

ATTITUDES TOWARD CAR MODIFICATIONS IN BEIJING AND
THE SAN FRANCISCO BAY AREA

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Abstract

People modified their cars to extract possible performance or appearance from the basic, original and factory products through alteration, addition or well designed replacement of parts. People want their cars to be different from the majority. Under the circumstances cars are the media while modifications are the messages. The study was conducted through the use of survey research, using questionnaire data collection. Participants were from a big university in China and a university in the San Francisco Bay Area. During this research, the tendency of assigning the cause or responsibility of people's behaviors on car modifications to characteristics and individualities mostly is studied; the public attitudes from China and the United States toward modifications are analyzed; media coverages and cultural differences' implications on people's attitudes toward car modifications are also discussed. Besides, bias, misunderstandings and unnecessary worries about car modifications plays essential roles in affecting feelings concerning car modifications. This research aims to increase the amount of knowledge regarding car culture and car modifications culture and let people have a fair and proper perspective on car modifications, decreasing the bias and prejudices as much as possible.

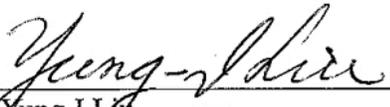
Keywords: modifications, street racing, media coverages, attitudes, individualities

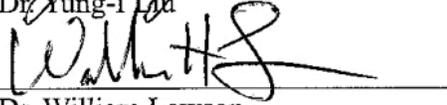
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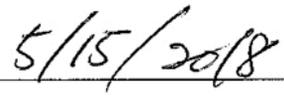
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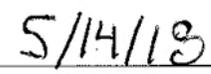


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Chapter One: Introduction

Talking about car culture, modifications or car tuning is a have-to-be-discussed topic. The modification is about racing at the very beginning, all the works to be done are for only one goal: driving fast. While, things have been changed a lot. Modifications are not just for racing but also for fashion and identification. Car tuning is becoming a media to spread messages. As the significant part of the car culture, car modifications plays a significant role in the social functions as well. The primary social purpose of car modifications is to attract attention and public acknowledgment (Forrester, 1999). Having an impressive vehicle to drive around and show off at some social parties can be a source of pride and self-esteem; it demonstrates material ownership and social capital. If young people have done the car modifications themselves, they gain tons of self-satisfaction from their creativity, personal expressions, technical expertise and craftsmanship (Carrabine & Longhurst, 2002; Thomas & Butcher 2003). Besides, the process of car modifications is an essential personal and social experience with meaning attached (Thomas & Butcher, 2003). This experience is not only for those gear heads, car lovers but also normal people who have to want their cars to be different.

Car modifications or even the car culture is mostly displayed mastery, skill, and techniques. Besides, it also showed masculinity as well. Thomas and Butcher talked about hooning, "Hoon" is a term refer to young people, especially young men, who engage in what may be perceived as dangerous driving behaviors (Graham & White, 2007), in their article to show that hooning may be done to show off to peers, gain

attention from the opposite sex or to feel an adrenaline rush (which in this case may involve taking risks behind the wheel). It emphasizes solidarity and belonging. A fundamental part of cruising has a nice car to drive because it serves as a signifier of connection and popularity (Thomas & Butcher, 2003).

The following questions are covered in this research. People's lifestyle beliefs, media coverage influence or personalities are responsible for the behaviors of people's car modifications. First of all, people live in the San Francisco Bay Area are the most open-minded and diverse people in the US. Therefore, their choices on modifications might be different and colorful. They may show more options for driving and more different opinions about this topic. On the other hand, Beijing is the capital of the biggest developing country in the world. The conservative power and traditional Chinese cultures are still very important to people who live in the city. Comparing to the San Francisco Bay Area's liberalism and diversity, Beijing is more like an ancient country with modernization seed growing fast inside it. So there might be more conflicted ideas and controversies about car modifications. It makes me wondering, is there a different thought about tuning their cars between people live in China and the United States. Because Beijing is the capital and a symbol of China, the San Francisco Bay Area is the most diverse and open area in the United States, it is a typical collectivism versus individualism comparison. Different lifestyles in the expression of unique music preference, personal TV program choices and spare-time activities may also influence people's attitudes towards car modifications.

Since the residence difference may be one of the factors that may impact people's behavior in car modifications, the answer of what are car modifications and what does car tuning do to our life may also help. Current car products cannot fulfill the need of market right now. People's eagerness on more customized and characteristic cars is growing. People are doing engine tuning and suspension changed for maximum performance enhancement. However, not everyone did modifications for performance and racing. Somebody does not only tune cars for racing, but the original purpose of modifying cars to make them faster and faster are also fading away. Instead, more and more people are looking for appearance modifications. As an example, change rims and wheels, not for a functional purpose but fashion intention. Under this circumstances, they are looking for differences, their way to display individualities and personalities.

People still have the bias on modified cars and car modifications itself, like the misunderstanding on car tuning, worrying about the safety of modified cars. Safety is a problem with modified cars; people are not confident about small workshop working on their cars. They still believe large manufactures can do a better job of assembling. Symbolizing modified cars' owners as gangsters or outlaws and visually supposing modified cars are fast, dangerous and meant to be racing. Some people still think guys obsessed with car tuning are either outlaws, rebels, or showing off a symbol of resistance, especially in China.

In visual rhetoric perspective, the prejudice on modifications is due to some movie scenes and violent video games, even to motorsports itself. Because there are lots

of serious accidents happened during the motorsports, crash, spin, and fires. That tragedy gives the public a huge visual impact that modified cars, especially those deep modified and looked different with the original ones, have a direct causal relationship with serious car accidents. Besides, some popular TV shows also have responsibility for this, for example, Top Gear from BBC and Grand Tour from amazon.com. When petrol heads are crazy about these shows and feeling so good with the fancy footages about cars, big fire explosions scenes and those funny but aggressive jokes sometimes, they don't realize how these impact other people positively or negatively. For instance, I never visual rhetorically thought the humor and irony jokes from Top Gear can frankly reflect combustion masculinity. In Tranter and Martin's study, "The study concludes by showing that Top Gear not only allows a letting go of combustion masculinity with laughter and humor but also less risky, less violent and more lawful ways of being male in the present through an emphasis on making, care and responsibility" (Tranter & Martin, 2013, p. 22). This could be a negative influence on feminism audience or regular women audience. Media coverage is a very important factor that may influence people's modifications choices which can also reflect their attitudes toward car modification. Thinking about media coverage's effects on people's behaviors, those who are more frequently exposed to negative media coverage of cars may have more negative attitudes toward car modifications than people who are less frequently exposed to negative media. The implication of media is powerful.

People do tuning or modifications on their cars because they are not satisfied with the original ones that come from factory directly to their hands. Personalizing their cars can bring them great satisfaction and also the opportunities to show off characteristics. Countless modifications parts in the cars represent meanings. They may tell a story of the car owner, consist a good memory of racing time, show people a unique taste of alternative music or independent rock band, represent a great talent on car tuning with high engineering gifts and so on. These messages are all behind modifications. Lifestyle choice is representative of one's personality, while one's music taste and preference can also tell part of one's lifestyle. The explanation of people's behaviors on car modifications may be answered by the connection between public attitudes towards their lifestyle and modifications involvement. As a result, the research is digging whether there is a connection between people's attitudes toward their lifestyle especially music preference and their involvement in car modifications or not.

Furthermore, people's choices can also be an important part of the conversation about cultural differences. For instance, to achieve a functional goal like increasing downforce for the car. There are many ways to get there. The rear wing, front wing, spoiler and underbody they are all options. The most aggressive option is the rear wing with underbody, giving other people around the most shock impact visually. However, this wing may not be used in the future for eighty percent of the time since the owner may not be even a member of a racing track club. Obviously, living in the information age with Internet everywhere, exposure to media coverages is, without doubt, a vital

influence on people's feeling about car's modifications part. So this rear wing is not built for performance, is just for broadcasting a message, that he is sharp? Or swag? A more low profile way of modifications? Or maybe a more aggressive way for expression? People's attitudes toward those exaggerated high-profile modified cars may be more positive if they are often exposed to positive media coverage or reports.

The attitudes towards various kinds of car modifications have been a minority in the research world for all these years. The reason is not that people don't have interests in this topic. On the contrary, people have lots of interests, but car modifications is controversial. Misunderstanding on car tuning, worrying about the safety of modified cars, symbolizing modified cars' owners as gangsters or outlaws and visually supposing modified cars are fast and dangerous are all the prejudice and bias people held about car modifications. This study analyzes the public's attitudes towards modified cars and car tuning, to explore the hidden messages behind those various car modifications. It questions the differences in message spreading of car modifications between China and the United States. The study was conducted through the use of survey research analysis, using questionnaire data collection. The research meant to increase the amount of knowledge regarding car culture and car modifications culture and let people have a fair and proper perspective on car modifications, decreasing the bias and prejudices as much as possible.

In the following chapter two, the conversation starts with talking about attitudes and cultural difference. The cultural differences between China and the United States is

the first thing to think about during this conversation. Since China has just stepped to the industrialization while the United States has already been at the league for over hundreds years. This leads to a maturer auto markets as well as modifications markets. People's attitudes toward modification in two kinds of markets may show some differences. Then, people's attitudes may be implicated by media coverages including news coverages, movie scenes and motor sports. The prejudice or preference towards car modifications has very likely possible come from those media coverages. Besides, with a deeper dig on the car modifications, the understandings of cars, tunings, racing, performance and the connections among them are getting better. Finally, even thong people are not gear heads or petrol heads they may still do modifications because of individualities displacements. They do modifications to show their differences from the routine rather than chasing fast and furious.

Chapter Two: Literature Review

“Attribution theory deals with how the social perceiver uses the information to arrive at causal explanations for events. It examines what information is gathered and how it is combined to form a causal judgment” (Fiske, & Taylor, 1991, p.23). In this research, the explanation of people’s choices about their car modifications and lifestyles are central concerns. By the designed questionnaires, the reasons behind why people did modifications to their cars and all explanations made by people in attempts to show their personalities are under the research.

At the very beginning, car modifications was born for one reason and one reason only, to enhance cars’ performance and make them run faster and faster. However, with the development of the society, cars have been changed, racing has been different, so do people. Modifications are not only for performance now. What are people’s attitudes toward modifications? This is going to be the first part of the conversation. People from all over the world also have different opinions, whether they are from China or US. Besides, car modifications are not equal to car racing or dangerous illegal driving behaviors. Some modifications especially body tunings are about identifications and visual persuasion, to give a message to the society. The second part talks about exposure to media. While, connections among racing, modifications, dangerous, illegal and bad behaviors come easily to people’s minds sometimes. It is highly possible that negative media coverages about cars may subconsciously influence people. Some prejudice on modifications is due to some movie scenes and violent video games, even to motorsports

itself. It is unfair to hold this biased idea to modifications. Then, an explanation about modifications follows, and some terminologies are discussed. Finally, cars are the media, and the modification is the message. People do modifications not only to chase performance enhancement of the car, even though they did so, but they are also still doing that for showing their personalities and individualities to the rest of the world. The display of their characteristics is the primary purpose of their modifications.

Attitudes toward Modifications and Cultural differences

Fishbein defined an attitude as “a learned predisposition of human beings” (Fishbein, 1967a, p.383). Based on this predisposition, “an individual would respond to an object (or an idea) or some things (or opinions)” (Fishbein, 1967b, p.392). Kotler stated that an attitude is a person’s enduring favorable or unfavorable evaluations, emotional feelings, and action tendencies toward some object or idea (Kotler, 2000). One definition of an attitude is “a relatively enduring organization of beliefs around an object or situation predisposing one to respond in some preferential manner” (Rokeach, 1968, p. 112). Attitudes have been defined in many ways; attitudes are commonly viewed as summary evaluations of objects (e.g., oneself, other people, issues, etc.) along with a dimension ranging from positive to negative (Petty, Priester & Wegener, 1994). Attitudes are the most common component of surveys; they include but are not limited to, components of satisfaction (Hofstede, 1998). People express their attitudes by telling their feelings and subjective responses. In a way, most of the survey questions cover attitudes, the objects or situations are different aspects of the reality, the information

about their attitudes are hiding behind the practice. According to information integration theory, attitudes or beliefs are formed and modified as people receive, interpret, evaluate, and then integrate stimulus information with existing beliefs or attitudes.

In this research, in order to test participant's attitudes towards car modifications and their true feelings about car racings, motorsports and other related topics that help people understand car modifications better, a variety of variables are tested, including feelings, attitudes, and lifestyles. In this research, lifestyle and attitudes are the main variables used to process the test. Using psychographic segmentation to group those who love cars and modifications and people who does not into more specific cluster. When attitudes, motivations, personality characteristics and belief systems are analyzed mathematically or statistically to determine groups with substantially different attitudes, the result is a psychographic segmentation (Morgan & Levy, 2002). Different characteristics determine different lifestyle choices which also make the attitudes towards the same thing different.

Furthermore, media coverages about the car modifications topic, including street racing, track racing, and motorsports may influence people's attitudes positively or negatively. Either way, the biases exist. "Biases in information processing have become prominent concerns in attitude change. Researchers have also gained an appreciation of the multiple ways in which a single variable can affect persuasion "(Petty, Wegener & Fabrigar, 1997, p.625). It's hard to tell which specific point that triggers the change of one's attitudes or feelings about one thing. Like Fazio and Williams and Houston and

Fazio said: “The individual will bias information processing in a direction implied by the valence of those attitudes” (Fazio & Williams, 1986; Houston & Fazio, 1989). This research is proposing different kinds of possibilities and hypotheses to find the closest answer to the truth. There are multiple motivations for behavior, and people in a specific demographic category have a wide range of attitudes (Morgan & Levy, 2002).

Positive Attitudes

To some people, especially to those who are petrol heads, car modifications is like a little boy’s game but more expensive and dangerous. While the dedication and enthusiasm the big boys or little boys put into the game are still the same. Building or assembling something is the most exciting and creative activity in the world, for some people. They feel they can control the world while doing it because they are in the zone. Because it is generally assumed that people prefer to control their environment (White, 1959) directly, one may expect that people would capture this opportunity and make their cars different from others by exerting control in their environments through a series of personalities-directed, self-initiated car tuning, as well as use the modifications to meet new friends, learn new skills and knowledge to empower themselves, to make themselves different. Via car modifications, the original factory cars look like individualization products.

Neutral Attitudes

To some people, modifying or tuning the car is like a magical movement because of the unfamiliarity with unknown areas, the whole process of modifications is full of mysteries to them. So they may not put their cars into risk modifying them since they cannot handle the consequences of modifications. Some of these people even hold

opinions that mass products are always more reliable than handmade products. In general, people only act when they know their general expectancies. Their actions may produce predictable results (Lefcourt, 1966; Rotter, 1966). The predicted results let people feel safe because it won't be too risky and do damages beyond their expectations. It follows that the nature of those who have no plan on modifications because of the anxiousness about unfamiliar engineering (not because they do not want to change their cars or chase personalities) in general may be better thought of as an outcome of individual cautiousness. They think too much sometimes; they miss a lot too.

Negative Attitudes

It's hard for people to trust a personal workshop is a way better place than massive manufactory on tuning cars. Worrying about the safety especially the stability and maintainability of modified cars. They still believe large manufactures can do a better job in assembling, symbolizing modified cars' owners as gangsters or outlaws and visually supposing modified cars are fast, dangerous and meant to be racing. Some people still think guys obsessed with car tuning are either outlaws, rebels, or showing off a symbol of resistance, especially in China. However, it also creates cognitive dissonance. If a person holds two cognitions that are inconsistent with one another, he will experience the pressure of an aversive motivational state called cognitive dissonance, a pressure which he will seek to remove, among other ways, by altering one of the two "dissonant cognitions" (Bem, 1967). Because people have different ideas on one thing and once they hold inconsistent thoughts, they don't feel right as a result sometimes it

turns out an argument or a fight. Some people who hold negative attitudes toward modifications may automatically leave bad comments on people who love modifying their cars or spend weekend time on racing tracks. However, if a person held two psychologically inconsistent cognitions, he would experience dissonance and would attempt to reduce dissonance much like one would attempt to reduce hunger or thirst (Leon, 1950). People cannot stand some different ideas for they have the confidence to believe they are right or better than others like car modifications are for bad boys. In their mind, modifications and race driving already have solid positions and vivid images, which are dangerous, irresponsible and unstable. So they cannot see modifications as a normal way of personal expression or chase for the limit of motor-powered engineering.

Cultural Difference between China and the United States

Cultural values of collectivism and individualism are different in their emphasis on independence and interdependence within some group (Markus & Kitayama, 1991). Collectivism focuses more on identifying the self within collective groups, while individualism gives priority to the people themselves. Psychological dependence, union, sharing, communal obligations, stable social engagement, and group benefits are all common factors of collectivism (Hui & Triandis, 1986). So, some Chinese people are rather willing to buy a car without personality than buying a car his friends or family members will judge too much. The core element of collectivism is the assumption that groups bind and mutually obligate individuals. In contrast, individualism focuses on personal rights, a concern for the self and immediate family, personal initiatives and self-

fulfillment, and personal achievement (Hofstede, 1980). In other words, personal accomplishment is vital for individualistic cultures; whereas, for collectivistic cultures, public benefit matters the most (Ji, & Janicke, 2018). Some Chinese people are the opposite of American people; they rather are ordinary than show the rest of the world that they are different or they have their individualities. Scholars have generally reached a consensus that individualism is the dominant cultural theme in the Western countries, particularly in the U.S (Ward, 1995; Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985), while Asian countries have stronger emphasis on collectivistic values (Fletcher, Olekalns, & Cieri, 2001).

In Hofstede's cross-cultural survey of IBM employees, he found that the U.S. was ranked highest on the individualism dimension (rank 91), and China (rank 20) being at the very low end of the individualism dimension; thus, representing a collectivistic orientation (Hofstede, 2011). That's why choosing samples from Beijing and the San Francisco Bay Area is a good idea. These two cities partially represent the two countries' situations. They are both vast, diverse and having bad traffic, which meant car capacities are significant.

Exposure to Media

There is some media bias on modified cars. People are exposed to too many negative media coverages such as car chase scenes in action movies with stock cars, risky driving in car commercials, dangerous driving tests on TV shows and so on, and most people have a very vague idea of modified cars and mass-produced performance cars (or

even some ordinary fast cars). These cause people think modifying cars is quite full of spirits of resistance and revolt.

Because there are lots of serious accidents happened during the motorsports, crash, spin and fires. Those tragedies give the public a huge visual impact that modified cars, especially those deep modified and looked totally different with the original ones, have direct causal relationship with serious car accidents. It thus appears that news outlets may promote media violence in general, and video game violence specifically as a direct cause of violent behavior (Ferguson, 2007). Besides, some popular TV shows also have responsible for this, for example Top Gear from BBC and Grand Tour from amazon.com. When petrol heads are crazy about these shows and feeling themselves so good with the fancy footages about cars, big fire explosions scenes and those funny but aggressive jokes sometimes, they don't realize how these impact other people positively or negatively. For instance, I never visual rhetorically thought the humor and irony jokes form Top Gear can frankly reflect combustion masculinity. The study concludes by showing that Top Gear not only allows a letting go of combustion masculinity with laughter and humors, but also less risky, less violent and more lawful ways of being male in the present through emphasis on making, care and responsibility (Tranter & Martin, 2013). This could be a negative influence to feminism audience or regular women audience.

TV and Movies

Lots of people believe that displays of risky, dangerous drivings on Movies or TV Shows, such as excessive speeding, doing "Donuts" on the street, may encourage more

people to drive fast. Because watching other people doing something thrilling or exciting can bring a special thrill-seeking feeling to an individual. A driving-specific thrill seeking measure called the Driver Thrill Seeking Scale included ideas, such as driving fast for nothing but some thrill (Stradling et al., 2004) and driving fast sometimes just to frighten the driver himself (Stradling et al., 2004). With this feelings and motivations, people may try to put these into practice. Especially when they have a perfect ride to implement, for example, a good modified car or a sports car. Some government authorities also suggest that motor vehicle advertisements that show risky driving may increase the likelihood of people exposed to these media in risky driving (Advertising Standards Canada, 2009; Automobile Association, 1992; Jones, 2007). The results of this study advocate that a regular exposure to aggressive driving motor vehicle medias may have effect on risk-positive attitudes, emotions or risky driving inclinations. Although males as group showed statistically significantly higher risk-positive emotions on exposure to negative media coverages of cars and driving, which includes risky drivings and motor racings on the road, compared to female as a group (Fischer et al, 2009). However, in a qualitative study, participants of seven focus groups examined messages they felt were being promoted about motor vehicles and driving in two motor vehicle commercials they viewed (Redshaw, 2007). Participants described the dominant messages promoted in the commercials as racing-focused associated with aggressive, competitive driving styles, although in general, the males tended to be less concerned about suggestions of racing, pushy, competitive, dominating driving and saw the advertisements as showing normal

male activity (Redshaw, 2007). It shows that male audience has already been used to those thrill-seeking signals from medias. They do not see these are dangerous activities or bad ideas to the road safety. They probably think it's normal for a masculine to drive like that, to speed like that. In this case, modification is no more than a simple step towards the thrilling driving experience.

Video Games

Competitive racing video games can make a profound influence on people. Risky driving is a key contributor to motor vehicle injuries and deaths. Despite the potential negative consequences of unsafe driving, there is much risk-glorifying content in media such as in street racing video games, movies, television shows or advertisements (Ferguson et al., 2003; Fischer et al., 2011; Shin et al., 2005; Watson et al., 2010; Vingilis & Smart, 2009). With different personality characteristics there comes different behaving options. Individuals who exposed to violent video games may highly possible have aggressive thoughts. The important question is whether these “thoughts” transfer to aggressive behaviors or not (Ferguson, 2007). In this study, the motorsports them video game may encourage the players to commit street racing or dangerous driving. Among personality characteristics, thrill, sensation or risk seeking propensity has consistently been associated with risky driving (e.g., Arnett, 1996; Arnett et al., 1997; Burns & Wilde, 1995; Clément & Jonah, 1984; Dahlen, Martin, Ragan, & Kuhlman, 2005; Donovan & Jessor, 1985; Fernandes, Soames Job, & Hatfield, 2007; Jonah, 1997). Thrill-seeking may lead to stunt driving because stunt driving activities can provide the type of novel and

intense stimulation that thrill seekers find pleasurable (Arnett, 1996). Only recently have risk-taking inclinations and actual behaviors been examined about risk-glorifying street racing games. As Beullens et al. (2008) stated: “It is therefore remarkable that the relationship between playing such games and reckless driving has remained largely unexamined” (p. 89). There are still lots of undoing research about the correlation between playing video games and influence in actual behaviors, but the attitudes to driving behaviors and cars are sure can be tested. A range of variables influence drivers’ attitudes to speeding, driving violations, and accident involvement. Among the most significant of these variables are age, gender and sensation seeking propensity (Dobson et al., 1999; Laapotti & Keskinen, 2004; Turner & McClure, 2003).

Playing street racing video games was a significant predictor of positive attitudes toward risky driving which, in turn, predicted intention to drive this way in the future. Similarly in Fischer’s survey of 198 Germans, they found that playing street racing games was positively associated with self-reported competitive driving, exhibitionistic driving, and collisions. Kubitzki, Fischer, Guter and Frey (2007) conducted a focus group study with young German illegal street racers and found that street racing video games were perceived by the illegal street racers to play an important role in their deviant driving. Aggressive video games trigger aggressive ideas which increase accessibility of other aggressive cognitions, emotions, and behaviors (Anderson & Bushman, 2001, 2002; Anderson & Dill, 2000). As Fischer et al. (2011) wrote: “the racing game effect requires the player to perceive that he or she is actively involved in

breaking traffic rules, which leads to the self-perception that one is a reckless driver, and thus finally to more risk-taking” (p. 703).

Those risky-glorifying media can be one of the reasons why those risky drivers have their risky driving inclinations at first place. After all, exposure to risk-promoting media may change individuals’ self- concept because they come to identify themselves with the media characters engaging in risk-promoting behaviors (Fischer et al., 2012). They exposed themselves too much to these media and think these as a cool gesture to be somebody special or hold the idea that such risky driving may provide an opportunity to active self-involvement or tend to see their modified car’s image affecting the way in which other people see them (Automobile Association, 1992), to show their personalities and independence to the rest of the world that they are different from others. A low percentage of participants in my research have no idea the correlations or the difference between stock racing cars from the factory and the modified cars from a personal plant, they may assume modifying is one of the reasons that these drivers behave aggressively and dangerously on the road. But base on the study other scholars did and my research, the key point to the risky driving is driver’s mind which has no direct connection to the modifications itself. It’s a complicated impact. Somehow, some people blame modifications should be responsible for having bad influences on road safety.

Car Modifications

Car modifications or car tuning is a process to modify the performance or appearance of a vehicle. Most vehicles leave the factory set up for an average driver's

expectations and conditions. Modifying a car is to seek a way to personalize a vehicle from the factory to the owner's preference. To meet the owner's unique needs of the car, engine tuning, chassis parts altered, rims and tires changed, and other car's appearances changed are necessary. Some of the people chase better fuel economy with a fancy look of the interior design; some of them look for a colorful body; some of them try best to produce more power of the engine and provide a better driving experience. No matter which part they choose to alter, they have requests from the car. In their eyes, cars are not only a transportation tool but also a part of personal life, a piece of their personalities, a slice of their styles to show the rest of the world that they are different.

For most of the petrol heads (gearheads or car lovers), the modifications of performance are their priorities, all the time. Because car modifications was all about street racing at first. The relation to auto racing makes performance modifications play a dominant role in the whole car tuning market, though most of the performance cars never compete.

Performance Modifications

Modifications for enhancing performance is the very first reason people do modifications at first place, to make the car run faster. In tuning for performance field, engine, chassis (including suspension, steering, tires, and rims) and aerodynamic performance are the most important. But, during our study, this part is not the priority. So, here is just some briefing information.

Engine Tuning

Engine tuning is the process of modifying the operating characteristics of an engine, and also involves modifications designed to increase the power of the engine. Engine tuning plays a vital part in ensuring that all digital processors that actively control fuel injection and ignition timing to provide optimal engine operations (Hardie, Tait, Craig, Chase, Smith & Harris, 2002). These modifications can range from a simple chip tuning to adding nitrous injection, to a complete engine swap. "Tuning an engine" has many different meanings today. Traditionally, to tune an engine meant adjusting the timing and the air/fuel ratios. Adjusting engine timing and air/fuel ratios improves power and reliability of an engine without any further modifications. On the other hand, tuning an engine becomes incredibly beneficial after already heavily modifying the engine with upgrades, like forced induction (including nitrous) or adjusting the internal parts to increase engine compression.

Today, many people consider tuning to be adding cold air intakes, exhaust systems, Turbochargers, or any other part that could conceivably make the car faster. It is important to note that the two different meanings of the word tuning refer to two entirely different methods of making a car faster. Other standalone engine management systems are available. These systems replace the factory computer with one that is user programmable.

Suspension Tuning

Suspension tuning involves modifying the springs, shock absorbers, sway-bars, and other related components of a vehicle. Shorter springs offer greater stiffness and a lower center of gravity at the possible cost of unwanted changes of suspension geometry. People often put suspension condition and comfort of the car together, because the suspension is the part that controls vibration and feedback. While, sometimes, comfort is a complicated concept. Comfort, in this connotation, does not imply softness or smoothness: a race car driver is not “comfortable” in a chassis that is spongy and soft. The race car driver is ‘comfortable’ in a car that provides excellent feedback and inspires confidence (Johnston, 2010). Handling is sometimes used to describe the lateral behavior of a vehicle (Genta, 2006), or it may be intended to describe the responsiveness of the vehicle to driver inputs (Dixon, 2007). The most comfortable condition is a balance. Balance the handling and seating comfort. People who just did a modifications on suspension, are the most low-profile petrol heads because most of these tuning parts cannot be told from the surface. People have to drive the car themselves to tell the difference.

Misunderstandings on Modifications and Motor Sports

When consumers are not satisfied with their original cars from the factory, they choose to modify them. When they first modify a car, the prototype they are looking for is racing car from famous motor sports like Formula 1, Le Mans 24hours or WTCC (World Touring Car Championship) and so on. Not only the motor sports racing cars

represent the highest level of vehicle technologies but also the athletic spirits of motor sports encourage their fans to make the change to their cars to reach a higher, faster and stronger goal. The principle of vicarious learning would predict that motor-sport enthusiasts who watch racing events frequently are more likely than non-motor racing fans to be influenced by these events (Vingilis, Seeley, Wiesenthal, Wickens, Fischer & Mann, 2013). But in another event like football or basketball, they need people or fans to practice a lot and keep fitness to be involved in the event. Otherwise, individuals cannot participate in playing them. While motor sports do not have that limits to the entrance, almost everybody who has a driver's license can drive a car, and it's not exhausted; it does need people to run or lift weights; it does not need high coordinate abilities or team spirits. While none of these are true about professional racing.

Misunderstanding on modifications and racing has been there for a long time. However, racing is a careful, skillful, need-to-check-every-data and full-of-engineering skills sport. Driving on a racing track is a different thing from exceeding the regulation speed on a highway. Because racing is a careful, skillful need-to-check-every-data and full of engineering sport. On the racing track, all cars need technical requirements, a series common sense checks to make sure all vehicles are in good, safe working order. It is important to check out every car before trying to get it inspected. Wheels, tires, steering, suspension system, engine and brakes, everything needs to be inspected carefully. Although, there is evidence that motor racing events are linked with an increase in road accidents off the racetrack. Racing drivers themselves have been shown to be

poor role models regarding their safety record on public roads (Williams & O'Neill, 1974). Racing on professional racing tracks is not dangerous and illegal, and regular modifications for racing is not either.

But racing on the public street with no respect and sense of responsibilities is. Street racing and associated stunt driving activities, such as burnouts and drifting, are high risk driving activities and of considerable concern to the general public (Palk, Freeman, Gee Kee, Steinhardt, & Davey, 2011; Vanlaar, Simpson, Mayhew, & Robertson, 2008). These driving activities have also fostered media and government attention because of associated traffic-related deaths (Palk et al., 2011). Parkin the review of street racing for the US Department of Justice, state that the problem has reached severe levels, and too many cases like these lead the public to think those car modifications are for very dangerous street racing or at least prepared to risky driving and only for “bad boys” or rebels (Parks, 2007). Stunt drivers were more likely to be young, less concerned about excessive speeding and street racing, to hold more negative attitudes towards Ontario’s stunt driving legislation and more positive attitudes towards street racing and stunt driving, to score higher on the driver thrill-seeking, competitive attitude toward driving and risky driving scales and more likely to report traffic offenses in the past year. The sequential logistic regression showed that personality characteristics and attitudes provided unique contributions to the model in predicting stunt driving. Thus, although a minority of the sampled car and racing enthusiasts engage in stunt driving, further interventions need to be considered to reduce their risky driving beliefs, attitudes and

behaviors (Vingilis, E., Seeley, J., Wiesenthal, D. L., Wickens, C. M., Fischer, P., & Mann, R. E, 2013). Denholm and Dalton also note that being a car culture enthusiast can be a definite lifestyle choice (Denholm & Dalton, 2005). It is vital to emphasize that other than some particular types of dangerous and illegal driving behaviors like drag racing on public streets, being part of car tuning or car culture is not harmful to people in general. People could probably spend their money on drugs and alcohol, but instead, they put it into something they can handle by themselves, it is their entertainments on the racing track at the weekend (Denholm & Dalton, 2005). Thus, there are still bright sides of car modifications no matter how people misunderstood before.

Appearance Modifications

Appearance modifications includes exterior modifications. It could include body kits, spoilers, HID (High-Intensity Discharge) Xenon lights, alloy Wheels, carbon fiber body components. Obviously, body modifications offer questionable improvements in Aerodynamic performance. The study focuses on appearance modifications because the visual of car modifications has more influence on normal people since not everyone has enough knowledge about engines and chassis, but most of the people can tell the difference from the look of a car (or modified car). People who modify their cars want to show the characteristics of themselves. On the other hand, people walking on the street saw those modified cars, their feelings, and attitudes towards those cars can also show their individualities. Behind all these reflections and feelings, messages are spreading, and different car cultures are bred.

Aerodynamic

Aerodynamic forces can be used to improve tire adhesion and, thus, improve vehicle performance and appearance as well. Once the car looks good, it must run well as well. Because there is a beautiful balance between mechanical functional structure and performance behaviors. When aerodynamic designing is logic and good for the car performance it always comes with good looking or at least, not bad looking. Since aerodynamic modifications is concerning to bodybuilding too much, that part is discussed under this category.

Borrowing matured airplane wing design to help car's performance by providing more downforce is a brilliant idea. Assembling a big rear wing is becoming the most popular modifications demand in car tuning business. Most of the people are chasing the visual effect more than the actual function. But, to provide a good aerodynamic function to the cars, engineers have to solve lots of problems. The difficulties were highlighted by Katz (1994), and his findings can be summarized as follows: "A race car lifting surface design is different from a typical airplane wing design because (a) a race car's front wings operate within strong ground effect, (b) open-wheel race car rear wings have very small aspect ratio, and (c) there are strong connections between the wings and other vehicle components like body, wheels, or other wings" (Race car wings section, para. 1). These lifting surface designs lead to a serious question: does every car need them? The answer is no. Because, if the car cannot run fast enough, even the wings cannot provide enough downforce, which means the wings only bring cars liability, not ability. These

fancy, good-looking designs are just for a race car that designed to be running at top speed on the racing track, not a family mini-van or SUV meant for highway and city parking lots.

Adding or modifying spoilers and a body kit to improve not just the physical looks of the car, but most importantly, the aerodynamic performance of a vehicle. Through the generation of downforce, cornering speeds and tire adhesion can be improved, often at the expense of increased drag. Due to the complex geometry of these vehicles, the aerodynamic connection between the various body components is significant, resulting in vortex flows and lifting surface shapes unlike traditional airplane wings (Katz, 2006). This design leaves people a lot of choices. For those who focus on enhancing performance, they will install spoilers or wings with perfect engineerings. However, for most drivers, they do not have a powerful enough car to handle those body kit. The only reason they put those things on their cars is to show their personalities. It's easy to get that job done, install a big wing; then other people will know that you are different.

Body Tuning

“The motion of air around a moving vehicle affects all of its components in one form or another. Engine intake and cooling flow, internal ventilation, tire cooling, and overall external flow all fall under the umbrella of vehicle aerodynamics” (Katz, 2006, para. 3). Body tuning involves adding or modifying spoilers and a body kit. Sometimes this is done to improve the aerodynamic performance of a vehicle, as in the case of some

wings or bumper canards. More often, these modifications are done mainly to improve a vehicle's appearance, as in the case of non-functioning scoops, wide arches and the like. To lighten the vehicle, bodywork components such as hoods and rearview mirrors may be replaced with lighter weight components.

Often, body modifications are done mainly to improve a vehicle's appearance, as in the case of non-functioning scoops, wide arches or other aesthetic modifications. Aftermarket spoilers or body kits rarely improve a car's performance. The majority, in fact, add weight and increase the drag coefficient of the vehicle, thus reducing its overall performance. Roof chops and sectioning the body are also used to improve aerodynamics, dating back to the 1940s.

Tires and Rims

Tires have large effects on a car's behavior and are replaced periodically. Therefore tire selection is a very cost-effective way to personalize an automobile. Choices include tires for various weather and road conditions, different sizes and various compromises between cost, grip, service life, rolling resistance, handling and ride comfort. Drivers also personalize tires for aesthetic reasons, for example, by adding tire lettering.

Audio Changes

A stock audio system is one specified by the manufacturer when the vehicle was built in the factory. A custom audio installation can involve anything from the upgrade of the radio to full-blown customization based on the audio equipment. Events are held

where entrants compete for the loudest, highest quality reception or most innovative sound systems. Some common modifications include more top quality speakers and subwoofers, amps, a better wiring system.

Alternative Forms of Modifications in the San Francisco Bay Area and Beijing

The other important form of modifications is fixing or rebuilding, keeping an old even antique car running again. This is a different area from what we talked about before. Rebuilding the car is about keeping the car's function for business or engineering purpose, seldom for personality display. In the San Francisco Bay Area, there are a group of people in Livermore, like collecting antique American cars from the 1950s, like 1949 Chevrolets Fleetlin race, 1956 Ford Crown Victoria, 1955 Chevrolets and so on. Most of the modifications purpose of these cars is to keep them running. Although those old American cars on the road today have relatively high inefficiencies due in large part to the lack of modern technology (James & Marcus, 2006). This has resulted in increased fuel consumption as well as adding to the economic plight of its owners. Most of the cars need to install new electrical parts and modern starters. Otherwise, there is no way they can be fully functional.

There is a modifications case about a 1955 Dodge in Livermore, start with a plate intake to enhance air inflow efficiency. Then rebuilt the eight-cylinder engine three times. Talking about rebuilding engines, one of the necessary steps to do that is boring cylinders. The reason to bore the cylinder is that there would be lots of scratches on the cylinder after driving for years. It's a normal thing and happens in almost every car due to

the fast vertical movements of plungers inside the cylinders. While the boring process is not difficult nor expensive if the cylinders are from last ten or fifteen years because all the procedures to achieve the goals are made base on modern industrial mass-production standard. However, these cylinders came from the 1950s and made by No.45 raw steel which is a heavy and old material with high intensity. And the numbers of these cars and parts are insufficient. So the price to rebuild is high. To keep the intensity of iron qualified to found cylinder, the factory processed heat treatment before shaping. During this process, a whole new cylinder was giving birth.

And this is only one step of rebuilding, fooled by updating driving system and other transmission parts.

In Beijing, there is a very rich guy with lots of powerful friends in the government, so he has the resources to buy a 1957 Cadillac. Because in China, to own antique cars and modify them are both illegal activities. If somebody tells you he can get you an antique car, he must be a smuggler. However, this 60 years old car, due to the limitedness of the age, has a lined eight cylinders engine can only produce 100 horsepowers. But it's still good enough to drive its almost 3000 kilograms weight body across the city of Beijing perfectly thanks to modifications and engine rebuilding.

The parts they used to modify their old cars are various. To buy parts to make the engines work well on those cars, the owners have to choose some illegal way to import from all around the world through third countries. Ninety percent of the modifying cases in antique cars are about engine rebuilding or changing. Chassis modifications case is

rare. If the modifications happened in the US or other mature marketing countries with perfect labor union system. Not China obviously, because the Chinese government embargoed industrial products and tools, which meant there is no chance for the public to purchase cheap and mass-production items or tools to do mechanical works by themselves. And this also makes the government monopolize the market.

Although car modifications at first place are meant to enhance cars' performance and make them faster, not all of them are for racing. Some of them are just for bragging or showing off various messages.

Car modifications are not equal to car racing or dangerous illegal driving behaviors. When people think of car modifications and racing, the first reaction, highly possible, is dangerous or outlaws thanks to countless action movies and part of the history of car modifications connecting to racing and fast driving mentioned before. Just like Graham and White mentioned in their article about car culture and dangerous driving, hooning (Hoon is a term referring to young people, especially young men, who engage in what may be perceived as dangerous driving behaviors) on public streets and highways is generally considered unsafe by authorities and has called forth a range of sanctions (Graham & White, 2007). People easily put racing, modifications, dangerous, illegal, bad behaviors these words together thanks to some negative media coverages about cars with those labels and subconsciously think there are connections among them all the time. Which is not entirely true right now. Some prejudice on modifications is due to some movie scenes and violent video games, even to motor sports itself. Because lots

of people cannot tell the difference between modified cars, stock cars with no appearance changed or mass-produced performance cars. It is unfair to hold this biased idea to modifications. While, on the other hand, there are still lots of people believe that modifications is no more than normal mechanical handwork, it is not bigger different than building a tree house or wooden castle on their yard. In this study, I am going to use narrative analysis to dig this exciting topic, people's attitudes towards modifications and whether or not they have prejudice on modifications due to the exposures to risky-driving media coverages.

Display of Individualities through Car Modifications

Cars are the media, and modifications are the messages. The world is changing so do the forms of communication. Inside the Internet age, social media, blog and video chat are the new media and present a new form of communication. In the practical world, cars can be one kind of media, exchanging information with others by their modifications. Modifications are a good follower and play a role in the game of communication through cars. Use cars to broadcast a message, the messages behind modifications. Cars are the media, and modifications are the messages. What do the signs mean to people in Beijing and the San Francisco Bay Area? McLuhan thought media is a continuation of the people (McLuhan, 1962). That means, what he calls the media is by no means the four big media in everyone's heart, which are newspapers, film, radio, and television. McLuhan's media including all the human production and manufacturing concerning normal lives and all

the extensions about human brains and consciousness. So the modifications of cars can be seen as one of the communication forms.

McLuhan pointed two major categories, one is extended body medium and extension of the brain; the other one is electronic media which is the extension of the brain, the rest of all media are an extension to the body (McLuhan, 1962). When people see a normal car running by, they may not leave more attention to it. Because the information behind the message the car held is simple and clear, this is a regular transportation tool to deliver a human being or a family from location A to location B. It's an ordinary message that everyone is familiar with. However, if there is a deeply modified car running on the street with a loud engine and big wing on the back running by your side, it's hard not give it more look. Because it's different, the message behind those modifications parts shows that the identification of the driver must be characteristic and different from others. This medium has a great impact on human society and people's feeling. Media plays an indispensable role in human society's development progress, but the effect may be invisible because media can make people narcissistic and numb (McLuhan, 1962). During the development of the modern society, an individual is getting harder to find a proper way to demonstrate his or her personality by not offending others or annoying others. Because with the fast growth of the market economy, money worship and egoism also imperceptibly affect the booming middle class, which leads more and more people to chase more unique or exclusive lifestyle. That's why an exaggerated gesture, a super loud engine with a massive rear wing on the car, for example, might

work. To spread messages to the world that they are different by modifying cars is becoming a personal styling job.

“The medium is the message” (McLuhan, 1973) is a phrase coined by Marshall McLuhan meaning that the form of a medium embeds itself in any message it would transmit or convey, creating a symbiotic relationship by which the medium influences how the message is perceived. For McLuhan, it was the medium itself that shaped and controlled “the scale and form of human association and action” (McLuhan, 1962). In McLuhan’s argument that the way this medium played with conceptions of speed and time transformed “the world of sequence and connections into the world of creative configuration and structure” (McLuhan, 1973, p.12), like movies. Cars can also be that kind of media, but they play roles in people’s real life and are also transformed with time and location. Like American muscle car could bring people direct power and speed decades ago, which represented the beauty of masculinity, in all its rough vigor and oily athletic perfection. However, now they are more simples of stubborn, old and countryside smell with no advanced or modern technologies. Some modifications parts, they are showing drivers’ personalities directly especially body tunings. They are about identifications and visual persuasion, to give a message to the society. Talking about car modifications under the background of car culture is not merely about machines and engineering, but also society and cultural phenomenon. Defining automobility as not machine-human connections but the cultural and physical spaces constructed for and by automobiles and all drivers together (John, 2004). The car owners are telling the rest of

the world about his or her own stories about the car with the unique modifications parts and characteristic combinations of them. The messages behind those modifications on cars are read by people walking past the modified cars and reflected the owners behind wheels by people's reactions and attitudes toward them.

Car's appearance is very important to people especially those who are not petrol heads. The main principle of design is to help people with everyday tasks, to make life more enjoyable and more stylish (Redmond, 2000). That's what a car designer think. Telling the make, a model of the car on the street just by a glance is like a 101 class in Car School. Any car enthusiast can recognize the make, model and even the year of a car from an arbitrary viewpoint (Llorca, Colas, Daza, Parra & Sotelo, 2014). However, all these cars are factory products; they leave the factory set up for an average driver's expectations and conditions. They are normal. They are dull. They are boring. They cannot be part of styling. Car tuning is transforming the original bare-stock car into a personalized fashionable car.

Fashion is a form of self-expression, so is car modifications. For any petrolhead, driving his or her loved car on the street put an awesome eyeball-catching rear wing on the back of the car that reflects unique interests and personal style is thousand times cooler than wearing an Off-White jacket with a pair of Yeezy. Just like Carrabine and Longhurst stated in their words, for young people who are interested in cars, cruising and street machining can be seen as an exciting alternative (Carrabine & Longhurst, 2002). These modifications parts can easily show off the car owner's personality as they come in

a variety of styles, functions, and colors. In the US, people can drive at 16 and have a license after 18. In some families, parents buy a car for their kid's 16 birthday presents. But in China, young people cannot drive cars or get a license until 18. And few parents in China would buy a car as their kid's 18th birthday present. As a result, there are two more years, comparing to Chinese peers, for those American kids who can express themselves naturally freely and manifest their personalities conveyed the full dynamic youth power straightforwardly by crunching their cars. Tuning their cars is a fascinated way for teenagers to own their independent utterance right and their demand to express individuality, to display different tastes, to show off various personalities. Thus, when people walk on the street, there are some cars running across with loud engine or exaggerated paintings or modified body, their reactions toward them are important to our survey. They can tell how these modifications parts work in appearance modifications and whether other people received their messages through modifications or not.

Music preference is part of a lifestyle and has something to do with people's modifications involvement too. The rebellious nature of rock music is a true story though the fans of rock music are not found universally (Zweigenhaft, 2008), and George, Stickle, Rachid, Wopnford (2007) and Rentfrow and Gosling (2003) found that rap and rock load onto differing groupings of musical tastes. But they are still both the representatives of independent music and underground culture. So they must be treated separately from other music. The rebellious gene inside rock and rap show the listeners that they are representing more than just music style but also lifestyle by people's own

choices. Because they are independent expressions and individual performance. These personalities may also be people who love driving racing or modified cars have. There is no solid evidence can tell that whether people's personalities and lifestyle, in general, are related to music preference in general, with few attempts to investigate this question perhaps. Only guesses.

Furthermore, the focuses on anti-authoritarianism in Rock'n'Roll, Metal, Rap and other alternatives, independent music have more meanings. Rentfrow and Gosling (2003) first identified four musical styles, reflective and complex, intense and rebellious, upbeat and conventional, and energetic and rhythmic, which were associated with scores on the Big Five personality inventory (Langford, 2003), which produces a score for an individual on each of five dimensions that together are claimed to provide a comprehensive overview of personality. The Big Five dimensions are openness, conscientiousness, extroversion, agreeableness, and neuroticism (Langford, 2003). Openness is an appreciation of adventurousness and art, curiosity, and enjoyment of the unusual; conscientiousness consists of self-discipline, feelings of duty, planning, and achievement orientation; extroversion consists of seeking stimulation and company, energy; agreeableness consists of being compassionate and cooperative; and neuroticism is emotional instability and a predisposition toward negative emotions such as anxiety and depression (Langford, 2003). Among these five personalities, the openness and extroversion personalities are this research's primary interests. They can be found in lots of car lovers and people who are very involved in car modifications or track racing.

Besides, these personalities can also be seen a connection between characters, lifestyle and car modifications involvement. For example, Rentfrow and Gosling found that liking for both reflective and complex music and intense and rebellious music was related positively to openness, and that liking for energetic and rhythmic music was related positively to extroversion and agreeableness (Rentfrow & Gosling, 2003), as a result there is a huge chance that car modifications lovers love listening to rock and metal music with heavy beat or rap music with alternative spirits. Liking for upbeat and conventional music was related positively to extroversion, agreeableness, and conscientiousness and negatively to openness (Rentfrow & Gosling, 2003). These music are more like some pop and not independent music, people who are funned of that music have less chance to take a risk-modifying their cars and show the world their differences from others. They are not that kind of people who are competitive and enjoy thrilling.

Lifestyle categories are formed by society and marketers who study purchase behaviors of consumers to predict their consuming intentions (Englis & Solomon, 1995). In this research, the lifestyle choices constructed by psychographic information such as opinions, attitudes, and personality, are used to be the directors of people's personalities display, especially car owners. For example, "Furs and Station Wagons" cluster members are much more likely than the typical consumer to have a second mortgage, buy wine by the case, read Architectural Digest, drive BMW 5-series cars, eat natural cold cereal and pumpnickel bread, and watch The Tonight Show. Members of this cluster are unlikely to chew tobacco, hunt, drive a Chevette, use non-dairy creamers, eat canned stews, or

watch Wheel of Fortune (Englis & Solomon, 1995). In contrast, people who drive performance cars, are much more likely to watch Sports channel and have domestic beers, eat fried fast food and white bread, may have tattoos, listen to independent music rather than following the public trends. People of this cluster may have more independent individualities. They may modify their cars more than one time since the performance car are meant to be modified to be perfect. Otherwise, cars cannot present their potentials of the engine power and steering. Music preference is also an important part of a lifestyle. People can tell one's personality based on his or her music taste. Nuki, Nagata, and Kawakami explored the relationship between music preference and personality and found that individuals with high extraversion liked new age music best out of all genres, whereas neuroticism was related to liking classical music (Nuki et al., 2004).

Dichotomous thinkers prefer simple rather than complex situations, and this tendency may be reflected in their choice of music genres. So they would prefer simple and upbeat rhythms or melodies in music (such as pop and rock), rather than more complex rhythms or melodies (such as jazz or classical music) because their style of thought is congruent with the former kind of music (Oshio, 2012). Rock'n'Roll music is another example; it is powerful and inspiring music that can be highly influential in both reflecting and shaping how people believe and behave. The rhythms are full of strength, and the lyrics are filled with un-satisfaction to the real life and resistance to the authority. For most of the Rock'n'Roll music, the rage inside of the songs is reasonable with hope. Rockers and rock fans believe that they can wake people up to build a better future to change the

status they do not satisfy with right now. To be angry all the time and to be young all the time. Most of these people may have the same passion for making their cars different because modifying a car is also rebellious and a message to tell their dissatisfactions to the status quo and to show their personalities.

Misunderstanding about Car Modifications

Although car modifications are meant to enhance cars' performance and make them faster, not all of them are for racing. Some of them are just for giving various messages. This conversation is talked about in three parts. The first part is making a point that car modifications are not equal to car racing or dangerous illegal driving behaviors. The second part is that some modifications especially body tunings are about identifications and visual persuasion, to give a message to the society. Finally, the third part is about a misunderstanding. People easily put racing, modifications, dangerous, illegal, bad behaviors these words together and subconsciously think there are connections among them all the time. Which is not entirely true right now.

When people think of car modifications and racing, the first reaction is highly possible dangerous, thanks to countless action movies and part of the history of car modifications connecting to racing and fast driving mentioned before. Dangerous driving on public streets and highways is considered unsafe by authorities and has called forth a range of sanctions.

Misunderstanding on modifications and racing has been there for a long time. However, racing is a careful, skillful, need-to-check-every-data and full-of-engineering

skills sport. Driving on a racing track is a different thing from exceeding the regulation speed on a highway. Because racing is a careful, skillful need-to-check-every-data and full of engineering sport. On the racing track, all cars need technical requirements, a series common sense checks to make sure all vehicles are in good, safe working order. It is important to check out every car before trying to get it inspected. Wheels, tires, steering, suspension system, engine and brakes, everything needs to be inspected carefully. Racing is not dangerous and illegal. Modifications for racing is not either. But racing on the public street with no respect and sense of responsibilities is. And too many cases like these lead the public to think that car modifications are also dangerous and only for “bad boys” or rebels. Denholm and Dalton note that being a car culture enthusiast can be a positive lifestyle choice (Denholm & Dalton, 2005). It is vital to emphasize that other than some certain types of dangerous and illegal driving behaviors like drag racing on public streets, being part of car tuning or car culture is not harmful to people in general. People could probably spend their money on drugs and alcohol, but instead, they put it into something they can call their own, it is their entertainment on the weekend (Denholm& Dalton, 2005). Thus, there are still bright sides of car modifications no matter how people misunderstood before. In this survey, the data about reactions when people see a modified car on the street can show how people think about car modifications, how the cultural environment embrace car modifications.

Through the conversation about attitudes and cultural difference between China and USA, it leads the study to media coverages about car modifications, racing, and

motorsports. Then, with a deeper dig on the concept and various forms of car modifications, the research found a display of individualities is the main purpose that people do modifications. People use cars as media and modifications are the messages. To find the connections and correlations among car modifications, attitudes, media coverages, characteristic lifestyle and where people live, the following research questions and hypothesis are proposed:

Research Question 1: Is there a difference between willingness on modifying cars by people live in Beijing and the San Francisco Bay Area?

Hypothesis 1: There are differences between lifestyles in the San Francisco Bay Area and Beijing.

Research Question 2: Is there a connection between people's attitudes toward their lifestyle especially music preference, and their involvement in car modifications?

Hypothesis 2a: People who are more frequently exposed to negative media coverage of cars have more negative attitudes toward car modifications than people who are less frequently exposed to negative media.

Hypothesis 2b: People who are more frequently exposed to positive media coverage of cars have more positive attitudes toward car modifications than people who are less frequently exposed to positive media.

Hypothesis 3a: People's attitudes toward high-profile modified cars are more positive if they are often exposed to positive media coverage or reports.

Hypothesis 3b: People's attitudes toward high-profile modified cars are more

negative if they are often exposed to negative media coverage or reports.

Hypothesis 3c: People's attitudes toward low-profile modified cars are more positive if they are often exposed to positive media coverage or reports.

Hypothesis 3d: People's attitudes toward low-profile modified cars are more negative if they are often exposed to negative media coverage or reports.

Chapter Three: Method

Subjects

There are 350 participants in total join the survey, but only 336 complete it, 14 cases were deleted because either they did not finish the questionnaire or their answers were outliers. More than half of the sample was female, and 80% were under 24 years of age. Half of the sample lives in Beijing, China and the other half-lives in the San Francisco Bay Area, USA. About a half had their cars, and only one fourth had some basic concepts about modifications or car tuning. More than a half knew the difference between modified cars and ordinary cars and they would choose to enhance their cars' performance rather than appearance. However, only 34% of the participants had a plan to put modifications into practice in the future.

Utilizing a combination of purposive and convenience sampling, more than 150 college students in Beijing and 150 more in the San Francisco Bay Area were surveyed for the study. The questionnaires were finished with paper and pen both in China and the San Francisco Bay Area. Participants were awarded the following incentives: extra credits for the course they will take and a movie pass or some shopping coupons. The mode of asking questions during the research was self-administered, computer-assisted questionnaire. In this survey, the goal is to reflect partial car cultural difference through the survey and their attitudes towards car modifications with some indirect question combinations.

College students are good choice for this survey because they are average and neutral. Firstly, college students are diverse. The survey is to collect data from normal people. They may be car lovers or not. They may have their cars or not. They may have a basic idea of modifications or not. They may know engineering concepts or not. Whether or not, none of these matters, because the survey needs, participates diverse and colorful. So they can reflect attitudes and cultural differences directly. Secondly, college students still have some passions on surveying with good hearts. Because there is another possible subject role is that of the negative or bad subject who tries to sabotage the research by deliberately providing useless or invalid responses (Singleton & Straits, 2010). Finally, college students are the most convenient source to access. The college is like a small society; students are like representatives of people from different classes in society. The survey was conducted in a university in Beijing and a university in the San Francisco Bay Area.

Procedures

All the samples were from college students in Beijing and the San Francisco Bay Area. In gathering data, respondents completed hardcopy survey questionnaire with paper and pen. As an effort to make sure the uniformity of the survey without any unnecessary bias, the survey questionnaire had only one version, even for the version using in Beijing. Because the error caused by the translation is not necessary so that all questionnaires either used in China or the US are in English. To minimize the misunderstanding of the Chinese version questionnaire, the terminologies of some car modifications were

translated into Chinese, and the expression choices were as simple and direct as possible. Besides, due to China's good English education at high school, most of the college students are well educated enough to finish the questionnaires. Just in case, before the questionnaires were distributed in Beijing, a very detailed explanation concerning the research and questions were talked through to the participants in Chinese and help were offered while they filled the questionnaires. All the questionnaires were finished anonymously.

All participants are above 18 and well educated. In Beijing, the participants are all Chinese, in the Bay Area, the nationalities may be various. Besides, there would be no potential benefits or any risk of loss of privacy to the participants. However, no names or identities are be used in any published reports of the research. Only the researcher have access to the research data. No names or identities were used in any published reports of the research after collecting. All the data were input to researchers' laptop. And in the survey, there were no personal questions. The questionnaires were distributed in paper and pen both in China and USA, and the consents were read and signed by the participants.

The questionnaire was designed with all closed-end questions. Because it's going to be very difficult for researchers to summarize and analyze rich and varied and often irrelevant and vague responses from open-ended questions. Coding such material is a time-consuming and costly process that invariably results in some degree of error (Sudman & Bradburn, 1982). While close-ended questions can provide standard

responses by creating the same frame of reference for all respondents. Since most of the questions are concerning cars and car tuning or modifications, the survey were used as few terminologies in the car business as it can be. For example, aerodynamic effects will be exchanged by “Big wing put on the back of the car.” Besides, to collect the real reflection about the samples, all the modifications questions are about appearances rather than performance tuning. It’s also the direct way to learn how normal people react to modified cars during daily life.

Furthermore, to make this questionnaire work, the survey also focuses on the cognitive process of answering questions. It requires respondents (1) Comprehend the question, (2) retrieve the information requested from memory, (3) formulate a response in accord with the question and the information retrieved, and (4) communicate a response deemed appropriate (Sudman, Bradburn, & Schwarz, 1996). The research is designed to fulfill these demands as much as it can. The bias, leading, misleading and vague questions are also eliminated at the first phase of the questionnaire design.

Measures

Independent Variables

There are totally four independent variables in this research. Living in Beijing or the San Francisco Bay Area are two of the variables (Beijing = 1, San Francisco Bay Area = 2).

Respondents were asked how often are they exposed to media coverage or report about cars. Since the positive and negative media coverage have different influence to the

audience, so the questions are separated to positive news report like, breaking records on famous racing tracks, some car performance-enhance parts with high technology, modified racing car teams participate charity activities, or motorSports champions' healthy, positive and positive-energy characteristic, police or other law enforcement department cars with high-technology modifications parts. and negative coverage like, driving sequences in movies, car accidents on reports with modified cars involved, mean jokes in Car TV shows, serious accidents in motor sports, or car accidents on reports without modifications or racing involved. The media exposure frequency is continuous variable, ranged from 1 (Never) to 7 (Always). (Positive media coverage: $M = 3.350$, $SD = 1.776$; Negative media coverage: $M = 3.390$, $SD = 1.876$).

In addition to show people's characteristic, there are two additional moderator variables measured in this study: music preference and spare-time activities. The music preference ($M = 0.650$, $SD = 0.618$) was a question that allowed participants to choose their favorite two music style among eight options: Rock, Punk, Metal, Rap, Pop, Electric, Folk and Country. The variable's range is two, from zero to two. If participants got zero point means they do not like listening to alternative music, if they got two points means they enjoy listening to alternative music. Only if participants' choices are among Rock, Punk, Metal and Rap, they got one point for each choice, otherwise they had no points.

Dependent variables

There are nine dependent variables in this research. Because the simplest response choice is “yes” or “no”, and it’s a good way design closed-ended questions by various response formats. The questionnaire is not long and full of questions like “Loud engine will make you feel annoyed?”. To find out responds’ attitudes, the Likert response scale are used in Likert scale, and consist a series of responses ranging from something like “Strongly Agree” to “Strongly Disagree”. It is common to use numerical rating scales, with verbal ratings provided for the numerical endpoints (Davis, Smith & Marsden, 2007). High or low involvement in modifications asked by questions “Do you have a plan on modifying your cars in the future” (Yes = 1, No = 0) and “If you are going to modify your own cars, which part is your preference” (Performance = 1, Appearance = 2. $M = 1.460$, $SD = 0.499$). There is a question in the questionnaire designed to test participants’ feelings about modified cars. The feeling was an average of eight items. Participants chose their feelings from score 1 (Annoying and Rude) to 7 (Awesome, it’s pretty cool). Then combined their choices together and calculate the average number ($M = 3.510$, $SD = 1.368$).

Spare-time activities ($M = 0.970$, $SD = 0.782$) was an average of two items. The first item asked about interest in joining activities inside room or outside room. The choice of inside room got zero point while the choice of outside room achieved 1 point. The second item asked respondents whether prefer taking more competitive and extraverted activities like sports, competitive video games, traveling and hiking or less

competitive and introverted activities like reading, watching TV, hanging out with friends and tea time.

In addition, two questions were designed to show important factor that respondents' motor sports or Car Theme episodes preferences have something to do with modifications interests. The first one is "Have you ever watched Car theme TV show like Top Gear or Grand Tour?" (Yes = 1, No = 0) and the second one is "have you ever watched motor sports before like Formula 1, 24 hours of Lemans and so on"(Yes = 1, No = 0).

The first reaction about modified cars are also part of the attitudes toward modified cars. Another popular rating approach measures people's reactions to stimulus words or statements on a 7-point scale with endpoints anchored by opposing adjectives. Respondents are asked to rate the stimulus word or statement as it relates to each pair of adjectives. For example in this questionnaire, there is a question designed to collect people's direct reaction and attitudes toward modified cars. A particular advantage with this format is that people with different background knowledge can totally understand the same question without any further explanation about the terminologies. To be more clear about the question, the question already removed all irrelevant terms to make the expression simple and direct. Unless respondents' ideas are too limited to the categories, seven categories seem enough to cover the attitudes reflections about the sample. For measuring the fun range of their beliefs, feelings and attitudes, the seven categories are good enough too. The reaction was divided into two parts, one was the reactions about

High-profile ($M = 4.330$, $SD = 1.702$), the range is seven, from point one (Annoying) to points seven (Awesome); the other one is the reactions about Low-profile ($M = 4.470$, $SD = 1.657$, the $Max = 7$), the range is seven, from point one (Annoying) to points seven (Awesome).

Other Variables

Gender was coded with male = 1, female = 2. The participants year of birth was recorded to age, the highest age is 54 and the lowest age is 18. Having a car or not is an important question, 1 = Yes and 0 = No. The respondents were asked if they have basic concept on modifications or not to show their common understanding about car tuning. But only 26% of the participants have basic concept on car modifications. Participants were also asked if they know the difference between modified cars and original cars from factory by simply “Yes” or “No” answers to supplement information about their basic knowledge about modifications (Yes = 1, No = 0).

Chapter Four: Results

Research question 1 predicted an connection between participants' residence (where people live, in Beijing or the San Francisco Bay Area) and people's willings to modify their cars. Table 1 indicated that research question 1 is not supported. because a chi-square was conducted and the result for this test was not significant: $\chi^2 (1, N = 336) = 1.071, p > 0.05$.

Table 1. Modifications plan vs. Participants' residence

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.071	1	0.301

Note. * $p < 0.05$ two tailed test.

The data cannot tell an obvious difference between willingness on modifying cars by people live in Beijing and the San Francisco Bay Area.

Hypothesis 1 predicted an connection between participants' residence (where people live, in Beijing or the San Francisco Bay Area) and displays of people's characteristics. The display of people's characteristics are divided into four different parts, TV show, motor sports, music preference and spare time activities. Table 2 indicated that the connection between TV show choices and participants' residence (where people live, in Beijing or the San Francisco Bay Area) is supported, because a chi-square was conducted and the result for this test was significant: $\chi^2 (1, N = 336) = 23.881, p < 0.05$. While, the connection between watching motor sports and participants'

residence (where people live, in Beijing or the San Francisco Bay Area) is not supported, shown in Table 2, because a chi-square was conducted and the result for this test was not significant: $\chi^2(1, N = 336) = 0.123, p > 0.05$.

Table 2. TV Show vs. Participants' residence & MotorSports vs. Participants' residence

	Value	df	Asymp. Sig. (2-sided)
Watching TV Show			
Pearson Chi-Square	23.881	1	0.000*
Watching MotorSports			
Pearson Chi-Square	0.123	1	0.725*

Note: * $p < 0.05$ two tailed test.

Table 3 indicated that the relationship between the music preference and participants' residence (where people live, in Beijing or the San Francisco Bay Area) is supported, because an independent samples t -test was conducted to determine if people's residence location affected their preference on music which can help to describe their characteristics (music preference [$M = 0.650, SD = 0.618$] vs. where people live [$M = 1.500, SD = 0.501$]). The Levene's test for equality of variances was significant ($F = 9.249, p < 0.05$), so equality of variances cannot be assumed, $t(333.479) = -4.930$.

Besides, the relationship between the spare time activities and participants' residence (where people live, in Beijing or the San Francisco Bay Area) is also supported, shown in Table 3, because an independent samples t -test was conducted to determine if

people's residence location (spare time activities [$M = 0.970$, $SD = 0.782$] vs. where people live [$M = 1.500$, $SD = 0.501$]) affected their spare time activities choices which can help to describe their characteristics. The Levene's test for equality of variances was significant ($F = 4.090$, $p < 0.05$), so equality of variances cannot be assumed, $t(331.086) = -0.209$.

Table 3. Music Preference and Participants' residence
&
Spare Time Activities and Participants' residence

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means		
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig</i> (2-tailed)
Music Preference	Equal variances assumed	9.249*	0.003	-4.930	334	0.000
	Equal variances not assumed			-4.930	333.479	0.000
Spare Time	Equal variances assumed	4.090*	0.044	-0.209	334	0.834
	Equal variances not assumed			-0.209	331.086	0.834

Note. * $p < 0.05$ two tailed test.

To sum up, the data can partially support Hypothesis 1 that There are differences between lifestyles in the San Francisco Bay Area and Beijing.

Research Question 2 predicted an relationship between people's involvements into car modifications and people's willings to listen to independent/alternative music. The involvement into car modifications is divided into two parts, one is people's modifications plan and the other one is people's preference on modifications. Comparing to appearance changes, the performance modifications took more time and energy to do and more complicated. So people choose to do performance modifications are more involved into modifications than people who choose to appearance changes.

Table 4 indicated that the relationship between people's plan on car modifications and people's willings to listen to independent/alternative music is not supported, because an independent samples *t*-test was conducted to determine if people's music preference (music preference [$M = 0.650$, $SD = 0.618$] vs. people's modifications plan [$M = 0.340$, $SD = 0.475$]) affected their plans on car modifications. The Levene's test for equality of variances was not significant ($F = 0.111$, $p > 0.05$).

Table 4. Music Preference and Modifications Plan

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means		
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig</i> (2-tailed)
Music	Equal variances assumed	0.111*	0.739	2.189	334	0.029

Preference	Equal variances not assumed	2.141	217.181	0.033
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Note. * $p < 0.05$ two tailed test.

Table 5 indicated that the connection between people's modifications preferences and people's willings to listen to independent/alternative music is not supported, because an independent samples t -test was conducted to determine if people's music preference (music preference [$M = 0.650$, $SD = 0.618$] vs. people's modifications preference [$M = 1.460$, $SD = 0.499$]) affected their preference on car modifications. The Levene's test for equality of variances was not significant ($F = 1.891$, $p > 0.05$).

Table 5. Music Preference and Modifications Preference

		Levene's Test for Equality of Variances		t -test for Equality of Means		
		F	$Sig.$	t	df	Sig (2-tailed)
Music Preference	Equal variances assumed	1.891*	0.170	-1.750	334	0.081
	Equal variances not assumed			-1.753	328.956	0.081

Note. * $p < 0.05$ two tailed test.

As a result, the data cannot support the Hypothesis 2 that people listening to independent/alternative music are higher involved into car modifications than those listening to pop music.

Hypothesis 2a was intended to examine the relationship between how often people are exposed to negative media coverages about modified cars, racing cars, motor sports and so on, and the personal feelings and attitudes towards modified cars. To conduct this analysis, a Pearson product-moment correlations were conducted, the outcomes are shown in Table 6. Exposures to negative media coverages about modified cars, racing cars, motor sports and so on was found to be positively related to the personal feelings and attitudes towards modified cars, $r(336) = 0.178$, $p < 0.01$. The correlation is significant.

Hypothesis 2b was intended to examine the relationship between how often people are exposed to positive media coverages about modified cars, racing cars, motor sports and so on, and the personal feelings and attitudes towards modified cars. To conduct this analysis, a Pearson product-moment correlations were conducted, the outcomes are shown in Table 6. Exposures to positive media coverages about modified cars, racing cars, motor sports and so on was found to be positively related to the personal feelings and attitudes towards modified cars, $r(336) = 0.224$, $p < 0.01$. The correlation is significant.

Table 6 . Expose to positive media and attitudes toward modified cars

		Expose Media Negative	Attitudes/Feelings Modified Cars
Expose Media Negative	Pearson Coerlation Sig. (2-tailed)	1	0.178** 0.001
Expose Media Positive	Pearson Coerlation Sig. (2-tailed)	1	0.224** 0.000

Note. ** $p < 0.01$ two tailed test.

After all, the data can support the Hypothesis 2a and hypothesis 2b that people who are more often exposed to negative visual impact of cars, for example, driving sequences in movies, car accidents on news reports with modified cars involved or serious accidents in motor sports, have more negative attitudes to car modifications.

Hypothesis 3 was intended to examine the relationship between how often people are exposed to positive and negative media coverages about modified cars, racing cars, motor sports and so on, and the personal feelings and attitudes towards high-profile and low-profile modified cars. To conduct this analysis, four Pearson product-moment correlations were conducted, the outcomes are shown in Table 7.

Exposures to negative media coverages about modified cars, racing cars, motor sports and so on was found to be positively related to the personal feelings and attitudes towards high-profile modified cars, $r(336) = 0.108, p < 0.05$. The correlation is significant. While, exposures to negative media coverages about modified cars, racing cars, motor sports and so on was not found to be related to the personal feelings and attitudes towards low-profile modified cars, $r(336) = -0.065, p > 0.05$, which is considered a relationship.

Table 7. Expose to positive media, negative media, reaction to high-profile modifications and reaction to low-profile modifications

	Reaction High-profile	Reaction Low-profile
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Expose Media Negative	Pearson Coerlation Sig. (2-tailed)	0.108* 0.049	-0.065 0.235
Expose Media Positive	Pearson Coerlation Sig. (2-tailed)	0.063 0.253	-0.087 0.110

Note. * $p < 0.05$; ** $p < 0.01$ two tailed test.

Exposures to positive media coverages about modified cars, racing cars, motor sports and so on was not found to be positively related to the personal feelings and attitudes towards high-profile modified cars, $r(336) = 0.063$, $p > 0.05$, which is considered a minimal relationship. While, exposures to positive media coverages about modified cars, racing cars, motor sports and so on was found to be positively related to the personal feelings and attitudes towards low-profile modified cars. It's not significant. $r(336) = -0.087$, $p > 0.110$, which is considered a minimal relationship.

In summary, the hypothesis 3a is not supported, hypothesis 3b is supported, hypothesis 3c and hypothesis 3d are not supported. As an result, the data can partially support the hypothesis that people are more willing to modify their cars in the future if they are less often exposed under negative media coverage or reports.

Chapter Five: Discussion and Conclusion

Residency and Modifications

Different cultural experiences generated different beliefs, and different beliefs lead to diverse decisions which influence consumers' needs and behaviors during consumption activities (Amould & Thompson, 2005). Besides, the cultural experience can also help to explain consumers' behavioral difference between people living in Beijing and the San Francisco Bay Area. Chinese culture has three important aspects which are collectivism, interpersonal relationships and social self-worth (Yang, Lu & Sun, 2018). Based on these three features, it is easy to tell that Chinese consumers have big possibilities to be characterized by their collectivistic orientation (Brewer & Venaik, 2011). Comparing to American people, Chinese people are easier to be influenced by group-based incentives and thinking regarding "we" rather than "I," striving to be part of a group. Sometimes, Chinese people put larger significance on the inter-group affiliation than individual preference.

As a result, when Chinese people choose a car, they want one with all the others' recommendations. They choose a good one, rather than a right one. A good car means it's good for most of the people but may not be appropriate for themselves. However, most Chinese consumers do not care too much. They may even sacrifice their own needs to coincide others' opinions. They do not hold an opinion that car is part of personal life and identification. Car is just a simple transportation tool to take them from location A to location B. These are totally against the spirit of modifications, to meet the owner's

characteristic needs of the car, to fulfill their personal preference and important need on cars' performance and appearance, to show the drivers' unique identification and individualities.

Under the American culture, people are encouraged to be themselves and truthful to their personal needs. Showing people's personalities with pride and feeling free about it without others' judgments is mainstream in the the San Francisco Bay Area. So, that's why this research question "Is there a difference between willingness on modifying cars by people live in Beijing and the San Francisco Bay Area" is proposed. In Beijing, China, there should be fewer people choose to modify their cars, not even mentioned the fact that in China, car modifications of any kind is still illegal right now.

However, the result of the data showed above did not say so. There is no obvious evidence showing that more people in the San Francisco Bay Area are willing to modify their cars than people in Beijing. Some people do the modifications anyway, to display their personalities, to tell the world the modified cars and the way of life is what they are looking for. It has nothing to do with where they live or what kind of lifestyle they choose. They do it.

Lifestyle and Modifications

In Hofstede's cross-cultural survey of IBM employees, he found that the U.S. was ranked highest on the individualism dimension (rank 91), and China (rank 20) being at the very low end of the individualism dimension; thus, representing a collectivistic orientation (Hofstede, 2001). With this understanding, this hypothesis was partly based

on the individualism-collectivism difference between Chinese and USA people. The interesting part of this part of the research was to investigate attitudes that vary on the individualism-collectivism difference and how different characteristics predict car modifications willingness in these two different cultures. The hypothesis tested people's different attitudes toward lifestyle in the San Francisco Bay Area, the representative of the most independent and individualistic area in USA, and Beijing as the less individualistic, but rather collectivistic city. Using music preference, spare time activities choice, and willing to watch car theme TV shows and motorsports to indicate people's different lifestyle choice can display their characteristics, further, may also influence their willingness on modifying their cars in the future. Besides, China is one of the few Asian countries that pertains a socialistic-communistic ideology. Thus, investigating a Chinese sample is a logical choice regarding representing a collectivistic culture (Leung, Kim, Zhang, Tam, & Chiu, 2012).

Lifestyle choice describes a broad personal life strategy involving the creation and circulation of distinct media formats that are designed to resonate with particular target audiences. To serve as a vehicle for identification, these formats are configured to anticipate the attitudes and preferences of distinct consumer groups, or different lifestyle clusters (Tompkins, 2009). The use of consumer information to infer an underlying lifestyle and, thereby, to assign an individual to a social category, confers a certain psychic economy (Cantor & Mischel, 1979; Sujan, 1985). Lifestyle categories are formed

by society and marketers who study purchase behaviors of consumers to predict their consuming intentions (Englis & Solomon, 1995).

In this research, the lifestyle choices constructed by psychographic information such as opinions, attitudes, and personality, are used to be the directors of people's personalities display, especially car owners. They can easily code people and their behavior into a few simple cognitive categories (Cantor & Mischel, 1979; Cohen, 1981; Englis & Pennell, 1993; Kinder et al., 1980; Wyer & Srull, 1981). For example, the "Shotguns and Pickups" cluster is partly defined by high usage of chainsaws, snuff, canning jars, AMC Eagles, frozen potato products, and whipped toppings. Cluster members are exceptionally unlikely to use car rental services, belong to country clubs, read Gourmet magazine, and drink Irish whiskey (Englis & Solomon, 1995). However, people who drive performance cars, are much more likely to watch Sports channel and have domestic beers, eat fried fast food and white bread, may have tattoos, listen to independent music rather than following the public trends. People of this cluster may have more independent individualities. Most of these people may have modified their cars at least once since the performance car are meant to be modified to be perfect. Otherwise, cars cannot present their potentials of the engine power and steering.

In these four tests: music preference, spare time activities choice, and willing to watch car theme TV shows and motorsports, only the motorsports test was not supported. It addressed that even though more people who have strong personalities may watch motorsports sometimes, but it cannot say more of them live in the San Francisco Bay

Area. The residence may not influence their choices. Petrol heads (gearheads or car lovers) are true car enthusiasts who enjoy driving and working on their cars themselves; this is a choice of lifestyle. They believe the cars can tell their own stories for their owners and show their individualities. Mostly men, like noisy music and fast foods, with many craft workers and blue-collar workers, they love American muscle cars and Japanese performance cars. They like automobiles, enjoy driving and are particularly interested in cars with sports attributes (Rubner, 1991). These people are possibly more independent self-centered.

From the test data, the connection between music preference and participants' residence (where people live, in Beijing or the San Francisco Bay Area) and spare time activities and participants' residence are both supported, which means these part of the hypothesis are tested by the data to be true. People who live in the San Francisco Bay are more like to take outdoor activities and listen to alternative music, which indicates that they are more extrovert personalities (Rawlings & Ciancarelli, 1997) comparing people in Beijing. These people may be more concerned with fun, who think motorsports as an exciting event. The higher the scores they get at music preference and spare time activities indicate that these people are more interested in listening alternative music and competitive outdoor activities, who have bigger chance to understand cars or even car modification as part of a lifestyle and saw motoring programs, mechanical engineerings and racing designs as entertainment as much as movies, music or others.

Numbers of researches have been taken to show that personalities and individual differences may influence music preference. The tastes of music may also implicate people's lifestyle choices. For instance, back in the 1980s, Little and Zuckerman believed that "sensation seeking had a positive relationship with liking all types of rock music and had a negative relationship with an enjoyment of soundtrack music" (Little & Zuckerman, 1986). Most rockers or rock music fans are more independent individuals and proud of being different from the others. They somehow like people who have their cars modified. Because they do not care about others' judgments and are stick to what they wanna show off the world, true themselves and dissatisfaction about the real world.

In the 1990s, Dollinger used Big Five personality types as a measure of music preference in personality and lifestyle study; extraversion was positively related to jazz and hard rock, and openness to the enjoyment of a variety of musical forms outside the mainstream of pop and rock (Dollinger, 1993). Rawlings and Ciancarelli later also found that extraverts liked popular music and individuals scoring high on openness enjoyed a wide range of musical genres (Rentfrow & Gosling, 2003). In these studies, a Short Test of Music Preferences was developed, comprising 14 musical genres, and found four-factor structures that they labeled reflective and complex, intense and rebellious, upbeat and conventional, and energetic and rhythmic. They also confirmed the relationship between music preferences and some aspects of individual differences (Oshio, 2012). As we can see from the data, the higher scores the participants got in music preference question, the more often they listen to alternative and independent rock

music. Before the research, we assumed that people listening to independent/alternative music are higher involved in car modifications than those listening to pop music.

However, the data turns out not support the assumption, which means no matter what kind of music people choose to listen to, it cannot influence their determination on modifying cars.

One of the most alternative metal music, horror metal, has a tiny group of listeners. I am one of the fans. Heavy metal is designed to objectify the imagined aesthetic tastes and cultural values of its target audience; this music is also specifically geared to mobilize a type of listener in sync with the industry's lifestyle categories (Tompkins, 2009). I went to an underground metal concert in Oakland, the first year I came to the United States. After my parking, I found a lot of modified cars parked nearby, and they all belonged to the audience that came to the same metal concert. This fact brought me the question that does lifestyle (music preference) has connections with modifications willingness? I've been keeping that question over a year, waiting to find out the answer. Unfortunately, the data of my tests are not supported. However, the sample in the study comprised only around 400 participants, and they are all college students so that the relationship between music preferences and car modifications preference among people remains unclear.

Media Exposures and Modifications

The Pearson Correlation is 0.546, see Table 7 above, which indicate that people who are more often exposed to the negative visual impact of cars, for example, driving

sequences in movies, car accidents on news reports with modified cars involved or serious accidents in motorsports, partially have more negative attitudes toward car modifications. Media coverages do implicate people's attitudes toward car modifications. People use media because of the utility they derive from the medium (Rubin, 1994a). They absorb information easily and widely, but sometimes they get fooled as well. The media not only influence what the public thinks about but also how the public thinks about something (McCombs, 2004). People are stupid sometimes while they are in the group, they start to depend on others and lose themselves quickly, they will lose the independent thinking ability to face the need of collectivity (McCombs, 2004). One of them start a conversation about how dangerous the street racing is, and there are lots of modified cars are involved, no matter what the truth is, people at least will join the conversation for a moment or listen to the talks for a minute even though they do not address a speech. In this circumstance, people are easily manipulated. People who believe modifications are the beginning of a series of dangerous activities including street racing and dangerous driving may forget it to embrace the "modifications are another form of a message to show personalities" opinion. Some people do modifications for fun; they do not even do racing at all.

It's easier to find out people's attitudes towards car modifications under different circumstances. To those players, the whole life may be just an amusement park to them, so whether they are into modifications or not, their attitudes must be related to their lifestyle choices. They may believe that "entertainment was the most significant of the

factors affecting respondents' attitudes, followed by credibility and irritation" (Xiao, 2015). They may have higher scores (4.33 in 7) in the question that about feelings about high-profile modified cars, but the conclusion that these people are positively influenced by the media coverages (positive or negative) cannot be given. Because, in this case, they may feel like having fun about anything they see on the street.

From the research, the mean score of the question "How often are you exposed to media coverage or reports about cars?" (1-7: Never-Always) Is 3.39 in 7, see Appendix D, it's close to the median, which means people do have a habit watch news or obtain information from other media. Social behavior is under the individual's conscious control, the level of consciousness decreases as the level of habit in performing the behavior increases (Bamberg & Schmidt, 2003). Consequently, Triandis suggested that apart from intention and behavioral control (which he conceptualized as the presence of facilitating objective conditions), the construct habit is to be considered as an additional predictor of behavior (Triandis, 1980). People used to watch bad news about cars and racing. As a result, it is hard for them to see modified cars very positively. For example, Transport Canada identifies speeding as the second most common contributor to motor vehicle fatalities with 27% of fatalities and 19% of serious injuries involving speeding (Transport Canada, 2011). Another study, using the Fatality Analysis Reporting System (FARS) form that reports "fatal crashes in the US, found that 0.21% (315) of all fatal collisions (149,568 fatal collisions in total) and 399 fatalities were attributed to street racing during 1998–2001" (Knight, Cook, & Olson, 2004). In these fatalities, no solid

evidence ever indicate that all cars are modified. Most of the cars are just family using cars. Even though all of the fatal collisions were involved modified cars (315), the rate is only 0.21%(149,568 fatal collisions in total). It was a very small number. However, to those scored 3.39, exposed to negative media coverages, they may still have more negative attitudes toward modifications and believe modifications are the major reason people do speeding and dangerous driving than those people who have scored 3.35, exposed to positive media coverage (data in Appendix D). Triandis defined a habit as situation-behavior sequences that are or have become automatic so that they occur without self-instruction. The individual is usually not “conscious” of these sequences (Triandis, 1980). People’s attitudes toward cars, modifications, and racing are just influenced by habits unconsciously through all kinds of media.

The visual impact is the most powerful weapon of TV and movies; they use images and pictures to persuade people to believe what they presented to them. From some individual’s perspectives, using a car has advantages among lots of means of transport, like higher speed, comfort, and flexibility. These are subjectively reflected and are the main determinants of individual’s positive attitudes toward cars and related modifications that can improve them. People have more positive feelings about low-profile modified cars (4.47 in 7, 1-7: Annoying-Awesome). Overall, the present study indicates that people’s attitudes toward high-profile modifications are generally negative, and attitudes toward low-profile modifications are generally positive. People have some misunderstandings and doubts about car modifications and racings because the media

plays a role. The study conducted through the use of survey research, using questionnaire data collection to find out that the more often people are exposed to negative media coverage about cars the more negative attitudes they have about modifications.

Limitations of the Study and Suggestions for Future Research

The research has two limitations. First, the participants are all from college students. University is a small society, students are from all around the world and different classes of the society with various backgrounds. After all, it is not real society, the integrity and diversity are still not enough for a better conclusion. So, in the future, an expanded size of the sample will be applied. Participants will not only from college students, other group of people will be included as well, such as white collars, blue collars, teachers, doctors and so on.

Secondly, there were still some limitations in the questionnaire. During the research, I found that some questions did not reflect participants' real opinions. When I tested participants' passions on car theme TV shows or other online streams, more questions assessing content details should be provided so that participants would offer more detailed feedbacks. Feedbacks about the exciting footages from the car chasing part in the show are the most interesting part for the participants. If these answers can be obtained, it may help to interpret the second and third Hypothesis better.

Several ideas can be proposed in the future based on the limitations. Attitudes about car modifications are complicated. Because both attitude and car modifications are complex constructs, more tests can be done in the future study. Literature concerning

modifications is limited. The correlations between people's lifestyle choices and car modifications willingness are going to be studied in the future. Besides, more specific measures about testing attitudes towards car modifications are needed to be found.

Conclusion

People's attitudes toward car modifications are influenced by media coverages and lifestyle, but the most important factor is people themselves. Most of the tests above indicate that people's own decisions are the key to determine whether they choose to modify their cars or not. The only reason to modify cars is to fulfill their wishes, which are either to display characteristics and individualities or achieve their goals in cars' performance.

Testing people's attitudes toward car modifications are hard to be done perfectly flawlessly since modifications are not a majority topic and a sort of controversial. This study analyzes the public's attitudes towards modified cars and car tuning, to explore the hidden messages behind those various car modifications. The car is the media, and the modifications are the message. Messages are spreading to interpret people's inner desires and individualities about their cars as well as their life. The research did not find obvious modifications willingness differences between Beijing and the San Francisco Bay Area. The sample may be the problem since all the samples in this research are from universities. In the future, to improve this study, samples are better going to choose from more varies clusters. Music preference and other lifestyles are also just partially implicate people's modifications plans or willingness. The correlations among music preference,

modifications willingness, and personalities are not very significant. Though it is kind of obvious to imagine that people with independent individualities like listening to alternative music, so they have bigger chance to modify their cars to be different from others. However, the tests did not support it. People no matter have what personalities or listen to what kind of music, have the same chance to modify their cars. The only thing matters are their wills. Music preference, lifestyles, residency or even motorsports can influence much on people's modifications decisions.

This research meant to increase the amount of knowledge regarding cars and car modifications, in the same time, let people have a fair and proper perspective on car modifications, decreasing the bias and prejudices as much as possible. The fast-growing middle class and booming car market, as well as modifications and other car post-market in China, will push the government to legalize car modifications in the future soon. To be part of pushing car modifications legitimate in China in the future is also one of this research's purpose. When I go back to China, I will put myself into this cause to make car modifications legitimate in China, to let more Chinese petrol heads, gear heads, car lovers have a chance to modify their cars reasonably.

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Appendix A: IRB Approval



CALIFORNIA STATE UNIVERSITY, EAST BAY
25800 Carlos Bee Boulevard, Hayward, California 94542-3008

Office of Research and Sponsored Programs
Telephone: (510) 885-4212 Fax: (510) 885-4618

INSTITUTIONAL REVIEW BOARD NOTICE OF ACTION

- | | |
|---|--|
| <input checked="" type="checkbox"/> Approval by: | <input checked="" type="checkbox"/> Initial Review |
| <input type="checkbox"/> Full Board Review | <input type="checkbox"/> Continuation Review |
| <input type="checkbox"/> Expedited Review | <input type="checkbox"/> Modification Review |
| <input checked="" type="checkbox"/> Administrative Review | <input type="checkbox"/> Adverse Reaction |
- Exemption category:**
(45 CFR 46.101(b).2)

Project title: Attitudes Towards Car Modification in Beijing and SF Bay Area

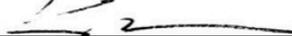
Principal Investigator: Peter Wang

Date of Action: 12-15-2017

Expiration Date: 12-15-2018

Protocol Number: CSUEB-IRB-2017-295-S

The above Action applies only to the protocol submitted. Any changes in the content or procedures of this research must be submitted to the Institutional Review Board for review and approval.

Signature  Date 12-15-17

Name: Kevin Brown, Ph.D.
Title: Chair, Institutional Review Board
Address: California State University, East Bay
Hayward, California 94542-3008

Telephone: (510) 885-4212
FAX: (510) 885-4618
E-Mail: kevin.brown@csueastbay.edu

- Please see attached comments
cc: Yung-I Liu, Faculty Advisor
Department of Communication



CALIFORNIA STATE UNIVERSITY, EAST BAY
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Office of Research and Sponsored Programs
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Memorandum

Date: December 15, 2017

To: Peter Wang

From: Kevin Brown, Chair
Institutional Review Board

Subject: Comments on your protocol

The Institutional Review Board has approved your research protocol “Attitudes Towards Car Modification in Beijing and SF Bay Area.” In addition, the board has approved a waiver of the federal requirement to document consent in writing, given that consent is obtained as described in your protocol.

Good luck on your research!

KB

cc: Yung-I Liu, Faculty Advisor
Department of Communication

Appendix B: Car Modifications Questionnaire

1. Your age? _____
2. Gender? _____
3. Do you have your own car?
Yes No
4. Do you have your own car?
Yes No
5. Do you have basic concept on Car Modification?
Yes No
6. Do you have a plan on modifying your car in the future?
Yes No
7. If you are going to modify a car, which part is your preference ?
Performance Appearance
8. Where do you live right now?
China USA
9. Do you know the difference between modified cars and original cars from factory?
Yes No
10. Have you ever watched Car Theme TV show like “Top Gear” or “Grand Tour”?
Yes No
11. Have you ever watched Motor Sports before? (Like F1, 25Hours of Le Mans.....)
Yes No

12. What kind of music you like? (Pick two)

Rock, Punk, Metal, Rap, Pop, Electric, Folk, Country, Others

13. What do you usually do in your spare time? (Pick one from each row)

Inside room activities Outside room activities

Sports Playing competitive video games

Watching movies Hang out with friends

14. How often are you exposed to these media coverage or reports about cars?

For example:

Driving sequences in movies;

Car accidents on reports with modified cars involved

Mean jokes in Car TV shows;

Serious accidents in motor sports

Car accidents on reports without modification or racing involved

Frequency (Pick one)

Always ■ ■ ■ ■ ■ ■ ■ ■ Never

15. How often are you exposed to these media coverage or reports about cars?

Breaking records on famous racing tracks.

Some car performance-enhance parts with high technology.

Modified racing car teams participate charity activities.

Motor sports champions' healthy, positive and positive-energy characteristic.

Police or other law enforcement department cars with high-technology modification parts.

Frequency (Pick one)

Always Never

16. When you hear news about serious car accidents (people died or seriously injured sent to the hospital), the top 3 relevant factors concerning the accidents in your mind are:

Fatigue driving Dangerous driving Extreme weather Racing on the highway
 Sports cars Modified cars Police pursuit Bad driving habits

17. How do you feel when you see car running on the street with.....

	Awesome (It's pretty cool)	Noting Special			Annoying and Rude		
Huge Rear Wing	1	2	3	4	5	6	7
Huge Rims	1	2	3	4	5	6	7
Huge Rims with Shining Colors	1	2	3	4	5	6	7
Super low body of the car	1	2	3	4	5	6	7
Car body painted in Cursing words or unfriendly pictures	1	2	3	4	5	6	7
Super loud engine	1	2	3	4	5	6	7
Shining and colorful headlight	1	2	3	4	5	6	7
Loud Audio System(Music)	1	2	3	4	5	6	7

18. What is the first reaction when you see a **deep modified** car running on the street

Appendix C: Descriptive Statistics of Questionnaire

Variable	Mean	Standard Deviation	Max	Mini
Age	22.090	6.189	54	18
Gender (1=male, 2=female)	1.580	0.494	1	2
Having car or not (1=Yes, 0=No)	0.530	0.500	0	1
Having concept on Modification or not (1=Yes, 0=No)	0.260	0.439	0	1
Having plan on modification or not (1=Yes, 0=No)	0.340	0.475	0	1
Preference on modification (1=performance, 2=appearance)	1.460	0.499	1	2
Where does participant live (1=China, 2=USA)	1.500	0.501	1	2
Difference: Modified cars VS original cars (1=Yes, 0=No)	0.540	0.499	1	0
Like watching Car theme TV show (1=Yes, 0=No)	0.360	0.481	0	1
Like watching Motor Sports (1=Yes, 0=No)	0.320	0.467	0	1
Music Preference (2-0: alternative-not alternative)	0.650	0.618	0	2
Spare time activities (2-0: extroverted-introverted)	0.970	0.782	0	2
Expose to Media-Negative (1-7:Never-Always)	3.350	1.776	1	7
Expose to media-Positive (1-7:Never-Always)	3.390	1.876	1	7
Feeling about modified cars (1-7: Annoying-Awesome)	3.510	1.368	1	7
Reactions about High-profile (1-7: Annoying-Awesome)	4.330	1.702	1	7
Reactions about Low-profile (1-7: Annoying-Awesome)	4.470	1.657	1	7