 the national census revealed that there were close to 44 million people living in Liaoning. The majority of people living in Liaoning are Han, 83.9%, with 16% of the population

being made up of minorities: the Manchu, 12.9%, Mongolians, 1.6%, Hui, 0.6%, Koreans, 0.6%, and Xibe, 0.3%.

Liaoning has a monsoon influenced continental climate with large seasonal variation. Winters are very cold, though dry, typically hitting -20 degrees Celsius. Summers are hot and humid with daytime temperatures reaching 30 degrees Celsius.

### **Economics** (Northeastern Region, 2014)

Liaoning's GDP reached nearly 2.5 billion RMB, about 413 billion USD, in 2012. Its growth rate is higher than China's overall average of 10.1%, coming in at 12.6%. It is also important to note that Liaoning's GDP represents 49% of northeast China's GDP, being the most industrialized and prosperous province in the northeast.

Since the "revitalize the northeast" plan set into motion in 2003, Liaoning's growth has boomed. The plan's major focus of attention has been on seven basic industrial sectors: shipbuilding, auto production, transportation infrastructure, equipment manufacturing, steel, petrochemicals and pharmaceuticals. The major sectors in Liaoning are composed of agriculture, 8.7%, industry, 53.8% and services, 37.5%. Liaoning's main products are: automobiles, heavy machinery, machine tools, oil, metal and petrochemicals. Major exports include: electro-mechanical products, steel, processed agricultural products, hi-tech products, garments and refined oil. These exports mainly go to Japan, the EU, South Korea and the US. Emerging industries are also on the rise, including: IT and software, biopharmaceuticals, aviation, new materials, energy, environmental technologies and advanced equipment manufacturing.

## **Education** (Northeastern Region, 2014)

As of 2011, Liaoning has 122 colleges and universities, 22 adult colleges, 484 secondary vocational schools, 422 high schools, 1,637 junior secondary schools, 5,118 primary schools, and 8,661 kindergartens.

Prominent universities and university-level institutes in Liaoning include:

Shenyang: Northeast University, Liaoning University, China Medical University, Shenyang Pharmaceutical University, Shenyang Agricultural University, Shenyang Normal University, Shenyang Space and Aviation University, Shenyang Conservatoire, Luxun Academy of Fine Art and the Shenyang Athletic University.

Dalian: Dalian University of Industry and Technology, Northeast University Finance and Economy , Liaoning Normal, Dalian Medical University, Dalian Maritime University and Dalian Foreign Language Studies.

## **Shenyang** (Shenyang, 2014)

Shenyang is the largest city in northeast China with a population of 8.1 million and 6.3 million of those people living in the urban areas, roughly the same amount of residents as New York City.

The commercial and transportation hub of northeast China since the 1950s, Shenyang's focus remains on machinery and fabricated metals. This includes: rolling stock, machine tools, wire

and cables, cement, electrical equipment, chemicals and fertilizers and pharmaceuticals. Textile and raw material processing is also present in the area. Remaining one of the leading railway centers in China, Shenyang is an important transportation hub for travel and trade. Current infrastructure is still expanding with new roadways and more subway lines being added.

Tourism has also increased in the past few years, becoming a staple of Shenyang’s economy. The main attraction is the Qing era Imperial palace along with many other historical monuments and sites.

Shenyang also serves as an educational center of the northeast, housing more than 20 colleges and universities. Many other scientific research institutes are also present, as well as libraries, fine art museums and music conservatories.

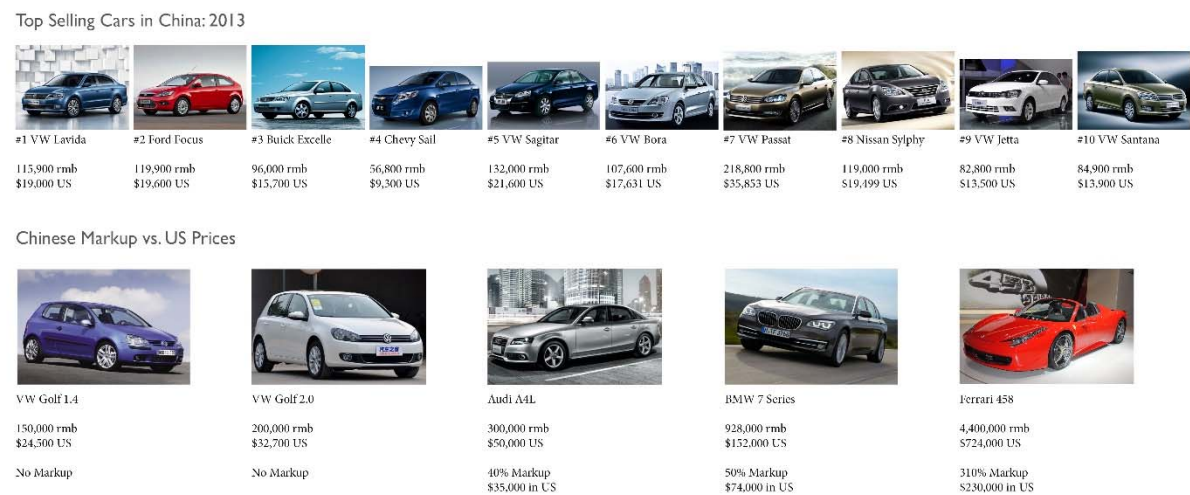



fig. 69




#### 4.3.4 Observations


### Public Transportation



Taxis are common throughout Shenyang though the amount of traffic obviously slows the commute. Taxi fares are typically more expensive than the bus or subway, making them an unpopular choice for everyday transportation.




Bus use in Shenyang is very popular. The buses have their own designated lanes making commutes more efficient. Trip times can be very long though as some commutes can take up to 3 hours.




For longer commutes and travel the use of high speed rail is commonly used. China's infrastructure is well built and expanding at a rapid rate. This will increase regional travel and open new lines of economic growth for provinces along the route.

fig. 70

### Public Transportation



Subway routes are also popular in Shenyang. This map shows a few of the lines and stops along the way. This is a good way to keep congestion off the roads though the amount of lines may not be significant enough yet to make a major impact.



Electric scooters and gas powered scooters are heavily used throughout the region though current laws have been passed keeping these scooters off 12 major roads. This is due to the high amount of traffic from automobiles and hopes to increase the flow of traffic.

fig. 71

## Public Transportation



Snowy winters are the norm in Shenyang, making travel even more hectic. The rate of travel is obviously slowed during winter as well as increased safety concerns. Motorcycle and bicycle travel will also diminish as temperatures drop and the roads become more hazardous.

Some locals seem un-phased by the flooding and are determined to get to where they need to be. This might be a common occurrence in the summer.



fig. 72

### 4.3.5 Product Comparison

#### Transportation Comparison

Public Transportation in Shenyang






Type					
Features					
Cost per Individual	na	1 - 3 rmb	8 rmb at start 2 rmb/ Km additional	2 - 4 rmb	5 - 600 rmb
Speed per Km	1Km = 17 min	1Km = 5.8 min	1Km = 1.4 min	tbd	Standard 97.5 Km/hr High Speed 195 Km/hr
Fleet Size	na	3000	170,000	na	na
Infrastructure	Sidewalks along roads  No pedestrians on highway system	140 Lines with three major stations: General, South and West  Stops at every district  Over 160 routes	193 Taxi Companies  Over 5000 Km of major highways  Highway service charges	Line 1: 22 stops traveling 27.8 Km from East to West  Line 2: 20 stops traveling 21.8 km from North to South  4 other lines under construction with plans for 7 more lines in the future	2 main stations: North and South  City buses make stops at the train stations  Trains go to other major cities
Pros	Fastest way to travel close distances; free	Cheapest way to travel medium to long distances	Faster than bus travel, convenient for medium travel distances, comfortable	Most efficient of all motorized travel, not too expensive, little to no delays	Fastest type of travel for long distances, comfortable
Cons	Still crowded on streets, traffic is dangerous	Bus system is heavily used, traffic delays, crowded on bus	Can get costly, traffic delays, highway service extra	Limited number of stops, crowded	Still have to get to and from the station, high prices for longer trips

fig. 73

Transportation Assessment  
Public Transportation in Shenyang

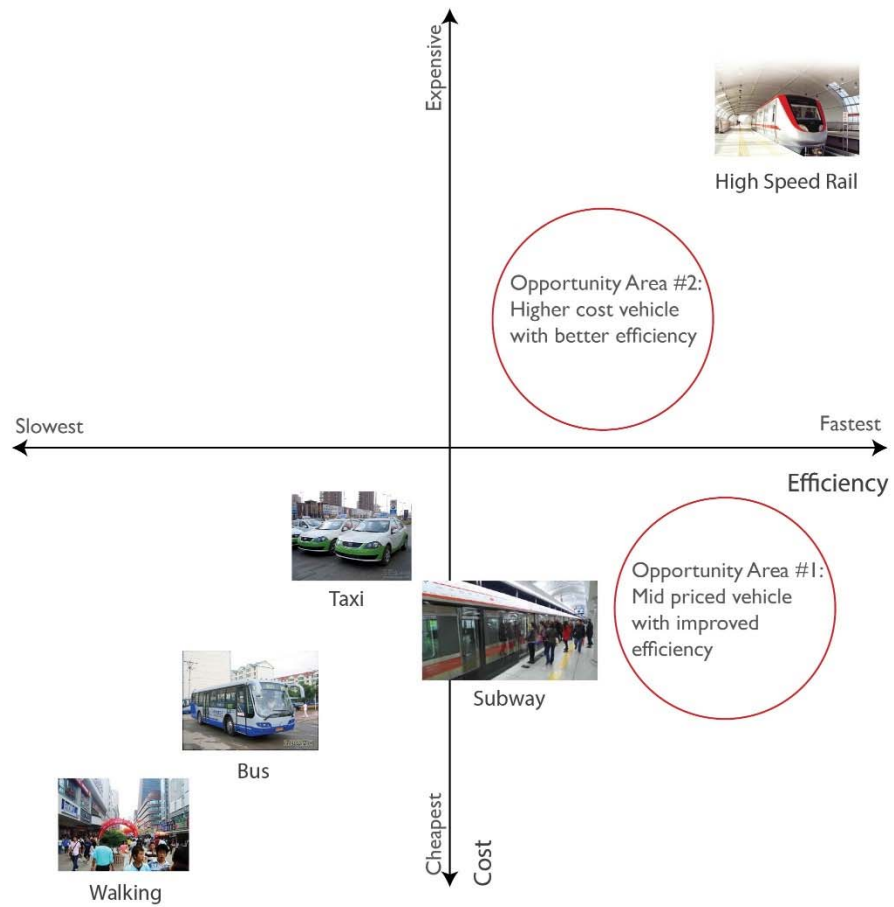
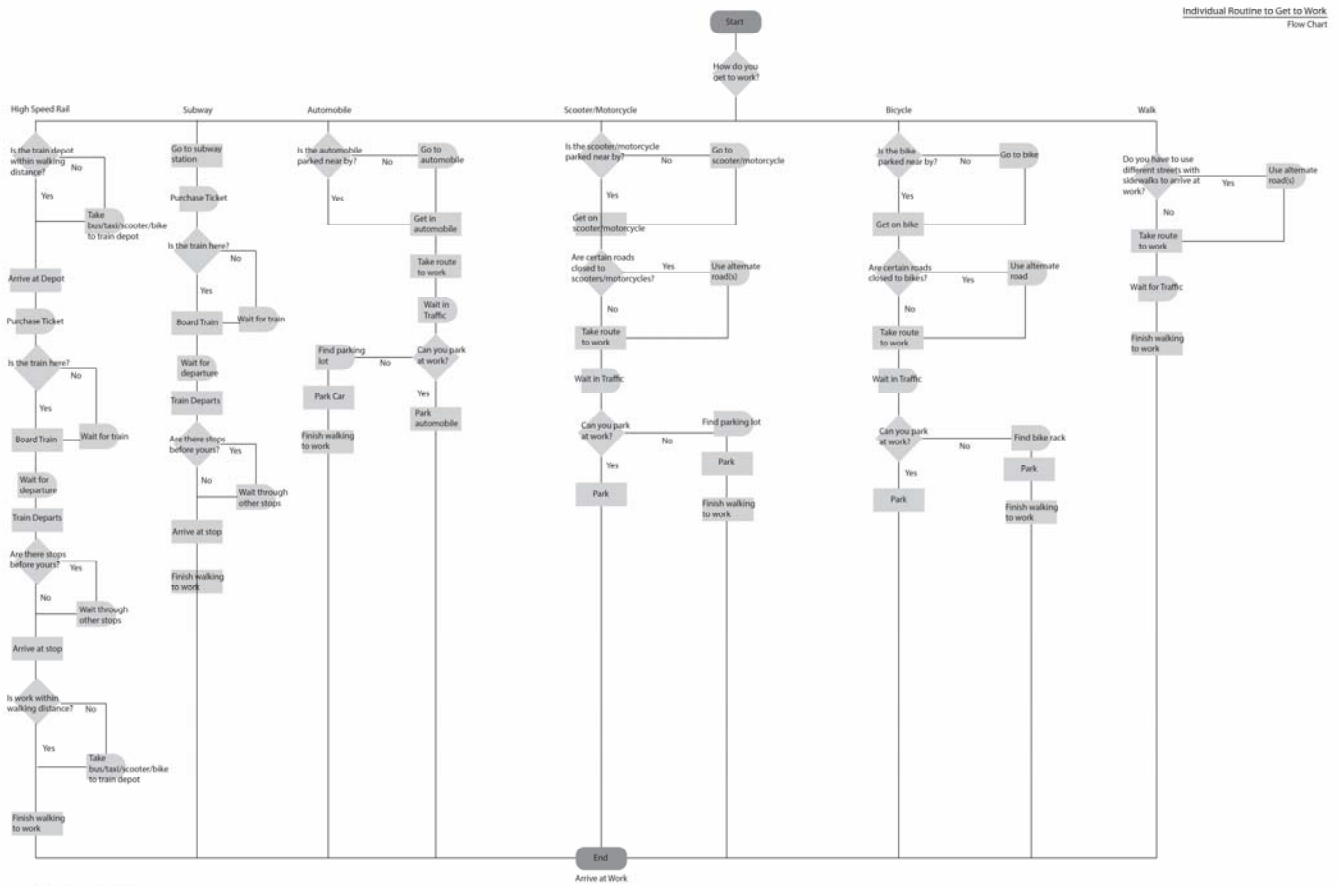


fig. 74

## 4.3.6 Flow Chart



### Observations and Implications

For long distance travel the high speed rail system will be used in which the distance to the train depot and the distance to work after the train has arrived will be the area of concern. Buses do connect to the train depots but this is another step added to the travel process.

The greater the distance the harder and longer it will take to arrive at work. With over 5 million people living in Shenyang the traffic and delays will be abundant. These delays will be most apparent with bus, taxi, automobile and scooter travel. While segregated bus lanes might help with traffic flow, the sheer amount of traffic will still delay travel. The closure of certain roads to scooters and motorcycles will also effect the efficiency of this travel as new routes will have to be taken.

Within the city the use of the subway, bicycles and walking will be the most efficient means of travel. With no traffic jams the subway will do away with these delays, although the number of stops inbetween destinations will slow travel. This would be the most efficient way of travel if the amount of lines were proficient enough to encompass a wide range of stops and the number of trains could handle the mass amount of people.

In Shenyang the largest problem is the amount of people on the roads. An increase in personal transportation will not help and must be limited. An increase in public transportation or carpooling would ease traffic congestion along with the addition of more segregated lanes for these types of travel. While having personal transportation might be a sign of freedom or independence, the amount of vehicles in Shenyang must be controlled and only be allowed in rural areas.

fig. 75

#### **4.3.7 Target Demographic**

The Manchu - Insertion of cultural and semiotic data/analysis. Reference cultural and semiotics data and results.

#### **Summary of Cultural & Semiotic Implications**

##### Human

##### **Cultural Implications**

Subsistence – Helps indicate who will use the vehicle more, men or women? In this case since the Manchu household practices equal power, vehicle use will most likely be even. This also indicates that the buying decision will be split, suggesting that the vehicle will have to appeal to men and women equally.

Bisexuality – This ultimately determines what men and women want in the vehicle. Current trends indicate that SUVs are the most popular with European auto maker VW leading in yearly sales. This is due to their build quality, aesthetics and reputation. Also, with income levels rising the up and coming class likes to show off their wealth, purchasing higher end brands. All of these characteristics will be taken into consideration when applying the aesthetic to the vehicle.

Accommodate the physical make-up of the 5% female to the 95% male. Follows ergonomic standards.

With Western trends influencing fashion, some of these characteristics will carry over to the aesthetic design of the vehicle, e.g. color choice, interior material choice, etc.

Territoriality – With up to three generations living under one roof, the vehicle will most likely be used by more than one family member and/or transport a group of individuals. This suggests the vehicle must have seating for at least five individuals and also stand the wear and tear of everyday use.

The vehicles interaction with its environment, the city of Shenyang, will also be taken into consideration. Here the vehicle must effectively travel on the current infrastructure, underlying size requirements. Parking will most likely be an issue too, so material choice to withstand the outdoor elements must be considered.

Learning & Acquisition – The vehicle's controls must be intuitive and easily learned.

Defense – Traditionally practicing Shamanism, the Manchu's beliefs focus around the promotion of well-being, strength, healing and love. Some of these aspects can be translated to the aesthetic of the vehicle.

Exploitation – Effectively giving the vehicle a sense of comfort inside is also a priority. If the interior of the vehicle is not attractive to the consumer, no purchase will entail.

### **Semiotic Implications**

From the semiotic analysis of the four ads it can be determined that the most useful aspects to incorporate into the human function are from the metaphors present. As described below in the marketing function, the positive traits focused on should be translated aesthetically to the vehicle. The analysis also reveals the cognitive connection with the vehicle is extremely important and could be based on these positive traits as well.

### Marketing

#### **Cultural Implications**

Interaction - Manchu language taken into consideration, e.g. tone of voice, gestures, etc.

Association - The majority of Manchu will now receive industry wages. This will set the tone for how much the vehicle will cost. Here the target market will also be determined, focusing on a

specific class and age group. Through the analysis of data the vehicle should be marketed as elegant, high quality and professional.

Subsistence – Also contributes by acknowledging maintenance cost, insurance and registration fees.

Territoriality – With the vehicle designed with seating for five the vehicle can be marketed to families.

Learning & Acquisition – With traditional Manchu culture having influence on learning techniques, the values and beliefs instilled on users at an early age will provide an outline of symbolism to use for marketing purposes. Thus connecting the vehicle to the consumer on a subconscious level.

Play – The Manchu demonstrated high interest in sports and games which can be translated to marketing by branding it as a fun vehicle.

Defense – Use of the symbolism and figures from Shamanism as metaphors for the vehicle could be used for a positive marketing response. Here taboos are also discussed as the number four will be avoided as well as the colors associated with death.

Exploitation – Marketing the interior as a place of comfort reflects the Manchu's needs as they enjoy a range of many activities at home.

### **Semiotic Implications**

Three of the four ads relied on using traditional Chinese culture and symbolism to create a subconscious connection with the viewer. This essentially effects how the ad is read, in this case using positive symbolism as metaphors to describe the vehicle. The majority of ads focused on the traits of power, fortune or good luck, happiness, beauty, freedom and aspiration towards greatness. Notice that negative metaphors or traits are avoided.



## Technical

### **Cultural Implications**

Association - Switching from agriculture to industry, therefore a more urban suspension will be used. This will also influence the role of the vehicle, focusing on city driving rather than rural.

Subsistence – The role of the vehicle, commuting to work and leisure, implies that it must be reliable, durable and fuel efficient.

Territoriality – In order for the vehicle to carry up to five individuals the overall dimensions must accommodate this. Safety will also be a priority.

Temporality – The vehicle must be durable enough to withstand everyday commutes and weekend travel. Since arriving on time is a Chinese custom the vehicle must be dependable and require little to no maintenance. This entails quality parts and construction.


Exploitation – With the Manchu almost fully integrated into Han culture the level of technology present in the vehicle will have to reflect modern standards.

## Production

### **Cultural Implications**

Temporality – With dependability and high quality construction a priority the production facilities must be able to meet these standards.

### 4.3.8 User Personas



#### Chun - Lives in Shenyang / Works in Shenyang


**Characteristics:**  
Female Factory Worker  
Age 18-35  
Single  
Doesn't own a personal vehicle or have a license  
Currently uses public transportation to get to work  
Would like a more efficient way to get to work  
Lives with several other friends in a small apartment  
Current salary prevents her from owning a personal vehicle  
Likes traveling on the weekends to the countryside

**Work Life:**  
Chun commutes to work in Shenyang using the public transportation system. She has to wake up early to use the bus since the average trip takes 1 hour. The bus spends most of the time sitting in traffic. Chun works 8 to 10 hours a day and has little to no time for anything else on the weekdays.

**Social Life:**  
Chun spends her evenings during the week with her roommates at her apartment. On the weekends they like to travel to the countryside for outdoor activities.

**Needs:**  
Chun would like a more efficient way to get to work so she can have more time in the mornings and afternoons to herself. She would also like an easier way to travel to the countryside so she can take more impromptu trips and travel where she likes.

fig. 76



#### Hao – Lives in Shenyang / Works in Yingkou

**Characteristics:**  
Male Port Worker  
Age 35-65  
Owns a personal vehicle  
Married with 2 children  
Lives in a medium sized apartment on the outskirts of Shenyang  
Likes traveling on the weekends to the countryside

**Work Life:**  
Hao commutes to work every morning with his compact car. The trip takes at least 2 hours along with waiting in traffic. Hao would prefer to take the train but it is not high speed and takes more than 3 hours to get there. Hao is a port maintenance worker and oversees the upkeep of the docks.

**Social Life:**  
Hao spends the majority of his free time with his children. They like to travel around the area, as well as to Beijing.

**Needs:**  
Hao would like to have a faster commute in the mornings so he could spend more time with his family.

fig. 77



### Ji – Lives in Shenyang / Works in Shenyang

#### Characteristics:

Male Auto Worker  
Age 35-65  
Owns a personal vehicle  
Married with 1 child  
Lives in a house on the outskirts of Shenyang

#### Work Life:

Ji lives on the outskirts of Shenyang and commutes to work using public transportation. Ji uses the bus and the average trip takes about 1.5 hours. Ji is an auto worker for Ford and assembles cars on the floor line.

#### Social Life:

Ji likes to go out with his work friends during the week nights as well as spending time with his family on the weekends. His family likes to spend the weekends taking trips around the city to the local museums and attractions.

#### Needs:

Ji doesn't use his car to get to work because it would take the same amount of time to travel to work using the bus. In addition there is limited parking at work. Ji would like a faster commute so he could have extra time to be with his family and for personal hobbies.

fig. 78



### Li – Lives in Shenyang / Works in Shenyang

#### Characteristics:

Male Electronics Worker  
Age 18-35  
Owns a scooter  
Single  
Lives in a small apartment with 2 other friends  
Likes to travel on the weekends  
Saving for a car

#### Work Life:

Li works at a local electronics factory in Shenyang and takes the subway to work. The average commute is a half hour and is somewhat efficient. Li work about 10 hours a day.

#### Social Life:

Li likes to travel long distances on the weekends. His scooter is unsafe for this type of travel and he frequently uses the high speed rail system.

#### Needs:

Li would like to travel more but the high speed rail is costly for long distances. He is currently saving for a car though most of the cars available are to expensive.

fig. 79



### Piao – Lives in Fushun / Works in Shenyang

#### Characteristics:

Male Textile Worker  
Age 18-35  
Uses public transportation  
Single  
Lives with his parents  
Likes to go out at night in Shenyang on the weekends  
Saving for a car

#### Work Life:

Piao uses the bus to travel to work everyday. The average trip takes close to 2 hours. Piao works at a textile factory and typically works 8-10 hours a day.

#### Social Life:

Piao likes to spend his weekends in Shenyang with his friends and enjoys the night life.

#### Needs:

Piao would like a faster commute to get to work and is currently saving for a car. By living at his parents house he is able to save the majority of his wages. Popular vehicle costs are still a bit out of reach and it will take him several years to meet his goal.

fig. 80

### 4.3.9 Performance Criteria

Performance Criteria for Proposed Vehicle			
Factors		Parameters	Performance Criteria
Human Functions	Aesthetic	Design	Modern look/ Styling cues from cultural data
		Color Options	Reflect Manchu likes
	Physical	On/Off	Key start/Less complicated the better
		Interior touchpoints	Ergonomically designed/95% male to 5% female/Durability and wear cautious
		Maintenance Areas	Easily Accessible/Universal parts/Intuitive directions
	Cognitive/Social/Cultural	Value	Simple colors and design for a dependable feel. Quality fit and finish.
		Cultural Aspects	Implementation of cultural analysis and breakdown
Technical Functions	Internal	Durability	Vehicle designed with daily commute in mind. Everyday wear and tear taken into consideration.
		Motor/Drivetrain	Durable motor with ample power combined with efficiency/ Naturally aspirated, universal parts, manual transmission
		Accessories/Options	2 Trim models/ Basic options to keep cost down
		Electronics	Simple wiring and accessories
		Climate Control	2 Trim models/ With and without a/c
		Fuel Type	Unleaded/Diesel options for current model/ Optional alternative energy sources when infrastructure can support them
		Safety	Good to Excellent Crash ratings
		Weight	Lower the better/ Lower weight means better performance and mpg's/Sub 3000 lbs
	External	Suspension	Tuned for Chinese roads/ Comfort, reliability
		Durability	Able to last +10 years/100,000 miles without any problems
		Weather Resistant	Dipped frame and body for rust protection/ Quality weather stripping and seals
		Aesthetics	Modern in appearance/ Mirrors cultural data/Not cheap looking
		Size	Sub-Compact to Compact Size/ Seats 4, optional 5/ Hatchback profile to maximize space and storage
Production Function	Tooling	Tooling Cost	Initial tooling will be costly/Use tooling from previous model years?
	Materials	Vehicle Materials	Locally sourced materials if possible. Recycled and Sustainable options implemented.
	Assembly	Time for Assembly	Efficient assembly processes, faster than current avg./ Current hours to build a car = 30 hrs
	Logistics	Manufacturing Location	Chinese Plant to avoid trans-pacific travel costs
Marketing Functions	Shipping	Shipping	Rail or Semi Truck depending on distance
	Target Market	Demographic	Manchu individuals traveling or living to/in Shenyang, Liaoning Province
	Price	Retail	18000 to 48000 rmb/ \$3000 to \$8000 US
	Channel	Stores	4S Stores
	Competitiveness	Positioning	Placed in opportunity area of product positioning map/ Competitive Pricing
Corporate Marketing	Dealership Marketing		Meet Manufacturers Brand image

fig. 81

Here the proposed performance criteria for the vehicle can be explored. The four functions, human, technical, production and marketing, will further separate the vehicle into a variety of factors that will ultimately determine the success of the vehicle. It is important to note that if one key area is overlooked the entire vehicle's success could be in jeopardy.

Cultural and semiotic data found in the analysis will take priority in the performance criteria, ensuring that the final concept provides an emotional connection with the target market.

### 4.3.10 Morphological Matrix

Morphological Matrix - Vehicle Analysis

	Alternates	1	2	3	4	5
<b>Features</b>						
Body/Frame		Steel	Aluminum	Composite	Metal/Composite	
Engine		Small Displacement I3	Small Displacement I4	Turbo Diesel	Turbo I4	V6
Transmission		Manual	Standard Automatic	CVT		
Fuel Type		Unleaded	Diesel	Electric	Hydrogen	Bio-Diesel
Lights		Halogen	LED	Incandescent	HID	
Wheels		Steel	Aluminum	Carbon Fiber	Magnesium	
Safety Features		Traction Control	Forward Air Bags	Side Airbags	Stability Control	ABS
Electronics		AM/FM Radio w/Aux Jack	CD Player	Full Entertainment Center	CD/DVD	Navigation
Interior		Cloth	Leather	Leather Substitute		
Brakes		All Disc	Front Disc/Rear Drum	All Drum		
Suspension		All Independent	Front Ind./Rear Solid			
Driveline		FWD	RWD	AWD		
Gauges		Digital	Analog			
Options		Sunroof	Roof Rack	Body Skirts	Color matched interior	

Concept 1  
 Concept 2  
 \* = Both

fig. 82

By listing out the possible alternatives for key parts or areas of the vehicle a suitable combination can be selected. For meeting the Machu's wants and needs, as well as meeting the performance criteria, Concept One will be chosen. A brief explanation of why each of these elements was used will be included in the final concept phase of the study.

4.3.11 Interaction Analysis

Interaction Analysis: Performance Criteria vs Components			Body Panels	Structural Frame	Frame	Tires	Wheels	Brake System	Suspension	Fuel Type	Engine	Transmission	Interior Panels	Dash Board	Gauges	Seats	Safety Features	Lights	Electronics	Entertainment	Air
Factors	Parameters	Performance Criteria																			
Human Functions	Aesthetics	Design	Modern look, styling cues from cultural data	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Color Schemes	Reflect Manchu Style	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Interior	Very clean, less complicated the better	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Interior Touchpoints	Ergonomically designed 90% male to 95 female/Usability and wear (audiot)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Neuroscience Areas	Facially Associated/Emotional participation direction	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Technical Functions	Cognitive/Perceptual/Cultural	Value	Aesthetically pleasing, Meets target market's standards and desires.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Cultural Aspects	Implementation of cultural analysis and breakdown	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Usability	Quality Party Feedback on touch points	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Material/Design	Usable, usable with people, combined with efficiency/ Naturally exposed, universal parts, manual transmission	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Accessories/Options	2 Time model/ Basic options to keep cost down	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Production Function	Performance	People sitting and experiences	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Climate Control	2 Time model/ Heat and without air	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Paint Type	Included/Excluded options for current model/ Optional alternative energy sources when infrastructure can support them	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Weight	Based on location/ Cost savings	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Weight	Lower the better/ Lighter weight means better performance and mpg/Chub 3000 lbs	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Marketing Functions	Interior	Tuned for Chinese people/ Comfort, reliability	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Usability	How to test 200 pieces/ 100,000 when without any problems	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Weather Resistant	Stipped frame and body for rust protection/ Quality, weather stripping and seals	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Weather	Weather in appearance/ Mirror cultural details/ Cheap, boring	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Test	Has Customer to Contact/ One Day, 6, national/ 2/ Feedback profile to maintain space and change	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Marketing Functions	Tooling	Tooling Cost	Initial tooling will be costly/ One tooling from previous model years?	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Materials	Quality material materials/ Functional, beautiful and sustainable options/ Implemented	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Assembly	Time for Assembly	Efficient assembly processes, faster than current avg/ 2 Content hours to build a car + 30 hrs	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Logistics	Manufacturing Location	Chinese Plant to avoid from specific travel costs	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Shipping	Shipping	Real or Semi Truck/ Shipping and insurance	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Marketing Functions	Target Market	Demographics	Manchu individuals traveling or living in the Manchu, Learning Practices	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Price	Price	10000 to 20000 only/ 10000 to 20000 only	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Channel	Channel	40, 3000	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Competition	Competition	Market is approaching area of product positioning/ most/ Competitive Pricing	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Competitive Marketing	Competitive Marketing	Market Identification/ Brand Image	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total			34	28	25	22	29	22	25	31	25	25	25	25	24	24	24	25	31	30	28

fig. 83

From analyzing the interactions between the performance criteria and key components of the vehicle it has been determined that the exterior and the interior of the vehicle will be crucial in effectively marketing the vehicle to the Manchu. Here both areas must reflect their values and aesthetic preferences.

These areas will incorporate the use of the cultural and semiotic data acquired through analysis.

### 4.3.12 Mind Map

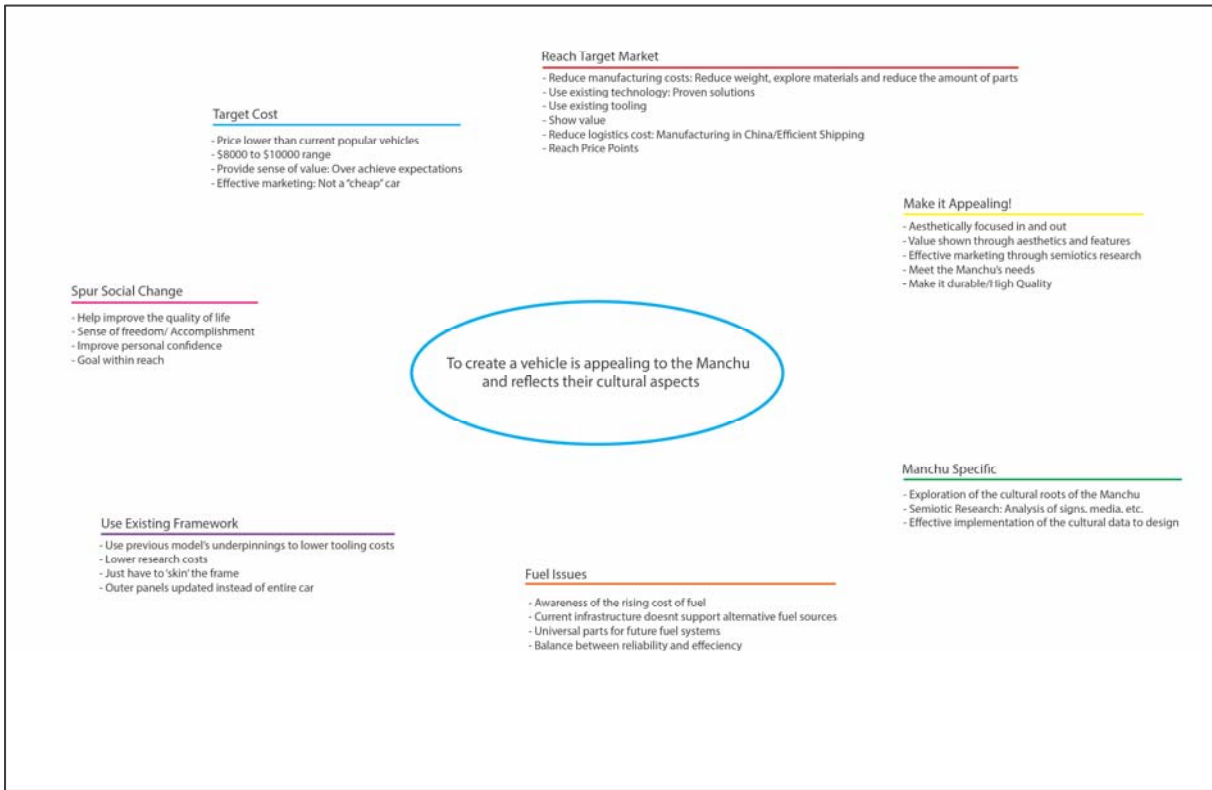


fig. 84



#### 4.3.13 Summary

By focusing on balancing the human, marketing, technical and production functions, the vehicle will effectively meet and exceed the needs and wants of the target market. Cultural and semiotic data must take priority to ensure that these goals are met. From the automotive analysis and cultural analysis it has been determined that the concept vehicle will be most effectively marketed in the area of opportunity shown below.

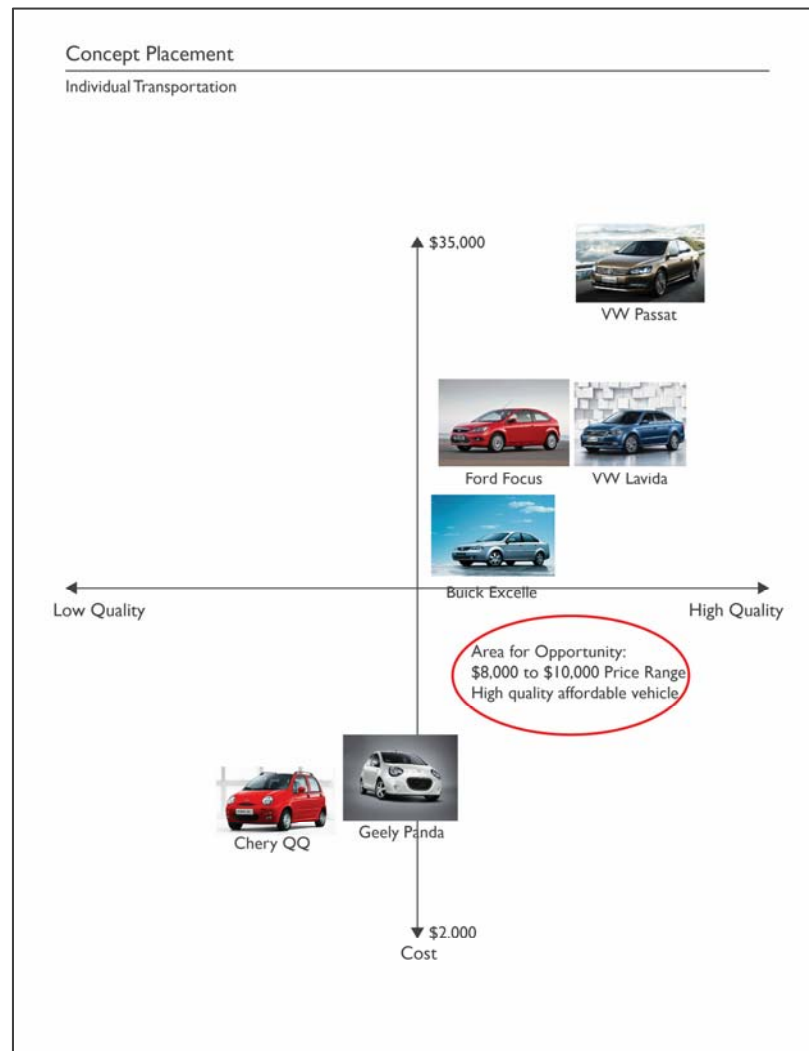


fig. 85

#### **4.4 Concept Design**

In this chapter the exploration of concepts and the incorporation of cultural and semiotic data will be visualized. The goal is to express and examine different aesthetic variations of the exterior and interior of the vehicle, all while honing in on the best ideas that will create an emotional connection with the target market and finally the prototype. Various medium and tools can be used, with the given examples conducted in a fashion familiar with the author.

#### 4.4.1 Initial Sketches

The first initial sketches will be a brainstorm of ideas. Here the exterior and interior aesthetic will be explored loosely, allowing different ideas to take shape. Initial sketches should be done quickly, progressing towards a more refined concept.

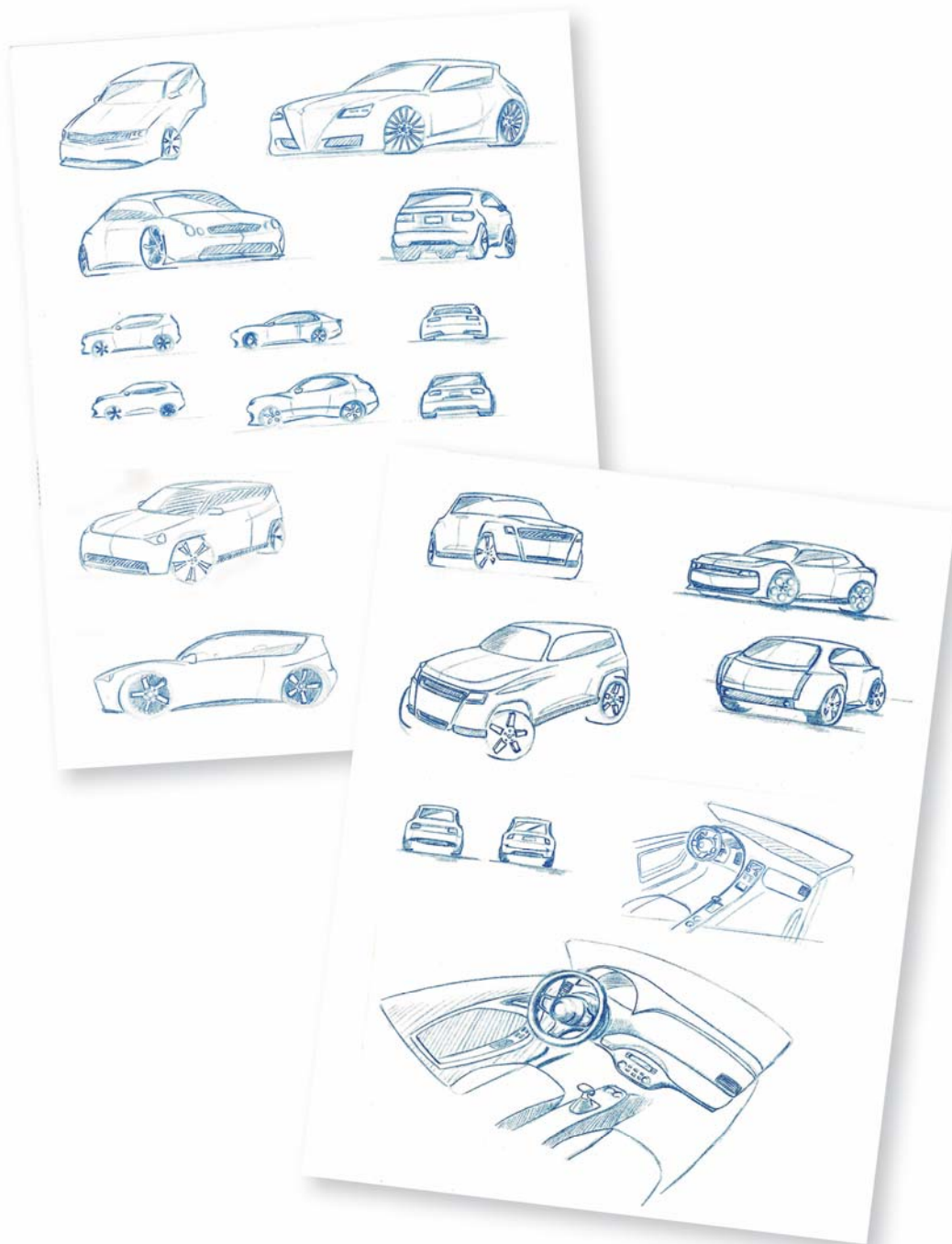


fig. 86

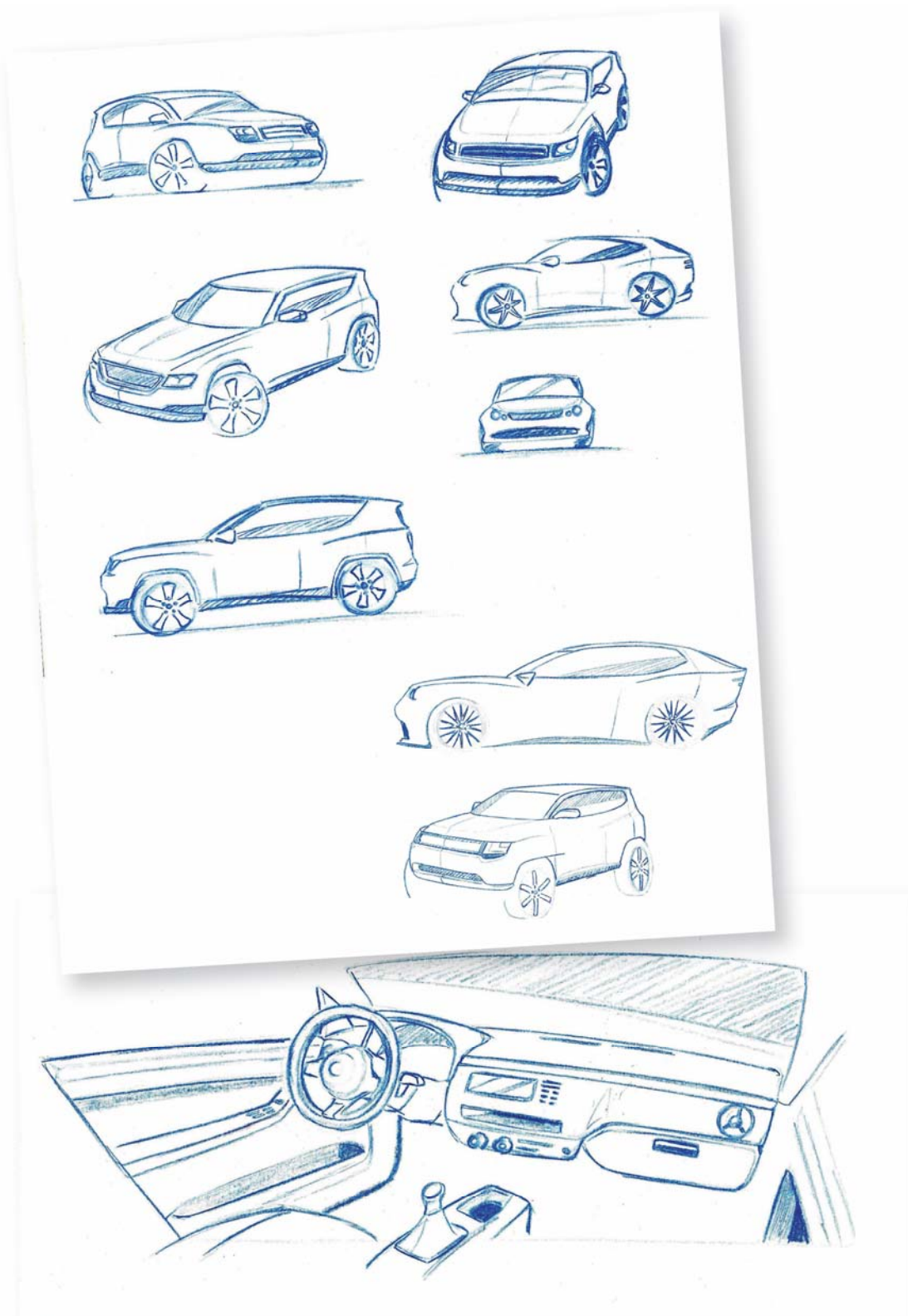


fig. 87

#### 4.4.2 Refined Sketches

The next step in the design concept phase will be to refine the sketches. Here the initial sketches will be analyzed to determine which forms best mirror the cultural and semiotic data. In the case of this study two perspective views will be shown along with an interior shot to provide an overall sense of what a complete vehicle will appear like. The focus on smaller details will be intensified, along with a deeper analysis of the pre-set requirements. The total number of refined concepts will be reduced with the best alternatives chosen for the final concept.

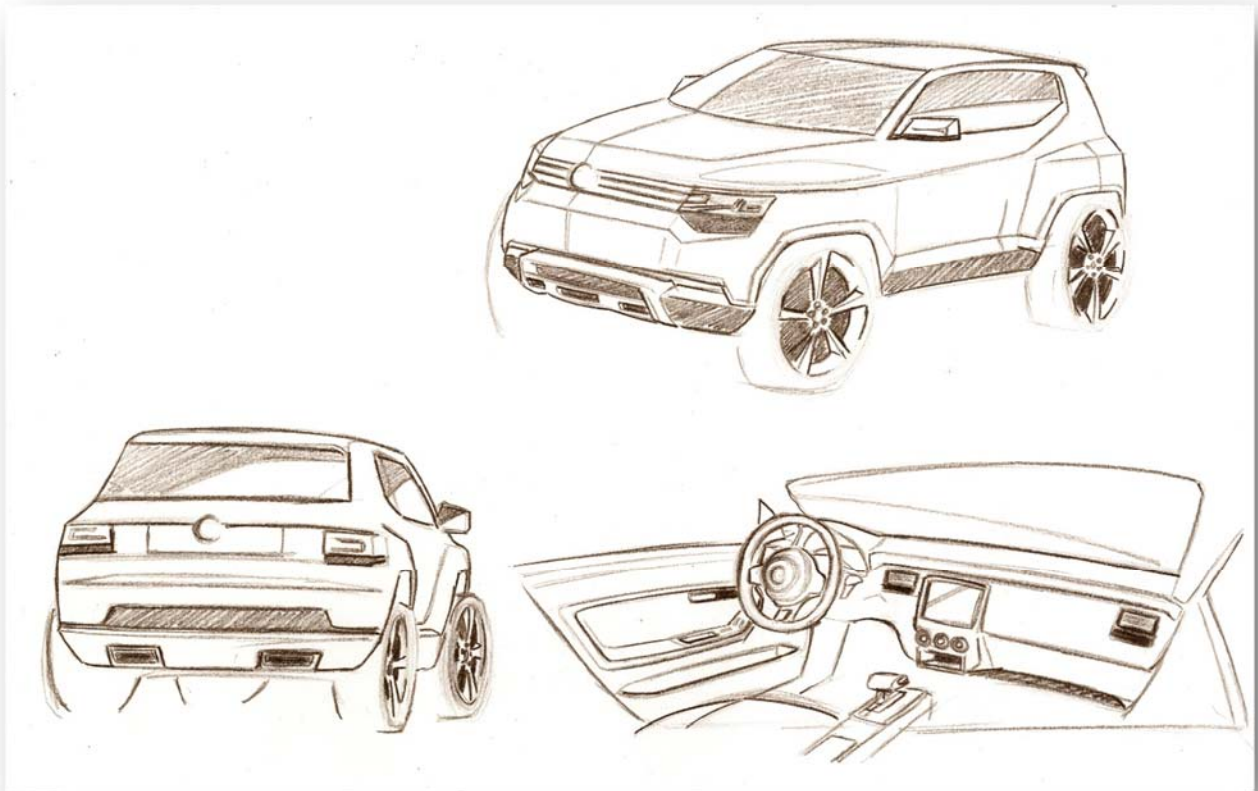


fig. 88

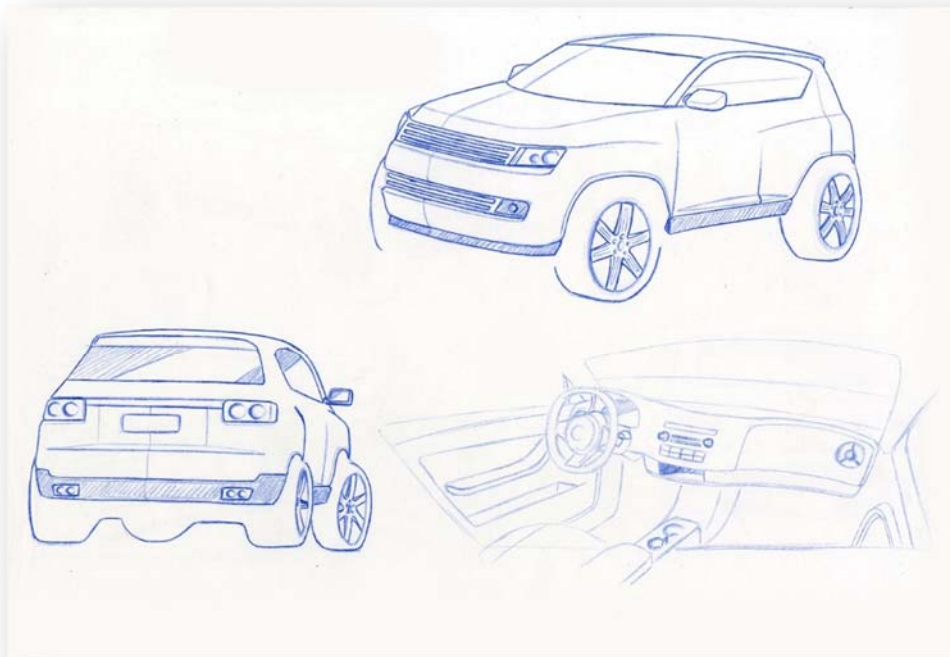


fig. 89

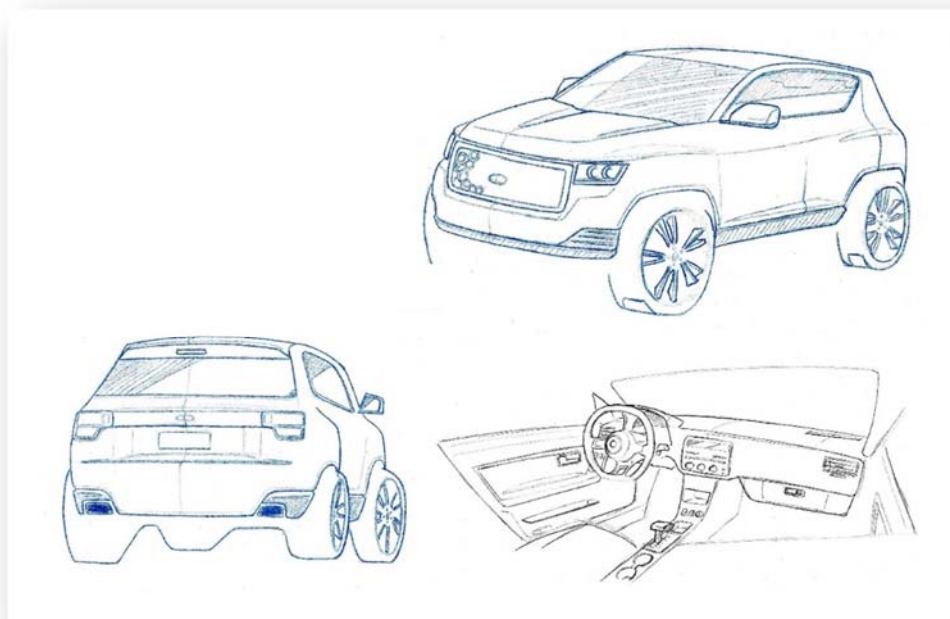


fig. 90



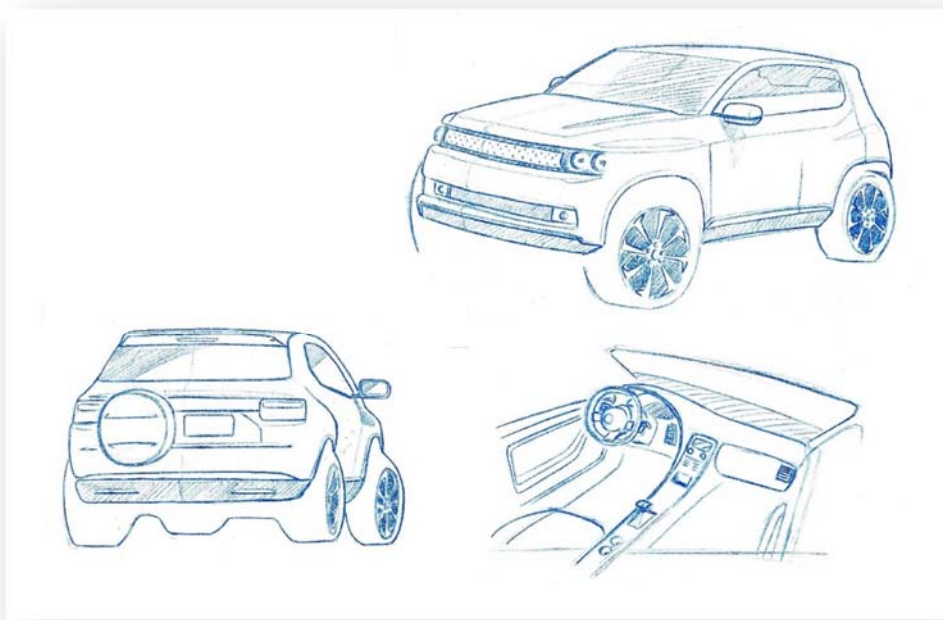


fig. 91

#### 4.4.3 Final Concept

From analyzing and evaluating the best qualities of the refined concepts a final concept will be developed. This evaluation will be based upon the cultural and semiotic implications found, as well as data revealed in the automotive design approach.



fig. 92





fig. 93

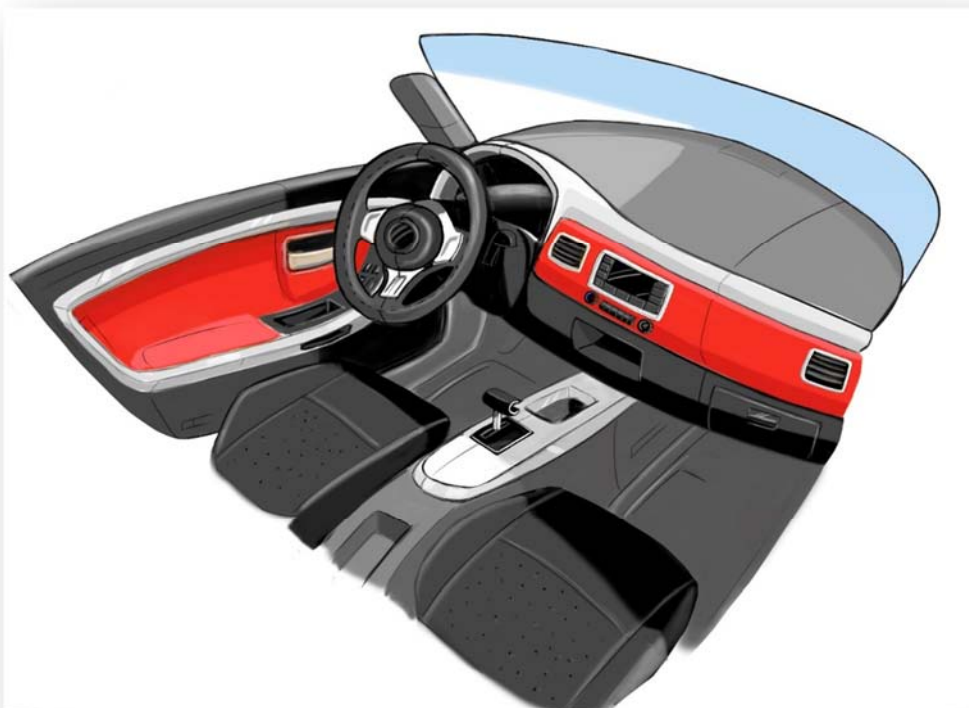


fig. 94

#### 4.4.4 Physical Model



fig. 95



fig. 96

## 5.0 Conclusion



fig. 97



fig. 98



fig. 99

## **5.1 Cultural Incorporation**

Breaking down the Manchu culture to its root form using Hall's (1959) framework, tangible aspects were extracted. From the cultural research, analysis and evaluation, the following implications will be incorporated into the vehicle. The text below will list a brief recap of these traits in the 10 categories, specific to the human function. A more detailed and thorough analysis can be viewed in the previous chapter, section 4.1.

### **Interaction**

With the traditional Manchurian dialect nearly extinct and with nearly all Manchu speaking Mandarin, the vehicles operational dialect will be in Mandarin. This will be applied to the vehicles controls, depicted in figure 99, letter A.

### **Association**

As minimum wage increases, the lower class is seeing a redistribution of wealth and gaining a more positive identity. With this in mind the vehicles aesthetic will reflect this movement, exhibiting a sense of elegance through the unhindered horizontal lines of the grille and fascia, depicted in figure 97, letter A and the rear fascia, figure 98, letter A.

### **Subsistence**

With the vehicle being intended for daily commuting and weekend travel, reliability and durability are key. While maintaining a physical durability, an aesthetic sense of durability will also be applied, implied by the high belt line and narrow windows depicted in figures 97 and 98, letter B.

### **Bisexuality**

Manchu tradition holds men and women in equal power. For this reason the vehicle will most likely be shared. An aesthetic that appeals to both men and women must be taken into account.

With current technical field dress codes influenced by Western culture, Manchu men and women dress conservatively and professionally. The aesthetic of the vehicle will also exhibit these traits, maintaining an overall conservative feel on the exterior of the vehicle, figures 97 and 98, and an overall professional feel on the interior, figure 99.

### **Territoriality**

There are typically up to three generations of Manchu living under one roof. Suggesting that the vehicle will be used extensively for travel, the interior of the vehicle provides for ample storage through a variety of compartments, depicted in figure 99, letter B.

### **Temporality**

Only data relating to the technical function found.

### **Learning & Acquisition**

Current methods of raising children in China emphasize discipline and hard work. Here persistence is key, with the focus on effort over innate ability. As the redistribution of wealth and higher education increases in China, individuals are purchasing vehicles as a sign of accomplishment and status. The vehicles aesthetic will again mirror these traits, exhibiting elegance with the overall front fascia and wheels, figure 97, letters C and D, and with rich interior features, figure 99, letter C.

### **Play**

Manchu have a high interest in sports and games with a rich history of archery and equestrian skills. Focusing on the fun side, the vehicle will incorporate this trait on a technical level as well as a visual level. Through the use of dynamic lines on the lights and bumpers, figures 97 and 98, letters E and C, along with gently flared fenders, figures 97 and 98, letters F and D, the vehicle will give off a hint of athleticism and fun.

**Defense**

Traditionally believing in Shamanism, the Manchu's beliefs are based around the promotion of well-being, strength, healing and love. Maintaining this sense of balance and harmony will be a goal of the overall aesthetic of the vehicle, captured by the use and balance of distinct traits noted previously throughout the other categories.

**Exploration**

Enjoying a wide range of activities that provide a sense of comfort, from gardening to karaoke, the Manchu's sense of comfort will also be considered. The overall feel of the interior, figure 99, must capture this sense of home, instilling a sense of harmony.

## **5.2 Semiotic Incorporation**

By analyzing presented texts and evaluating them through semiotics, the hidden messages or distinctions operating within them can be revealed. This establishes underlying conventions, identifying specific cultural traits, values and beliefs. From the analysis and evaluation of the four advertisements used to market vehicles to the Chinese, chapter four, section two, the following is a recap of how this data was incorporated into the vehicle.

### **General**

Overall it was determined through analysis that traditional Chinese values, beliefs and spirituality are still held in very high regard. The use of traditional Chinese symbols revealed what traits are prevalent, providing an insight to what Chinese citizens aspire to and emulate. Three of the four ads played off these symbols as metaphors, attempting to brand their vehicles as embodying these traits.

Specific to these traits were positive values and beliefs, with the most commonly used being references to power, strength, good fortune, happiness, ambition and freedom.

### **Human Function**

Incorporating the Manchu's traditional beliefs in Shamanism, the vehicle's aesthetic will reflect the values of strength and balance, as well as the traditional Chinese values of freedom and ambition. Shown in figures 97 and 98, with all areas of design contributing to these traits.

### **Marketing Function**

With strong ties to China's heritage and culture, the use of Chinese symbols will be heavily used and referenced in the marketing campaign. This will effectively connect the viewer on a subconscious level, influencing how the ad is read and dictating how the message is understood. This in turn will create an emotional connection with the viewer and in turn increase sales.



### 5.3 Automotive Incorporation

By initially understanding and researching the automotive industry and then focusing on the Chinese market, specifically the Manchu, detailed analysis and evaluation has led to a wide range of technical and production aspects to be incorporated into the vehicle. With Manchu culture and semiotic insights taking priority, the following is a summary of where this data will be applied. Deeper analysis of this area can be found in chapter four, section three.

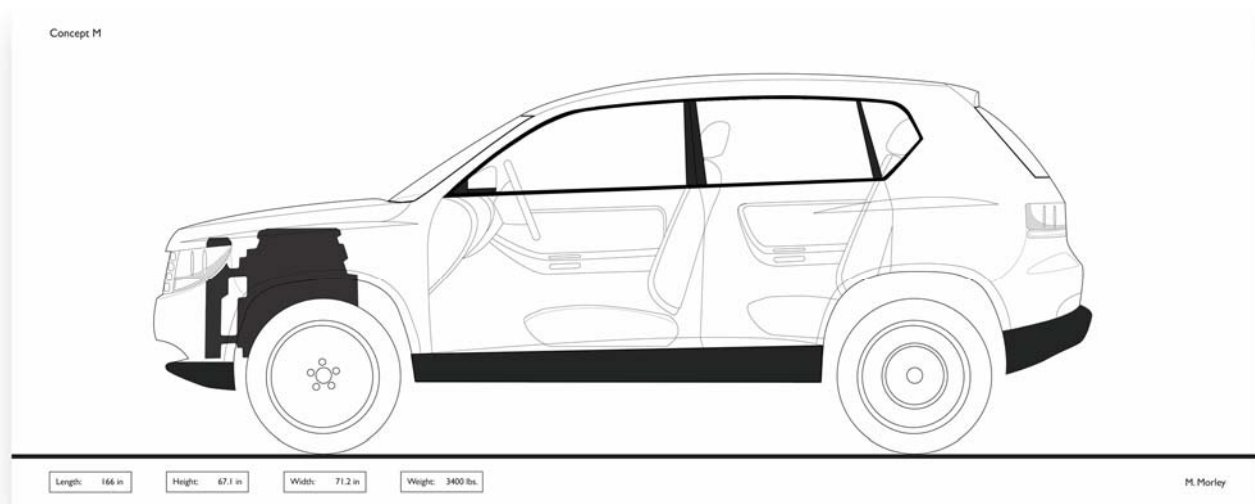


fig. 100

#### Drivetrain

Engine - Small displacement, naturally aspirated I4. This will provide ample power for city use while providing very good fuel efficiency.

Transmission – 6spd automatic. Focusing on simplistic controls, only an automatic transmission will be used. This will also help cut costs by using only one option.

Drive Type – Front Wheel Drive. Greater power loss is typical with rear wheel drive cars.

Incorporating the use of FWD will help reduce power loss, reduce weight and increase fuel efficiency.

Fuel Type – Regular Unleaded. Chosen for its availability and cost.

### **Suspension**

Fully independent front and rear. In order to provide a smooth, quality ride this type of suspension was chosen. This will also help with vehicle longevity and hopefully lower maintenance issues.

Brakes – Four wheel disc brakes will be used to keep current with performance and industry standards, as well as safety standards.

### **Frame & Body**

Platform – Compact SUV

Frame – Steel frame to increase the strength and safety of the vehicle.

Body – The body will also be steel in order to reduce production costs and increase durability.

### **Interior**

Seating – Up to five adults with ample space for cargo.

Technology – Modern but basic technology will be used, providing for ease of use as well as lowering cost.

Controls – Intuitive while focusing on ergonomics and touch points.

## **5.4 Summary**

With the incorporation of this new approach into the current automotive design process a stronger emotional connection between the target market and product can be achieved. Focusing on cultural differences, exploring these traits and extracting tangible aspects to incorporate into design will ensure the products success. By using these tangible aspects and supplementing the four functions the product can meet and ultimately exceed user expectations while promoting and celebrating cultural diversity.

## References

*2013 Production Statistics*. 2014. Retrieved January 12, 2014, from

<http://www.oica.net/category/production-statistics/>

*Alvanon Standard China*. (2013). Retrieved from

[http://www.alvanon.com/assets/files/alvaform/AF-SPECS\\_AS-CHINA-Adult\\_\[v3.0\]\\_\\_03MAR2014.pdf](http://www.alvanon.com/assets/files/alvaform/AF-SPECS_AS-CHINA-Adult_[v3.0]__03MAR2014.pdf)

*Ancient Civilizations*. (2014). Retrieved from <http://www.ushistory.org/civ/8b.asp>

Banks, J.A., Banks, & McGee, C. A. (1989). *Multicultural education*. Needham Heights, MA: Allyn & Bacon.

Bennett. (2008). The Consuming Culture. *Auto Focus Asia*. Retrieved September 19<sup>th</sup> 2012, from

[http://www.autofocusasia.com/automotive\\_design\\_testing/automotive\\_design\\_process.htm](http://www.autofocusasia.com/automotive_design_testing/automotive_design_process.htm)

Berger, Peter & Thomas Luckmann (1967): *The Social Construction of Reality*. New York: Anchor/Doubleday

Carlson, D. (2011). A Return to Fundamentalism. David Report, vol. 13, pgs. 1-7

Chandler, Daniel. (2013). Semiotics for Beginners. *Semiotics: The Basics*. Retrieved June 2, 2013, from <http://www.aber.ac.uk/media/Documents/S4B/semiotic.html>

*China*. (2014). Retrieved from <http://www.nationsonline.org/oneworld/index.html>

*Chinese dress in the Qing Dynasty*. (2014). Retrieved from  
[https://www.powerhousemuseum.com/hsc/evrev/chinese\\_dress.htm](https://www.powerhousemuseum.com/hsc/evrev/chinese_dress.htm)

Ciferri, Luca. (2014). *Porsche sales boss expects China to top U.S. as brand's No. 1 market*. Retrieved from <http://www.autonews.com/article/20140108/RETAIL01/301089981/porsche-sales-boss-expects-china-to-top-u-s-as-brands-no-1-market#>.

*Cultural Taboos in China*. (2014). Retrieved from <http://traditions.cultural-china.com/en/14Traditions5519.html>

Davis, Wade. (October, 2009). *The Wayfinder's: Why Ancient Wisdom Matters in the Modern World*. Convocation Hall, Toronto, Ontario.

Dewar, Gwen. (2012). What research says about Chinese kids and why they succeed. *Parenting Science*. Retrieved October 7, 2013, from <http://www.parentingscience.com/chinese-parenting.html>

*Doing Business in Liaoning Province of China*. (2014). Retrieved from  
<http://english.mofcom.gov.cn/aroundchina/liaoning.shtml>

Hall, Edward T. (1976). *Beyond Culture*. Garden City, New York: Anchor Press/Doubleday.

Hall, Edward T. (1959). *The Silent Language*. Garden City, New York: Doubleday and Company, Inc.

Hill, Patrice. 2013. As Detroit founders, its auto industry soars; rapid globalization leaves city's economy behind. *The Washington Times*. Retrieved December 11, 2013, from <http://www.washingtontimes.com/news/2013/aug/11/as-detroit-founders-its-auto-industry-soars/?page=all>

Huynh, Quynh-Nhu. (2013). *The European Automotive Industry Pocket Guide*. Brussels, Belgium: ACEA Communications Department.

Jakobson, Roman & Morris Halle (1956). *Fundamentals of Language*. The Hague: Mouton

Jin-long, Kwu. (2014). Manchurian People. Altaic Wiki. Retrieved October 13, 2013, from <http://altaic-wiki.wikispaces.com/Manchurian+People>

Kaikan, Jidosha. (2013). Japanese-Brand Vehicles in America: Freer Trade, Greater Growth, More Jobs. *jama*. Retrieved January 7, 2013 from <http://jama.org/freer-trade-greater-growth-more-jobs/>

Kress, Gunther & Theo van Leeuwen. (1996). *Reading Images: The Grammar of Visual Design*. London: Routledge

Leiss, William, Stephen Kline & Sut Jhally. (1990). *Social Communication in Advertising: Persons, Products and Images of Well-Being* (2nd Edn.). London: Routledge

Lodge, David (1977). *The Modes of Modern Writing: Metaphor, Metonymy and the Typology of Modern Literature*. London: Arnold

M. Danesi & P. Perron. (1999). *Analyzing Cultures: An Introduction & Handbook*. Bloomington, Indianapolis: Indiana University Press.

*Manchu People*. (2008). Retrieved from <http://www.chinafacttours.com/facts/people/manchu-ethnic-minority.html>

Meyer, Mathieu. (2013). KPMG's Global Automotive Executive Survey. Amsterdam, North Holland: KPMG International.

Norman, Don. (2012). Does Culture Matter for Production Design?. *Core77*. Retrieved January 8, 2012, from [http://www.core77.com/blog/columns/does\\_culture\\_matter\\_for\\_product\\_design\\_21455.asp](http://www.core77.com/blog/columns/does_culture_matter_for_product_design_21455.asp)

*Northeastern Region*. (2014). Retrieved from <http://www.chinaknowledge.com/Business/Provincdetails.aspx?subchap=9&content=47>

O'Neil, Dennis. (1998). An introduction to the study of culture and the methods used by anthropologists to study it. *Human Culture*. Retrieved 5/13/2013, from <http://anthro.palomar.edu/culture/Default.htm>

Patton. (2007). Ten car design trends to shape the future. *MSNBC*. Retrieved September 17<sup>th</sup> 2012, from [forbesautos.com](http://forbesautos.com)

Peirce, Charles S. (1931-58). *Collected Writings* (8 Vols). Cambridge, MA: Harvard University Press

Saussure, Ferdinand de ([1916] 1974). *Course in General Linguistics* (trans. Wade Baskin). London: Fontana/Collins

Schroeder, Jonathan E. (1998). *Consuming Representation: A Visual Approach to Consumer Research*. Rochester, NY: Rochester Institute of Technology.

Sehgal, Vikas. (2011). India Automotive Market 2020. *strategy&*. Retrieved January 9, 2014 from <http://www.strategyand.pwc.com/global/home/what-we-think/reports-white-papers/article-display/india-automotive-market-2020>

Shenyang. (2014). Retrieved from <http://www.britannica.com/EBchecked/topic/539860/Shenyang>

Spencer, Herbert. (2005). *The Study of Sociology*. Ann Arbor, MI: Scholarly Publishing Office.

Sturgeon, Timothy J. (2009). Globalization of the automotive industry: main features and trends. *Int. J. Technological Learning, Innovation and Development*, Vol. 2, Nos. ½.

*The Automotive Industry in the United States*. 2014. Retrieved December 11, 2013, from <http://selectusa.commerce.gov/industry-snapshots/automotive-industry-united-states>

*The Central People's Government of The People's Republic of China*. (2012). Retrieved from <http://english.gov.cn/>

*The Chinese Calendar*. (2014). Retrieved from <http://www.timeanddate.com/calendar/about-chinese.html>

*Top 10 Automobile Brands in India 2013*. 2014. Retrieved January 8, 2014, from <http://www.mbaskool.com/fun-corner/top-brand-lists/7712-top-10-automobile-brands-in-india-2013.html>

Turner, Victor. (2013). Symbols in African Ritual. *Science*. Retrieved 5/14/2013, from <http://www.sciencemag.org/content/179/4078/1100.extract>

Tylor, Edward B. (2010). *Primitive Culture*. Charleston, S.C; Nabu Press.



Weller, Ludwig. (2013). *Crisis Deepens in the European Auto Industry*. Retrieved from <http://www.wsws.org/en/articles/2013/08/02/auto-a02.html>.

Williams, De'Edra. (2014). *China Business Etiquette, Culture & Manners*. Cyborlink. Retrieved October 24, 2013, from <http://www.cyborlink.com/besite/china.htm>

Womack, Mari. (2005). *Symbols and Meaning: A Concise Introduction*. Walnut Creek, CA.: AltaMira Press.

World Vehicle Production. 2014. Retrieved December 15, 2013, from <http://wardsauto.com/datasheet/world-vehicle-production-1950-2012>

Yi, Zhang. (2012). *New changes in China's social class structure*. People's Daily Online. Retrieved October 15, 2013, from <http://english.people.com.cn/102780/7750165.html>

Zhiling, Mu. (2014). *Nonverbal Communication: Chinese Emotion and Gesture*. Retrieved October 13, 2013, from <http://www.ling.gu.se/~biljana/gestures2.html>