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Supercar
Car culture and the sport-utility vehicle

by

William S. Brown

A thesis submitted to
The Faculty of Graduate Studies and Research
in partial fulfilment of
the requirements for the degree of

Master of Arts

School of Journalism and Communication

Carleton University
Ottawa, Ontario
October, 2001
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**Supercar
Car culture and the sport-utility vehicle**

**submitted by William S. Brown, B.A.
in partial fulfilment of the requirements for
the degree of Master of Arts**

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ABSTRACT

We are all participants in car culture, a complex system of shared knowledge, and individual expression of that knowledge, with respect to cars. The theory of car culture holds that all cars are designed, and that the meaning behind a car's design is more important than its technical specifications or functionality. Car culture is learned through mass communication and everyday interaction with automobiles and is affected by forces external to it. The fashionable sport-utility vehicle is the best expression of contemporary car culture. More so than any other car, the SUV represents all the problems and opportunities of mass auto mobility and car culture. The SUV has retained its fashionable status in contemporary car culture because it incorporates its problems into its received meaning. The SUV turns its problems into opportunities and solutions.

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NO VEHICLE IS a better expression of contemporary American car culture than the sport-utility vehicle. The modern SUV is, in practically all respects, used just like an ordinary car; yet it offers what many people have deemed to be the perfect blend of stylishness and functionality, of sportiness and utility. The SUV is the ultimate multitasker, able to conquer urban or natural jungle in car-like comfort with sports car style, while offering all the room any versatile person or any busy family could demand. But at the same time, the pesky “family” image has been cleverly kept at bay. If you find you can no longer fit your active lifestyle or your family into your sporty Chevrolet Corvette, then Chevy still has just the thing for you—a sporty *and* utilitarian SUV like the Blazer, Suburban, Tahoe, Tracker or TrailBlazer. You can do it all and be whoever you want to be—thanks to the sport-utility vehicle.

The SUV is a “supercar” because it has saved American car culture from the banality which, during the 1970s and 1980s, threatened to render the car into appliance-like oblivion. When in the 1970s, for example, the Ford Mustang shed its V8 muscle for six cylinder civility, car culture was in a coma-like state. But in the same way that a super hero is so much more than an ordinary person, the SUV has been so much more than an ordinary car. It has revived car culture with promises that far exceed any mere car. The SUV is a supercar first and foremost because it offers the promises of adventure, style and safety. But there is more.

The SUV is a supercar because, with profits up to ten times those of conventional cars, it has saved automobile companies by making them rich. The SUV is a

supercar because it has helped save the American economy. The SUV is a supercar because it has given marketing managers and advertising copywriters a vast expanse of symbols to experiment with. And the SUV is a supercar because it has some super problems.

Like practically every stylish car before it, SUVs are expensive environmentally and socially. Environmentally, there is no circumventing the fact that the physical design of an SUV mean that it always burns up more of a dwindling supply of an unrenowable energy resource than a car. All things being equal, even a so-called "compact" SUV necessarily burns more fuel than a comparable car because its boxy shape and four-wheel drive mechanism always makes it less efficient. Further, SUVs emit more noxious gases into the environment, in part simply because they burn more fuel, but also because the government has been reluctant to force auto makers to "clean them up" as they have cars.

Socially, the SUV has some serious safety issues which make it practically immoral. Like its fuel efficiency problem, the heavier and "jacked up" design of an SUV means that it is inherently less stable than a comparable car. This means that it is more susceptible to rollovers, a catastrophic event for its occupants. Further, upon impact with a mere car, the SUV's design means that it tends to cause greater injury to other motorists.

It is impossible to completely rid the SUV of these environmental and social problems without making it look and act more like a station wagon. The SUV is a

supercar because, unlike the station wagon, it is super controversial. Depending on who you ask, the SUV is one of the greatest vehicles on the road or one of the worst. While conventional cars—especially those built after the mid-1970s—are remarkably benign, the SUV is a car cultural juggernaut.

During an *Investigative reports* television program entitled the “SUV craze,” Dutch Mandel, editor and associate publisher of *Auto week* magazine, said we are in “a Golden Age in auto mobility.” Without a hint of ambiguity, he gushed that the SUV “is a vehicle that allows people to identify personal freedom, and you must celebrate that. . . . That’s what makes America great: I can buy it; I can afford it; I can drive it” (Mandel, 2000). In car culture and for its experts like Mandel, the automobile is more than just a consumer good; it is an outlet through which Americans legitimately express their hopes, fears and desires. The SUV is something to be enthusiastic about because the meaning associated with it is undeniably positive. Americans are not buying into the “SUV craze” due to some negative external force such as an energy crisis. Rather, SUV buyers are, of their own volition, making a choice on the open market. They are true Americans, supporting free enterprise capitalism and upholding their democratic right to express their individuality. The SUV is not a problem, it is a solution.

The problem with the SUV, for writer Paul Roberts, a contributing editor to *Harper’s magazine*, is that it is an abject product of American consumerism and a delusional symbol of the American psyche. He says that “[t]ens of millions of Americans

[are] going into debt to buy what amounts to not only a dysfunctional, socially problematic, goofy-looking car but a very big one at that—and this fewer than thirty years after an energy crisis and an environmental awakening were supposed to have killed our yen for gas guzzlers” (Roberts, 2001, p. 70). Most argue that the antecedents to the SUV’s popularity were the elimination of the extravagant 1950s and exciting 1960s cars, which “left a great hollow place in the American psyche.” That the most exciting car in the early 1980s turned out to be the minivan was a problem because it made its owner feel “responsible, domesticated, and, above all, sexually unavailable” (Roberts, 2001, p. 71). One response was the SUV, a brutish vehicle happily promoted as some sort of versatile “rolling tool.” But this is a guilt-reduction pitch which is “one of the smoothest cons in modern marketing” because fewer than 11% of SUV owners use it for off-roading, families are smaller, roads are better, and crime is down (Roberts, 2001, p. 72). Just like cargo pants that never hold cargo, “SUVs are simply the latest example of America’s gear fetish” which communicates that its owner has “important things to do, and, by God, I may have to drive across your lawn to do them” (Roberts, 2001, p. 73). But while there are no serious implications of attaching extra pockets to pants, the SUV is downright unconscionable. While Mandel feels we are in a “Golden Age,” Roberts argues that SUVs represent the end of the “Age of Reason,” because “if thinking had anything to do with it, Americans would have stopped buying SUVs a long time ago” (Roberts, 2001, pp. 74 & 75).

The laudatory and controversial sides of the SUV make excellent fodder for a thesis in mass communication. As a study of the way that meaning is created and circulated in modern society, this thesis is a formal inquiry into the multifarious ways that the SUV-as-symbol has been mediated in American car culture. The pages which follow describe both the reality and the system of meaning of the SUV, although the emphasis invariably must lie with the latter. Also, and perhaps unfortunately for some, this thesis only admits to showing the “American” side of car culture, with the realization there might be differences for Canada. But the focus is on the U.S. because it is still the foremost auto market in the world.

This thesis is an inquiry into car culture and the SUV’s place in it. To begin, the following chapter describes car culture and acts as an interpretive guide. The theory of car culture holds that practically all cars are functionally able to fulfill transportation requirements, so the main area of inquiry should lie in the symbolic role of an automobile.

Chapters three and four are, respectively, a literature review and history of car design. These two chapters provide the background necessary for any inquiry into contemporary car culture by describing the interaction between a car’s functional and symbolic roles. Notably, cars can be plotted on a two-way graph which depicts the extent to which they are symbolically “utilitarian” and “stylish.” Culturally, the SUV incorporates its “super utility” into its style.

Chapters five, six and seven are the analysis of the SUV proper. First comes a

background analysis of the meaning of the SUV's design, as interpreted through a selection of its magazine advertising. There are probably as many ways to describe SUV meaning as there are SUV models, but advertising is sufficient. Advertising is the site where manufacturers try their hardest to appeal to the values of car culture while, at the same time, influencing what those values actually are. Chapters six and seven describe at greater length the problems of the SUV. In each, the seamy side of the SUV is exposed. After this exposure, it is shown how car culture mediates these problems so that they appear as "opportunities" which actually enhance the SUV's favorable reception for many people.

The final chapter sums up the thesis by defending its title, *Supercar*, and by predicting the future of the SUV. Like all fashions, the popularity of the SUV will decline—although the fact that it has already been so long-lived is an indication of its tremendous staying power. Without some disruptive external force, we can probably expect the sporty and utilitarian SUV to remain popular for some time to come. After its popularity finally wanes, it will be fondly remembered by most along with the communications/technology boom of the 1990s. For others, it will be remembered derisively as yet another example of America's love affair with morally irresponsible automobiles. The theory of car culture predicts that the SUV will never die. Its meaning will live on, distorted and ambivalent.

CAR CULTURE IS shared knowledge about cars, including knowledge as to what types of people drive particular cars, and the complex process through which this knowledge develops. Everybody in society has acquired knowledge about all the different types of cars which they are exposed to every day, although everybody expresses their knowledge in individual ways. Family car, sports car, luxury car, exotic car, sport-utility vehicle, an old junker—to the extent of their knowledge, every person could talk meaningfully about what aspects of each car makes each one what it is. Beginning in childhood, this knowledge is gained through years of “cultural training,” a complex learning process shaped by a barrage of media messages and extensive personal experience; car culture is also affected by a wide range of “external” forces such as auto regulations, gasoline prices and the economy. There are many ways to “read” car culture, the two most important to this thesis being the cars themselves and media messages; but cultural artifacts also include auto regulations, urban planning and road construction, advocacy and adversary groups, and ancillary developments like drive-through food establishments and drive-in movie theatres. Throughout it all, the theory of car culture maintains that cars are *designed*, and that the meaning of each design is more important than the technical specifications of that design. Time and again during North America’s one-hundred years of car culture, it has been demonstrated that good design also has to have a supportive belief system.

All the characteristics of a car make up its “design,” including its overall physical appearance and extra adornments, brand name and model name, type of engine,

price, wheels/tires, safety features and so forth. There is nothing “natural” in any of this, as all the aspects of a car design are chosen. In car culture, it is untenable to suggest that the design of a car could not possibly be something different (save, presumably, that wheels and tires need to be round). Everything about a car’s design is carefully chosen by its manufacturer for reasons, be they stylistic, economic, technological and/or political.

Like fashion design, car design conveys meaning. While clothing and cars have utilitarian functions, they also have important symbolic functions as markers of identity. If clothing and cars did not have a symbolic function than there would virtually be only one type of garment and one type of car. Without a symbolic role, culture would not develop because no value systems would have to be learned; car design and fashion design would be reduced to an ideal or agreed-upon functional unit. The design of visible consumer products—like clothing, cars, appliances, houses, toilets—is absolutely everywhere. The only exceptions are those few instances where design would wreak havoc with functionality. For example, power outlets probably have to be designed to a consistent functional standard without much regard to fashion. But on a car, nothing of its design escapes a symbolic role.

Cars can convey meaning which is appealing or repugnant, conservative or controversial, high status or low status. Indeed, all cars are symbolic of something, no matter how dull and ordinary they are. Importantly, because car culture presumes some shared knowledge of car design, everybody has a certain degree of cultural com-

petence to know what a car means. So in precisely the same way as fashion, some cars are “stylish,” which means that they communicate an appealing message; European luxury cars like the BMW or Mercedes-Benz have consistently been stylish. Other cars may be controversial, meaning that their message is not socially acceptable; an old, rusted-out Chevy belching visible fumes conveys a defiance of the cultural norm that a car should be in reasonably good running order. Most cars are remarkably ordinary, neither highly stylish nor controversial; but the fact that a Toyota Corolla, for example, is so plain does not mean that it has no symbolism, just that it symbolizes “plain-ness.” Whether stylish, controversial or conservative, the meaning communicated by a car does not simply emanate from the car itself; rather, meaning comes from the shared norms of car culture and can be completely unrelated to design. A plain car like a modern Corolla would not be considered dull and ordinary if it could magically go back in time to the 1920s where, in that culture, it would be a marvel. The real issue is not how design has evolved and changed over time, but how car culture has evolved and changed so that some car designs are deemed stylish, conservative, controversial and so forth.

So far, car culture has been described in general terms. But while it is necessary to suggest the shared aspects of knowledge, it is also necessary to recognize that people are individuals and express themselves in a number of ways, including the type of car they own. For car culture to function, there has to be general knowledge and individual expression; there has to be shared norms and some consistent compliance with

those norms. While car culture presumes a “knowledge of” the high status associated with the Mercedes-Benz, this does not mean that everybody agrees that the Mercedes-Benz is “stylish.” Indeed, some may find it highly controversial because it uses much more gasoline than a Toyota Corolla; some might simply think an American-made Cadillac is better than a German-made Mercedes-Benz because the former is better for the domestic economy; and some may think that owning any expensive car is ridiculous and thus own an inexpensive one, like a Corolla.

Out of a shared culture, individuals choose cars for many of the same reasons that they choose their clothing, because one’s car says a great deal about its owner/driver. But because cars are such an expensive fashion item, people often “choose” particular cars without actually purchasing them. This second way of choosing a car simply means a favorable evaluation of it, perhaps backed up with an aspiration to purchase one. For example, a promising law school student may dream of owning a BMW while having little interest in owning a Cadillac. Meanwhile, her present car is an old Corolla, in part because that is all she can afford but also because she prefers Japanese cars over comparable American ones, like the Chevrolet Cavalier.

This car evaluation process is affected by many things, including one’s income and socio-economic status, group affiliation, lifestyle, personality, knowledge and prejudice. Car culture theorizes that individuals select cars which they find congruent with who they are—or who they want to be thought of as—but that this is only weakly correlated to socio-economic status. While car culture accepts that most “average”

people are not able to afford a Mercedes-Benz, it presses us to recognize that at any given price point there is a wide range of choice. A person seeking to convey status by purchasing a Mercedes-Benz could also have purchased a BMW, Jaguar or Japanese luxury marque such as Lexus, Acura or Infiniti. And, of course, there is a range of different models within each brand name—from sporty two-seater convertible to sport-utility vehicle (but not minivans, an indication of how unstylish this type of design is to upscale consumers). If it is an inexpensive car, there is still choice—from, say, a Chevrolet or Toyota to a 10-year-old Mercedes-Benz. A car shopper who opted for the inexpensive Toyota might be saying “I just need trouble-free transportation.” The one who bought the old Mercedes might be saying “I’m a ‘car guy’ who loves stern German engineering.”

Not only does one’s car say a great deal about its owner/driver, everybody knows a little about everybody else based on their choice of car. This is an important point. The shared knowledge of car design extends from the meaning of the design to knowledge of its owner/driver. Not only could everybody describe a wide range of car designs (eg., what is a “luxury car”?) but also a wide range of people (eg., what kind of person drives a “luxury car”?). These are part of the rules and stereotypes of car culture which are learned and formed every day. If these things were not learned, then car culture as we know it would cease to exist, because cars would no longer serve as markers of identity.

In America’s economy, stylistic shifts in car culture are important, otherwise the

same car would always be appealing and stylish. A significant part of the economy is dependent upon all the work involved to maintain the “fashionable” side of car culture. While not everybody is concerned with owning a fashionable car, *all* car design does evolve, incorporating functional improvements along with stylistic “improvements.” (The Ford Model T and the Volkswagen are two important exceptions and are discussed in the next two chapters.) These shifts in style are, in significant part, attributable to auto makers pushing new designs. Especially through their extensive advertising expenditures, auto makers ensure that car culture gets “tired” of one design and thus seeks something new. But just as importantly, shifts in what constitutes “style” are highly influenced by many outside factors. Invariably, stylish cars in North America have signified a whole spectrum of historical, social and economic values.

The best example of a signifying design is the Volkswagen “Beetle.” This is a car which at first (after World War II) signified Hitler and Nazi Germany. Then, in the 1950s, it was a counter-cultural symbol against unfettered consumerism. During the 1960s, it signified friendship and free love, despite its Nazi heritage. And finally, in the late 1990s, the “New Beetle” is trendy, with its cartoonish “retro” design which (for those who care to remember) signifies the 1960s in an apolitical way. Throughout more than five decades of its existence, its design has remained remarkably consistent and thoroughly recognizable; its meaning, however, has shifted from fascism, to opposition of conservative values, to a trendy/fashionable consumer good which is the most postmodern car on the road today. While the Volkswagen has never been styl-

ish in the same way as a Cadillac, it has been highly communicative just like the Cadillac. During the 1950s especially, its *lack* of decorative treatment was, for some people, precisely its stylistic appeal.

Because car design does not, on its own, contribute to car culture, it is necessary to appreciate how the values of car culture get generated and circulated. This occurs through two main ways, although they are not mutually exclusive. First, through mass communication, car design is representational. Second, through experience, car design is physical. These two affect each other because mass communication influences the meaning we receive physically from car design, while our experiences with cars influence how we interpret representations. These two avenues of learning are powerful, but within limits. Car culture is oppressive and manipulative to the extent that it is insidious and astute. That is, cultural training often occurs without the recipient's conscious awareness, and it affects the recipient's attitudes because the message is deftly delivered.

Through mass communication, knowledge of car design is generated and circulated through a wide range of media and falls under all the constraints and opportunities associated with the media. This type of circulated meaning can be positive or negative but never indifferent, as indifference is simply an example of how undetected learning can occur. In the media, positive meaning can be circulated under the direct control of auto makers or "accidentally" by others; negative meaning most commonly comes through critical news coverage or the occasional bout of muckraking.

Throughout all of this, individuals attend to the messages to one degree or another, interpreting information to maintain cognitive consonance or “filtering” information they deem unimportant or incorrect. Some people even become knowledge “experts” in media information, and may be called upon to share their wisdom. Other people claim not to care about media information, although influential non-expert learning occurs with them, too.

Advertising, specialist publications, news reports, books, popular media and more are all messages which contribute to the shared knowledge of car design. Such messages are everywhere, from the full page advertisement in a news magazine to the picture of the president’s limousine (probably a Lincoln Continental supplied for free by Ford) on the opposite page. In the media, cars are constantly placed in specific settings and associated with specific people. Through such consistent representations, cars are not only associated with certain things but also become symbols for those things. For example, part of why everybody knows that a BMW is a high status car with snob appeal is because “Frasier Crane,” a somewhat-pompous, Harvard-educated, well-to-do psychiatrist drives one on the hit television show *Frasier*—it is shown on the screen and even talked about when it is not there. A young black man, if seen driving a BMW, might be presumed (by some people at least) to have stolen the car, in part because we stereotype him as poor and also because we have seen this representation on “reality” television shows like *Cops*.

Most often, media messages are highly complimentary and congruent with the

state of car culture. When an advertisement boasts about horsepower, it is not only influencing car culture to appreciate horsepower, but also a reflection of the value that horsepower is appreciated. This value is complemented when a Hollywood movie glamorizes horsepower by depicting powerful cars in the ever-present “car chase.”

Only occasionally are messages competitive and incongruent with car culture. Competition is evident, for example, when a writer criticizes a car design while an advertisement promotes it. However, all criticisms are not created equal. The harshest kind is one which says a design is socially irresponsible; these most often (but not always) comes in non-advertiser supported media. Conservative criticisms are those which describe a design as technologically inferior; these most often come in auto-friendly publications. As a final but important point, the study of the role of mass communication in car culture should not only analyze surface meanings, but also the what-goes-without-saying.

The second main way knowledge of car design is generated is through experience. People learn about car design by physically encountering it on a daily basis. Physically, meaning is generated as people interact with automobiles through sight, sound, touch—even smell (that “new car smell”). Ownership of a car, driving it on public roads, paying to put gas in it, seeing other cars, walking through a parking lot—even riding public transportation—all contribute to a shared understanding of what car design means. While, as noted, media messages contribute greatly to how car design is received at a physical level, car culture recognizes that sometimes seeing

truly is believing. The use of one's car is not done in the privacy of one's home, but in public. Every day, cars get used in specific ways by certain types of people; people learn and even copy what is believed to be acceptable. Part of why most people associate the minivan with "family" is because it has often been seen transporting families. Minivans are probably not associated with musicians who use them to transport their "gear" to and fro, although it is probably used for this too—just not often enough for the connection to be firmly established. While it might be tempting to suggest a sort of natural relationship between car design (like the minivan) and meaning ("family") there is nothing natural about it at all. If it happens to seem natural, it is only because learning has been so complete. Before the minivan, it was the station-wagon, a design which some auto makers today are trying to associate with trendy lifestyles.

The media representations and physical existence of a car design make up a sort of "cultural life" of it in car culture. Because car design has a "life," it grows, evolves and reaches maturity. After maturity, a particular car design will be deemed passé—even objectionable. But because car culture is in large part a system of meaning, car design never really dies. Like any cultural artifact, its meaning will live on and, when convenient, it will be recalled into present day. A culture's past is a virtual warehouse of old symbols which can be re-presented in modern guise. On the one hand, auto makers access symbols which carry positive meaning, the simplest form of which occurs when a new car is given an "old" name, like the venerable Chevrolet Impala. On the other hand, automobile critics may invoke symbols with negative meaning; for

example, the concluding chapter suggests that the Ford Explorer SUV might be remembered like the Chevrolet Corvair, because both have come under public scrutiny for vehicle stability problems. However, as meaning is recirculated it is invariably distorted.

Like the two ways meaning is created in modern car culture, it can be re-circulated symbolically and/or physically. Symbolically, in 1979, when Honda juxtaposed its Civic with the Model T and Volkswagen, it was re-circulating meaning associated with these two car designs. As demonstrated in chapter four (in which this advertisement is reprinted), the utilitarian design of both the Model T and Volkswagen conveyed desirable meanings in 1970s car culture and was thus an effective way to promote the utilitarian Civic. But this advertisement conveniently lost some of the meanings of the Volkswagen and Model T. What gets distorted in the recalled memory are the many inhumanities of Henry Ford's assembly line and the fact that the Volkswagen was once simply known as "Hitler's car."

Physically, some people cherish "classic" cars of the 1950s and a massive auto parts industry has been built up to keep these artifacts of a bygone car culture motor-ing. One of the best ways to keep the happy memories of 1950s car culture alive and healthy is to keep one of its relics running. For new cars, arguably, part of the appeal of V8 motors (especially in the "muscle car" and in several sport utility vehicles) is that they are a throwback to earlier days, when almost every car had one of those lumps of "Detroit iron." What gets lost in this memory, as demonstrated in subsequent chap-

ters, is the many critics' complaints that 1950s cars were socially and environmentally irresponsible.

A METHODOLOGICAL NOTE

The methodology of this thesis is semiology, the study of signs. The following chapters will consistently refer to the symbolism of the SUV, that is, how the SUV and its representations (especially advertising) symbolize values like safety, ecological friendliness, power, freedom, adventure and (in the final chapter) telecommunications. While this thesis is not, strictly speaking, a formal application of semiotics, it implicitly draws upon many of its ideas, particularly the way in which objects derive sign value from the context in which they are situated. In other words, *some* cars are stylish because *most* cars are not, and car culture teaches us to recognize stylish cars.

Using the theory of car culture is only one of many useful methodologies to study the American automobile. It is important to recognize that other methods offer useful insights too. Indeed, the automotive literature review in the subsequent chapter is, in large part, a demonstration of how other authors have studied the automobile. Their perspectives run the gamut, from an economic analysis to Marxism, from an analysis of manufacturing processes to a historiography of the car and American society. But there is a diverse field of literature which could be studied that does not analyze the "car" per se, but communication. At this junction, it is useful to underscore the fact that the "car culture" approach recognizes and draws upon other approaches

but that it places the accent elsewhere. This point may be clearer if we compare the car culture approach with another prominent methodology, political economy.

Since car culture is shared knowledge which is derived from communication, Vincent Mosco's 1996 book, *The political economy of communication*, is highly pertinent. Mosco defines political economy "as the study of *the social relations, particularly the power relations, that mutually constitute the production, distribution, and consumption of resources*" (Mosco, 1996, p. 25). It is clear that the focus on "social relations" is very close to our focus on "meanings." Indeed, we would not be able to discuss the "meanings" generated and circulated by car culture without some logical recourse to the notion of "social relations." However, it is important to note that social relations are immediately linked to power relations, and in this *linkage* lies an important difference between our approach and political economy. Political economy usually argues that social relations are in the last instance, or in some importantly structural way, determined by power relations, that the "cultural" is determined or produced by the "economic," that the superstructure of cultural exchange and meaning is merely an artifact or by-product of the deeper and more essential infrastructure or material base of life. In various versions, of course, the line which links infrastructure to superstructure can be more or less tortuous, but it always exists.

Our approach does not deny the value of examining the material base of automobile production. It suggests, however, that the meaning of automobiles and of car culture is neither captured nor exhausted by the material base. Indeed, it argues that

a concentration on the material base actually moves us away from the way in which meaning is generated and circulated in car culture. The chapters which follow will demonstrate that the generation and circulation of meaning in car culture is an historical and sedimented artifact, shaped not only or even principally by power relations in the production process but also by individual attitudes, the way in which advertising self-consciously plays with its own history and with the expectations of consumers, by individual and group aspirations, and so forth.

Nonetheless, immediately helpful in political economy is an emphasis on institutional power and distribution processes. A political economy approach would critically examine the power structures of car culture and the resources they bring to bear in the formation of culture. To take one obvious example, G.M. is the largest automobile company in the world and is the largest advertiser in North America; this means it would have structural power to *make* the “rules” of car culture, although political economy would never obtusely insist that G.M. acts alone. But we should go even further than this and recognize that while G.M. certainly has a major voice, its intentions and activities, its production process and political lobbying, its wealth and power can not, and very frequently do not, determine the meanings which people associate with its products. When the TV Batmobile was built on the chassis of a G.M. experimental automobile in the mid-1960s, G.M. had less than no influence over its use and meanings. When O.J. Simpson made his notorious 1994 escape in his white Ford Bronco SUV, Ford was hardly in any position to have much control over the meanings which

were subsequently associated with its SUV—although writers now believe that it actually enhanced its appeal. And when futuristic visions of rocket-powered floating automobiles pop up in shows like the *Jetsons*, more often than not car manufacturers find themselves trying to “catch up” with such representations. This is where the car culture approach places its accent. Indeed, it would seem that the production process takes advantage of opportunities created by the production and circulation of meaning, just as frequently as it shapes those opportunities.

This thesis goes to great length to show that the meaning of a car’s design (what it communicates) is far more important in car culture than its functionality (its ability to provide transportation), although this conception leaves room for cars whose high functionality (like the Volkswagen) can be a meaningful appeal in its own right. Whether stylish or not, political economy would stress the automobile’s role as a commodity. Mosco defines “commodification” as “*the process of transforming use values into exchange values*” (Mosco, 1996, p. 141). This means that commodification is how things that fulfill a human need are structurally created and exchanged on the marketplace. Here, one avenue of inquiry would describe personal mobility as a “use value.” The automobile is an example of how personal mobility can be commodified, although it is mutually constituted by other things, especially public transportation, urban planning and road construction. Road construction, in particular, is extraordinarily difficult to commodify, so governments have traditionally stepped in to undertake this huge public works projects. Clearly, this has facilitated the success of both car culture and

the auto industry. With respect to the SUV, the fact that billions in public funds are spent building and maintaining roads so that a growing number of motorists can drive their “rugged” *off-road* vehicles on them would hopefully not be an irony lost on even the most austere political economist.

Staying with commodification, another avenue of inquiry might consider the production process, particularly the invariant fact that “stylish” automobiles command higher prices than “unstylish” ones. The SUV, in particular, is a remarkably inexpensive vehicle to manufacture, yet sells for high prices. That is, from a manufacturing point of view, many SUVs are modified trucks, so development costs are very low; from a marketing point of view, the SUV’s popularity means that savings do not have to be passed on to consumers. This thesis necessarily recognizes the exceptional profitability of the SUV, and finds that auto makers protect their “cash cows” through lobbying and astute symbolic management. But political economy would be more formal. It would describe in greater detail the SUV’s profitability, and then critically analyze the institutional channels through which auto makers enhance and promote its style. While such an emphasis is an important moment of any analysis of car culture, we should resist the temptation to believe that it offers an exhaustive explanation of car culture. The fact that we can show convincingly how industries try to shape opinion does not mean that they have successfully shaped it, that it can not evolve beyond the shaping, that it can not assume forms unintended by the shaping, that it can not be ironic or playful or angry and so forth. In short, we must resist the temptation to

assume that production explains consumption. Hence, while there is a degree of overlap, the difference lies in car culture's articulation of the SUV's received meaning and political economy's emphasis on power structures.

Mosco acknowledges that cultural studies offers useful insights to communication studies and political economy, for it is a field of study "rooted in the needs, goals, conflicts, failures, and accomplishments of ordinary people aiming to make sense of their lives" (Mosco, 1996, p. 251). Cultural studies can remind political economy that "multiple overlapping hierarchies constitute the process of structuration," and that there is an "energizing potential of multifaceted forms of social agency, each of which brings with it dimensions of subjectivity and consciousness that are vital to political praxis and which have received too little treatment in political economic analysis" (Mosco, 1996, p. 252). Political economy, in turn, criticizes pluralistic theories like cultural studies by returning to questions of structural power and control. For example, an important question concerns who has the *greatest* resources in culture. Cultural studies' notion that people are their own media "producers" does not sufficiently analyze people's abilities at this task, nor the producer's ability to circumvent people's facilities, nor the fact that resistance is structurally defined (Mosco, 1994, pp. 257–262). For example, with respect to how cultural resistance is structurally determined, somebody who hates cars might attempt to resist car culture by not owning a car. But this person still needs to be mobile, because personal mobility is a necessary "use value." Public transportation is one obvious route to mobility, but, for many, it is

a gloomy one. Part of its gloominess is because it is mutually constituted by the structural forces of the automobile. The lackluster level of service offered by public transportation is influenced by widespread auto ownership by most everybody else.

To sum up, the theory of car culture conceptualizes people as largely autonomous, because they hold their own beliefs about cars and make choices about cars. It holds that we can assess car culture by reading its “signs,” particularly cars and advertisements. Political economy, by contrast, reminds car culture that such a conceptualization of “choice” is disingenuous, for it is still made amongst a limited number of major auto companies who have widespread structural powers to ensure their interests are satisfied. Car culture focuses on meaning; political economy focuses on institutions. Suggesting which is a “better” approach is not the purpose of this “methodology” section, and doing so is probably impossible anyway. But this thesis is about meaning, so suffice it to say that the study of car culture is important because it reveals how power, as political economy sees it, is represented in ordinary life. The theory of car culture respects the “choice” that people would obstinately *claim* to have, particularly since a car is, for most people, the second largest purchase they will ever make. Car culture maintains, more so than political economy might admit, that the decision to buy an SUV is, in the final analysis, an autonomous one. It is based on what people, individually, think about it—even if this knowledge is less than perfect.

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THE AUTOMOBILE IN America over the past one-hundred years has been everything from a vehicle for economic prosperity and depression, a killing device, an object and symbol of American technological ineptitude, the main site for political-economic struggle, and the ultimate expression of an advanced capitalist society. In being all these things, the car has had both a functional and symbolic role in American culture. But this does not make the car unique; clothing, for example, has these roles, too. What has made the car different is its potential to be controversial. Cars have a heavy impact economically, socially and environmentally. Fashionable cars, in particular, almost always cost more than unfashionable (dull) cars. Cars are one of the most expensive fashionable good capitalism has produced and people own.

Each book selected in this historical literature review interprets the functional and symbolic role of the automobile differently. Each book is useful because each is representative of the values of the car culture in which it was published. Five major periods of car culture are identified immediately below, and then each book is discussed in greater length.

To begin the first phase of the story, we have conservative economic historian John B. Rae. His book, *The American automobile* (1965), exemplifies a laissez-faire attitude towards the car which was characteristic of American car culture from its inception through the 1950s. While his book leaves much to be desired, the facile innocence with which it is written crystallizes the viewpoint that the automobile is inherently good.

The second major phase started around the end of the 1950s and carried on through the 1970s. The innocence of American car culture had begun its decline as the high costs of car-based auto mobility came to be recognized. This phase is represented by John Keats and Ralph Nader, both of whom attack the auto industry as irresponsibly pandering to consumerism run amok. While the idea of having car-based auto mobility is not necessarily bad to these two authors, its realization in a libertarian affluent society has been abject. Keats's style is popular and made his book, *The insolent chariots* (1958), a best-seller of its day. Until his final chapter, he is metaphorical and sarcastic; in the final chapter, he beseeches his readers to consider automobile choices on moralistic grounds. Nader's book, *Unsafe at any speed* (1965), marked the first serious inquiries into car design. In its wake, the awesome power of the car companies was undermined and car culture lurched a little towards accepting the role of government to enforce more socially responsible design. But as American auto makers were pushed and shoved into making more socially responsible cars, Japanese auto makers were already making them.

The third major phase of American car culture occurred during the 1970s and through the 1980s. The preoccupation during this time period was with the success of Japanese cars in the American marketplace. Once the world leaders in the automobile industry in both sales and technology, the American industry was seemingly mired in technological stagnation which was exacerbated by shoddy quality. This is illustrated using three books. According to popular automotive journalist Brock Yates (1983), the

American companies had got up to speed sometime after the Second World War, but had been coasting ever since in the deluded belief that marketing and finance could ensure the success of their business. When technology became “fashionable,” old “Detroit iron” was left in the dust of the Japanese. Robert Sobel (1984) claims that American car culture has been a war, and that domestic auto makers had lost it to foreigners. In particular, the Japanese invaders were successful because they caught the American companies off guard. Their weapon: small, high quality, conventionally styled cars, which were perfectly suited to an auto culture which demanded such attributes. Finally, an MIT book, published in 1990, is an extensive study of how the Japanese build cars. Basically, the Japanese build cars more efficiently and with greater care, both of which result in a better quality product at a reasonable price point.

The fourth major phase is largely about what has happened in the wake of phases two and three. After extensive government legislation to cure the most socially irresponsible aspects of car design, and after the domestic auto industry had reasonably recovered from the astute invasion of the Japanese, what is left to say about American car culture? To James J. Flink (1988), the really interesting developments of the automobile and culture had fully ended through the late 1970s and early 1980s. There is little left to say, as it is clear to him that the future of the automobile will be evolutionary rather than revolutionary. To Flink, the history of the car is over.

In the fifth and final phase, car culture has undergone a serious bi-polarization. Car design in the 1990s, according to David Gartman (1994), has symbolized class divi-

sions more than it has in several decades. Unable to find a sufficiently distinctive automobile in the 1990s, droves of upscale consumers have turned to the truck and sport utility vehicle. Gartman exemplifies the 1990s viewpoint that the SUV is the new escape machine from the working world, with its symbolic promise of outdoor/off-road adventure. However, he only uses the last few pages of his book to make this argument. This leaves open an opportunity for further study in this area of American car culture.

THE AMERICAN AUTOMOBILE: A BRIEF HISTORY (1965)

John B. Rae is a typically conservative writer about the automobile. Conservatism is well represented in his 1965 book, *The American automobile: A brief history*. According to the book's dust jacket, Rae is an economic historian who is a "specialist in the history of technology and science." As such, he focuses his analysis rather straightforwardly on observable economic facts, but he is also awestruck by the manufacturing capacity of the car industry. This is apparent from page one, where he states "[t]he American automobile industry has grown into the largest manufacturing operation in the world, its annual performance is the most important single indicator of the condition of the American economy, and American life is organized predominantly on the basis of the universal availability of motor transportation. All this would have been an impressive accomplishment over a period of centuries: as it was, it took place in two generations" (Rae, 1965, p. 1). In other words, Rae's thesis prepares us for a story about

the American automobile as being a vehicle for economic growth (making it a good thing, of course) which dovetails nicely with an egalitarian American culture because it provides “universal” transportation.

Rae’s assumption of the goodness of economic forces reach high levels of simplicity when he glosses over the 1950s era of big, powerful, flashy cars. The 1950s were a time when “the decision on the purchase of an automobile was based as much on prestige considerations as on convenience of transportation” (Rae, 1965, p. 208). Rae supports an unfettered marketplace by saying that “[i]n a boom period with a high level of employment these vehicles seemed to be what the American people wanted, and so” naturally enough, we might add, “they were built” (Rae, 1965, p. 209). Rae’s book is important because it is a formal expression of how America’s car culture is legitimate because it coheres with a broader American culture which values free-enterprise capitalism, consumerism and individualism. While he maintains that the purchase of automobiles is a choice, what that choice happens to be is reduced to neutral economics. While it is a general truism that a strong economy is correlated with sales of more and more expensive autos, it leaves open the question of what people buy, why they buy it, and the role auto makers play in this entire decision-making process.

THE INSOLENT CHARIOTS (1955)

Where Rae’s book is representative of a conservative view, John Keats’s 1958 book, *The insolent chariots*, is representative of the popular social critic’s view. “[T]houghtfully

dedicated to the Automobile Manufacturers Association,” Keats’s book is written with a snarky and sarcastic style. He attacks the auto companies, their workers, their dealers and the American public: “our automobiles are overblown, overpriced monstrosities built by oafs for thieves to sell to mental defectives” (Keats, 1958, p. 186). This caustic tone is a sign of the times. In the year it was published, the Edsel was introduced and rejected by consumers (see next chapter). Like most popular writers, Keats contributes a perspective to our knowledge of car culture which is not always well expressed in academic books.

Written during the 1950s, the most ostentatious decade of automobile design, Keats criticizes auto design as being dysfunctional, pretentious, expensive and unsafe. For example, while the height of the average American grows taller, cars get lower. While cars were once built with adequate height, “[n]ow, one crouches to crawl into an illuminated rolling cave, and then reclines on a sort of couch, there to push buttons and idly wonder what might lie in front of that glittering hood” (Keats, 1958, p. 20). Making matters worse is that bad design propagates itself through a process of “cross-breeding,” where “the result is always a more expensive combination of the least desirable features of the parents” (Keats, 1958, p. 21). There are several examples of this principle. One is the “hardtop convertible . . . whose top is neither hard nor convertible . . . [which] will collapse like a Japanese lantern, for it has no center posts to support it” (Keats, 1958, p. 23).

Like many critics, Keats is not opposed to the idea of car-based auto mobility.

The problem is really one of perspective, particularly as it is brought out that more money is spent on building and maintaining roads than all the important social programs combined. This verges on “building a nation for automobiles rather than one for people.” Auto mobility “has grand possibilities providing that we realize the automobile is after all a machine, and not a love-object, and that we relate its use to some of its proper functions and to some human values” (Keats, 1958, p. 212). Foreign cars, especially the Volkswagen, are what Keats has in mind when he says cars should just be machines. Because it is just a “machine” it is, by Keats’s definition, a virtuous product. He neatly expresses this idea by asking a poignant question which would never occur to a conservative economist like Rae:

Where is the business morality in selling what you can, as compared with the business morality of producing the best machine you can, to sell at the lowest possible price? (Keats, 1958, p. 226)

This question is representative of a new set of values which an increasing number of consumers were beginning to have. Indeed, perhaps by asking the American auto makers and public to think about something as oxymoronic as a “business morality” means that the idea was not far fetched after all. This idea would be a big part of Ralph Nader’s interest in automobiles and the resultant automotive legislation.

UNSAFE AT ANY SPEED (1965)

This idea of moral auto design is an important part of Ralph Nader’s 1965 book, *Unsafe at any speed: The designed-in dangers of the American automobile*. (An updated version was published in 1972; roman numeric page references are taken from this later version.)

Like Keats, but with none of the sarcasm, Nader argues that the American public does not have its priorities straight. Car crashes and tens of thousands of fatalities every year have resulted in the build-up of a vast support system, but “the true mark of a humane society must be what it does about *prevention* of accident injuries, not the cleaning up of them afterward” (Nader, 1972, pp. xc-xci). This has occurred due to America’s unfettered auto marketplace in which auto companies have been woefully irresponsible:

A great problem of contemporary life is how to control the power of economic interests which ignore the harmful effects of their applied science and technology. The automobile tragedy is one of the most serious of these man-made assaults on the human body. The history of that tragedy reveals many obstacles which must be overcome in the taming of any mechanical or biological hazard which is a by-product of industry or commerce (Nader, 1972, p. xci).

Rather than build and actively promote a reasonably safe car, “consumer’s expectations regarding automotive innovations have been deliberately held low and mostly oriented to very gradual style changes” (Nader, 1972, p. xciii). Auto manufacturers have played a key role in shaping an auto culture in which life-saving safety concerns are marginalized, while comparably inexpensive stylistic cues have become the main way that consumers evaluate cars.

Nader’s book aims not just to point out safety flaws, but also to assign culpability. Safer steering assemblies, to cite one example, had been patented starting around the 1920s. When Senator Robert Kennedy confronted Ford president Arjay Miller with this observation at the 1965 Ribicoff hearings on auto safety, Miller stated that “[w]e have got thousands of patents in the Ford Motor Company . . . that are not

worthy of the light of day.” The problem with Miller’s statement, argues Nader, is that a patent “represents a stage of knowledge concerning a useful invention.” It means that auto makers were aware of a safety issue in their products, because patents “define with some precision an *important safety problem* in motor vehicle crashes” (Nader, 1972, p. 92). Useful safety patents “sit on the shelf” because auto makers decide not to build them into their cars. Safety did not sell cars. Adding safety features increased the retail price of the car without increasing its perceived value to the consumer.

While useful patents “sit on the shelf,” new automobiles come out yearly. Stylistic enhancements sell new automobiles, while innovative engineering is much less important. There are two main outcomes of the negligible role of engineering:

First, of the dollar amount that the manufacturer is investing in a vehicle, whatever is spent for styling cannot be spent for engineering. Thus, the costs of styling divert money that might be devoted to safety. Second, stylistic suggestions often conflict with engineering ideas, and since the industry holds the view that “seeing is selling,” style gets the priority (Nader, 1972, p. 211).

At its worst, style creates brand new safety hazards yet is approved for production anyway. This is because style “has been designated by automobile company top management as *the* prerequisite for maintaining the annual high volume of automobile sales” (Nader, 1972, p. 210). The best example of this is the tail fin, a styling cue that is the best symbol of the 1950s styling era. The biggest fins came on the late 1950s Cadillacs, which Nader states “bore an uncanny resemblance to the tail of a stegosaurus” (Nader, 1972, p. 223). The sharp fins were clearly an imminent safety hazard which should never have seen production. Had Cadillac been a more responsible

company, nine-year-old Peggy Swan might still be alive; as it was, she had the misfortune of accidentally riding her bicycle into the back of a Cadillac, impaling herself on one of the fins, and dying later in hospital. She was one of many victims.

At the time of Nader's 1965 version of *Unsafe at any speed*, the federal government enforced Public Law 88-515, which promulgated that the 30,000 vehicles it purchased each year had to meet certain safety standards. However, due to auto group lobbying, the standards were "watered down" to add-on safety features which were already available at extra cost (Nader, 1972, p. 304). Observable safety features are in the interest of car makers:

What prompts automobile makers to refer in testimony or speeches to safety devices or other distinct, observable features instead of the far more important structural advances in safety engineering is the ease with which devices can help shift attention to the area of consumer acceptance and extra-cost options instead of the manufacturers' responsibility (Nader, 1972, p. 309).

The auto industry gets what it wants due to its effective political-economic power: "[t]he industry knows that the political success of any administration more and more is being measured by its success in promoting economic growth in sheer quantitative terms" (Nader, 1972, p. 324). However, Nader argues that the proper role of a democratic government should be to enforce auto safety for the public interest's sake. "A democratic government is far better equipped to resolve competing interests and determine whatever is required from the vast spectrum of available science and technology to achieve a safer highway transport environment than are firms whose all-absorbing aim is higher and higher profits" (Nader, 1972, p. 332-333).

The extent to which auto safety became an important issue after Nader's book

is debatable, although he feels that American society had begun to “wake up to the realistic remedies” available to offset the “relentless carnage” on America’s roads (Nader, 1972, p. xvi). A safety-conscious public helped for the passage of the National Traffic and Motor Vehicle Safety Act of 1966. While Nader argues that the new Act was a “mere rubber-stamping of existing vehicle safety attainments,” there was at least a “breakthrough” in the mandatory installation of seat belts by January 1, 1968 (Nader, 1972, p. xviii). 1971 showed the first decline in traffic fatalities in a decade. The Department of Transportation estimated that seat belts alone were saving about two to three thousand lives every year, even though most people did not use them.

THE DECLINE AND FALL OF THE AMERICAN AUTOMOBILE INDUSTRY (1983)

During the 1980s, most automotive literature described a malaise of the American auto industry through comparison with the success of the Japanese. Brock Yates, an automotive journalist, published a rather scathing attack on the domestic auto industry in his 1983 book, *The decline and fall of the American automobile industry*. His main criticism amounts to this: American cars are not good because they are not as technologically advanced as Japanese and European ones. Like Keats, Yates provides a popular cultural perspective on the car. Yates is reflective of the mood of auto journalists of his day. It is important to appreciate this style of discourse because it makes up an important part of the rhetoric of popular car culture.

One of Yates’s most astute observations comes (oddly) midway through his

first chapter. It should have been on page one, for it is his thesis for why the U.S. has technologically inferior cars. He blames two of the most important auto magnates:

Henry Ford and his Model T created a nation of utility drivers who wanted little more from their cars in a mechanical sense than portal-to-portal transportation. It was an egalitarian revolution in which virtually untrained drivers handling the simplest cars were suddenly granted an unprecedented mobility. The overlay of status identified with American automobiles was supplied later by Alfred P. Sloan, Jr., longtime chairman of General Motors, and his successors. Utility and glamour, not technical advancement, became the marketing tools of Detroit (Yates, 1983, 30).

As time went on, especially through the 1960s, G.M. had grown “complacent,” confident in the belief that “relatively cheap styling changes” could take the place of “real automotive innovation” (Yates, 1983, p. 29). As American auto companies directed their efforts towards “marketing and finance” instead of technical advances, their share of the auto market declined because “[i]t was apparent that the consumer would no longer tolerate shoddy workmanship in the domestic auto industry” (Yates, 1983, p. 46). Note that Yates combines the issues of auto technology and “shoddy workmanship.” This means that the application of better technology results in superior cars because they are built to a higher level of precision. However, we do not necessarily need to accept a sort of technology-equals-quality relationship.

While American auto makers were mired in technological stagnation, American car culture shifted towards a popular appreciation of technology. Interestingly, Yates is on the verge of undermining his whole book with the observation, made in the final pages, that technology had become “fashionable.” By treating technology as fashion, he borders on the argument that technology is not as important as one might assume after reading his book:

Old-line American engineering and production types scoff at hi-tech foreign imports and claim—*quite correctly*—that traditional pushrod engines, beam axles, drum brakes and conventional carburetion can be made to operate as effectively as the most abstruse and expensive gadgetry. American cars were once sold with this image of solid reliability and simplicity, but *fashion* has made obsolete all that gabble from Motown and ease of manufacture, low cost, and utility. . . . Times have changed, and Detroit has ceased to be a source of automobiles that carry strong perceived value in the world marketplace (Yates, 1983, pp. 287-286, emphasis added).

Like his argument concerning Ford and Sloan, technology-as-fashion is highly significant. It is also potentially confusing. It raises the question: just what does Yates think constitutes a “good car”? Is it better technology? Or, is it a matter of making cars with greater care and precision so that they function effectively and reliably? For Yates (a “car guy” if ever there were one) the answer is yes on both counts: (1) cars are better with modern technology because they perform better and (2) cars are better if built with higher standards of quality. The Japanese had attained both these criteria, while the American auto makers were stuck hopelessly trying to convince consumers that their cars at least satisfied the second criterion.

CAR WARS: THE UNTOLD STORY (1984)

Robert Sobel, in his 1984 book *Car wars: The untold story*, interprets the story of American car culture as being a battle between the U.S. and foreign invaders. *Car wars* is effectively about how the U.S. lost the car “war.” Sobel is useful because he tells the story of how foreign cars were adopted into American car culture. We learn about American car culture and its shift to one which accepted foreign cars.

The first Japanese cars to reach American shores were two Toyopet Crowns, in late August 1957. The success of the Japanese in the U.S. is remarkable. By the mid

1960s, sales of Toyotas and Nissans were in the tens of thousands; by the 1970s, sales jumped to the hundreds of thousands. Sobel states the Japanese were successful because they were more conventional than the odd Volkswagen:

At first blush it might appear the reasons for the Japanese successes were the same as for the VW Beetle's acceptance several years before, namely, they turned out low-priced, economical, well-produced vehicles, which were serviced by an efficient organization. Only some of this was true. Toyota and Nissan certainly established smooth-running sales and service operations, and their cars were economical. But the prices for most models were above those for the Beetle, although Americans clearly didn't mind paying the difference. This was so because the Japanese had capitalized on a variation on themes developed in Wolfsburg and Detroit that was once again a clever compromise. Volkswagen led the way with small cars, and Detroit countered with compacts. Toyota and Nissan came up with sedans that were small compacts, combining the VW size with interiors, engineering, and appearances that would appeal to American drivers (Sobel, 1984, p. 168).

Where Volkswagen had secured an obscure place in American car culture, Japanese companies "did nothing less than oblige Detroit to consider accepting a new concept of the position of the automobile in Western society"—an economy car with "a touch of luxury" (Sobel, 1984, p. 171). For Toyota in 1965, this was its Corona model, "both familiar and foreign . . . and sufficiently exotic to attract purchasers" (Sobel, 1984, p. 175). Compared to the Volkswagen Beetle, the Corona had a more powerful motor (mounted up front where people expected it), was heavier, had four doors, more equipment and, at only \$250 more than the Beetle, seemed like a good value. The Corona was advertised as a conventional departure from American cars, whereas Beetle advertising emphasized how different it was (see appendix 7, page 93, chapter 4). Further, the success of Japanese cars was also affected by a better public perception of Japanese products in general. "Japan's reputation for quality had been enhanced by their television sets, cameras, and other consumer items, so that car buyers were more

receptive to the Corona than might have been the case earlier" (Sobel, 1984, p. 177).

American car culture is heavily affected by economic forces. In 1971, the U.S., for the first time in its history, "ran a deficit in its balance of trade." This marked a new economic era. President Richard Nixon instituted a wage freeze, tax cuts, a program whereby the dollar was allowed to "float," and he "temporarily placed a 10 percent surtax on all imports." The floated dollar and surtax raised the prices of Japanese cars; between 1971 and 1972, Japanese car prices went up by about 10 per cent while American-made compact car prices remained about the same. But even with the price advantage of Japanese cars reduced or eliminated, and a more level playing field, Detroit was unable (or unwilling) to manufacture high quality small cars:

[T]he Big Three still evidenced little interest in compacts, much less small cars. General Motors' Vega was recalled in the summer of 1972; the rear brakes were failure-prone and the wheels tended to spin off, while the body rusted almost as its woeful owner watched. Its highly touted aluminum engine started burning oil at 10,000 miles or so, and sales were slipping. As for Ford's Pinto, owners reported it was next to impossible to keep its front end aligned. The visibility was poor, the ride rough, and some drivers yearned for power steering, so tanklike was it to handle (Sobel, 1984, p. 221).

The poor quality of American small cars would really become a serious problem after the stability of gasoline supplies and prices was eroded. Car culture is literally fuelled by gasoline. "Few Americans had known what the initials OPEC stood for before the spring of 1973; by Christmas, no motorist would fail to recognize them as symbols of the greatest threat to his driving freedom since World War II" (Sobel, 1984, p. 222). Nixon's wage-price freeze kept per-gallon prices artificially low, despite raising prices of crude oil, averaging \$0.36 in 1970 to \$0.39 in the summer of 1973. A few shortages during Memorial Day weekend brought a "petro-panic": "amid talk of conspiracy, a

permanent petroleum shortage, and an end to the age of the automobile, owners of vehicles lined up at gasoline stations to buy what they could" (Sobel, 1984, p. 223). Fistfights and even a couple of murders were reported as motorists tried to cut into lines. Frank Ikard, President of the American Petroleum Institute, stated prophetically in March 1974 that "[t]he love affair of the American with the large automobile has come to an end" (Sobel, 1984, p. 224).

During the late 1970s and early 1980s, the "victory" of the Japanese car was "secured." The spring 1979 Iranian revolution brought another energy crisis. Gas prices reached an average of \$0.81 per gallon in June and gas stations readied their pumps to accommodate the symbolic \$1.00-per-gallon price. This resulted in another rush to small cars: "Detroit once again was whipsawed in the marketplace, and the auto industry was in disarray, with its leaders demoralized" (Sobel, 1984, p. 260). More embarrassing product recalls of American cars hurt their reputation even more. Then, the Japanese started selling bigger, more expensive cars:

That the Japanese would upgrade had been predicted by students of that country's industrial scene, and for that matter by American manufacturers who had experienced being run down by the Japanese bulldozer. Earlier, in such fields as textiles, steel, cameras, and varieties of consumer electronics, Japanese firms would come in with inexpensive products, accepting little or no profits, in the hope of obtaining market share. Then, when several American competitors were demoralized, the Japanese would simultaneously upgrade their products and raise prices. So it would be that the reputation would pass through three stages: from low priced to good value to high quality (Sobel, 1984, p. 269).

The most remarkable car was the Honda Accord. Unlike Yates, Sobel is less interested with its technical specifications and more with the Accord as a symbol of quality motoring in America. "[T]he Accord suited the times admirably. Customers whose

last cars had cost \$3,000 to \$4,000 and who now had to go to five digit figures for automobiles had no intention of trading them in every few years. Demands for high quality and durability became more insistent than ever . . . the whipsawing caused by alternating fuel shortages and glut resulted in a compromise size for standard sedans—which happened to be that of the Accord” (Sobel, 1984, p. 277).

Unable to compete effectively with the Japanese, on April 19, 1981, Japan’s Foreign Minister, Masayoshi Ito, and President Ronald Reagan agreed on temporary “voluntary” export restrictions. Not only was this a symbol of American incompetence, it was badly timed because Japanese companies shifted to selling more expensive models. For Sobel, as indicated with the Accord, retail prices constitute “the most important industrial development of the late 1970s and early 1980s” (Sobel, 1984, p. 304). The average price of a car was less than \$7,000 at the end of the 1970s, but that figure jumped to almost \$10,000 in the first few years of the 1980s:

Given a close to five-digit price tag, American automobile purchasers tended to overlook national loyalties and even comfort and performance. What they wanted was value, and it was on this battlefield that the Japanese and Americans fought it out, with both sides from the outset knowing that the Japanese had a decided edge in both products and perceptions (Sobel, 1984, p. 305).

In the end, American companies virtually gave up the war. The early 1980s were a period of consolidation and cooperation between Japanese and American companies. To help ease tension Japanese companies started making their cars in America. Honda started making Accords in the U.S. in 1981, and a Toyota/G.M. venture was not far behind. In the end, these partnerships meant that “Detroit has abandoned the subcompact area to the foreigners” (Sobel, 1984, pp. 322–323).

THE MACHINE THAT CHANGED THE WORLD (1990)

Many so-called “Japan books” were written during the 1980s. The best representative example of the study of the Japanese auto industry came just after the decade had passed, with the 1990 M.I.T. study *The machine that changed the world*. Its authors, James P. Womack, Daniel T. Jones and Daniel Roos, stress that their book is not a “Japan book” because it is a “careful explanation of the logic and techniques” of Japanese production methods, which they term “lean production” (Womack, Jones, Roos, 1990, p. 9). *The machine* is important to an understanding of car culture because it describes the Japanese difference. Not only does the book serve as a reminder of the preoccupation with Japanese production through the 1980s, but it also lays bare the structural aspects of car making which gave rise to the superstructural elements of car culture.

There are three production methods to making cars: craft, mass and lean. Craft production was the only way cars were made in the late 1800s and early 1900s. It remains today only for very expensive cars like the Lamborghini. Craft production was characterized by “[a] work force that was highly skilled in design, machine operations, and fitting” who operated “general-purpose machine tools” and produced cars in low volumes. No two cars were identical, reliability was “elusive,” and retail prices were high (Womack, Jones, Roos, 1990, p. 24–26). Craft production effectively meant the car was a novelty owned by the wealthy.

The most important aspect of mass production, the authors stress, was not building cars on an assembly line: “[r]ather, it was the complete and consistent inter-

changeability of parts and the simplicity of attaching them to each other” (Womack, Jones, Roos, 1990, p. 27). Henry Ford, the most important mass producer, insisted that his parts all be identical. When the usage of identical parts was later combined with a production technique whereby each worker affixed only one part to the vehicle, average task cycles dropped from 8.56 hours to 2.3 minutes. This was still before the moving assembly line. The moving assembly line brought task cycles down even further, to 1.19 minutes. The time needed to assemble the main components into a completed vehicle fell from 750 minutes in 1913 to 93 minutes in 1914 (Womack, Jones, Roos, 1990, pp. 27–29). Fewer man-hours per car brought prices down and increased car sales. According to the authors, classic mass production is characterized by long production runs of standardized parts, surface features which give the impression of newness, and line workers who have little effective responsibility over how it all gets put together.

The idea for lean production began when Eiji Toyoda’s (of Toyota) “production genius” Taiichi Ohno tried to adapt mass production tools in their plants. One of the most expensive, complex tools was the stamping press used to create body panels. These massive, clumsy devices were the quintessential application to meet a mass market. American manufacturers found that they could simply buy many presses, and dedicate each one to produce millions of a part for months or even years. Such an arrangement was not feasible for Japan. Ohno’s “idea was to develop simple die change techniques and to change dies frequently—every two to three hours versus two to three months”:

By the late 1950s, he had reduced the time required to change dies from a day to an astonishing three minutes and eliminated the need for die-change specialists. In the process, he made an unexpected discovery—it actually cost less per part to make small batches of stampings than to run off enormous lots. . . . Making small batches eliminated the carrying cost of the huge inventories of finished parts that mass-production systems required . . . and it eliminated the waste of large numbers of defective parts—which had to be repaired at great expense, or even discarded (Womack, Jones, Roos, 1990, p. 53).

This system depended on a more involved workforce: “[h]olding back knowledge and effort—repeatedly noted by industrial sociologists as a salient feature of all mass-production systems—would swiftly lead to disaster in Ohno’s factory.” And so began lean production, a manufacturing system which “uses less of everything compared with mass production—half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product in half the time” (Womack, Jones, Roos, 1990, p. 13). Where classic American “management by the numbers” instilled a “move the metal” mentality (with defects fixed in a “rework” area) “Ohno placed a cord above every work station and instructed workers to stop the whole assembly line immediately if a problem emerged they couldn’t fix” (Womack, Jones, Roos, 1990, p. 56–57). Defects were fixed on the line and did not reappear, “rework” was virtually eliminated, and workers were happier and more productive.

THE AUTOMOBILE AGE (1988)

The most authoritative, balanced and all-encompassing book included in this review is James J. Flink’s 1988 book, *The automobile age*. Flink has an exceptionally broad thesis behind his book:

The rise of the automobile industry and the socioeconomic impact of the road and the car are central to the history of the advanced capitalist countries in the twentieth century, and explain an especially large part of the history of the American people (Flink, 1988, p. iix).

A fairly extensive analysis of the international aspects of the auto industry are provided in his book, but his focus is on the U.S., “for to understand the worldwide automobile revolution one must put center stage the world’s foremost automobile culture.” Flink analyzes America’s automobile culture by looking at several themes, including the technical developments of the passenger car, mass production and its impact on workers, and the development of the infrastructure of mass auto mobility. Because this literature review already describes many of the technical and symbolic aspects of the car, the following paragraphs will focus on some of Flink’s observations concerning the political-economic aspects of the car.

For Flink, the 1920s and 1930s represent two of the most important decades for the political economy of the car. The auto industry was the principle reason for the boom of the 1920s. It was the largest sector of manufacturing and spawned the success of many ancillary industries; it was also the second largest government expenditure during the 1920s, with more than \$2 billion spent on road construction in 1929 alone. However, mass auto mobility “played a key role in creating the most important necessary conditions underlying the [Great] Depression.” The Depression was the result of a decline in consumer spending, which “resulted from the economic dislocations that were an essential ingredient of the automobile boom, and from the inevitable drying up of that boom” (Flink, 1988, p. 189). Importantly, this means that the car was

the principal force behind a reorganization of America's political economy:

The Depression kickstarted the government into action because it had to correct market deficiencies. President Franklin Roosevelt's promise of a "New Deal" was an important part of the Fordist political economy because it formally recognized the instability of capitalism. Part of the Deal was to legally establish the right of workers to form a union and engage in collective bargaining. This was ostensibly accomplished with the 1933 National Industrial Recovery Act which, while ineffective from a strictly legal point of view, still "stimulated labor organization and gave an impetus for management to pay more attention to labor relations" (Flink, 1988, p. 225). This Act was replaced by the 1935 National Labor Relations Act, which put the support of the government behind unions and effectively eroded some of the power of industry. The American Federation of Labor organized the United Automobile Workers of America (UAW). G.M. and Chrysler gave in to the UAW in 1937, and Ford held out until 1941. This marked "a new era of labor relations . . . as workers turned away from dependence on Henry Ford's paternalism" (Flink, 1988, p. 228).

The growth of government regulations during the 1960s and 1970s is the most important indication of how the public grew increasingly aware of the social costs of auto mobility. Regulating the automobile meant that a significant portion of the price was devoted to making the car safer, less polluting and more fuel efficient. This marked a shift to more functional cars:

Fulfilling federal safety, emissions, and energy requirements has all but ended the annual cosmetic model change, put a new emphasis on functional design, and stimulated inno-

vation in automotive technology. Retail price increases to cover the cost of meeting federal standards since 1968, adjusted to 1983 dollars, amounted to \$1,699.20 of the average \$10,481 retail price of an American-made passenger car by the 1984 model year—\$475.92 for safety equipment and \$1,223.28 for emission controls and changes to improve fuel economy (Flink, 1988, p. 382).

Emissions standards were first enforced with the Motor Vehicle Air Pollution Control Act in 1965, which forced auto manufacturers to meet the same standards as cars sold in California. The 1970 Federal Clean Air Act, enforced by the Environmental Protection Agency, sought stricter standards, which auto manufacturers fulfilled by “the conservative path of proliferating . . . desmogging devices on already overly complicated conventional engines,” which made them run poorly and return fewer miles to the gallon. This made it difficult to meet the standards of the 1975 Energy Policy and Conservation Act, which required that auto manufacturers achieve a Corporate Average Fuel Economy (CAFE) of 27.5 miles per gallon by 1985. (Significantly, a less stringent standard was adopted for so-called “multi-purpose vehicles” like the SUV.)

Flink concludes his book by stating that energy crises, government legislation, better automotive technology and increasing penetration by foreign-made cars, had meant the end of the “auto age” through the 1970s:

[I]t is clear that the Automobile Age—half a century of historical development dominated by the motor vehicle—had ended by the early 1970s. The automobile has not been a historically progressive force for change in American civilization since at least the 1960s. Unlimited accommodation to mass personal auto mobility ended as government came to recognize automotive safety, pollution, and energy consumption as major social problems and consequently to regulate the automobile industry and to invest in mass transit (Flink, 1988, p. 408).

The “hegemony” of the auto industry in American society has come to an end. It has been replaced by new industries, especially computer and telecommunications ones.

This is not to say that the car will go away any time soon; rather, it means that as the car has become socially responsible it has become much less controversial. Put another way, the car is dull and appliance-like. Flink's claim of the end of the auto age is interesting with regard to SUVs, because they are less socially responsible than most cars; they burn more gas, pollute more and have safety issues. Importantly, SUVs are not, under law, "cars"—they are "trucks." This is significant because it means that Flink is partly incorrect. The "auto age" has been replaced by the "SUV age" in the 1990s. Because of the SUV, some of the struggles of the "auto age" have re-emerged.

AUTO OPIUM: A SOCIAL HISTORY OF AMERICAN AUTOMOBILE DESIGN (1994)

David Gartman, in his 1994 book, *Auto opium: A social history of American automobile design*, interprets American car culture with a Marxist approach. He begins with the Marxist idea that stylish cars could be a "narcotizing ideology, the false consciousness of contemporary capitalism." After reminiscing about his childhood love affair with cars, shared with his father, he asks: "[w]ere my dad and I simply dupes suffering under the delusions of false consciousness, oblivious to the inequities and indignities of America's class system due to the obscuring ideology of automotive consumerism?" Rather than settle on a dogmatic Marxist answer, Gartman is seemingly more realistic by saying that "[a]utos and other consumer goods did not delude us about the existence of social inequities in postwar America. They merely made them more tolerable and painless." However, the narcotizing effect of the car was eroded through the fre-

netic 1960s:

[T]he aesthetic qualities of cars were shaped by a contradictory process of class conflict in American society as a whole. Americans blocked by class power from realizing their aspirations in production were forced to turn to beautiful, stylish goods in consumption for a semblance of power, progress, and sociality. For a relatively brief period in American history, the substitute satisfactions of auto consumerism were sufficient to induce acceptance of the indignities of mass production. But ultimately America's mode of mass consumption came into contradiction with its mode of mass production, generating the social struggles of the 1960s that led to the demise of this ill-fated coupling pioneered by the auto industry (Gartman, 1994, pp. xiv–xv).

Gartman is interested in how the car has appeased Americans in a Fordist culture, which he defines as “the shotgun marriage of mass production and mass consumption consummated by the intercourse of class conflict” (Gartman, 1994, p. 211). In other words, Fordism is the forced relationship between standardized goods and consumers, and has resulted in an uneasy interaction between the different classes. The car was an opiate to quell the unease between the classes, the beginnings of which can be found in the Ford Model T and competition from G.M. (This is taken up further in the next chapter.) What will concern us here is the 1950s decade of “fantastic styling” and what Gartman claims to have been the end of car-as-opiate through the 1970s and 1980s.

The “fantastic styling” characteristic of 1950s autos was the result of increased wages and auto makers striving to provide distinctive cars with a minimum of investment into advanced engineering. The labor class was kept complacent through greater wages which permitted it to seek satisfaction through consumerism, especially fancy cars:

Blocked in their true realization, American desires for autonomy and community were channeled into privatized, reified commodity consumption. And because such substitutes

were inherently unsatisfying, they were compulsively repeated in a frenzy of futile and limitless consumption (Gartman, 1994, p. 139).

Mass production was not well suited to providing genuinely high quality, distinctive cars, so auto makers added value through surface stylistic cues. Cheap stylistic enhancements were accepted by the consumer, Gartman argues, because automated factory work “eroded the skills by which people judged the quality of consumer products and brought easily discernable quantity to the fore as the central standard of judgement” (Gartman, 1994, p. 153). A quantifiably desirable car is one with a bigger motor, more horsepower, more size, more features, more colors and more stylistic enhancements.

Two of the most significant cars of the 1950s were the Volkswagen and the Edsel. They are the prototypes of 1950s car culture. Gartman’s theorizing leads him to the conclusion that the Volkswagen appealed to consumers who did not need their vehicles to be an “escape” machine. Those buying the Volkswagen (and other European cars) were of a different class than those buying American cars:

Bourgeois professionals, intellectuals, and business executives were not exposed to the worst inhumanities of Fordism. Because they exercised more decision-making power over the machinery of production than working Americans, they required less insulation from it at leisure, less forgetting and compensation. The chrome geegaws that created artificial distinction and value were less desirable to those who held distinctive, valued positions on the job. And insulation from the labors of Fordist machinery was less necessary for those not subjected to it. Soft bourgeois hands could enjoy the uncharacteristic labor of gear-jamming, as soft bourgeois bottoms would revel momentarily in slamming over bumps in a stiffly sprung sports car (Gartman, 1994, p. 169).

Buyers of the Volkswagen and other European cars were not simply seeking cheap transportation. Nor were they simply rebuffing excessive American cars. Rather,

according to Gartman, they did not require their car to appease their class-based frustrations because they did not have any such frustration. But also, buyers of European cars sought distinctiveness through a type of vehicle which was *truly* different, rather than the look-alike mass-produced form of distinctiveness.

This shift towards some real distinction is best exemplified by the infamous Edsel. But “[t]he Edsel was so obviously an attempt to look different that consumers began to see its underlying similarity to other Ford products and the rest of Detroit’s cars” (Gartman, 1994, p. 178). The Edsel launch was also timed near the launch of the Russian-made Sputnik satellite, an event which “shattered the myth of America’s technological superiority” (Gartman, 1994, p. 179). Big, flashy cars were targeted as examples of America’s inability to compete technologically on a global scale. The Edsel is important to Gartman because it represents the culmination of 1950s style and also because it marked the end of the over-styled car as a mass-produced opiate.

The 1970s and on have been characterized by a much more somber car culture, one in which the narcotizing effects of Fordism have been undermined but not eliminated. Gartman is quick to stress that Fordism has still been the dominant mode of production and consumption:

[T]rendy conceptions about post-Fordism aside, there have emerged no viable institutional alternatives, no new social regimes to regulate the relation between production and consumption. The measures undertaken to solve the crisis of Fordism have been largely dictated by the logic of Fordism itself. Even as the employment and wage foundations of mass production has eroded, consumerism has remained the major focus of popular solutions to Fordism's problems. Consequently, the mainstay of American consumerism, the automobile, has maintained its importance as a cultural icon. But despite concerted efforts by auto makers and their designers, the car has yet to regain the cultural significance it achieved during the heyday of Fordism (Gartman, 1994, p. 212).

The 1973 oil embargo by the Organization of Petroleum Exporting Countries in particular meant that “gas-guzzling cars became defined as socially irresponsible” (Gartman, 1994, p. 213). In response to “public pressure,” the American federal government passed the Energy Policy and Conservation Act in 1975. Under such constraints, the institutional influence of the stylists was eroded as engineers came to the fore. “When the costs of unrestrained consumerism came home to roost in the public consciousness, rational demands for safety and economy predominated over nonrational wish fulfillment” (Gartman, 1994, p. 214). Cars of the 1970s tended to appear functionalistic by mimicking the severe look of European sedans. But as with the Edsel, consumers recognized “Detroit’s *faux* functionalism,” and were opting in droves towards the “real economy” found in cars from Japan and Europe. The Big Three needed something to bring back the consumer base it needed to survive in a Fordist system.

Politically, a solution was found with the election of Ronald Reagan and his so-called economic program of “Reaganomics.” His program “slashed back social welfare programs,” “launched a frontal assault on unions,” and, most importantly, its “restrictive monetary policies engineered a devastating recession that disciplined labor by driving unemployment to unprecedented postwar levels” (Gartman, 1994, p. 218). Reaganomics deepened class divisions, and America’s subsequent economic comeback has been largely attributed to a growing professional class of young urban professionals, the yuppies. American auto makers catered to the higher end of the mar-

ket and abandoned cheap car production to be fulfilled by the imports. They catered to this market with two new styling trends. First was the “aero look,” which “became associated in the consumer’s mind with high-tech, efficiently engineered automobiles” of European influence (Gartman, 1994, p. 221).

The second automotive trend was the “authentically American” sport-utility vehicle, a “design that appealed to the upscale demands for functionality and distinction” (Gartman, 1994, p. 222). The roots of this vehicle could be found in the early 1980s, with a sport called “off-roading,” whose symbolism was not much different than the dream machines of the 1950s:

As the freeways, highways, and surface streets of America became increasingly crowded, polluted, and regulated, many Americans took their automotive fantasies off the roads into the countryside and wilderness, conjuring up nostalgic fantasies of an American frontier of unbounded space and opportunities. Once again, the automobile became a mobile means of escape from the escalating problems of urban and suburban America (Gartman, 1994, p. 223).

Gartman suspects that the early off-roaders were “much like hot rodders.” By this he means that the off-roaders were “working-class men” who used off-roading as an expression of their power to dominate their surroundings. Unfulfilled at menial jobs, they took to the trails as an outlet for expression. Also, driving these off-road vehicles on regular streets symbolized a revolt against mainstream American life.

Gartman points out that the shift of these vehicles into acceptance by the upper class was “puzzling,” particularly since this class probably “objected to the automotive destruction of America’s wilderness.” At any rate, the SUV was appropriated from the off-roaders (with the addition of luxury amenities like leather seats, air conditioning

and labor-saving automatic transmissions) and became a desirable symbol of upscale functionality. However,

[t]he fascination of upscale consumers for rugged-looking off-road vehicles was more symbolic than functional. Of course, as this group discovered parenthood and turned child-rearing trendy, these spacious cars did provide ample room for hauling kids to school and after-school ballet and violin lessons. So did the station wagon, but it was stigmatized as the frumpy old vehicle of suburban mass consumption and would never do to express the distinction of America's newly enriched professional-managerial elite. These jeep-like autos were not only distinctive but also expressed this environmentally correct group's penchant for natural, healthy lifestyles (Gartman, 1994, pp. 213–224).

The SUV was appropriated because yuppies needed a vehicle with sufficient space to transport their families, yet station wagons were not acceptable because they carried undesirable symbolic meaning. Further, the SUV is symbolic of a return to nature, although its owner was much more likely to experience nature in a much more “gentle” way through activities like rock climbing, cottaging, and maybe even mountain biking. Meanwhile, cheap little cars were bought in droves by lower classes. This brought a sharp class polarization in American car culture. As Gartman puts it, “[c]ars once again symbolized class, eroding the ideology of mass consumption that underwrote the now-decaying system of mass production” (Gartman, 1994, p. 224). This means that the visual impact between an SUV and a regular car was greater than that between an upscale car and a regular car of previous decades. This created an even greater chasm in auto culture, with one group driving small “econoboxes” and another driving big trucks.

THE HISTORY OF American car culture and car design can be thought of as an intersection of two main values. First is utility, the way in which a car can provide efficient, practical and safe transportation. Utility can be achieved in several ways. It can be achieved simply through the use of a more rational design; it can be legislated (forced) by government; or, it can come as a result of better technology, such as a more efficient engine design. The second value is style, the extent to which a car is made to look fashionable, normally achieved by making an appealing design. A fashionable car is simply one which conveys a desirable message to car culture in precisely the same way as fashionable clothing. The problem that happens with stylish cars is that the utility of the car is effectively undermined as the stylists make it look “fashionable.” Throughout it all, the theory of car culture maintains that *all* cars signify something and practically everybody knows what that is. The “intersection” of utility and style is depicted graphically in appendix 1 (page 86), using modern prototypes.

The purpose of this chapter is to use this idea of “intersection” to tell the story of the development of America’s car culture and car design. Where possible, the practical side of “utility” and the fashionable side of “style” are discussed to show how each of these has taken greater or lesser importance. Some of the events covered include: the rise of the “Big Three,” General Motors, Ford and Chrysler; the rise of stylish cars; the beginnings of government intervention in the auto industry; and a brief look at the successful foray of Japanese cars in the American auto market.

At the end of the 19th century, and for the first few years of the 20th, automo-

biles were playthings for the rich. Regardless of type, automobile ownership at the turn of the century was a symbol of social status because it meant that the owner had the disposable income to buy one and the leisure time necessary to keep it running. Indeed, keeping one's automobile in running order was a time consuming challenge, as they were prone to constant mechanical difficulties. Reliability tests and feats of durability were quite common, as manufacturers sought to visibly demonstrate the capabilities of their products (see appendix 2, page 87). Some major cities built auto-friendly roads, like Detroit's Grand Boulevard, which were smooth, flat and often not open to non-vehicular traffic. Wealthy automobile owners apparently took great delight in the occasional impromptu race with horse-drawn carriages (McShane, 1994, p. 112).

Soon into the 20th century, the mechanical novelty of the automobile had begun to decline. Attention shifted to how the automobile could be a useful alternative to the horse and buggy, rather than the car-as-toy (Flink, 1988, p. 33). Several developments bear this out. For example, America had its first true "mass-produced" car. In 1904, Ransom E. Olds sold 5,508 "curved dash," 3 horsepower Oldsmobiles (see appendix 2, page 87). The San Francisco earthquake occurred in 1906; cars were used to carry in much-needed supplies because rail lines had been destroyed. By 1907, fuel economy tests were at least as frequent as reliability tests. And in 1908, the unprecedented feat of disassembling three cars, mixing up their parts and reassembling them into three properly working vehicles had been accomplished. The three cars were Cadillacs, and it meant that auto manufacturing had passed an important test of pre-

cision. 1908 was also the same year the first Ford Model T was sold.

During the early 1900s, Henry Ford had a dream of selling, what he called, “a car for the great multitude.” This would be an ideal car—inexpensive, reliable and simple. Importantly to the present discussion, because he was only going to make one type of car, stylistic enhancements were unnecessary. For Ford, lower selling prices and the exigencies of mass production were more important than superfluous changes in design.

The first Model T was sold on October 1, 1908 (see appendix 2, page 87). Initially, prices for the Model T ranged from \$825 to \$850, making it a very inexpensive car for its time. But prices would drop much further, especially after a moving assembly line was started on January 1, 1910, at Ford’s Highland Park assembly plant. By 1912, the Model T sold for about \$575, which was less than the average yearly income in the U.S. Prices dropped further, to the mid-\$300 range in 1916 until its last year of production in 1927, when the then-outdated Model T sold for under \$300. (See appendix 3, page 88, for information on average yearly incomes and selected vehicle prices.) Ford’s policy of an unchanging design, with savings of economies of scale passed on to consumers, helped make the U.S. the most automobile country in the world. Total Model T sales of 15 million helped account for a people to car ratio of 5.3; this figure can be compared to 96 people per car in Germany, 44 for Great Britain and 10.7 for Canada. Ford had indeed made a car for the great multitude.

Ford established that the mass auto market would be fulfilled through mass produced cars made on complex, yet inflexible, assembly lines. Assembly lines

brought the number of assembly hours per car down, which made it less expensive to the consumer. An engine component which might have taken a skilled machinist half a day to produce could be made in minutes by anybody with the rudimentary training necessary to operate a special metal-cutting machine. This is part of what is called "Fordism," wherein a standardized mass consumer good is produced in a series of discrete yet simplistic steps by line workers operating expensive, task-specific machinery under the vigilant eye of managers. At Ford, speeding up the assembly line was critical to making enough cars to meet demand. Indeed, by 1913, Model Ts were only sold in black enamel paint, as this was the fastest drying colour. The black Model T is symbolic of how Fordist production methods placed the exigencies of mass production above the desires of consumers for stylized goods.

Fordism is not just a production method but a complex political economic system. Capitalists pay their workers high wages and workers spend their money on the open marketplace, buying goods such as cars. Ford started paying his line workers the unheard of rate of \$5 per day, beginning in 1914, as an exchange for the mind-numbing, dreary work. A line worker stuck tightening one bolt for eight hours a day could take solace through the purchase of commodities. For a time until 1921, Ford even had a "Sociological Department" (later renamed the "Educational Department") which investigated the private lives of workers to ensure their wages were being spent appropriately (Flink, 1988, p. 121). The political economy of Fordism is important with respect to the "intersection" of utility and style because, as we will see, consumers

would come to resent products whose aesthetic was as dreary as the mass production line. While the Ford Model T was accepted as a suitable product because of its low price, General Motors offered more style.

The story of Ford and Fordism serves as a good contrast to the story of General Motors (G.M.) and Sloanism. William (Billy) Crappo Durrant founded the G.M. Corporation on September 16, 1908, coincidentally not long before the sale of the first Model T. Durrant was a flamboyant and unpredictable manager who was known for making impulsive and irrational decisions. After two years of his management, and a 1910 recession, G.M. was out of money (Flink, 1988, p. 65). A cash infusion from banking groups bailed out the corporation on the condition that the unpredictable Durrant be ousted. At the same time, G.M. became the first auto company to have its stock listed on the New York stock exchange. Under its new President, Charles W. Nash, and greater control by banking interests, G.M. returned to profitability. Under banker and stockholder control, G.M. established itself as a financial center rather than an auto maker per se. While Henry Ford always dreamed of building automobiles, the bankers and stockholders of G.M. would have financed the production of any consumer good, so long as it was profitable.

Although Durrant had been ousted from G.M., he was a wealthy major stockholder and was, like Ford, still interested in automobiles. Durrant established a new automobile company in the early 1910s, which used a design by Louis Chevrolet. He successfully brought to market the \$750-\$875 Chevrolet in 1914. Although most ver-

sions of the Model T were cheaper, the Chevrolet sold well in large part due to its better appearance (see appendix 4, page 89). This is particularly true as the years passed and the Model T looked even more dated (Gartman, 1994, p. 65). Yet despite his success with Chevrolet, Durrant had always wanted to be in control of G.M.—and he was from 1916 to 1920. During this time, Durrant was engaged in his unusual management style, which included the purchase of non-automotive companies. For example, one of his fortuitous acquisitions included a refrigerator manufacturer, on the logic that refrigerators were similar to cars (both had steel bodies and motors); this company became Frigidaire. Durrant also acquired Delco Laboratories (which is still with G.M. today) headed by Charles F. Kettering and the Hyatt Roller Bearing Company, headed by Alfred P. Sloan, Jr.

Sloan would soon go on to be President of G.M., but not before G.M. would experiment with an unusual engine design. James J. Flink attributes a great deal of significance to the 1919–1923 Chevrolet with the then-new Kettering air-cooled engine. Air-cooled engines have certain utilitarian attributes, particularly for the way in which they are not susceptible to freezing up during winter or over-heating in summer. But the Kettering engine was a failure because it was plagued with many mechanical difficulties. According to Flink, the Kettering engine “marked the last attempt by an American automobile manufacturer to pioneer to the stage of production a truly radical engine design” (Flink, 1988, p. 232). The Kettering failure is one of the best early examples which illustrate how it is more profitable to innovate through exterior visual cues than

hidden mechanical advancements. The Kettering engine taught the leaders at G.M. that the safest bet was on style rather than technology. By the early 1920s, G.M. had instituted a three year styling cycle for its cars, with minor “facelifts” in between (Flink, 1988, p. 235). Three years happened to be about the lifespan of the expensive metal stamping dies used to create body panels, so capital costs were kept reasonably low.

Sloan officially became G.M. President in 1923 and, like Ford, would have a management practice named after him: “Sloanism.” Sloanism can be understood as a contrast to Fordism. Where Fordism sought to appeal to buyers with one type of product, Sloanism appealed to a wide range of buyers by offering an assortment of cars. Under Sloanist marketing, G.M. offered a hierarchy of cars, beginning with the entry level Chevrolet line all the way up to the prestigious Cadillac line. In between were slotted Pontiac, Oldsmobile and Buick. As persons moved up in social standing, they could purchase increasingly expensive cars which were reflective of their higher socioeconomic status. One of the best parts of Sloanist marketing, of course, was that a buyer moving up the G.M. hierarchy was still in the G.M. family.

The 1920s can be thought of, in part, as a conflict between two giants: one offering what was believed to be the ultimate in utility, and the other appealing to a consumer desire for greater style. This conflict between utility and style effectively ended in 1927, with two important events happening within one month of each other. First, on May 27, 1927, Ford finally stopped producing the Model T. After sales of more than 15 million units, the \$290 Model T had by then become an object of derision. It came

to be a symbol of everything that was wrong with Fordist mass production. Even more, according to David Gartman in his book *Auto opium: A social history of American automobile design*, Fordism and the Model T had moved from their democratizing roles to one which exacerbated class divisions:

Ford revolutionized auto manufacturing, transforming it from a skilled craft process controlled by craftworkers to a largely unskilled process manned by detail workers and controlled by technicians and engineers. In compensation for the inhumanities of his new production process, Ford paid workers the incredible wage of five dollars a day, which many used to purchase commodities for their leisure lives with which to recuperate from and forget their working lives. But the ugliness of the mass-produced products they bought to fill their refuges from the Fordist factory did not allow workers to totally forget the oppressive workplace. When compared to the "classy" consumer goods of their employers, products like the Model T were immediate reminders in consumption of the class gap between labor and capital in production. The demand of consumers for autos and other mass-produced goods that completely insulated their consumption from production led to an imperative for class-obscuring style which would prove the demise of Ford's simple motorcar for the masses (Gartman, 1994, pp. 39–40).

While the Model T once was democratic for the way it brought affordable auto mobility, its ugly, utilitarian design became a symbol of cheapness which was driven by lower class people who could afford nothing better. Its lack of aesthetic unity, for example, can be seen in the way the windshield abruptly met the engine compartment, as if the two components were indiscriminantly bolted together by unskilled assembly line workers who did not care about the product they were building (which was basically true). G.M. cars, by contrast, hid their mass production origins much better than the Model T. For not much more money, a buyer could choose a Chevrolet and not have to be reminded, nor tell onlookers, that he or she bought a dull device for mere transportation.

The second major event in 1927 was the institutionalization of style. Less than

a month after Ford conceded Model T utility, Sloan created the Art and Color Section, headed by Harley J. Earl, a 6'4", 235 pound, gruff speaking, well dressed Californian. Earl had got his start in a Los Angeles custom body shop, designing one-off stylish cars for Hollywood's rich and famous. He was initially hired on as a consultant for G.M.'s Fisher Body Division to design a new Cadillac, the result being the 1927 Cadillac LaSalle, the first mass-produced car designed by one person (see appendix 5, page 90). Note, for example, the large swooping fenders on the LaSalle. Such smooth stylistic cues made the car look like the "hand-crafted classics," Gartman feels, because they replaced "the mechanical look of rectilinear lines with the organic appearance of curvilinearity (Gartman, 1994, p. 81). But it was not an easy style to achieve. Earl had to fight with production managers, who said the fenders were unsuitable for mass production because they could not be stamped out of one sheet of metal. But Earl forcefully insisted his design be implemented. He won, and so each fender was stamped out of three pieces of steel and welded together (Flink, 1988, p. 236). The LaSalle marks the first time that engineers had to make concessions to stylists, rather than the other way around. More generally, the institutionalization of style at G.M. meant that style would be centralized and directed by a core group of "artists," rather than the haphazard system whereby engineers made styling enhancements if it suited the exigencies of mass production.

Like Ford and G.M., Chrysler had its own lesson to learn with regard to the significance of style. Walter P. Chrysler got his start at G.M., leading the Buick division by

1912. Chrysler was apparently very aggravated with Durrant because he muddled around in Buick's affairs too much. Also, Chrysler was known as a serious engineering type, who wanted to put advanced technology in moderately priced cars. Chrysler eventually quit G.M. and, in 1924, brought out his mid-priced Chrysler Six, manufactured by his Maxwell car company. The Chrysler Six is significant because it was the first moderately priced car to utilize a technologically advanced, high compression engine.

In the years that followed, Chrysler earned a reputation for making automobiles with advanced engineering. However, things were taken too far with its 1934 Chrysler Airflow, a car which, again, is exemplary of how auto manufacturers learned that a car's visual cues are vital (see appendix 5, page 90). The Airflow was an engineering exercise in making a streamlined automobile. But the Airflow was an astounding sales disaster which almost put the company out of business (Gartman, 1994, p. 124). Significantly, it did not receive any input from dedicated auto stylists; its shape was created solely by engineers. An auto stylist might have recognized that the style of streamlining is at least as important as the function of being streamlined. As Gartman puts it, "[t]he entire industry concluded from the episode that even meticulous and innovative engineering could not sell an ugly car, and that beauty could not be calculated by engineers' equations but only intuited by stylists' probing of consumer emotions" (Gartman, 1994, p. 125). American auto makers thus learned very early on that expensive engineering alone could not guarantee sales of cars.

The quintessential period of automobile culture in America occurred during

the 1950s (see appendix 6, page 91). The Second World War had ended and times were good—especially for the auto makers who were no longer constricted by wartime rationing and who were selling in a sellers' market. These happy times were reflected in American auto design as cars got bigger, flashier and more powerful. As the size of the average car climbed upwards, and as it became ornate with more chrome, average horsepower increased, from 110 in 1946 to 180 ten years later—with some massive motors pumping out more than 300. (Ford's Model T, by comparison, had 22 horsepower.) All this power was the result of the high compression V8 motor; as soon as 1953, the majority of U.S.-made cars had 8 cylinder motors (Sobel, 1984, p. 4). Even G.M.'s low line of cars, the Chevrolet, came equipped with powerful V8s. Several styling cues are representative of the 1950s. In addition to chrome, the "hardtop convertible" and wrap around windshield were popular.

But the most recognizable styling cue of the 1950s was the tail fin. The first tail fins appeared on Cadillac's "new" postwar car, the 1948 Series Sixty-Two. William L. Mitchell, Earl's protégé, takes credit for the non-functional protrusions. The fins were inspired by the Lockheed P-38 WWII fighter plane, an airplane for which G.M. had supplied 200,000 motors during the war. Those fins helped make the Series Sixty-Two Cadillac's most popular car, with sales of 40,000 on a total Cadillac output of 92,554 in 1949. Fins grew in size and proliferated to other models in the G.M. lineup. They were even available on Chevrolet models; indeed, the 1955 Chevrolet Bel Air is regarded by many auto enthusiasts as being the quintessential 1950s car, with fins just about the

right size and just the right amount of decorative treatment without being overdone (by 1950s standards at least). The biggest fins came on the late 1950 Cadillacs. (See appendix 6, page 91). In short, the tail fin is, arguably, the single best example of how styling was much more important than utility.

There was a limit to the extravagantly styled cars of the 1950s. The Edsel range of cars—the Ranger, Pacer, Corsair and Citation—are the prototype of all that was wrong with 1950s automobiles. The Edsel is the representative example of how American consumers were unwilling to accept another gauged up, over styled and over powered car. Its ugly styling was probably most harshly criticized; the front end styling was likened to a toilet seat, a horse collar, an Oldsmobile sucking a lemon, and even a vagina. (See appendix 6, page 91.) While it is true that the launch of the medium-priced Edsel in 1958 coincided with a recession year, it is too simplistic to presume that a relatively poor economy was the main reason for a lack of acceptance of the car. More fundamentally, as a *Consumer reports* article put it at the time, the Edsel epitomized “the many excesses which . . . were repulsing more and more potential car buyers” (quoted in Gartman, 1994, p. 178).

Easily one of the most repulsed was John Keats, in his 1958 book *The insolent chariots*. His book was introduced in the previous chapter as one of the earliest and most sarcastic critics of the auto industry, and he has plenty to say about the Edsel and the car culture it was born into. In some respects, Keats can sympathize with Ford only because the Edsel was conceived starting in 1948 when the mood was “optimistic” and

even “orgiastic,” and still very positive in 1955, “the gaudiest sales year in automotive history” (Keats, 1958, pp. 90–91). The Ford Forward Products Planning Committee conducted its market research and determined that “of those who bought middle-priced cars, at least 3-1/2% could be persuaded to buy a new Ford brand”—a profitable figure and thus the Edsel (Keats, 1958, p. 92). In all seriousness, after reading some initial reviews of the Edsel, Keats points out that “the basic tragedy of the Edsel’s design was not that it was a hot car improperly suspended, nor that it was necessary to buy additional [optional] equipment to cure its little faults, but that it was not a *different* car. It was just another big, gaudy, not-too-unusual looking entry in what is euphemistically called the middle price range” (Keats, 1958, p. 105).

There was at least one different car on the market—the Volkswagen. Keats says that “[t]he Volkswagen people are so busy trying to fill their orders that they do not need the services of market analysts, researchers, psyche-plumbers, hidden persuaders and twenty million dollars’ worth of advertising” (Keats, 1958, p. 113). It is to the story of the Volkswagen that we now turn, and conclude the story of the Edsel by saying that the car was only on the market for three years, its best sales year (the first year) only seeing a third of its forecast sales. In the end, Flink tells us, “the name Edsel became a synonym for ‘loser’” (Flink, 1988, p. 306).

The Volkswagen is the Model T of Europe. It was designed and built to be a sturdy, reliable car which would be easily affordable. Like the Model T, the Volkswagen was a highly functional design which did not undergo substantial alter-

ations during its extensive production run. (See appendix 7, pages 92 & 93 for a collection of Volkswagen pictures.) And also like the Model T, there was a vision behind the car which was, ostensibly at least, democratic—or, perhaps better, nationalistic. Rather than make a car for a target market, the Volkswagen was intended for everybody (in Nazi Germany)—a “people’s car.” The two main men behind the Volkswagen hoped that their car would make a better nation by making it auto mobile. These two men were Adolf Hitler and Ferdinand Porsche, both of whom loved cars and admired Henry Ford greatly.

The story of the German “invasion” of the American auto market is well captured by Robert Sobel, in his 1984 book, *Car wars: The untold story*. Volkswagen general manager Heinz Nordhoff sent representative Ben Pol and one Volkswagen car to the U.S. in January 1949, with the hope of establishing distribution channels through already-existing foreign car dealerships. None were interested at the time in carrying what most thought of as “Hitler’s car,” so Pol sold his one demonstrator and its spare parts for \$800 and went home (Sobel, 1984, p. 39). Later in the same year, Nordhoff himself came to the U.S. and was met with the same hostility as Pol. But he also learned an important lesson: that an important component to the success of his company would be the establishment of a service-oriented distribution chain, something different than what American consumers were used to. For a growing number of consumers who preferred foreign cars, Nordhoff saw an opportunity: he would ensure that the Volkswagen was sold by a dealership system which specialized in

Volkswagens. This was different than the typical way foreign cars were sold, which was through dealers who carried a wide array of foreign cars with negligible commitment to any one of them. For consumers who had tended to prefer American cars, Nordhoff wanted his dealerships to stay away from the common high pressure sales tactics. The bad reputation of car dealerships was firmly established through the 1950s; high pressure sales games became the norm and even today, many people are anxious at the prospect of having to enter a dealership and purchase a car.

The first dealership to sell the Volkswagen was owned by Max Hoffman in 1950, although he only agreed to sell Volkswagens in exchange for the opportunity to sell the new Porsche sports car (Sobel, 1984, p. 42). In 1950, 150 Volkswagens were distributed by Hoffman, 200 in 1951 and almost 400 in 1953. By 1954, Volkswagens were being sold in Southern California where it had become a "fad car." But Hoffman and his associates were not to Nordhoff's liking because he did little to actively promote the car. Nordhoff appointed Will van de Kamp to strengthen the distribution system. According to Sobel, van de Kamp "withdrew franchises, demanded upgrading, berated those who ran slovenly operations, and rewarded efficient dealers with larger territories" (Sobel, 1984, p. 45). More than 20,000 Volkswagen "Beetles" were sold in 1955, and with it, a Volkswagen culture emerged:

It was truly a phenomenon, one Detroit noted, but about which it would yet do nothing. Volkswagen clubs appeared, there were magazines devoted to service tips, anecdotes, and even the history of the car. Drivers would beep their horns when they saw another VW. It all was somewhat puzzling to drivers of domestic cars. There was the "VW bore," a species encountered usually on the East and West coasts at cocktail parties, who insisted on imparting to others tales of his car's stamina and economy. By 1959 . . . the car was well on its way to symbolizing the youthful revolt against what many considered a

crass materialism that was corrupting the American dream, a consumption ethic run amok. Whereas middle-Americans celebrated earthly successes by purchasing and polishing ornate and large Detroit products, intellectuals at prestigious colleges and universities . . . flaunted contempt for such values by driving about in their VWs—unwashed and a trifle dented at that. All of this occurred years before the media discovered “the generation gap.” Ironically, what once had been “Hitler’s car” became a touchstone of sorts for the political left in the United States and would remain so through the hectic 1960s (Sobel, 1984, p. 45).

This shift of the Volkswagen’s symbolic meaning—from an abject object associated with Nazi Germany to one which was associated with free-loving, left wing America—is highly interesting with respect to the utility/style “intersection.” Technically speaking, if the Beetle were to be placed in the “intersection,” it would fall under high utility and no style because it does not have many stylistic enhancements. But interestingly, its lack of style was an oppositional style all its own. The Volkswagen, for a growing number of people, was sought because it was a high quality car and also because it conveyed utilitarian values over prototypically American stylistic ones. By 1961, the Volkswagen had captured 3% of the market, with sales of 177,000 (Sobel, 1984, p. 48). The Big Three had had enough, and brought out their own line of small cars—the most significant of which was the 1960 Chevrolet Corvair.

The Chevrolet Corvair was, to Ralph Nader in his book *Unsafe at any speed* (1965), the prototype of the unsafe American car. Basically put, a potential problem with all rear-engined cars like the Corvair is that during cornering, the rear tires are prone to losing traction because the weight of the engine acts with a pendulum force. But the main problem was the Corvair’s flawed suspension, which exacerbated the problem by putting the wheel out of proper alignment with the road; this, in turn,

could cause the tire to become seriously deformed and lead to a rapid loss of driver control. (See appendix 8, page 94.) But the fact that the Corvair had stability problems was just the beginning.

Most importantly, Nader charges the Corvair with being “one of the greatest acts of industrial irresponsibility in the present century” (Nader, 1965, p. 4–5). He starts by pointing out that several aftermarket companies offered products that improved the Corvair’s suspension, advertising impressive claims like “keeps wheels on the ground.” Auto enthusiast magazines criticized the Corvair, but in their typically normative tone; “critics are not necessarily crusaders. . . . An unwritten rule is that you never ‘straight-arm’ a vehicle or its manufacturer, or enter the territory of muck-raking” (Nader, 1965, p. 14). Auto magazines are in no hurry to offend manufacturers—if they did, they might have their free supply of cars shut off and be forced to *buy* all the cars they write about. Car experts agreed that the Corvair was flawed, although for them it was either a marketing opportunity or a good story.

But Nader is a lawyer concerned about auto safety and the public good, not a “car guy.” The problem was that during the process of designing the Corvair, its leading engineers—Edward Cole, Harry Barr, Robert Schilling, Kai Hansen and Frank Winchell—had to take out as many manufacturing costs as possible. One of the first costs to go was in safety equipment. While every car is a compromise between safety, styling and cost, using “compromise” as a defense is “meaningless”; “[f]or the significant question is, who authorizes what compromises of engineering safety?” (Nader,

1965, p. 22). Despite the testing facilities available to Chevrolet engineers and hundreds of written complaints and threats of lawsuits, “the absence of any corrective action year after year can only be explained by bureaucratic rigidities and the abject worship of that bitch-goddess, cost reduction” (Nader, 1965, p. 36).

In an effort to make the Corvair as stable as possible without spending any money on it, Chevrolet specified unusual tire pressures for the front and rear. Lower tire pressure at the front (15 p.s.i.) reduced steering sharpness (which helped stability) and higher pressures at the rear (26 p.s.i.) increased the integrity of the wheel/tire combo. To this, Nader states the truism that “[i]t is well established that cornering stability can be improved with any weight distribution, front or rear, by manipulating tire pressure.” But the crux in the case of the Corvair is that “any policy which throws the burden of such stability on the driver by requiring him to monitor closely and persistently tire pressure differentials, cannot be described as sound or sane engineering practice” (Nader, 1965, pp. 23–24). By specifying such tire pressures, Chevrolet was effectively admitting a safety flaw in the suspension design—the responsibility for which was foisted upon literally millions of owners, mechanics and gas station attendants.

Auto safety advocates like Nader, organizations such as Physicians for Automotive Safety, and various state and federal organizations and politicians were the principal backers supporting automobile safety legislation. The first federal law mandating auto safety requirements was the National Traffic and Motor Vehicle Safety Act, which was passed in 1966 with its standards applicable to any automobile pur-

chased after January 1, 1968. This legislation was the end result of the Ribicoff Hearings, headed by Senator Abraham Ribicoff, during which auto makers testified and revealed the negligible investments in auto safety versus the vast sums spent on styling, horsepower, advertising and executive bonuses. Paul Gikas argues that the 1960s automobile legislation helped make crashworthiness a “cultural ideal,” a “popular crusade to take charge of the quality of everyday American life” (Gikas 335). The Ribicoff Hearings effectively limited the freedom of auto makers because they would have to build their cars with a greater appreciation for the public interest. In part, says Gikas, this means that the 1960s represented the shift from the car as “dream machine” to an “appliance” to get from one place to another. Safety legislation also coincided with the 1968 federal Motor Vehicle Air Pollution and Control Act, which mandated that automobiles had to meet the emissions standards which California had passed in 1963. The political will to support safety and emissions standards is evidence that America’s car culture had shifted towards one which was more accepting of utilitarian values. Further evidence was provided above with the demise of the Edsel and the success of the Volkswagen. More evidence is suggested below with the success of the Japanese car in the American automotive marketplace.

Given that this chapter is about the history of the American automobile, a detailed analysis of the Japanese car industry is outside the present scope of discussion. However, three key points of difference are noteworthy. First, one of the biggest differences in the Japanese automotive industry is scale; while the Big Three were sell-

ing millions upon millions of cars up through the 1950s, Japanese manufacturers could only sell thousands to their much smaller market. For example, Toyota first started selling cars in 1935, but only sold 20 of them; Toyota had better sales for its trucks, but only 3,023 were sold in 1937. In 1955, the entire Japanese automobile industry only produced 20,268 passenger cars (87,904 three-wheeled vehicles were produced) (Sobel, 1984, p. 147). Japan's market conditions could not support the mass production which was found in the U.S. The Japanese devised different methods of production which placed greater emphasis on efficiency and flexibility. Two of the hallmarks of Japanese "lean production" methods is the just-in-time inventory system (call *kanban*) which encourages a system of continuous improvement (called *kaizen*). Lean production methods blend some of the benefits of craft production (like attention to detail) with mass production (like standardized products). Lean production is recognized as being one of the main reasons why Japanese cars are rated as being of such outstanding quality (Womack, Jones, Roos 55–58).

A second noteworthy point concerning the Japanese car industry is more cultural. At the risk of overgeneralizing, Japanese culture has been described as more cooperative and loyal than American culture, which is more competitive and antagonistic (Sobel, 1984, pp. 131–135). This cooperation lead to strong alliances between industry, banks and government which all sought to rationalize auto production and thus strengthen the industry in ways not typically found in the U.S. Several examples illustrate this. Japanese government had highly favorable export policies and restric-

tive import policies. Strong industry/bank alliances were more open to risk, as seen in relatively high debt/equity ratios. Greater cooperation can also be seen with the relationship between industry and its employees. For example, while the U.S. had a powerful, national auto workers union, auto unions in Japan are divided amongst the different manufacturers. (An attempt to form an All Japanese Auto Workers Union failed in 1954.) Each separate union was more loyal to its company and cooperated more with their plans to increase efficiency and productivity. Some writers have described this “cooperation” and “loyalty” critically; Flink argues that “Japanese labor-management relations go beyond paternalistic to be premodern” (Flink, 1988, p. 335) However, favorable worker attitudes do seem to have helped the Japanese industry in its goal of succeeding in the U.S. market.

The last point of the Japanese auto industry is significant to this historical sketch of American car culture. Simply put, Japanese cars, like the Volkswagen, were *different*. They were built for Japanese driving conditions and seemed out of place in the U.S. Japan had bad roads and expensive gasoline, both of which lead to Japanese cars being small, maneuverable and fuel efficient—yet underpowered, at least by American standards. The U.S. had smooth, wide roads and inexpensive gasoline—conditions which were ripe for big, powerful cars. A comparison of 1970s prototypical Japanese and American cars is provided in appendix 9, page 95.

The first Japanese car shipped to America was a Toyopet (later, Toyota) Crown, in late August 1957. This was at a time when “made in Japan” still meant “cheap,” and

the Crown seemed to live up to this dubious reputation. Sobel states that the Toyopet “was not unusual or loveable [like the Beetle] in any way, and at the same time it seemed tacky to a generation of Americans accustomed to thinking Japanese goods as being inferior and still nursing the bitterness of war” (Sobel, 1984, p. 158). While a suitable car in Japan, the Crown was totally unsuited for use in the U.S., particularly its poor ability to keep up with American cars on open highways. There were other problems with the Crown too, like its high price of \$2300 (\$600 more than the Volkswagen) and the name Toyopet which combined the weak images of “toy” with “pet.” However, sales climbed steadily with better models. While in 1960, only 7,013 units were exported to the U.S. this number increased to 31,447 in 1963, 406,250 in 1968 and up to 725,586 in 1970 (Sobel, 1984, p. 150).

The 1970s and early 1980s were a difficult time for the U.S. economy and the domestic auto makers. Conservative economic historian John B. Rae points out in *The American automobile industry* (1984) that the 1970s were a period of economic fluctuation. A general recession at the start of the decade prompted the Nixon government to let the American dollar “float”; this meant that U.S. dollars did not have to be directly convertible into gold which, in turn, was an effective devaluation of U.S. currency. In 1972, when the domestic industry was already on an upswing, Nixon’s policy meant that imported cars lost some of their price advantage, although Japan could compensate by selling to its growing domestic market. The Arab oil embargo in late 1973 brought shortages of gasoline in some areas. Images of big American cars lined

up at gas stations were seen in nation-wide news reports and still make their way into present-day documentaries on the automobile. It meant the coming of a new era in the auto market:

In the second half of the 1970s, the American automobile industry had entered a new era, although as is customary with new eras in history, the signs of its arrival were blurred and uncertain. . . . The industry was being urged to shift to smaller cars by a clamorous section of public opinion and by those who feared further embargoes, and it was being pushed in the same direction by the requirements for fuel economy imposed by the EPA under the Energy Conservation Act (Rae, 1984, p. 149).

The market regained its strength shortly afterwards, until another energy crisis hit in 1979. According to Rae, “the minor petroleum crisis of 1979 did what the major crisis of 1974 had failed to do—completely changed American buyer preferences in motor vehicles. In just about a month the market for large cars almost vanished; customers were looking for vehicles with good fuel economy” (Rae, 1984, pp. 153 & 155). The American car industry had been dependent on a consistent supply of cheap gasoline to fuel its mighty automobiles; when this relationship was undermined, the little imported cars must have seemed all the more appealing. Small, fuel efficient cars were better suited to a North American car culture which was forced to place greater emphasis on cars as efficient transportation—a hallmark of utility.

A late 1970s advertisement for the Honda Civic captures the mood well. This magazine ad (included in appendix 10, page 96) juxtaposes the Civic against the Model T and Volkswagen, thus associating the car with two of the most recognizable symbols of transportation utility. The advertisement boasts that the Civic is “a simple car,” which meant that it had conservative 1970s auto values built into it. This ad is

representative of the way in which Japanese cars successfully inserted themselves into a car culture which valued practicality. The year after this advertisement ran, Japan surpassed the U.S. in total motor vehicle production and captured greater than 25% of the American market. A year later, G.M. failed to make a profit for the first time in six decades and Chrysler practically went bankrupt. Demands for protectionist policies mounted, and the Japanese government “voluntarily” agreed to limit exports to between 1.68 and 1.85 million units during the early 1980s.

This historical sketch of North American car culture ends with two important events at G.M.: (1) a direct partnership with Toyota; and (2) the introduction of the new Saturn line. Both of these events were in large part attributable to Roger Smith, G.M.’s new chairman in January 1981. Smith is important because he genuinely wanted a small car which would be able to compete effectively against Japanese imports.

First, in 1983, G.M. and Toyota announced the formation of New United Motors, Incorporated (NUMI). A couple of years later in late 1985, NUMI was jointly producing identical Toyota Corollas and Chevrolet Novas at a reopened assembly plant in Fremont, California. The Corolla and Nova were the same car, built on the same Japanese-inspired assembly line, differing only in minor stylistic cues and by the name brand applied to the car. While this was not the first or last time American and Japanese manufacturers would cooperate, it is surely one of the most significant. The Corolla/Nova is a symbol of the way in which American auto makers admitted that they had something to learn from a country which was once regarded as a joke and

even the enemy. As Sobel puts it, “[n]o greater admission of American defeat and Japanese success could have been imagined. That GM, the world’s largest industrial enterprise, once so widely admired for its managerial success, should seek lessons from Toyota must have seemed absurd only two decades earlier” (Sobel, 1984, p. 124). A *Road and track* review of the Nova put it well by saying “We have met the enemy, and they is us [sic]” (*Road and track*, 1985, p. 55). With mighty G.M. looking to Toyota for some answers on how to build cars, the conversion of American car culture to one which embraced utilitarian values can be considered virtually complete.

The second major event to happen at G.M. was the new multi-billion dollar Saturn car division. The Saturn is significant in a similar way that the Art and Color Section was significant in 1927: it is the institutional recognition of an important set of values, especially those which seemed unattainable using existing structures. Smith opted to create a whole new division which would distance itself as far as possible from old-world G.M. But Saturn would still convey a made-in-America appeal. As one writer, Joe Sherman, put it:

Had our standards remained static, or improved just a little, while the standards of other countries, like Japan and Germany, both rising like phoenixes out of the ruins of war, defined some new epoch? . . . Saturn became a quest for quality you could make a down payment on and drive home. And point to and say with pride, “Made in America.” The country needed that (Sherman, 1994, p. 8).

The Saturn would, on the one hand, prove that G.M. could build a car which would appeal to Japanese car buyers. But on the other hand, to have to create a whole “new” company financed by G.M.’s deep pockets is a symbol of failure because it is a recognition that G.M. had to reinvent itself. Like the Volkswagen and Japanese cars, the

Saturn would have to be *different*; indeed, its slogan bluntly stated “A different kind of company. A different kind of car.” But “different” really seemed to mean Japanese—from the way the car was built, to relations between labor and management, to the car itself which was small in size and of good quality, and to its promotion campaign which was folksy and sensible. (See appendix 10, page 96.) The first Saturn production car rolled off the new assembly line on July 31st, 1990. Roger Smith was at the wheel. He retired the next day (Sherman, 1994, p. 321).

To conclude, the demise of the Model T and rise of stylish cars from G.M. is an indication of how motorists have long sought cars that offer more than utilitarian transportation. The 1950s, the most ostentatious decade of car culture, took style to its greatest extravagance. But not everybody thought over-styled 1950s cars were desirable, and so many bought the utilitarian Volkswagen—a car whose functionality made it a symbol of car cultural backlash. The success of utilitarian Japanese cars further illustrates the decline of a flamboyant car culture. To prepare us for the next chapter, the sport-utility vehicle is a blend of fashionable “style” *and* functional “utility.” This makes the SUV a mediation of car culture’s past, particularly 1950s extravagance and 1970s modesty. Indeed, it makes little sense to describe the SUV’s “utility” and “style,” because they come seamlessly together in a cultural culmination of fashion and functionality. Like most fashionable cars before it, the SUV is less socially responsible; but *unlike* so many fashionable cars before it, the SUV’s problems are transformed into opportunities.

Appendix 1

Utility/style intersection. (All figures US. Car and Driver 2001 new car guide)

High utility (function) Practical, efficient
Economy sedan
	Cute/sporty coupe			
	Toyota Corolla			
	Volkswagen New Beetle			
Low style (form)	Price	\$13,000–14,000	Price	\$16,500–21,700
	Length	174 inches	Length	161.1 inches
	Weight	2400–2500 lbs	Weight	2700–2800 lbs
	Engine	1.8L 4 cyl	Engine	1.8–1.9L 4 cyl
Unfashionable, dull	Horsepower	125	Horsepower	115–150
	Fuel economy (city)	29–32 mpg	Fuel economy (city)	22+ mpg
	High style (form)		High style (form)	
	Fashionable, cool		Fashionable, cool
Full size sedan
	Sports car			
	Ford Crown Victoria			
	Dodge Viper			
Low utility (function) Impractical, inefficient				

All cars symbolize. This chart depicts four prototypical cars which are predominantly “utilitarian” or “stylish,” although some may disagree with the selections. The driver of the Ford Crown Victoria may think that his or her car is highly stylish, if only because it is big and classically “American.” The shifts in what constitutes “style” is an important part of car culture.

Compare the Toyota Corolla and Dodge Viper in particular. The Corolla has been sold in the U.S. for decades and remains a highly practical car, with inoffensive styling, a small yet efficient engine and a reputation for reliability. The Viper, on the other hand, has overt styling which angrily sneers at you, and is equipped with the biggest, most irresponsible motor

available in any production car. The Corolla is capable of rapid acceleration, able to attain highway speeds in under 10 seconds from a standing start. The Viper can do this same feat in about 4 seconds.

On this intersection, the sport-utility vehicle is a blend of style and utility. Indeed, its stylistic appeal is something we can think of as a form of “extreme utility,” derived from its do-it-all, go-anywhere, ready-for-adventure design. This means that the SUV actually *makes utility its style*. However, like practically all stylish cars, its design makes it less socially and environmentally responsible, because it has safety problems, burns more gas and pollutes more than comparable automobiles.

Appendix 3

Average annual earnings of employees, "when employed," 1900–1960
(U.S. Bureau of the Census, 1975, p. 164).
Selected car prices (Flamming, 1999).

Salary		Car prices	
1900	\$418	1900	Porter Stanhope\$750
1901	438	1901	Oldsmobile Curved Dash650
1902	472	1903	Packard Model F2,000
1903	477	1905	Buick Model C1,200
1904	482	1908	Ford Model T850
1905	490	1909	Ford Model F1,200
1906	504	1913	Buick Model 251,050
1907	529	1913	Cadillac Torpedo1,975
1908	519	1913	Chevrolet Series H875
1909	545	1913	Ford Model T Town800
1910	575	1913	Ford Model T Runabout525
1911	587	1914	Cadillac roadster1,975
1912	601	1916	Buick D-45 touring1,020
1913	633	1918	Chevrolet 490685
1914	639	1919	Ford Model T center door sedan875
1915	635	1921	Ford Model T center door sedan795
1916	705	1925	Ford Tudor sedan580
1917	807	1925	Ford Model T Runabout345
1918	994	1927	Buick Country Club1,765
1919	1,142	1928	Ford Model A Roadster480
1920	1,342	1928	Ford Model A Fordor sedan625
1921	1,227	1929	Ford Town Car1,400
1922	1,190	1931	Cadillac V165,350–15,000
1923	1,278	1932	Ford Victoria Coupe600
1924	1,293	1932	Studebaker President Eight1,750–1,855
1925	1,317	1934	Chrysler Airflow CU sedan1,345
1926	1,346	1940	Oldsmobile Series 901,131
1927	1,380	1941	Cadillac Series Sixty-Two convertible sedan ...1,965
1928	1,384	1948	Cadillac Series Sixty-One2,278
1929	1,425	1949	Cadillac Series Sixty-Two 4-door sedan3,050
1930	1,388	1949	Cadillac Series Sixty-Two convertible3,442
1931	1,298	1950	Ford DeLuxe Fordor1,472
1932	1,141	1953	Chevrolet Corvette3,513
1933	1,045	1954	Packard Caribbean6,100
1934	1,066	1955	Chevrolet V8 Bel Air Convertible2,305
1935	1,115	1955	Cadillac Series Sixty-Two4,448
1936	1,146	1958	Edsel Citation convertible3,801
1937	1,259	1958	Edsel Pacer convertible3,028
1938	1,221	1959	Edsel Corsair convertible3,072
1939	1,266	1960	Chevrolet Corvair2,103

Appendix 4

Chevrolet style and Ford utility

These two photos show the aesthetic differences between the low-priced Chevrolet and Model T. The Chevrolet 490 (so-called because it was priced at \$490 during its 1916 introductory year) offered greater style. Even after its price rose to \$685 in 1918 it was popular in large part because it offered more style than the Model T. Indeed, when offered as a closed-in model such as the one pictured here, the Model T actually cost \$875, which was more than the Chevrolet.

The Chevrolet is lower and sleeker looking than the Model T, as evident by its lower "beltline." Its windshield is raked, if only just a little. Its suspension components are much better hidden than the Ford. And perhaps most importantly, it could be purchased in a color other than black.

In 1916, Chevrolet sold 70,701 cars and Ford 734,811. By 1919, Chevrolet increased sales by 80%, up to 129,118. During the same time, Ford increased sales by 11%, to 820,445.

1918 Chevrolet 490
(Flammang, 1999, p. 83)

1919 Model T center door closed sedan
(Flammang, 1999, p. 87)

Appendix 5

Cadillac's stylish La Salle and Chrysler's technologically advanced Airflow

The 1927 Cadillac La Salle is the first mass-produced stylized car. One of the things which makes the La Salle significant is that it was designed front to back by one person: Harley Earl. He sought to give the mid-priced La Salle an expensive "custom look," and used some of the styling cues found on custom automobiles. For example, mounting tires on the side was an unusual yet elegant touch.

1927 Cadillac La Salle
(Car and Driver, Jan., 1990, p. 54)

The Chrysler Airflow was an advanced automobile for its day. But while it may have been a technical achievement, its functionally streamlined shape was very unconventional. Largely because of this, the Airflow sold very poorly and almost made Chrysler go into bankruptcy. The Airflow represents how auto makers learned that a car's shape had to be appealing to the consumer's eye. It is a symbol of how car manufacturers would have to balance artistry with engineering.

1934 Chrysler Airflow
(Flammang, 1999, p. 157)

Airflow juxtaposed with streamlined train, City of Salina.
(Gartman, 1994, p. 122)

Appendix 6

1950s Automobiles

Many automotive enthusiasts regard the 1950s as the "golden age" of the American automobile. The photos on this page and the next depict just a few of the prototypical models.

The top two photos show the first Cadillacs with tail fins, inspired by a World War II plane. Tail fins would proliferate and grow in size during the 1950s. The mid-1950s Chevrolet Bel Air models are considered by some to be just about the right size. And the biggest tail fins came on the late 1950s Cadillacs. Tail fins were one of the targets of the safety crusade, as they were hazardous to pedestrians.

All the photos on this page show many of the other styling cues which were popular in the 1950s. Every one of them has massive amounts of chrome hung on the body. The Chevrolet, for example, has twin chromed "rockets" mounted onto its hood. The models on this page have "wrap around" windshields, which were problematic because they tended to distort the driver's vision. And note that most of the cars are "hardtop convertibles," which means that they do not have center roof support, also known as the "B pillar." Only the "A" and "C" roof supports remain, which was insufficient support to keep the roof from collapsing in the event of a roll over crash.

The Ford-made Edsel at bottom became the symbol for what was wrong with the excessive 1950s American automobiles. Production of the mid-priced Edsel was cancelled after only three years. Ford reportedly lost \$250 million on the Edsel.

1948 Cadillac Series Sixty-Two
(Flammang, 1999, p. 232)

1957 Cadillac
(Vivian, 1994, p. 23)

1955 Chevrolet Bel Air
(Flammang, 1999, p. front cover)

1958 Edsel
(Vivian, 1994, p. 75)

1960 Chrysler 300 F
(Vivian, 1994, pp. 44-45)

Appendix 7

The Volkswagen (continued)

This is a "standard" model Volkswagen; most American models were equipped with more decorative accents. Like the Ford Model T, one of the most striking things about the Volkswagen is its unchanging design. While Beetle lovers may describe at length the numerous modifications made to their car, the essential design has remained essentially unchanged during its extensive production run. Original Beetles were still being produced through the 1990s and sold in countries like Mexico where safety and emissions standards were much less stringent.

1949 German "standard" model Volkswagen Beetle
(Editors of Consumer Guide, Beetle, 1998, p. 35)

One of the things contributing to the Volkswagen's success was its advertising. In direct opposition to typical American sensibilities—where bigger is better—this ad implores its readers to "think small."

Think small.

Don't let the size of the car fool you. The Volkswagen Beetle is a compact car with a lot of room for passengers and cargo. The car is small, but it's not small on the inside. The car is small, but it's not small on the inside. The car is small, but it's not small on the inside.

Don't let the size of the car fool you. The Volkswagen Beetle is a compact car with a lot of room for passengers and cargo. The car is small, but it's not small on the inside. The car is small, but it's not small on the inside. The car is small, but it's not small on the inside.

Don't let the size of the car fool you. The Volkswagen Beetle is a compact car with a lot of room for passengers and cargo. The car is small, but it's not small on the inside. The car is small, but it's not small on the inside. The car is small, but it's not small on the inside.

Volkswagen advertisement, 1962.
(Editors of Consumer Guide, Beetle, 1998, p. 74)

Appendix 8

The Chevrolet Corvair

The Chevrolet Corvair was G.M.'s "import fighter." It was also one of the targets of the safety crusade. Ralph Nader used the first chapter of *Unsafe at any speed* to detail the process by which G.M. marketed a car which it knew had stability problems. Rather than spend money to fix the problem, G.M. let the flawed suspension go into production and specified unusual tire pressures to make it as stable as possible.

The Corvair is symbolic of the shift to greater auto safety. It was one of the main cars which was scrutinized during the Ribicoff hearings, which resulted in the first federal auto safety legislation. Market forces were insufficient to bring about safer vehicles, and the message was that auto makers were not responsible enough to do it on their own.

Chevrolet Corvair (Vivian, 1994, p. 33)

FIGURE 1

Rear Suspension action, comparing 1964 and earlier swing-axle systems to the 1965 full independent axles. Note that as the rear wheels move down into an unevenness or bump, the wheels do not change camber as they did with the older system.

Car Life

Corvair suspension flaw (Nader, 1965, p. 16).

FIGURE 2: UNCONTROLLED SWING AXLE ACTION IN ONE TYPE OF CORVAIR INSTABILITY. SEEN FROM REAR.

1. Moderately loaded car on straightaway (slight positive camber)
2. Moderate right turn. Left axle angle allows centrifugal force of turn to cause beginning lift at arrow.

3. Critical right turn with tuck under—approaching rear end breakaway slide. Axle angle causes aggravated lift.
4. Breakaway, extreme tuck-under, and incipient rollover.

Corvair suspension flaw (Nader, 1965, p. 31).

Appendix 9

Comparison: prototypical 1970s American and Japanese cars

Dodge St. Regis

Car and Driver, March, 1979

Honda Civic

Road and Track, Buyer's Guide,
1976

American Motors Pacer

Road and Track, Buyer's Guide,
1976

The St. Regis is a classic American car—big in every respect and equipped with a big 8 cylinder motor. Note, in particular, the St. Regis's abundance of low-rpm torque. This characteristic of its motor gives superior "seat of the pants" acceleration—an immediate thrust which provides instant gratification. The American sport of "drag racing" is, in part, a celebration of such rapid acceleration. Further, it is commonly believed that "Americans drive torque."

Placed in the utility/style intersection, the St. Regis would score low in utility yet relatively low in style, although its massive size is communicative of high social status.

The Honda Civic is a typical Japanese car—small, space efficient and equipped with an efficient motor. The Civic has an "overhead cam" 4 cylinder motor, which is a technologically more advanced design than the motor in the St. Regis. It delivers much less total power yet more power for its size.

Also, the Civic's motor has to be revved higher to get its power, which is classically "un-American." A writer for *Road and track* claimed "while other carmakers talk of smaller but roomy cars, improving fuel economy and meeting tomorrow's antipollution goals, Honda has simply gone ahead and produced a car that sets standards in all three areas for the others to meet."

Placed in the utility/style "intersection," the Honda Civic would score exceptionally highly in utility and low in style.

The Pacer is a prototypical example of an American company's "small car." Its specifications fall rather conveniently in between the St. Regis and Civic. But the Pacer has neither the opulent size of the St. Regis to make it "American," nor the efficiency of the Civic to make it "Japanese."

The oddly styled Pacer was immortalized in the popular movie *Wayne's World*.

	St. Regis	Civic	Pacer
Price	\$9048 (1979)	\$3550 (1976)	\$5719 (1976)
Weight	3980 lbs	1825 lbs	3425 lbs
Length	220.2 inches	150.0 inches	171.5 inches
Wheelbase	118.5 inches	86.6 inches	100.0 inches
Interior sound level @ 70 mph	71 dba	77 dba	76 dba
Tire size	235mm, 15 inch	155mm, 13inch	N/A 14 inch
Fuel tank capacity	21.0 gallons	11.0 gallons	22.0 gallons
Engine type	Overhead valve V8	Overhead cam 4 cyl.	Overhead valve 6 cyl
Engine size (litre displacement)	5.9 L	1.5 L	4.2 L
Horsepower	150 @ 3600 rpm	53 @ 5000	100 @ 3500 rpm
Torque (lbs-ft)	360 @ 2400 rpm	68 @ 3000	185 @ 1800 rpm
Horsepower per litre of displacement	25.4	35.3	23.8
Transmission	3 speed automatic	5 speed manual	3 speed automatic
Acceleration 0-60 mph	10.9 sec	15.0	15.8
Fuel economy	14 mpg ("city")	36.5 mpg ("normal")	16.0 mpg ("normal")

Appendix 10

Advertisements: Honda Civic and Saturn

This Honda Civic magazine advertisement is representative of how Japanese cars were incorporated into American car culture. The "golden age" of the 1950s was long over, and many people during the 1970s were likely to think of their cars as appliance-like devices. Associating the Civic with two of the most recognizable symbols of utilitarian transportation—the Model T and Volkswagen—was an appropriate appeal at the time. The Civic remains a prototypical Japanese car—efficient and appliance-like.

It takes a simple idea to change history.

In 1908, a man named Henry Ford had a dream: build an automobile so simple and economical, everyone could own it. By 1913, the Model T Ford accounted for one of the new cars sold in America.

The Model T was simple, and because it answered a problem, it was simple to learn to drive, and simple to repair. This one car, unadorned, painted black, with a minimum of options, dominated the automobile business in America for nearly nineteen years.

In the late thirties, Ferdinand Porsche set about achieving a similar goal. This was a different age, with different problems. More people were learning how to drive. The car that was to be nicknamed the "Beetle" was designed to be put into the hands of every driver, from novice to Novelist. It had to be tough, so it was fitted with an engine that could be pushed all day long without breathing hard, and with fenders and

doors that could literally be replaced by an owner, using tools and a few of the same simple mechanical concepts that Henry Ford had revolutionized in updated versions and being pushed out of the market.

And to that, the public's desire for a car that was practical, low cost, and easy to maintain, and you have exactly the gears Honda had in mind when we designed the Civic. We had to think our car would take its place in history next to the Model T and the "Beetle."

What is truly amazing is that through three dramatically different periods in history, the answer to the world's automotive needs has always been the same.

Build a simple car.

We work hard to test drive our Honda.

Honda
We make it simple.

Honda Civic advertisement, 1979

This is the first Saturn advertisement to appear in *Road and track* magazine. Not only is the Saturn a "different kind of company" producing a "different kind of car," its sales pitch is different too because it appears so rational. The ad is similar to the Honda one above, due to its plain appearance (text heavy, white background) and straightforward, conversational style of writing. But it is different from the Honda ad, because it stresses the style of the new Saturn. Note that there is no mention of GM, not even in the smallest type.

When I started my new car, I was told:
"Design the car the way you want it to be, not the way you think the customer wants it."

"When I started my new car, I was told: Design the car the way you want it to be, not the way you think the customer wants it."

Well, we tried hard to make the Saturn just the way we thought it would be very far in the air business could be ignoring what people want.

In fact, we were there taking our car, every one of us, and we were getting ideas from people. A different kind of impact in the kind

of car we designed. For instance, during one of our consumer research sessions, someone said he wanted the Saturn to look like a Ferrari, but cost no more than a Civic. A big dream of his, I guess. But I knew what he meant.

Small car buyers want something they can park in the driveway. Not something they have to hide in the garage.

As proud as I am of the way they look, everything about the design of our coupe and sedans is based on beauty. You won't find scuffs on the hood of the car, for example, unless the engine really needs the extra air.

Then, knowing just what these cars mean, we tried to answer to what we heard people asking for. A van or a need expressed by the customer.

So we created our surprises for these cars. And we'll be pleased to see.

That's what it's going to be, now, is what we talk with our owner the next time around. "

© 1989 Saturn Corporation. All rights reserved.

Saturn advertisement, 1990

THROUGHOUT AMERICA'S ONE-HUNDRED years of car culture, there have been trucks. And arguably, the recreational appeal and go-anywhere ability associated with the sport-utility vehicle is nothing remarkably new either. Auto historian James J. Flink notes that "[w]ith the advent of the Model T and improved roads, the automobile outing and the automobile vacation became middle-class American institutions" (Flink, 1988, p. 167). But it has only been during the 1980s, 1990s and first decade or more of 2000 that the go-anywhere SUV (a car/truck hybrid) has become "stylish." But because practically *any* vehicle is capable of driving "off" the road and carrying recreational supplies, the meaning conveyed by the modern SUV eclipses its off-road functionality. Indeed, the wide assortment of features found on most SUVs undermines their off-road functionality because there is too great a risk of damaging an expensive vehicle. The SUV is a car design which should communicate the ability to go off road rather than necessarily be able to functionally do so. (The appendix, page 115, shows a photograph of a "functional" off-roader.)

The main specifications of an SUV are four-wheel drive, big wheels and tires, increased ground clearance and extra cargo-carrying capacity to hold "gear." The rugged go-anywhere style is already achieved through the SUV's technical specifications, particularly its added ground clearance; but it can be enhanced by cues like "skid plates" and plastic body cladding, which ostensibly protect the vehicle from getting damaged during off-road driving. In profile, an SUV should be a "two box" style, meaning one "box" for the engine and another "box" for the passenger/cargo com-

partment. A “two box” style can be contrasted with that of a minivan, which does not have discernible “boxes.” Other aesthetic features of an SUV include its blunt nose, flat hood and upright windshield, short overhangs, large tires and large wheel openings, fender flares, and roof rack. An SUV should never be mistaken for a minivan.

Because the SUV is not, technically speaking, a new invention its “history” should be described through an analysis of its meaning. While the cultural effects of the 1974 Bigfoot Monster Truck, the 1991 omnipresence of the Hummer during “Operation Desert Storm,” and the notorious 1994 escape of O.J. Simpson in his Ford Bronco are surely important, they are deemed too “accidental” and inconsistent for a methodical analysis of three decades of SUV meaning. In lieu of such events, this chapter uses advertising to describe the history of meaning of the SUV. Advertising is

The mini-van

The sport utility vehicle

both a reflection of the state of car culture and an influential force in it. According to Jack Solomon, by reading the signs in advertising, we learn about the “precise state of desire” of people: “[V]arious advertisements may say different things depending on their intended audiences, but in every case they say something about America, about the status of our hopes, fears, desires and beliefs” (Solomon, 1998, p. 47). He further argues that “[t]he logic of advertising is entirely semiotic: it substitutes signs for things, framed visions of consumer desire for the thing itself” (Solomon, 1998, p. 59). This is in accordance with the theory of car culture, which holds that the signification of a car’s design is more important than its functionality.

The appendix, page 108, shows the growth of SUV advertising in a sample of car magazines from 1985 to present. Completing this rather straightforward counting assignment resulted in exposure to many SUV advertisements. The final selections were eclectic, deemed a representative sample of how auto makers have tried to sell their SUVs. Three periods of truck/SUV advertising are identified below, including the 1970s “truck tough” period, the 1980s “multi-functionality” period, and the 1990s “single-purpose” period.

1970S TRUCK TOUGH: MAKE THE TRUCK A CAR

The main goal during the 1970s was to broaden the market for trucks and SUVs. Manufacturers had to strive desperately to convince potential consumers that their trucks could provide the comfort that they had come to expect from their

cars. People had, for the most part, apparently thought of the truck as a crude, harsh-riding working vehicle which offered little in comparison to a conventional car. Rather than try to radically alter this accepted meaning all at once, manufacturers opted instead to incorporate some of the positive imagery of the truck—its toughness, gained through years of its working life.

A 1973 advertisement for the full-size Chevrolet Blazer and a 1979 advertisement for a Toyota truck are representative of early attempts to sway car buyers to consider trucks. Both stress the toughness of trucks. The Blazer, for instance, “never forgets it’s a tough truck.” The Toyota, for its part, is “truck tough.” Through the 1970s, car culture had begun a decline, what has even been described as a time when the car itself became a “bad sign” (eg, Wernick, 1992, p. 78). Incorporating “truck tough” into advertising was an effective way to counter this cultural malaise. Another trick Chevrolet used was to advertise its trucks as “a better way to see the USA.” This slogan is noteworthy because it recalls the upbeat feelings of a memorable jingle from the 1950s, “see the USA in your Chevrolet” (sung to music).

Trucks and SUVs were not common sights on the

Chevrolet Blazer, 1973
(Road and Track, 1973, p. 29)

Toyota SR-5 Truck, 1979
(Motor Trend, Jan., 1979, p. back cover)

roads, so there is a direct—yet cautious—appeal to make the truck a substitute for the car. Almost as a sidenote, Chevrolet tells us that the Blazer is “also very big at the supermarket.” Likewise, Toyota rhetorically suggests that the SR-5 truck “could be your next car.” The “supermarket” and “car” are signifiers of the civil life associated with the car, and are supported by visual cues. We see in the Blazer advertisement a woman driver, complete with child and load of groceries in the back; this is a conspicuous appeal to associate car activities and stereotypically car-only drivers with a tough truck. It is strengthened because she is looking directly at the camera from below, a submissive come-hither pose. Presumably, her Blazer is equipped with something Chevy advertises as its “Cheyenne interior,” which means it has car-like comforts like power steering, automatic transmission and air conditioning. Toyota cannot tenably picture happy Americans in their vehicles, so instead they show a gear-shift knob which promises five speeds. At the time, a five-speed transmission was something of a rarity, except on technologically advanced cars like those from Japan or Europe.

1980s MULTI-FUNCTIONALITY: MAKE IT BOTH CAR AND TRUCK

The appeal of “toughness” of the truck and SUV has never disappeared. But the emphasis shifted enough during the 1980s to qualify it as another period of advertising. Auto manufacturers stressed the do-it-all “multi-functionality” of the SUV by directly associating a wide range of meaning to it, from computers to classical

music to rugged and playful outdoors fun. To make these complex associations, advertisements were “logical,” with a significant amount of text boasting vehicle capabilities. Further, advertisements featured contrasting graphical layouts which added to the signification of multi-functionality.

Despite a widespread shift to computer symbolism during the early 1980s, such appeals have been remarkably absent from SUV advertising. But a 1983 Jeep Cherokee advertisement demonstrates how, when pressed, even the SUV can be signified with computers. Superimposed on the left hand page is a grid pattern which even renders the background terrain into a computer sign of efficient off road capability. Because of concerns with efficiency during the early 1980s, the Cherokee is advertised as being both “leaner and meaner.” This claim is supported by an artistically rendered computer graph promising more miles-per-gallon than its competitors and more “horsepower per pound,” although power ratings are not actually specified. What makes this advertisement part of the “multi-functionalism” period are its conspicuous appeals to efficiency, power, off-roading and versatility.

Taking another approach at multi-functionality is a 1984 advertisement for the Ford

Jeep Cherokee, 1983
(Road and Track, Oct., 1983, p. 17 & 18)

Bronco and Bronco II. It introduces one of the most consistent themes in SUV marketing—security. Thanks in large part to the benefit of 4-wheel drive, the Bronco models are veritable “blizzard wizards.” Dominating the ad is a full page picture of a Bronco, snow spraying up from each of its four wheels. Judging by the smile on the driver’s face, she really is mobile and not just spinning her wheels. But the Bronco has a bigger role in life than bringing a smile to one’s face while powering through the snow; in one of the first upscale appeals, we see a woman wearing a fur coat, gently patting the hood of her new friend and saying “my Bronco II and me.” Through her direct eye contact and her use of common English, Ford is saying that the Bronco could be yours, too, America. By incorporating a wide range of symbols—spraying up snow, an upscale woman driver, technical descriptions and nationalism—Ford sells its Bronco as a highly versatile vehicle, ready to tackle anything and appealing to all Americans.

The multi-personality disorders of the SUV reached new heights in the second half of the 1980s, with one of its greatest proponents being General Motors. To silence any remaining doubts about the multi-functionality of a truck, GMC offered, in 1985, a booklet bluntly entitled “how to live

Ford Bronco & Bronco II, 1984
(Road and Track, Dec., 1984, p. 30 & 31)

comfortably with a truck." GMC admits that "sure, cars are great." But they can not promise adventure: "when adventure calls, passenger cars just don't get it." We know the owner of this GMC truck is a definite well-to-do "car guy," as indicated by the triple car garage and classic automobiles. Like this knowledge expert, we too owe it to ourselves to "discover a brand new way to express automotive enthusiasm."

Chevrolet was hardly discreet in a 1989 advertisement that appealed to one's need for "logic" and yearning for "laughter." Indeed, what could bring about a greater bout of laughter than roaring through hub-deep water with two of your best friends at your side? (Even the dog is laughing.) But in offering all this fun, Chevrolet reduces potential guilt by assuring us that there is "logic," although the logic has been reduced to only about one quarter of the advertisement.

Likewise, a GMC ad implores readers to consider its "Jimmy" SUV as "not just a truck anymore," but a truck/car you can also "play with"—perfect for hauling hefty cargo like chil-

GMC Truck, 1985
(Road and Track, Jan., 1985, p. 27)

Chevrolet S-10 Blazer, 1989
(Road and Track, April, 1989, pp. 116 & 117)

dren, collapsible chairs and sleeping bags.

As one last example, Isuzu explains that its Trooper SUV is “perfect whether you’re into classical, or rock.” Clean up your SUV, and it will take you in style out for a night on the town; the next day, unleash the Trooper on some craggy, rocky terrain. Cleaned up, people will never be sure if the

GMC Jimmy, 1990
(Road and Track, June, 1990, pp. 90 & 91)

Isuzu Trooper, 1989 (2 half pages)
(Road and Track, April., 1989, p. 16 & 17)

day’s adventures were as mundane as getting groceries or as adventuresome as an off-roading excursion. But for all intents and purposes, this Trooper advertisement marks an end to auto companies’ efforts to obviously advertise their SUVs as do-it-all machines. After years of obstinately making such claims, car culture had accepted that the SUV offered a wide range of benefits in addition to those gained from off-roading abilities.

1990s AND ON: THE SINGLE-PURPOSE IMAGISTIC PERIOD

Starting in the early 1990s, the multi-functionality role was accepted. This devel-

opment, coupled with increased diversity of available SUV models, meant that it became less tenable and desirable to try to be all things to all people. Freed from the confines of aggressively promoting the SUV as able to do it all, the SUV became an even greater marker of identity, particularly against all the other SUVs lumbering about. SUVs shed their Jekyll-and-Hyde persona and tried to find one unique position in car culture, a process that business managers might describe as a “brand identity.” In large part, this was accomplished through more symbolism and less descriptive text. Contemporary SUV advertising is holistic and imagistic.

Away from the hectic world of 1980s SUV advertising stands a 1991 Nissan Pathfinder advertisement. In the panoramic photo taking up greater than half of this ad, we are witness to a serene lake, lined with trees. Just in front of us are some concentric ripples in the water, probably caused by a playful fish or, perhaps, we have just lazily thrown a stone into the water—just like we did when we were a kid. To reach such a state of bliss, one only needs the Nissan Pathfinder, as directions to “Alta Lakes” are plainly provided. An off-road vehicle is necessary to scale a “steep climb” and to make it across a

Nissan Pathfinder, 1991
(Road and Track, Sept., 1991, p. 34 & 35)

“hub-deep” water crossing. A photograph of the Pathfinder’s profile indicates that this is one capable off-roader; lest one doubt its abilities, technical specifications are listed underneath, although they hardly seem important any more. The signifiers of this advertisement—water, trees, rock outcropping, time of day: dusk—to signify peacefulness, escape and nature are a consistent source of imagery for SUVs to this day (see chapter seven, page 168).

In stark contrast to the utopia of the serene lake, some advertising depicts the reality of the urban landscape. In such advertisements, the SUV is ideal to conquer not off-road trails, but the urban jungle—invariably depicted as a dark and menacing place. By 1992, the Trooper had shed its 1989 two-sided “night on the town” and rugged “off-road” persona to remind its target audience of a “jarringly obvious point”: “city infrastructures are falling part.” And indeed they are, if we accept Isuzu’s view of it: cities are strewn with massive potholes; cities are dark and gloomy; and even the constructions signs are falling down.

One of the SUV’s rivals was the station wagon; weakened for many years, GMC finally killed it in 1993. The grainy, faded photograph seems to pale in comparison to the message that the reader is much too special to be seen driving a station wagon, now an unappealing symbol of functionality. We infer the headline to emanate from the owner of this Jimmy: “I have nothing against

Isuzu Trooper, 1992
(Road and Track, Sept.,
1992, p. back cover)

station wagons. My mom used to drive one.” GMC copywriters point out that “the sedate practicality of a station wagon is meant for someone, but that someone isn’t you.” Rather, they go on, you need the “expansive practicality” of the Jimmy, although they never define what that precisely is—just that you need it. Maybe part of this “practicality” comes from the fact that the Jimmy will “seat you comfortably above the hosts of sedan drivers,” a further suggestion by GMC that SUV owners feel remarkably special compared to car owners. At any rate, nothing less than the horror of social rejection awaits the consumer who opts for a frumpy station wagon. While we all love our moms, deep down we are frightened of being accused of being too much like her.

For a mid-1990 Nissan Pathfinder campaign, the ambiguous “expansive practicality” suggested by GMC is defined precisely as the ability to avoid being “gored by Cape buffalo or torn to shreds by lions.” By associating the Pathfinder with a Safari expedition along “Tanzania’s Northern Circuit,” Nissan is making practically the strongest promise of off-road adventure of any SUV. Like most 1990s advertising, the technical specifications are marginal compared to the narrative, although they are neatly incorporated

GMC Jimmy, 1993
(Car and Driver, Jan., 1993, p. 108 & 109)

Nissan Pathfinder, 1996
(Road and Track, Oct., 1996, p. 88, 89 & 91)

into the story. On their journey, for example, “it is the jaded geologist who stands unimpressed at the rim of [a] 20,000-meter caldera. Less impressive is the steep, rough, narrow, winding and sorry excuse for a road that descends into the crater, but that’s what low-range 4WD is for.” Although the narrative is written in a witty tone, Nissan backs up its genuineness with a freely available “Pathfinder on Safari” video, an indication of the length to which marketers have gone to sell the adventure image. Does anybody really need a vehicle which has successfully fended off “hungry carnivores”? If you even have to ask this question, then the Pathfinder is not for you.

After the station wagon was symbolically killed in 1993, the next target was the pesky minivan. The minivan is the 1990s equivalent of the boring station wagon, yet it threateningly offers much of the versatility of the SUV. In a 1999 advertisement, Mitsubishi makes several cultural assumptions to sell its Montero SUV: (1) the minivan is uncool; (2) everybody knows this; and (3) you should too.

Why buy the Montero? There is an easy answer: “because no one ever says ‘whoa, nice mini-van’.” A similar message came one year later, too, when another Montero advertisement stressed its “stand-out-in-any-parking-lot type of

Mitsubishi Montero, 1999
(Road and Track, Apr., 1999, p. 31)

Mitsubishi Montero, 2000
(Car and Driver, Dec., 2000, p. 100)

looks.” From this we know that a significant part of the cultural appeal of the SUV is simply to look cool in the competitive display so inherent to car culture.

Perhaps as an indication that the American love affair with the big vehicle is starting to soften, GMC goes to great lengths to explain the “new reason” to buy a full-size SUV: “the way it handles.” At more than 5,000 pounds and greater than 18 feet long, they have a difficult brand identity to sell. They accomplish it as best they can by showing the Yukon on a broad swath of road, rounding a bend at speed. The road and background are blurry, a deliberate effect to enhance the image of a speeding vehicle.

GMC Yukon, 2000
(Road and Track, Oct., 2000, p. 110 & 111)

But in opposition to

GMCs pitch that there is no reason to feel guilty about buying a full-sized SUV, Suzuki uses the well-known pejorative term “boat” to criticize, in wholesale fashion, all big SUVs like the Yukon. Recognizing that engine power is often displayed by the ability to transport one’s recreational toys, Suzuki says that “you don’t have to be a boat to tow one.” Likewise, in an earlier advertisement, Suzuki stressed the fact that big expensive SUVs actually limit the ability to drive off road. “C’mon,” they say, “you’re not seriously gonna drive a \$40,000 vehicle here.” In a similar way that Volkswagen advertised its car to appeal to a particular audience of car culture, Suzuki has come up with clever ways to position its SUVs oppositionally. The advertising for both Volkswagen and Suzuki stresses that their models can fulfill whatever reasonable demands are placed on them; for the Volkswagen, it was transportation without the glitz and in the Suzuki’s case, it is the ability to do SUV activities “with none of the excess.”

A Ford Escape advertisement is a fitting end for this chapter’s analysis of SUV

Suzuki Sidelick, 1996
(Road and Track, Nov., 1996, p. 68)

Suzuki XL7, 2001
(Road and Track, Jan., 2001, p. 16 & 17)

meaning. This advertisement, and particularly Ford's choice of model name, captures an overriding theme of the SUV—"escape." As the ad explains, amongst "gossip" at the office which has your co-workers thinking "they've got you

Ford Escape, 2001
(Road and Track, Jan., 2001, p. 40 & 41)

pegged," the SUV owner is able to figuratively and literally "escape" the confines of his or her working life. Although a "communications systems specialist," our office worker is really a "cyclist." While a familiar theme in all SUV advertising, this Escape advertisement has simply been one of the best recent examples of how the SUV is been the ultimate expression of contemporary car culture. It neatly illustrates David Gartman's argument (in chapter two) that cars, and especially SUVs, have been a consumption outlet for people who want their vehicles to be more than just transportation. In car culture, cars should promise freedom, social acceptance and security.

In summary, during the 1970s, SUV advertising began by stressing its ability to act just like a car while, as a bonus, offering "truck toughness"; next, during the 1980s, advertising reduced any leftover apprehension of driving a truck by claim-

ing that the SUV could be both car and truck; finally, in contemporary advertising, the SUV is assumed to be able to satisfy regular transportation needs, so a number of extra promises are associated with the SUV, from tranquil vacations to exciting Safari adventure to the ability to “escape” one’s dreary working life. Like all stylish cars, the SUV promises more than transportation. Because “life is too big for cars,” car culture appropriated the SUV from its working roots, made it remarkably comfortable, and has found an audience in car culture which simply must have a vehicle that can offer transportation and the promise of security, being fashionable and having fun.

Isuzu Trooper, 1999
(Road and Track, Jan., 1999, p. 84 & 85)

Appendix

The "unstylish" off-roader. The growth of truck and SUV advertising.

This 1948 Land Rover is clearly designed for "serious" off-roading. It looks virtually indestructible. It has sturdy-yet-plain steel wheels and easily mended flat green paint. Its design is functional, dominated by flat body panels which could probably be straightened with a well placed hammer blow. With its easily accessible exposed mechanical pieces like hinges, bolts and spare tire, this Land Rover conveys the impression that it could be fixed very easily—even whilst on the trail. The engine underneath its "bonnet" would be a sturdy-yet-functional unit, much like the Model T's engine was.

(Jacobs, 1998, pp. 24 & 25)

But it is not an SUV in the same way that the modern SUV is. This Land Rover looks far too functional. It takes the design of off-roading too seriously, and is thus not "stylish." The SUV in contemporary car cul-

ture is a blend of off-road style with on-road civility. However, it is worth pointing out that for a certain audience in car culture, this is what an SUV should be. The fact that it is a Land Rover would undoubtedly mean that it would be venerated by some.

SUV and truck advertising, number of pages, controlled by number of pages in magazine.

(# of ads, divided by total # of pages of magazine, multiplied by 100)

Sample: Car and Driver, January issue (annual "10 Best" issue) and October issue (annual "new car" issue), 1985–2001 (August used for 2001).

THE FORD EXPLORER was introduced in 1990 as an “all-new-for-1991” model. Even its name was new. It quickly became a best seller in the SUV market. The Explorer, like virtually all sport utility vehicles, was based on an existing vehicle—Ford’s own Ranger pickup truck. In effect, all Ford had to do to create the Explorer was modify the Ranger: close in the pickup bed, add some rear seats, add (on most models) rear doors and make the interior more luxurious. While the development costs of the Explorer have never been fully disclosed to the public, there is every reason to suspect that they were remarkably low. This has helped make the Explorer an extremely profitable vehicle for Ford—its “cash cow.” It generated \$599 million pre-tax profit its first year and accounted for fully half of Ford’s profit by the late 1990s (Winerip, 2000, p. 46). In general, SUVs are referred to by auto makers as “high volume luxury vehicles” (Bradsher, 2001a, p. C1). This means that for all the manufacturers, SUVs are extremely profitable. The last thing Ford and its competitors want to see happen is for their SUV sales to be put into jeopardy.

Conceivably, a safety scandal is one thing which could undermine the popularity of the SUV in car culture. No doubt auto executives remembered that Ralph Nader had “killed” the Chevrolet Corvair in his 1965 book, *Unsafe at any speed*, so the threat that it could happen must have seemed possible. If the highly popular Explorer could be “killed” like the Corvair, than surely there was a possibility that the stylishness of the whole SUV segment, and all the profits that go with it, could be dragged down too. If the best-selling Explorer became a bad symbol in car culture, then the

symbolism of all SUVs might become bad too. More than any other vehicle in 1999 and 2000, the Ford Explorer SUV has come under the media scrutiny for some very serious safety concerns.

The purpose of this chapter is to examine how safety and the SUV are mediated in car culture. First, it looks at the safety problems of the SUV, particularly that of the Ford Explorer and its suspect Firestone tires. Next, this chapter will describe how the Explorer/Firestone controversy evolved in the media by analyzing its coverage in the *New York Times* (NYT). Lastly, this chapter shows why the Explorer/Firestone controversy has not seemed to undermine the popularity of the SUV and why the SUV is regarded as one of the safest vehicles on the road.

There are two main safety problems with the SUV. First is its propensity to roll over. The design of an SUV is much taller and narrower than a car, giving it a higher center of gravity which makes it much less stable. By far, rollovers are the most serious type of crash, a factor in 80% of SUV fatalities. In cars, rollovers are a factor in fatalities half this amount (Bradsher, 2000i, p. C4).

The rollover problem is exacerbated by the fact that SUVs tend to be heavier than a conventional car. Adding weight to an SUV—like passengers or making use of the huge cargo area—makes matters worse yet, because it is added above the center of gravity. David Champion, the director of auto testing at Consumers Union, pointed out that SUVs have limited payload capacities because the added weight of the SUV body strains the chassis much more than its original pickup body. While Ford rates

the Explorer to safely hold four 150 pound passengers and 150 pounds of cargo, Champion feels this is insufficient: “[i]f it’s five guys going fishing, that’s 1000 pounds—put in some fishing gear, a table and some refreshments and you’re over the weight limit without even catching any fish.” Stiffer suspension components would help, but they would detract from the Explorer’s smooth ride (Bradsher, 2000h, p. C1). With a car, and even a minivan, weight is added underneath, giving a ballast-like effect (Winerip, 2000, p. 46).

The fact that almost all SUVs have a cargo-carrying roof rack borders on irresponsibility because the weight is added so much higher off the ground. But roof racks are aesthetic enhancements, not functional ones. Given the fact that these racks are so high off the ground, probably not many people make use of them. If the rack is used, one can only hope, for the occupants’ sake, that it is for light-weight items—like inflatable toys, perhaps. Indeed, an inflatable toy might be desirable because it would communicate that the SUV owner owned a cottage on a lake—only accessible, onlookers must assume, by a four-wheel drive vehicle.

The other main safety problem of the SUV is the damage it causes other cars and their occupants in a collision. SUVs are higher off the ground, which means their bumpers tend to be too; when striking a car, especially its door, the bumper collides in an area where there is less structural integrity. This is called “override/underride,” a condition made worse by the fact that the stiff, rugged chassis absorbs little energy. This means that even more energy is absorbed by the car (Kurtis, 2000). Critics also

point out that the stiff chassis means the SUV performs poorly in crashworthiness tests. The SUV is bad for its occupants because the vehicle does not absorb as much energy as a regular car. (More on why car culture predicts this is an ineffective deterrent to SUV sales further below.) According to one university study described by Keith Bradsher, the occupants of a car are up to 16 times more likely to get killed if struck by an SUV than if hit by a car of the same weight. Put another way, for all the deaths attributed to Explorers with Firestone tires over the past *ten years*, it pales in comparison to the estimated 100 extra deaths which have been caused *every year* when an Explorer hits a car (Bradsher, 2001a, p. C1).

By June, 2001, the official death toll in the U.S. of Explorers equipped with Firestone tires had reached 203. Briefly put, the Explorer is an unstable vehicle (as all SUVs are prone to be), many of which were equipped, as original equipment, with faulty Firestone tires. The tires had a tendency to suffer tread separation, which simply means that the tread separates from the rest of the tire. (See appendix 2, page 142.) It was much more likely to happen when the tire was more than two years old, being driven in hot weather, at highway speeds and particularly if the tire was not inflated fully. Under such conditions, the tire would overheat and fail more readily than other types of tires. Despite the fact that Firestone tires were a factor in only one of every ten times an Explorer flipped over and killed people, the Explorer/Firestone controversy became national news. More so than any other, the Explorer/Firestone controversy has become the focal point of public inquiry, such as it is, into SUV safety.

Despite the fact that lawyers had been suing, and settling, cases against Ford and Firestone since the early 1990s, the first public report of the Explorer/Firestone controversy did not come until February 7, 2000, on a 10 p.m. newscast. (A timeline is provided in appendix 1, page 141.) KHOU-TV, channel 11, Houston, a CBS affiliate, aired the story to its 164,000 household viewership. Anna Werner was the news correspondent who broke the story. She began simply by calling a lawyer in search of potential leads. The lawyer told her about a case he was working on, and told her that there were many more like it. Werner recalled that she was “skeptical,” but also that “[i]t was an interesting lead” (Rutenberg, 2000f, C17). While a check with the National Highway Transportation Safety Agency did not reveal any significant information, KHOU’s own investigation found more than two dozen cases which were being blamed for nearly thirty deaths.

In that first report, Ford and Firestone presented a sort of united front. Firestone simply said that it had confidence in its tires. Ford blamed the deaths predominantly on “driver error,” one of the most common ways an auto maker will try to steer criticism away from its product. What makes this a “united front” is that the two companies were not blaming each other, as they would in the months to follow. By September of the same year, Jacques Nasser, Ford’s chief executive, said of KHOU “[t]hey deserve a medal actually” for uncovering and making the pattern of Explorer rollovers and Firestone tire tread separation. He was, of course, only laying blame on the tires (Rutenberg, 2000, p. C17).

The KHOU broadcast prompted a flurry of similar cases to be reported to the National Highway Traffic Safety Agency (NHTSA), quickly beginning with dozens of complaints and swelling to over 700 by the time the issue became news to the *New York times*. By May, the NHTSA had begun a formal investigation into Ford and Firestone. By August 9, Firestone initiated a voluntary recall of 14 million of its tires. A few days later on August 15, the NYT published its first story on the controversy. It is a complex series of events, with several competing interests.

Critics, made up of plaintiff lawyers and safety advocates, right away claimed that the tire recall should be expanded. Still, at this stage, Ford and Firestone were united, both of them saying that a bigger recall would put a greater strain on an already limited supply of replacement tires. Helen Petrauskas, Ford's vice president for safety and environmental engineering, argued that expanding the recall was not in the public's best interest "because many good tires will be delivered and used to replace good tires" (Bradsher, 2000b, p. C6). At this stage, most of the problem tires were believed to have been made at Firestone's Decatur, Illinois plant, during 1995. The location and date are significant, as the plant's union was on strike but Decatur kept making some tires with poorly-trained replacement workers and "scabs."

Part of the reasoning supporting a bigger recall was, even at this early stage, increasing evidence of Ford's and Firestone's irresponsibility to the American public. It would also prove to be the beginning of the end between the two companies. Although a brief mention was made of recalls happening in other countries, the main problem

was with Ford's and Firestone's handling of a similar recall in Venezuela, where Explorers were popular among that country's very wealthy. After an initial report on August 26 that Venezuelan authorities might seek criminal prosecution against Ford and Firestone, it was later revealed that: (1) tires sold on Explorers there specified a special nylon layer be built into the tire, which helped durability (Bradsher, 2000c, p. C1); (2) that an internal Ford memorandum dated March 1999 alerted Firestone to the Venezuelan problem, but that Firestone (and to a lesser extent Ford) did not want to initiate a recall for fear of having to tell U.S. authorities (Bradsher and Wald, 2000e, p. A1). Ford did initiate a recall, without Firestone's assent, but did not tell the U.S. The editorial desk writer pointed out this was "not acceptable behavior. United States law should compel a multinational company to advise American regulators of a recall of an unsafe consumer product in another country when that product is also sold domestically" (Editorial desk, 2000, p. A30). Ford would later claim that Firestone insisted U.S. tires were safe, and Ford agreed not to pursue the matter in the U.S.

On September 2, 2000, the Ford/Firestone controversy became front page news in the NYT. The case was mounting against Firestone. The National Highway Transportation Safety Agency issued a "consumer advisory" against even more Firestone tires, which it claimed were more dangerous than those in the August 9 recall (Bradsher, 2000d, p. A1). This "advisory" suggested that owners should replace the tires—even at their own cost—which had been purchased as replacements. The consumer advisory was, at that stage, the strongest course of action available to the

NHTSA; once more results were available, the Agency was prepared to force Firestone into a recall. Ford was quick to use this advisory as evidence that Firestone really was making bad tires.

By the second week of September, 2000, special Congressional hearings were being held in Washington, and the Explorer/Firestone issue was major—on the front page on September 7, 8 and 11. Also, September had the highest number of stories and opinion pieces published, at 17 (next was August, 2000, at 8). Accusations grew heated, as two corporate giants were trying to lay some of the blame (in Firestone's case) or all of the blame (in Ford's case) on each other. Congressional investigators felt that both corporations were to blame. One of the pieces of the puzzle was the remarkably high traffic fatality rate for a rather low number of warranty claims. Louisiana Republican Billy Tauzin, chairman of one of the investigative subcommittees, argued that Explorers with Firestone tires were a "lethal combination" of bad tires on a bad vehicle. In the last major Firestone tire recall in 1978, Firestone had replaced 17% of the tires under warranty even before the recall; warranty claims for Explorer tires were, Firestone claimed, "typical," meaning about 1/10th of 1%. But fatality rates per 1000 warranty claims were 80 times higher than Firestone's 1978 recall (Bradsher, 2000g, p. 1). In other words, many people were being killed while driving on what seemed like reasonably good tires. This, especially to Firestone, suggested that the Explorer was unusually unstable.

In this same NYT story, Ford countered successfully. Ford spokesman John

Harmon pointed out that Goodyear tires had virtually no problems on Explorers. He also pointed out that many of the crashes occurred with tires whose warranty had expired anyway, so warranty data were not useful. Helen O. Petruskas, Ford's vice president for environment and safety, pointed out that a lot of warranty claims are for "chaff": minor complaints about tires which have little to do with their integrity (Wald & Bradsher, 2000a, p. C1). Firestone was not looking good.

As the Explorer/Firestone issue became front page news the next day on September 7, 2000, two of the leading men would state two of the most important sound bites of the whole controversy. Masatoshi Ono, chairman and chief executive of Bridgestone/Firestone, in the best English he could muster, said "I come before you to apologize to you, the American people and especially to the families who have lost loved ones in these terrible rollover accidents." Jacques Nasser, chief executive of Ford, shot back later in the day with a much more effective statement: "[t]his is a tire issue, not a vehicle issue." However, according to NYT writers Keith Bradsher and Matthew L. Wald, "Republicans and Democrats alike refused to accept Firestone's apologies or each company's efforts to blame the other." Alabama Senator Richard C. Shelby said that "Ford and Firestone had at a minimum a moral obligation to make sure that the products they sell to the American public and other people in other countries are safe." For the most part, the evidence against Firestone mounted. A new document was released on this day, indicating that 64% of the dollar amount for warranty claims were for tires made at the suspect Decatur plant. The date on this document

was January 19, 2000, a significant date since Firestone had claimed it did not know about the problems at Decatur until Ford had told them before the August recall. Further, in January, Firestone had switched its Explorer tire production from the Decatur plant to other plants, yet it has never explained why (Bradsher & Wald, 2000e, p. A1). By about this time, many independent tire dealers were reporting that consumers were avoiding buying Firestone tires.

The controversy made the front page again the following day, largely, it would seem, because the NYT did its own analysis of a federal database on fatal auto crashes. It helps to show how difficult it is to spot a pattern, if one does not know what to look for, in large part because there are so many fatal traffic accidents. According to the NYT's analysis, fatal crashes in Explorers, between 1995 and 1998, were 2.8 times as likely to list tires as a contributing factor as compared to other SUVs. For every 1000 fatalities in Explorers, 17.8 listed tires as a factor; this compared with 6.4 per thousand for other SUVs. But at the time, the *total* official death toll stood at eighty-eight, compared to 40,000 fatal traffic crashes each and every year, so it was a difficult pattern to spot. Further, of the 50,000 complaints registered in the database every year, only 5 concerned the Firestone tires in question. Ford safety expert Ernie Grush, as statisticians are wont to do, compared the death rate to miles driven. Between 1995 and 1998, there were 35 tire-related crashes for the 120 billion miles accumulated by Explorers. This works out to 0.03 deaths per hundred million miles due to tires, compared to 0.6 deaths per hundred million miles attributable to rollovers not due to tire problems, or

1 fatality per hundred million miles for any type of crash (Wald & Barbanel, 2000b, p. A1).

Lest the point be lost, note in Ernie Grush's findings that, per 100 million miles, 95% of Explorer rollover fatalities do not list tires as a contributing factor. A few days later and back on the front page, Bradsher reminded readers (admittedly, this was not the first time the NYT raised the point) that SUVs need *very* good tires because they have an inherent tendency to roll over. The first rumblings of stricter SUV crashworthiness regulations were being reported too. There were plans, after twenty-seven years of "studying" the rollover issue, to start rating vehicles for their stability. At that point still, vehicles were only rated for front/side/rear impacts. Because 62% of deaths in SUVs are attributed to rollovers, and because of the Explorer/Firestone issue, there was more pressure to rate vehicles on rollover stability. As if he even had to point it out, Bradsher reported that "[a]utomakers and their allies in Congress are trying to block the ratings" (Bradsher, 2000f, p. A1).

A few days later, on September 13, 2000, the questionable stability of the Ford Explorer (and of all SUVs) would not be lost on Firestone's executive vice president John Lampe. After Firestone's chairman and chief executive Ono said that he took "full and personal responsibility," Lampe wanted to make sure that the Congressional committees not forget that of the 16,000 Explorer rollovers that "tire failure was involved in only a very, very small portion." Firestone built tires to *Ford's* specifications. Although it was not the first time it was reported, Lampe pointed out that Ford

had specified the tires be inflated to 26 pounds per square inch (psi) (Wald, 2000c, p. C1). The Explorer's rival, the Chevrolet Blazer, used a more-preferred inflation of 30 psi.

A brief reminder should be made about tire pressures. As demonstrated above in Ralph Nader (1965), modifying tire pressure is an inexpensive ("free," really) way to adjust the handling characteristics of any vehicle. According to Nader, Chevrolet had specified unusual tire pressures for its infamous Corvair in an effort to make it stable without spending any money on the suspension. For the SUV, lower pressures increase stability by making it steer less sharply which, in turn, slows down the abruptness of weight transfer. Internal Ford documents had been made public that prototype Explorers failed stability tests using higher inflation pressures. The extent to which Ford knowingly sold an especially unstable SUV is extremely difficult to tell. On the one hand, Petrauskas exasperatingly said of the documents "I'm really struck that somehow it's being held against us." Prototypes, including the Explorer, are tested and *fixed* (Bradsher, 2000b, p. C6). On the other hand, the engineering of a vehicle is always about decisions, and every dollar spent on making the Explorer, for example, "stylish" is a dollar which could have been put towards making it safer and more stable. After all, lawyers had been settling cases against the Explorer for years, so there is reason to lay some blame on Ford's design of the Explorer.

Lampe and Nasser were now fully arguing just who was responsible for what. Senator Ernest F. Hollings, a Democrat from South Carolina, was quoted in

the NYT as saying the hearing was “like tying two cats by the tail and throwing them over the clothesline and letting them claw each other.” Nasser and other Ford personnel were apparently shocked to hear that Firestone, in Nasser’s words, had “identified significant patterns of tread separations as early as 1998.” He was further quoted as saying that they went “berserk” after hearing from Firestone that it would take well into 2001 to replace all the tires (Wald, 2000c, p. C1).

For the next several months until May and June, 2001, very little was reported on the controversy. Compared to the 17 stories in September, only 9 stories appeared between October 2000 and May 2001.

In November, President Bill Clinton signed a bill that he claimed would remedy “some of the key shortcomings in identifying the recent Firestone tire problem.” Sue Bailey, the NHTSA administrator, called the new law “the biggest vehicle safety act since the 1970s.” One of the biggest improvements was that car and tire companies would be compelled to report recalls in other countries. But the overall tone of Matthew L. Wald’s November 7 story was that the new legislation was flawed. The main shortcoming was that it did not increase the ability to talk to the mechanics who actually fix cars. Joan Claybrook, head of the advocacy group Public Citizen (founded by Ralph Nader) and former head of the NHTSA during 1977 to 1980, said that “[t]he key to the agency having a proactive program is to work with the guys who get their hands in the cars” (Wald, 2000d, p. C4).

This “early warning” primary research was conducted during the 1970s. But, as Bradsher pointed out in an earlier news piece, it was expensive. It was allowed to “disappear” after newly elected president Ronald Reagan cut the Agency’s budget in half, criticizing it, according to Bradsher, “as an example of excessive regulatory zeal” (Bradsher, 2000a, p. C1). One of the proposed safety regulations eliminated under Reagan’s administration was one which would have forced manufacturers to install a low-tire-pressure warning system in SUVs (Winerip, 2000, p. 46). Inflation effectively eroded the Agency’s budget a further 30% since the early 1980s.

As noted above, Ford and Firestone had been settling cases with plaintiffs for years before it became a national issue. Tab C. Turner was one lawyer getting “rich by specializing in sport utility vehicle rollover cases.” In December of 2000, he was featured in an extensive *Times* magazine piece, written by Michael Winerip, as a sort of crusader against the two companies and Ford in particular. Lawsuits against Ford SUVs are nothing new; by 1995, Ford had settled 334 cases for a total of well over \$113 million for the Explorer’s predecessor, the Bronco II (Winerip, 2000, p. 46). We are introduced to Donna Bailey in the magazine article, the “perfect” example of a rollover case (no alcohol, no other vehicles, no other obstructions). She became one of the highest-profile cases of all.

In January, Winerip reported that Ford and Firestone settled Bailey’s case for what was believed to be in the tens of millions of dollars. One of the unusual parts of the settlement was a videotaped apology to Bailey:

Over the weekend, three Ford lawyers flew from Corpus Christi to Houston in the private jet of one of Ms. Bailey's lawyers, Mikal Watts, and visited her at the Texas Institute for Rehabilitation and Recovery, where she has been hospitalized for the last several months.

The videotape—which has no sound at Ford's request—shows three Ford lawyers, carrying briefcases, walking down a hallway at the hospital and then for about 15 seconds, talking to Ms. Bailey, who is lying in a hospital bed and using a ventilator. The video was released by her lawyers to reporters and shown on nationwide television (Winerip, 2001, p. C1).

Unfortunately, the *Times* does not report about any public reaction to the videotape in the following days. But safety groups, while appreciating that Bailey was under a lot of pressure to accept the settlement, would rather have seen a full fledged trial. Claybrook felt a trial “would have educated the public in a comprehensive way about what a lethal combination that tire and the Explorer are. It shows the limitations of plaintiffs’ attorneys and the courts for resolving important public policy issues.” According to Winerip, “Ford and Firestone have become increasingly aggressive in their efforts to settle the more than 200 lawsuits” since the initial August recall (Winerip, 2001, p. C1).

Little was reported in the NYT in the months which follow. But apparently plenty was happening to make Firestone increasingly angry. On May 22, 2001, the Ford/Firestone controversy once again became front page news, with Firestone's announcement that it was going to sever its business relationship with Ford. This was an end to a relationship begun by Henry Ford and Harvey S. Firestone before the hey-day of the Model T. During an early morning business meeting on May 22, Lampe requested safety data from Carlos Mazzorin, Ford's group vice president for purchasing. When the data was refused, Lampe promptly handed Mazzorin a prepared letter

which stated in part, “[b]usiness relationships, like personal ones, are built upon trust and mutual respect. . . . We have come to the conclusion that we can no longer supply tires to Ford since the basic foundation of our relationship has been seriously eroded.” With the partnership over, Firestone was even more critical of Ford. Lampe argued that Explorers had “significant safety issues,” and posted information on Firestone’s website which showed the Explorer was involved in tire-related crashes ten times more often than other vehicles with the same Firestone tire (Bradsher, 2001c, p. A1).

The main development which caused the May 22 separation was a May 18 NYT report. “Close” sources at Ford said it was going to replace more tires at its own expense in an effort to ensure a positive image (Bradsher, 2001b, p. C1). The official announcement was reported on May 23, 2001. Despite the fact that Ford expressed confidence in some Firestone tires about two months earlier, Ford announced it would replace *all* Firestone Wilderness tires, including ones which were given as replacements less than a year ago. Thirteen million tires were included, and the program was expected to cost Ford \$3 billion. Replacements would not be Firestone tires. Nasser said that “[w]e simply do not have enough confidence in the future performance of these tires’ keeping our customers safe.” Lampe responded with “[o]ur tires are safe. . . . The real issue here is the safety of the Explorer.” Importantly, Bradsher noted that Ford’s action was an “owner notification program”; because it was not an official “recall,” Ford does not have to meet many regulatory requirements (Bradsher, 2001d, p. C1).

In the days which followed, the last remnants of an issue about public safety were eroded as the controversy became a story about what one company was going to say about the other. According to Bradsher, they were “playing elaborate games, refusing to speak to each other’s executives and secretly telling regulators about safety problems with the other company’s products. . . . [T]hey are publicly denouncing each other every few hours” (Bradsher, 2001e, p. C4). In one of the last strikes against Ford, Firestone formally asked the Transportation Department to investigate the Explorer. That an auto parts supplier would ask for an investigation of a vehicle was unprecedented. Lampe backed up this request with a new catch phrase, attributed to him for the first time in the NYT on June 1: “[w]hen tires fail . . . drivers should be able to pull over, not roll over.” His point was that the Explorer’s design did not leave any room for error, unlike the Jeep Cherokee which was much more stable in Firestone’s tests and much more safe in the event of a rollover (Bradsher, 2001f, p. C1).

As if things could get any more confusing, Matthew L. Wald reported on June 20, 2001, that some of the replacement tires Ford were using were even worse than the Firestone tires. Billy Tauzin, a chairman of one of the Congressional hearings, was unsure of the soundness of his data; so he said that all “I’m trying to do is to make sure, since this is not a government recall, this is a corporate-sponsored replacement program, that we won’t end up having a government recall that follows it to replace the tires all over again.” At the bottom of this particular story, Wald reported that Ford chief executive Jacques Nasser “acknowledged that his company was replacing some

Firestone tires for which there was no evidence of a problem simply because consumers had no confidence in them” (Wald, 2001e, p. C4). Ford was in a favorable position to maintain good public relations. To ensure a positive brand image, Ford could recall Firestone tires—whether they were faulty or not. Firestone was in a worse position. They were hardly able to recall four million Ford Explorers and make it a safer vehicle.

While not conceding any problems with the old model, Ford recently launched its “all-new” for 2002 Explorer. Among its improvements are a lower bumper, lower center of gravity, better suspension, and side-curtain airbags which are effective protection during a rollover. As an option, Explorer buyers can order a new computerized stability control system. For all intents and purposes, the new Explorer is a safer vehicle than the old one. Still, safety is probably not a big issue for SUV shoppers. Explorer marketing manager, Ed Molchany, said “I wouldn’t say our owners are screaming for it.” Doug Scott, Ford’s SUV group marketing manager, said the Explorer/Firestone controversy “had no impact whatsoever” on the new advertising campaign, which barely makes reference to safety concerns at all (Bradsher, 2001a, p. C1).

An interesting question for an analysis of car culture is this: given that it was reported in the NYT that Explorers, and SUVs in general, are prone to deadly rollovers even without tire failure, why has the stylishness of the SUV not been severely compromised in the wake (and ongoing saga) of the Firestone/Explorer controversy?

Indeed, as Michael Winerip pointed out in his NYT magazine story, “[f]or the past 30 years, each decade has featured an S.U.V. marketing coup followed by a rollover scandal” (Winerip, 2000, p. 46). He was referring to: (1) the “first” SUV, the Jeep CJ, which was the civilian version of the World War II military jeep, exposed on a “60 Minutes” episode; and (2) the Ford Bronco II, in which 1,742 people were killed in rollovers from 1983 to 1999. Even Tab C. Turner, the chief lawyer representing the high-profile Bailey case, owns an SUV.

One of the first things to consider is the development of this controversy in the news media. This first avenue of inquiry is important because news information is one of the best candidates for how the public could have learned about the SUV’s problems. Here, it is important to recognize that even a highly respected publication like the *New York times* is still conservative. For example, Keith Bradsher is the main author at the NYT when it comes to critically reporting the SUV. While he was (and still is) highly critical towards the SUV during the Firestone/Explorer controversy, all the coverage reported a “newsworthy” event after it happened, or quoted a “newsworthy” person after he or she spoke. Although important safety issues of all SUVs were reported in the NYT and used for this chapter as introductory material, these general findings were not “newsworthy” on their own merit. While there is a possibility that the sample of NYT stories (obtained by searching Lexis/Nexis for “Ford Firestone” for all years) was skewed towards reporting only developments of the Ford/Firestone controversy, it is highly significant that none of the stories *began* with general safety

problems and then reported about Ford and Firestone. Of the 47 news reports and editorial pieces, 40 state "Ford" and/or "Firestone" and/or "tire" in the headline. The remaining 7 made such a reference within the opening paragraph. While we could expect there to have been some stories on SUV safety before the Explorer/Firestone controversy, it appears that once the controversy became "news," SUV safety was mediated through it. Thus there was, at least in the NYT, no sustained critique of the SUV, except for a few secondary findings that all SUVs are unstable. This is important because it means that the safety problems of the SUV were represented as discreet, forgettable product issues.

Moreover, nearing the end of the news coverage, the representation of the Explorer/Firestone/safety issue as a discreet product "issue" was eclipsed by the coverage of the feud between two corporate giants. One could almost imagine newsrooms across the country competing to be the first to break the "juicy" bits of coverage, especially as Nasser recalled millions of what might have been perfectly acceptable tires. Even tires, as it turned out, can be powerful symbols in car culture; with Firestone tires now symbols of corporate irresponsibility, it is little wonder that Nasser wanted to have them eliminated from underneath his profitable Explorer. The positive publicity which came after his announcement to replace all Firestone Wilderness tires must have made the \$3 billion it cost Ford seem like a bargain. In the end, broader public interest issues get downplayed as reporters write up delicious details of Nasser's and Lampe's squabbling. Meanwhile, smug Explorer owners head down to

the dealer to get several hundred dollars' worth of "fresh rubber."

The trip to the dealer leads to another important way that meaning is created and circulated. Meaning in car culture is strongly created by physically encountering car culture—seeing its artifacts, touching them and, indeed, being enveloped by one. The design of an SUV communicates safety exceptionally well at this level. This is not the type of safety communicated by the responsible Volvo, with its serious "boxy" shape, forgiving "crumple zones," friendly-yet-sturdy "passenger compartment," and intelligently designed "non-whiplash headrest." While much of the "safety" of the Volvo is attributable to its effective advertising, the advertising messages are supported by a car which appears to be made deliberately safe by thoughtful engineers.

The SUV, by contrast, is safe in an oblique and obtuse way. SUVs are the "highway equivalent of [the] school yard bully," who always gets what he wants and never has to worry about being safe (Kurtis, 2000). Because car culture theorizes that the way a car communicates safety is more important than how that car is functionally safe, the "reality" of the SUV's questionable safety record is of little consequence. Advertising consistently reinforces that the SUV is sturdy enough to tackle any terrain. This message is backed up by the solid feeling afforded by driving a heavy vehicle and the dominating viewpoint from sitting up high above mere cars. This leads to the next point: the SUV and the car.

As noted near the beginning of this chapter, SUV critics have pointed out that in crashworthiness testing, the SUV's rigid chassis makes it less safe than a car. In such

testing, the vehicle is rammed into a stationary object; because the SUV chassis is so rigid, more injury-inducing shock is transferred to occupants. In car culture, such objective tests do little to dissuade the potential SUV buyer. Not only are test results probably forgotten, they are not real world. How often do vehicles crash into perfectly solid objects? Out on the road, SUVs offer safety because their “jacked-up,” rigid and heavy design will mean the other car will take the brunt of the impact. As Explorer owner Randy Caudillo said in a November, 2000 episode of *Investigative reports*, “I feel real safe driving the Ford Explorer . . . If I get into an accident I’m gonna do the damage rather than . . . have my car take the damage” (Caudillo, 2000). This SUV owner’s statement carries moral implications, although it is also compatible with America’s culture of individualism. Part of the appeal of an SUV, from a safety issue perspective, is a defiance of public authority in favor of a “I’ll take matters into my own hands” approach. Indeed, this point is supported by consumer research which shows that SUV owners have a much higher fear of crime than automobile owners (Roberts, 2001, p. 71). While politicians and corporate executives bicker in Washington about making safer automobiles, car shoppers encounter a ready-made solution: a big vehicle which is “gonna do the damage.” To bring back the analogy of the school-yard bully: one of the best ways to not get beaten up by the bully is to be one yourself.

Conceptualizing the SUV as the “bully” of car culture is legitimate. And occasionally, SUV advertising does precisely this. A 1999 magazine ad by Isuzu obliquely animalizes its Rodeo model as *not* a car. (See appendix 2, page 135) In fact, as the ad

virtually yells to its reader, “Don’t call it a car, it gets mad.” This ad plays with the juvenile idea of name calling and the repercussions associated with doing so to a youngster. But get the Rodeo “mad,” and it is not just a child throwing a temper tantrum; rather, as indicated by the word “mad,” the Rodeo is uncontrollable. As the well-known saying goes, “dogs get mad, people get angry.” To ensure the point is not missed, Isuzu puts a picture of a wolf/mad dog in the lower left—fangs exposed, eyes in a menacing stare.

But the dog is man’s best friend too, and Isuzu wants to demonstrate the Rodeo can be yours. To have the Rodeo as a friend, the advertisement specifies some rules of conduct. While you cannot call it a “car,” you can describe it as being similar to a car because, for instance, it “drives like a car.” On the surface, this is a sales appeal of much SUV advertising. The SUV offers all the creature comforts of a car, yet offers the versatility to “help move a friend” or “get to where the fish are.” The underlying message is about taming the sheer bestiality of the Rodeo, which means to effectively become a bully against mere cars. As the ad reminds its readers, what use is a car?: “You can’t . . . see past the car in front of you in a car.” When in the Rodeo, this ad suggests, one can assert oneself with the aid of an aggressive—“mad,” even—companion. As if road rage were not enough of a problem in car culture, now the cars are getting mad too.

To conclude, this chapter has told the story of the Ford Explorer/Firestone tire contro-

versy because it has been the best recent example of how SUV safety has been mediated in car culture. What happened was that the controversy was mediated as a “product issue”—and an overwhelmingly Firestone one at that, despite evidence that there were significant problems with the Explorer. This was far different than during the 1960s when, as indicated in chapters two and three, car culture and widespread public opinion supported government legislation to force changes in car design. This meant that a car like the Chevrolet Corvair was taken as a representative example of all cars, rather than treated as a problem indicative of that car alone. Scrutiny of any safety “problems” of the SUV are further weakened by the fact that it is a “truck tough” design. For some people, this is precisely what makes it so appealing; calling it otherwise is akin to an insult. The rigid chassis and “jacked-up” design—which undermine the SUV’s functional safety—contribute favorably to its accepted meaning as an extremely safe vehicle.

Appendix 1

Selected timeline: Ford Explorer/Firestone tire controversy.

Sources: New York Times; Ford Explorer Rollovers

- 1970s:** National Highway Transportation Safety Agency (NHTSA) regularly conducts "early warning," primary research with garages.
- 1980:** Ronald Reagan elected, NHTSA's budget cut in half. "Early warning" research eliminated. Proposal to include tire-pressure monitoring systems eliminated.
- 1988:** Firestone acquired by Bridgestone Corporation, a Japanese company.
- Late 1980s:** Ford Explorer prototypes display tendency to roll over worse than Chevrolet Blazer. Ford specifies 26 psi, because it helps stability and gives a better ride. Firestone prefers 30 psi, because higher pressures are better for tire durability.
- End of 1990:** Ford Explorer introduced as all-new-for-1991 model.
- Early 1990s:** Lawyers settling cases against Ford and Firestone.
- 1995:** Firestone Decatur plant workers on strike over Bridgestone's increased work demands. Plant operated by replacement workers and "scabs."
- March 1999:** Ford and Firestone try to decide if tires in Venezuela should be recalled. Ford initiates recall without Firestone's agreement. U.S. authorities not told.
- Jan. 19, 2000:** ... Firestone financial analysts note problems at Decatur based on warranty claim data. Firestone shifts Explorer tire production to other plants.
- Feb. 7, 2000:** First public report on KHOU, Houston, a CBS affiliate. Consumer complaints increase to NHTSA.
- Spring, 2000:** ... NHTSA considers new tests for rollover stability ratings.
- May 2, 2000:** NHTSA begins formal investigation (already its 20th investigation of the year).
- Aug. 1, 2000:** ... Safety groups Public Citizen and Strategic Safety request Ford recall Explorers.
- Aug. 3, 2000:** ... NHTSA announces investigation of suspected 21 tire-related fatalities.
- Aug. 4, 2000:** ... Sears announces it will stop selling some types of Firestone tire.
- Aug. 9, 2000:** ... Firestone announces first tire recall.
- Aug. 15, 2000:** ... First New York Times report.
- Sept. 2, 2000:** ... Explorer/Firestone controversy front page news with announcement of NHTSA "consumer advisory."
- Sept. 6, 2000:** ... Congressional Hearings begin in Washington. Front page news Sept 7, 8 & 11.
- Sept. 7, 2000:** Important "sound bites" from Ford and Bridgestone/Firestone top executives.
- Nov. 2000:** President Bill Clinton signs new safety bill. Critics say it is deeply flawed.
- May 18, 2001:** ... Anonymous inside sources said Ford was going to replace all Firestone Wilderness tires at its own expense. (Official announcement **May 23, 2001**.)
- May 22, 2001:** ... Firestone severs business ties with Ford.
- June 1, 2001:** ... In an unprecedented move, Firestone asks Transportation Department to investigate Ford Explorer.

Appendix 2

Upsidedown Ford Explorer with separated tread.
National Post, May 22, 2001, p. A1

[illegible]

Isuzu Trooper advertisement
(Road and Track, July 1999, pp. 28 & 29)

ACCORDING TO GUS SPETH, president of the World Resources Institute, the "American dream" associated with the automobile "is beginning to look like a nightmare for our planet" (Nadis and MacKenzie, 1993, p. x). Amongst many environmental problems, motor vehicles in the U.S. are accountable for more than 50% of its carbon monoxide (CO) output, 30% of its nitrogen oxide (NO_x) output and 25% of its carbon dioxide (CO₂) output. Further, each and every vehicle on the road, no matter how new or old, emits 19 pounds of carbon dioxide for every gallon of fuel it burns (Nadis and MacKenzie, 1993, p. xv). As for CO and NO_x, as far back as 1950 they were recognized as chief causes of smog and ground level ozone, both of which are linked to a multitude of health complications which the American Lung Association claims costs tens of billions of dollars annually (Nadis and MacKenzie, 1993, p. 23). Carbon dioxide is recognized as one of the main causes of global warming, which threatens to radically alter the planet's climate with more extreme weather patterns, rising sea levels and reduced agricultural efficiency.

For Steve Nadis and James J. MacKenzie (1993), the laudable efforts to legislate cleaner vehicles have been seriously eroded by two factors. First, "no existing or conceivable pollution control technology can stop, or even slow, the carbon dioxide buildup" and, second, "the average fuel economy of American cars improved by 50 percent while total vehicles miles increased by 62 percent" (Nadis and MacKenzie, 1993, p. 31). Indeed, average fuel economy during at least the past decade has been going down rather than going up. Vehicle pollution is increasing, not decreasing. The

sport utility vehicle exacerbates these problems because of its greater fuel consumption and higher pollution levels than cars. The heavier environmental penalty is permitted under law because the SUV is designated a "light truck," a category of vehicle which is subject to less stringent regulations than cars. For example, an auto maker's fleet of cars has to attain a Corporate Average Fuel Economy (CAFE) of 27.5 miles per gallon (mpg); the truck CAFE is only 20.7 mpg. Cars can only produce 0.4 grams per miles (gpm) of NO_x; trucks can produce up to 1.1 gpm. As a direct result of how much fuel they burn, cars can emit 0.72 gpm of CO₂; trucks can emit 0.95 gpm of CO₂.

This chapter is about how environmental issues and the SUV are mediated in car culture. It begins with a brief theoretical discussion of the dual role of government as being the most effective institution to protect the environment and also the one expected to facilitate the economy. After this is a discussion concerning how the government has regulated the car and "light truck," including some description of the intense political-economic struggle to "clean up" cars and trucks (i.e., make them get better fuel economy and pollute less). Lastly, this chapter describes how the SUV is the ultimate car cultural expression of "environment" because it has so successfully adopted symbols of nature and the outdoors.

The SUV is an excellent case study of the political-economic forces which influence car culture. Matthew Paterson, in his article "Car culture and global environmental politics" (2000), argues that car culture not only has negative consequences on the environment but also supports the power structures which could ameliorate them

(Paterson, 2000, p. 253). The institutions which have the most effective power to enforce positive environmental change (mainly government) are also heavily implicated in the generation of negative environmental change (mainly pollution).

Paterson argues that a Marxist-based international political economic approach is the most effective way to understand why the car has been promoted so vigorously worldwide. Doing so, he claims,

allows us to emphasize the way in which capital accumulation requires the success of particular industries . . . and the way in which the state is structurally required to intervene to ensure continued accumulation and thus to promote key industries. . . . [T]he car industry is not simply something which has been organized through capitalist enterprises; it is an industry which has been seen ubiquitously as a key industry in ensuring continued accumulation (Paterson, 2000, p. 260).

What emerges is the key observation that the car is regarded as an ideal vehicle for economic growth, particularly with respect to the development of its necessary support industries. The economic growth potential of the car has been “central to legitimizing the car’s expansion, enabling the car to become perhaps *the* symbol of progress for most of the twentieth century” (Paterson, 2000, p. 263).

Paterson leaves little room for optimism that the government can realistically be expected to enforce ecologically sound policy if auto makers resist for economic reasons. This is because the car is an excellent vehicle for economic growth and that “[e]conomic growth has become one of the central indicators of government legitimacy in the twentieth century (Paterson, 2000, p. 268) Not only does the SUV have a much worse environmental impact, it is exceptionally profitable and thus economically beneficial. For example, Chrysler made hardly any profit on its full size Intrepid car,

yet its Durango SUV made profits of about \$8,000 each. Chrysler invested more than \$500 million to convert a Delaware-based car plant to Durango production in 1997, which works out to about \$1,000 for each Delaware resident. After its opening, Delaware Governor Thomas R. Carper (a Democrat) said “[i]f they need our help [fighting increased auto regulation] we’ll give it to them” (Bradsher, Nov. 30, 1997, pp. A1 & 43).

As noted in chapter two, James J. Flink (1988) argues that automobile regulation marked the end of the “auto age,” an era from about the 1920s to the 1970s in which the automobile was at the center of political-economic debate. The end began about a decade after the first reports of “smog” in California, which prompted that state to be the first to enact legislation to enforce minimal pollution control devices on all cars sold there after 1963. California’s standards were adopted nationally in the 1965 Motor Vehicle Air Pollution and Control Act. According to Flink, while auto makers “balked” at the idea of installing pollution-control devices nationally, “public pressure to do so became irresistible once it was seen from California’s experience that the basic technological problems had been solved” (Flink, 1988, p. 387). After the 1965 Act, some of the other major policies included the 1970 Clean Air Act, the 1975 Energy Policy and Conservation Act and the 1978 “gas-guzzler tax.” From pre-law levels to the early 1980s, hydrocarbon emissions went from 10.6 gpm to 0.41; carbon monoxide from 84 gpm to 3.4; and nitrogen oxide from 4.1 gpm to 1.0. As for fuel economy, Flink optimistically points out “that family-size cars today achieve better fuel economy than

compact models did in 1975" (Flink, 1988, p. 393).

One of the weaknesses of Flink is that he oversimplifies the political-economic struggles behind auto legislation. Although much less integrated than Flink, Jack Doyle's book, *Taken for a ride: Detroit's Big Three and the politics of pollution* (2000), provides exceptional detail. Doyle shows how the auto industry fought long and hard to delay or eliminate legislation, a strategy which he calls "a highly evolved political art form . . . invented and perfected by Detroit's Big Three." His book is "a story about determined industrial delay and technological negligence on a seventy-year scale." Throughout it all, Doyle argues, "America and Americans have been duped, deceived, and misled by Detroit about the possibilities for producing cleaner cars, trucks, mini-vans, and SUVs" (Doyle, 2000, p. 8).

The 1970 Clean Air Act, under enforcement by the the Environmental Protection Agency, was the first truly significant attempt to curb auto emissions. The Act set standards for 1973 cars, with the open possibility of a one year extension under certain conditions. Long before the 1973 deadline, the auto industry had begun an active campaign for the extension and it reached greater intensity as the deadline loomed closer. William Ruckelshaus, the Administrator for the EPA, had the official responsibility to determine if the deadline should be extended. Rather than strictly rely on the auto industry or its adversaries, Ruckelshaus held his own round of hearings which began on April 10, 1972. At the time, the only feasible way to reach the original standards and deadline seemed to be through use of the catalytic convertor, a

device which “cleans up” the exhaust through chemical reactions which “convert” the damaging “catalysts.” The Ruckelshaus Hearings became a mini-debate between catalytic convertor manufacturers, who claimed their devices were ready for mass production, and auto makers, who claimed they were not a proven technology.

Ruckelshaus denied the extension. He felt that “[t]he evidence now available in my judgement clearly establishes that catalysts are both safe and highly effective in reducing emissions.” His official announcement came on May 12, 1972 at a press conference which was filled with a great deal of apprehension and anticipation. According to John Quarles, one of Ruckelshaus’s “right hand men,” the announcement was received with “jubilation” by EPA employees because it affirmed their power to protect the environment. Outside the EPA, “the decision was hailed as a victory for the environment and a triumph for the public welfare over the special interests of industry” (Doyle, 2000, p. 85).

The jubilation would not last. The auto makers appealed the decision a few weeks later in the courts, and another appeal followed after that first one failed. As the deadline loomed, the pressure was stepped up to delay the emissions standards. Ernie S. Starkman from G.M. warned of a pending “business catastrophe” should the original standards be enforced:

[I]f GM is forced to introduce catalytic converter systems across the board on 1975 models, the prospect of unreasonable risk of business catastrophe and massive difficulties with these vehicles in the hands of the public may be faced.

It is conceivable that complete stoppage of the entire production could occur, with the obvious tremendous loss to the company, shareholders, employees, suppliers, and communities. Short of that ultimate risk, there is a distinct possibility of varying degrees of

interruption, with sizeable dislocations (Doyle, 2000, p. 86).

Throughout the auto makers' fight, this sort of "we don't have the right technology" argument was repeatedly made. If forced through, emissions legislation would undermine the well-being of the auto industry; this, in turn, would undermine the national economy. This is a persuasive and easily accepted argument given the government's role to facilitate the economy. However, what all the industry's foot-dragging conceals is that feasible solutions actually did exist. One week after Starkman's statement, Honda, a company which has an earned reputation for innovative engineering, announced it was ready to sell compliant cars without resorting to the use of catalytic convertors. A couple of months after that, G.M. announced it was going ahead with the installation of catalytic convertors on its cars anyway (Doyle, 2000, p. 88). These developments notwithstanding, a postponement was granted on April 11, 1973, with much less stringent standards set for 1975.

In late 1973, the U.S. underwent a serious energy crisis. According to Doyle, it meant that "[e]nvironmental laws, including the Clean Air Act, would come under heavy attack" (Doyle, 2000, p. 99). One of the outcomes was that the Senate, White House, and the Federal Energy Office passed the Energy Supply and Environmental Coordination Act in 1974; it delayed emissions standards until 1978 with the possibility of another one year extension. Further complicating matters was the 1975 Energy Conservation Act, which introduced the first CAFE standards. Basically, the auto industry was arguing that emissions regulations and energy conservation policies

were inconsistent with each other. Pollution control devices, the industry claimed, made their engines less efficient and thus burn more gasoline. The 1970s political-economic struggles influenced car culture such that energy consumption and the economy were important issues to everyone. As Doyle puts it:

In mid-March 1974, the Arab oil embargo ended, but the political and economic shock waves were just beginning. The US automobile industry, for one, was in for a long, rough ride. Within five months of the embargo, the auto makers began to see that tighter oil supplies would have a serious impact on the economy and their business. By April 1974, car sales were down more than 35 percent. It was the worst slump in car buying since the 1958 recession. "Once President Nixon announced . . . that people should turn down their thermostats to save energy," recalled one auto executive, "we couldn't sell a big car to save our ass from first base." (Doyle, 2000, p. 105)

It was into this altered political-economic climate that the auto industry was able to make one of its most persuasive threats: lost jobs. As sales of big American cars plummeted during the mid 1970s, and the Japanese increased their share of the market with their small efficient cars, the link between energy and jobs was thoroughly made. Claiming to represent "desperate men and women and their children," United Auto Workers representative Leonard Woodcock stated that he was speaking for "170,000 people, indefinitely laid off, who are becoming increasingly desperate. They see foreign cars, because of the fuel economy problem, taking more and more of this market" (Doyle, 2000, p. 110).

The industry needed some time to react, as small cars had been inconsistent with American car culture. As Mack Worden, G.M. marketing president, claimed in late 1974, "[b]uying up to bigger cars is the fundamental concept of American life" (Doyle, 2000, p. 115). Worden's point is important because it captures the way that

American auto executives viewed car culture. In trying to appeal to how they interpreted America's car culture, domestic auto manufacturers offered big cars which, like SUVs, made big profits. At the time, a Cadillac Coupe de Ville only cost \$300 more to manufacture than a Chevrolet Caprice, yet sold for \$2,700 more.

At the time, the Clean Air Act was formally set for enforcement in 1978. The auto industry continued its lobbying, and the Senate tentatively agreed to extend the deadline another year until 1979 while the House sought a delay until 1982. In the House-Senate conference which followed, the somewhat stricter Senate version prevailed. But the auto industry quashed it which, observes Doyle, "came as something as a surprise to both House and Senate conferees, since by killing the measure, the auto companies would then be subjecting themselves to illegal production" (Doyle, 2000, p. 125). The industry was "gambling" that the government, after the pending election, would pass more favorable emergency legislation to keep their 1978 vehicles compliant.

Democrat Jimmy Carter was elected president in November, 1976. At the time, "America was still deeply mired in the energy debate. . . . The nation's dependence on foreign oil was still a major political issue" (Doyle, 2000, p. 129). As the fight for the Clean Air Act started up again under Carter's administration, two of the most important figures who emerged were John Dingell, a Michigan representative and auto industry supporter, and Paul Rogers, a Florida representative and chairman of the House Commerce Committee's Health and Environmental Subcommittee. In prelim-

inary committee hearings, each had his own version of what the Clean Air Act should be. With a tie vote, the Rogers version was officially accepted by the full Commerce Committee. It proceeded on through the legislative process.

The Rogers Bill had to go through the House of Representatives, the Senate, and then a House-Senate conference. There was tremendous pressure on the Representatives to vote for the less stringent Dingell version. With the auto industry and the UAW on the same side supporting Dingell, a vote for him would be “a vote that pleased both big business and big labor at the same time” (Doyle, 2000, p. 142). As a *Wall Street Journal* reporter observed, “most members probably relied less on the confusing statistical barrage than on the weight of lobbying pressures” (Doyle, 2000, p. 142). In the House of Representatives, the Dingell Bill prevailed. In an immediate response, the National Clean Air Coalition charged that “[t]he House today has chosen to protect the \$4-billion-a-year profits of the American automobile industry rather than the lungs of the American people” (Doyle, 2000, p. 143). As the bill moved on to the Senate, the Dingell version was again accepted, although it was altered to be a little more strict than the House version.

By the time the Senate approved its bill, it was June 1977, and the auto makers were readying for 1978 production. This is an important point, because without new standards the cars could be built illegally because the original standards were still in place. The Big Three were threatening to simply shut down production which they, naturally, would have blamed on the government’s foot-dragging, despite the fact that

the auto industry were the ones who got the initial amendments quashed in the first place. In the end, the conference adopted standards which were closer to the Senate version than the House version, although they still were not as strict as the original standards set in 1970. Also, the standards had a number of loopholes, including the one for "light trucks."

According to Doyle, auto makers have been getting a "free ride of sorts, benefiting from the emissions and fuel economy loopholes inserted into the law more than two decades ago" (Doyle, 2000, p. 396). When the Energy Policy and Conservation Act was established, automobile fuel economy was a major issue in the wake of the 1973 energy crisis. However, while it was one thing to regulate cars, it was another thing for trucks. Auto makers engaged in a successful lobbying campaign, with the grassroots support of contractors, farmers and other tradespeople, to convince Congress that applying strict regulations to trucks would hurt the working man and thus economy. Trying to get trucks to achieve the same standard as cars would result in smaller, less powerful and more expensive trucks.

Setting light truck standards would be the responsibility of Joan Claybrook, who headed up the National Highway Transportation Safety Administration in 1977. Claybrook sought a 30% increase in fuel economy, to 20.5 miles per gallon for two-wheel-drive models for 1981, and 17.7 mpg for four-wheel-drive models. Auto makers sought an increase of only 6%.

Auto makers lobbied against Claybrook's proposal on three fronts, buoyed by

the fact that president Jimmy Carter was eager to push the National Energy Act through. First, as they did for automobile legislation, they used their political ties with top government officials. Second, they organized a grassroots campaign, comprised of auto dealerships and hardy Americans who feared the government would take away their gas-guzzling trucks. Finally, and importantly, the auto makers claimed that thousands of jobs would be lost if stricter standards were enforced.

Under accusations of “sheer economic blackmail” from environmentalists, and that “[y]ou can have the trucks and the fuel efficiency too” by auto analysts, Adams announced on March 15, 1978, that Claybrook’s initial proposal for a 30% increase had been softened to only 10% (Doyle, 2000, pp. 397–398). But there was more. Light trucks were exempted from the 1978 “gas-guzzler” tax which slapped up to hundreds of dollars of taxes onto vehicles which got 5 mpg under the CAFE standards. Light trucks were permitted to pollute between two and five times as much as cars. And, amongst other things (see below), they were protected from foreign competition which had a 25% surtax added to their prices. By winning all these concessions, the auto industry had secured a terrific marketing opportunity:

With all the good fortune bestowed on the auto makers by Congress and the federal agencies, Detroit was well on its way to riding a new wave of protected “light truck” prosperity. By lobbying tough in Congress and playing hardball with NHTSA, the auto industry had secured the legal basis to produce vehicles that both consumed more fuel and produced more pollution (Doyle, 2000, p. 399).

While the less stringent regulations were fought and won on the grounds that light trucks were “working vehicles,” these vehicles were promoted and sold increasingly for recreational use. This “marketing shift” had already begun by the late 1960s. For

example, one Ford advertisement for vans and trucks suggested to readers that “[m]aybe your second car should be more than just a second car.” In 1977, Robert Gillosky, Ford’s manager of truck advertising, said that “the compact pickup primarily is a personal use vehicle with only a small percentage of buyers using it for business” (Doyle, 2000, p. 399–400). In other words, the industry knew all along that their trucks were much more than just “working” vehicles.

Doyle attributes a great deal of significance to the lax standards for encouraging the sale of bigger “cars.” With the argument that light trucks were “workhorses” still prominent, Chrysler brought out its minivan in late 1983. It proved to be a highly popular and profitable vehicle, quickly selling out its first year production run and helping Chrysler avoid total financial meltdown. Despite the fact that the minivan was built on a car chassis, despite the fact that Chrysler deliberately made it “car like,” and despite the fact that it was so clearly meant to appeal to buyers as a family vehicle, it was designated a “light truck.”

The minivan is highly pertinent with respect to the SUV. The minivan marked an important shift of the family vehicle away from the big station wagon which had been *de rigueur* during the 1970s. The growth of the minivan segment was an important aspect for the growth of the SUV segment, because part of the appeal of the SUV is that it is definitely *not* a minivan. Those consumers who were less than enthralled with the feminine functionality and “family image” of the popular minivan found they had other, much more masculine choices in SUVs like the Ford Bronco II, the

Chevrolet Blazer and Jeep Cherokee. These vehicles appealed to the “yuppie lifestyle,” with all their recreational “toys” like camping gear and water skis, who wanted to “get away” for the weekend. New models like the 1990 Ford Explorer and 1992 Jeep Grand Cherokee “fully ushered in the modern SUV era” (Doyle, 2000, p. 403).

When auto makers have difficulty getting their trucks to meet relaxed CAFE requirements, they can make use of a few loopholes to boost their ratings. One thing they can do is simply change the “year” in which the truck was built. When G.M. felt that it would have difficulty making its 1998 CAFE requirement, it started—in January 1998—to call its new Chevrolet Suburbans rolling off the assembly line “1999” models. A few months later, it decided to “extend” its planned production run for its minivan models, a move which also helped boost 1998 CAFE figures. Lastly, G.M. put heavier duty suspension components on some of its Suburban models which effectively made them “medium” trucks and thus exempt from having to meet the same regulations. It was all too much even for the trade publication *Automotive News*, which cautiously suggested that “General Motors complied with the *letter* of CAFE law, but General Motors made a mockery of the *spirit* of the CAFE law. . . . Enforcement of CAFE is fine. Fair and logical enforcement of CAFE is even better” (Doyle, 2000, p. 413).

Another thing the auto makers could do was to make use of a special section of the CAFE law which encouraged the production of “dual fuel” vehicles—ones capable

of running on conventional gasoline and also ethanol fuel. Ethanol is made from corn; the provision was written into the law in 1988 to supposedly help corn farmers. For the auto makers, Doyle argues that the production of dual-fuel vehicles was a “no-brainer” because the law granted CAFE “credits”: for each one produced, auto makers were attributed with the production of one 60 mpg vehicle. When Ford had CAFE troubles in 1997, it announced it would make 250,000 dual-fuel vehicles over the next five years; prior to this announcement, it had only made a total of 5,000. For customers, it did not make any difference: the sticker price was the same and the car had sensors to detect which gas was being used. In the end, it probably did not matter much either way, as virtually all the dual-fuel vehicles would burn conventional gasoline. There were only 40 ethanol gas stations in all of the U.S. (Doyle, 2000, p. 414).

One of the best set of loopholes encourages the sale of even bigger SUVs. The bigger the SUV, the better for meeting regulations. Bigger SUVs are more expensive, yet are not considered luxury cars. As such, they did not have a “luxury tax” applied to them as they soared past \$36,000 U.S. Further, the really big ones over 6,000 lbs were not subject to the “gas-guzzler” tax. And for the monster SUVs which weighed more than 8,500 lbs, they did not have to meet even the light truck standards. Since its introduction in 1977, G.M. had no competition against its popular Chevrolet Suburban in the really big SUV segment. After sales shot up by 60% during the first half of the 1990s, hitting 137,000 by 1996, Ford released its new big SUV—the Expedition. Ford had hoped to sell 130,000 Expeditions every year but instead found itself selling

240,000 a year later and unable to meet demand; meanwhile, "Ford pocketed \$15,000 profit on each Expedition sold" (Doyle, 2000, p. 407).

But no SUV was as big as the new Ford Excursion, the biggest SUV sold in the world. It was introduced in early 1999 and is based on Ford's line of massive "super-duty" pick-up trucks. It is too big to fit in many conventional garages. Its gas tank is about quadruple the size of a car's. After the first reports of Ford's yet-unnamed gargantuan SUV, the Sierra Club ran a "name-that-SUV" contest; the winner was the "Ford Valdez," with the tag line "Have you driven a tanker lately?" The Sierra Club also gave the Excursion the "Exxon Valdez Environmental Destruction Award." The newspaper *USA Today* called it "an emblem of excess" (Doyle, 2000, p. 417).

According to an in-depth 1997 news report written by Keith Bradsher for the *New York times*, "American emissions of global warming gases are increasing even faster than previously expected, in part because of the rise in popularity of sport utility vehicles" (Bradsher, 1997, p. A1). Indeed, North America's 65 million light trucks produce as much pollution as its 125 million cars. At the time of Bradsher's report, the first international meetings of government officials to find ways to decrease pollution were getting underway in Kyoto, Japan. According to Doyle, America's love affair with the SUV, which "epitomized for some the excesses of rampant American consumerism," came under heavy attack because of their environmental penalty (Doyle, 2000, p. 395). The Kyoto meetings, and president Bill Clinton's suggestions that fuel economy

should be raised, put “auto industry lobbying . . . in high gear.” The lobbying was successful. “[A]fter pressure from the U.A.W., the Big Three and attacks from politicians in auto manufacturing states, the Clinton-Gore team backed off.” Further, the U.S. has been one of the few holdouts from the Kyoto agreements. According to Bradsher, environmentalist groups have, all things considered, devoted little effort in their fight against the SUV. While they have not abandoned the fight altogether, Bradsher reports that their lackluster efforts are “because they think they have little chance of success” (Bradsher, 1997, p. A1). That the government seems to pander to auto makers, and the fact that environmentalist groups think they can not win, is reflective of the power of car culture and of the SUV’s place in it.

In the study of car culture, the government *forces* changes in car design. Manufacturers are forced into changing the design of their cars for something other than “natural” reasons, which typically have included market demand, profitability, available technology and so forth. Importantly, when the government forces auto makers to “clean up” their vehicles, they are asking them to change the design in a way that results in better functionality (i.e., lower emissions and higher mpg) yet with only marginal gains in appealing meaning in car culture. Despite what appears to have been some interest in the matter during the 1970s, a century of car culture has consistently shown that environmentally friendly cars do not have widespread appeal. To illustrate, while auto makers have one-upped each other in “horsepower races” there have been, with only a couple of exceptions, no “clean car races.” Car culture holds

that the research and development costs that went into making a more “powerful” car could have been spent on making it “cleaner,” even if it is something as simple as making the car lighter and thus more fuel efficient. The 1970s and early 1980s are important because of the forced changes in car design—changes that Flink says resulted in the “end of the era of the all-purpose road cruiser as the predominant type of car” (Flink, 1988, p. 390).

Part of the cultural appeal of the SUV, certainly in its earlier days, is that it is a form of revenge against the dual energy crises, rising fuel prices, recession and the shifts in car culture and changes in car design which came as the inevitable result. Not only was there an influx of much-too-efficient Japanese cars like the Honda Civic and Accord, there was also a growth in undesirable American-made small cars. Of these, none was more laughable than the compact, 4-cylinder Cadillac Cimarron, one of the best indicators of how auto makers tried to shift production to meet the demand for “un-American” cars. As one auto writer claimed of the Cimarron, it was “a cynical marketing exercise” which “no one really took . . . seriously as a real Cadillac” (Vivian, 1994, p. 24). This shift to smaller cars—especially ones like the compact Cadillac—was an “unnatural” condition forced on by government legislation and tightened energy supplies. Things which are “smaller,” especially cars, are inconsistent with traditional American culture which maintains that “bigger is better.” There was an underlying tension which sought something distinctly “American.”

Americans found their “American” vehicles in the form of “light trucks,”

which could still easily be equipped with powerful V8 engines less choked by pollution controls and which offered all the size they could possibly desire. As gas prices came down, as the economy rebounded and as government policy encouraged the sale of American-made (but discouraged Japanese-made) gas-guzzling “light trucks,” a growing segment of middle-class consumers found a new outlet to express their pent up “American-ness.” An American truck was a good expressive substitute to signify the end of the dreary 1970s and early 1980s. In other words, part of the cultural appeal of the truck is that it is reminiscent of what had been the happiest decade of car culture—the 1950s, which signified the end of the Second World War.

It should be pointed out that despite all the changes, there *were* still big cars available—like traditional Cadillacs or full-sized cars like the Chevrolet Caprice. But clearly, as gas prices dropped through the 1980s and 1990s, consumers were ready to buy into a different kind of big vehicle. But it could not be too different. While the longer/lower/wider design of the 1950s “road cruiser” had been replaced by the shorter/taller/narrower design of the “off-road aggressor,” the appeal of the *car* never faded completely. The car was never abandoned because its comfortable side was integrated into truck design. As described in chapter five, beginning in the 1970s and through the 1980s, trucks were distanced symbolically from their brutish “work-horse” roots. Truck and SUV design become much more comfortable, complete with leather seating, automatic transmissions and air conditioning. Some newer models were even available with “push-button” 4-wheel drive capability which eliminated

the ugly-yet-functional lever from poking up from the floor and otherwise marring the laid-back couch-like seating arrangement. Gear-jamming ruggedness was tamed by push-button civility. This is consistent with a general trend in car and consumer culture through the 1970s, during which a “sex-gender upheaval” rendered overtly neo-patriarchal masculinity less and less tenable (Wernick, 1992, p. 77).

In sum, the gas-guzzling car design returned due to less stringent regulations and declining fuel prices; yet it was transmogrified into a four-wheel-drive off-road aggressor with, dare we say, a feminine side. The SUV is the ultimate cultural expression of the gas-guzzler because, as much as possible, it is a return to previous decades when government policy (or the lack thereof) and cheap fuel prices resulted in an uninhibited car culture where size and power were fully expressed. While not all participants accepted trucks and SUVs, enough of them did to establish them as *the* stylish gas-guzzling car design through the 1990s.

The lackluster fuel economy and relaxed pollution emissions regulations of light trucks add up to practically one of the worst ecological developments of the decade. However, one of the greatest cultural ironies of the SUV is its environmentally-damaging design yet environmentally-friendly media representation. In a wide range of popular media, advertisements and auto-friendly publications, the SUV is constantly portrayed as the perfect outdoors vehicle. Part of what makes the SUV the ultimate cultural expression of the environment and car culture is its successful incorporation of its opposition—nature, healthy lifestyles, trekking and experiencing the

outdoors. By incorporating the symbols of its opposition, SUV marketers have astutely constructed an image in which the SUV is in harmony with nature.

Advertisements are a ready source of symbols. For example, an April 2001 advertisement for the Jeep Grand Cherokee is typical of how SUVs are associated with nature. (See the appendix, page 168.) In this panoramic two-page-spread layout, the Cherokee is depicted in a natural setting sitting, quite innocently, on a rock outcropping at dusk. It is perched, much like some creature of the wild, beside the water; trees and grassland are nearby, and mountains loom in the background, although they are not much larger than the Cherokee. The relative symbolic simplicity of the advertisement—water, trees, mountain, grassland—add to its naturalness; the fact that the SUV literally comes into two-dimensional contact (kisses them, even) with these simple symbols of “nature” communicates that it is not doing them any harm. Missing from the advertisement are symbols (save for the SUV, of course) of the hectic world whence it came, which would disrupt the image of the Cherokee as being “at one with nature.” The SUV and its owner are on vacation from their busy reality. This vacationing theme is common in advertising, but it has greater poignancy in the case of the SUV because it has been a site for so much political-economic struggle.

The driver of this Cherokee (presuming there is one behind its deeply tinted glass) sits in an air conditioned cocoon, shielded from any effective interaction with the unknown natural settings surrounding the truck (like the mysterious fresh water and unknown type of tree—maybe a pine?). This is “nature,” seamlessly brought to you,

like so many television shows, by the SUV. For a significant proportion of SUV marketing like this Cherokee advertisement, the way to experience nature is to purchase an oversized, overly powerful two-ton behemoth and quietly conquer it. We might as well assume that the Cherokee in this advertisement has already conquered nature on its trip to the rock outcropping. It thus just sits there, eminently triumphant. We are told that the trip was done from within its “very pampering cabin” and with the aid of its “extremely powerful engine”—a big V8 which gulps a gallon of gasoline every 15 to 19 miles.

In its discreet headline, the copywriters for Jeep point out that “Only 5% of your lifetime is spent outside.” Encouragingly, they go on to say, you should “Make the most of it.” During those precious moments when you are not working to pay for the privilege (although some might consider it a right) of owning an expensive vehicle like the Grand Cherokee, well-to-do owners are encouraged to incorporate the SUV into their “quality time.” The environmental degradation inherent (but not necessarily so) in the SUV’s design is erased under a façade of encouraging owners to drive them in natural settings, maybe even as an escape from polluted cities. Throughout it all, the symbolism of the SUV remains clean and efficient, the perfect vehicle to fulfill one’s outdoor fantasies.

At times, it can be difficult to discern where the advertising stops and the “editorial” begins. The editorial and advertising blend seamlessly into an orgy of “outdoors-ness.” When, in 1995, *Road and track magazine* launched a new SUV-only maga-

zine, it saw fit to entitle it *Open road: the 4WD adventure magazine*. (See the appendix, page 168.) Under one interpretation, this title is oxymoronic; it combines the conflicting imagery of the “open road” with that of the 4WD-accessible “off road” excursion. But more accurately, this title is perfectly acceptable; it means that the adventuresome imagery of the “open road” has been displaced by the new fascination with off-road trekking. While the 1950s highway construction boom offered the promise of freedom, the reality of 1990s highway congestion has meant that people have to seek freedom through a return to more natural surroundings. And the SUV is perfect for this. Lest the point be lost, the front cover of this “premier issue” shows a sportswear-clad young couple, sitting on a rock outcropping at dusk; surrounding them are their adventure toys—mountain bikes (2); foldable chairs (2); sleeping bags (2); tent and Ford Explorer SUV (1 of each)—all of which are perfectly clean for this all-too-obviously poised publicity photo.

In another magazine, the adventure theme continues with *Automobile magazine's* “4x4 Field Guide,” an annual issue since it was introduced in 1996. According to Jean Jennings, editorial director, the SUV and the Field Guide are in large part about the promise that they offer; it “is a representation of the freedom from the constrictions of pavement that four-wheel-drive offers, whether we come to take advantage of it or not. . . . They carry off the beaten path towards adventure” (Jennings, 2001, p. 10). To wit, the issue covers such topics as surfing, cycling through Massachusetts, exploring “ghost towns,” powerboating on one of the Great Lakes, attending a Woodstock-like

concert and an exploration of Mount Olympic National Park.

A two-page spread of the excursion to Mount Olympic National Park is included in the appendix, page 168. Auto journalist Preston Lerner brought a Mazda Tribute SUV to explore the Park, despite the fact that it was unnecessary. He reports that “off-roading is strictly prohibited in the park” (Lerner, 2001, p. 24). However, when pressed, Lerner does find a gravel road, although even it is “doable in just about anything smaller than an RV” (Lerner, 2001, p. 25). Presumably, too, it would be doable in something smaller than an SUV. But driving the road in a car is inconsistent with the SUV’s place in car culture and the magazine’s mandate. Still, feeling rather righteous in their “light truck,” Lerner finds himself “speeding” along a highway through the Park, “disgusted” by the “pathetic sights” of the “hideous tangle of tree trunks and limbs that remains after an area has been logged” (Lerner, 2001, p. 27).

This is a good place to conclude, with an auto journalist tromping about a majestic National Park, complaining about the depletion of a renewable resource while forever burning up untold amounts of non-renewable resources in a Mazda-supplied, top-of-the-line, 200 horsepower SUV. From the reality of ecological degradation to the representation of ecological promotion, the SUV is the ultimate cultural expression of the political-economic and popular sides of car culture. The power of the SUV in car culture is in its ability to integrate the themes of its opposition while making driving “fun” again.

Appendix
SUV media representations incorporating symbols of "nature."

Jeep Grand Cherokee advertisement (Road and Track, April, 2001, pp. 50 & 51).

Open Road: The 4WD Adventure Magazine, fall/winter 1995, front cover

SUV feature story, "Tribute to the Olympics." (Automobile Magazine: 4X4 Field Guide, 2001, pp. 24 & 25).

Chapter 8

Conclusion

PART OF THE reason why this thesis was entitled *Supercar* is that, like the SUV itself, it could generate mixed reactions. In particular, SUV haters might likewise hate “supercar”—at least upon first impression. Although the title implies praise for the SUV, nothing could be further from the truth. *Supercar* is ironic. The neologism “supercar” means that the SUV is the ultimate cultural artifact of contemporary car culture. More so than any other car, the SUV illustrates in extreme fashion all the problems and opportunities of the automobile. Even SUV haters must surely agree that no other car illustrates contemporary car culture better.

The SUV is car culture’s contemporary supercar because it has been a site for controversy while, at the same time, erasing this controversy by incorporating it into its symbolism. As a thesis in mass communication, the purpose was not just to specify the problems of the SUV, but to describe how these problems are mediated in car culture and then explain why the SUV is, at this writing, still popular. Despite resistance on so many fronts, the SUV has remained the vehicle of choice for many participants of car culture. This has occurred due to many reasons, including America’s long love affair with cars that promise more than utilitarian transportation, the fact that media messages and the SUV itself convey safety and “outdoorsy” fun, and because of favorable “external” forces emanating from America’s political economy. Note that none of these reasons necessarily has anything to do with the physical characteristics of the SUV and everything to do with received meaning and political forces. This does *not* mean that the physical characteristics of a car are not important, just that they are

important only insofar as they convey meaning. The bulging fender flares, over-sized wheels/tires, and scratch-resistant “skid plates” only exist because they add favorable meaning to the SUV. Of course, different people evaluate SUV design differently; some may think SUVs are ridiculous but others go into debt for years just to have one. Vance Packard describes this process of evaluation as an interaction between the “personality” of the car and the personality of the buyer (Packard, 1957, pp. 52–56).

As for the future of the SUV, how long can we realistically expect so many people to pay extra for an off-road “personality” when it does not suit their own? Indeed, with a significant portion of SUV advertising downplaying off-road capabilities—and even some which outright mock it—the end of the SUV era might be remarkably close. Because so few SUV owners drive off road (some have put the number at 5%) and because the SUV is a fashion, it will evolve, reach maturity, and then become passé. But it will never die. Its meaning will live on.

More so than any other, the Suzuki has the cultural potential to become the “Volkswagen” of the SUV era. While the Suzuki is not as utilitarian as a conventional car, it still offers many of the SUV’s promises with fewer of its problems. And most importantly of all, it advertises this point repeatedly, just like the Volkswagen did. The Ford Explorer could become the “Corvair” of the SUV era. Future writers of the SUV may go to great length to try to fully understand why the national coverage of the Explorer’s problems did not scare people away from driving a vehicle that possesses stability problems. But at the same time, perhaps one of the conclusions will be that

the Explorer marked the beginning of the end, that the circulated images of Explorers upside down in ditches really did undermine the SUV's popularity. Lastly, the Ford Excursion could become the "Edsel" of the SUV era. Writer Paul Roberts (introduced in chapter one) test drove the Excursion and proclaimed it to be "a grotesque representation of a bizarre trend that substitutes true utility and functionality with toylike impersonations" (Roberts, 2001, p. 74). In many ways, the Edsel was precisely the same "grotesque" result of the 1950s era. The difference between the Edsel and the Excursion is that one utterly failed because car culture had begun to grow weary of chromed-up cars, and the other thrived because contemporary car culture still has enough room to accept massive four-wheel drive cars. In sum, the Suzuki, Explorer and Excursion are the most likely candidates to be remembered as prototypical of the opportunities and problems that a four-wheel drive recreational vehicle represent.

Currently, there are mixed indicators of the future popularity of the SUV. On the positive side, manufacturers are designing new SUVs so they pollute relatively less, are relatively more stable and are relatively more crash compatible. Unfortunately, this does little to help the tens of millions made during the previous decade, a growing number of which will be bought second hand and driven by younger, inexperienced drivers (Kurtis, 2000). Another positive indicator is the increasing diversity of models available. One is a recent entry from BMW, which claims itself to be "the ultimate driving machine." BMW actually calls its sports-car-like SUV (the "X5") a "sports activity vehicle," an attempt to use communication to

help distance itself from regular off-roading designs. The Saturn car company, which at one time said it made “a different kind of car,” will show just how different it is by making its own SUV (the “VUE”). No doubt, its “difference” will be in the image Saturn constructs for it. Finally, and perhaps as much a sign of the times as a 1981 four-cylinder Cadillac, Porsche is rumored to be introducing an SUV of its own (the “Cayenne”). That Porsche, after its whole history has been devoted to selling high-performance sports cars, might begin selling a “light truck” is indicative of the tenacious hold and versatility the SUV has on car culture.

If we take the diversity of SUV models as a guide, we should also consider the diversity of car models. As a sign of the SUV’s decline, there has been as late a resurgence of hatchbacks and station wagons—like the new Ford Focus, Toyota Matrix/Pontiac Vibe twins, and Mazda Protogé5. These models offer increased cargo-carrying capacity and a sporty appearance, but without the promise of off-road capability. While the SUV is hardly ever used off road either, its design includes the promise to do so. These new station wagons may become the new “cool” car in years to come, while the sight of an SUV conjures up feelings of irresponsibility –or prosperity.

Barring a major energy crisis or a major revival of environmentalism, the SUV will remain fashionable for perhaps up to another decade. First to go will be the bigger “truck-based” versions, like the Ford Explorer and Chevrolet Blazer, which have many more compromises than smaller “car-based” versions, like the Honda CR-V and

Ford Escape—although all will see their demise. Critics will remember the SUV as a gas-guzzling car with a host of safety and environmental problems. Popularly, the SUV will be remembered fondly like the lavish 1950s cars or over-powered 1960s muscle-cars. Alas, there will be no anti-establishment SUV in the *same* way that the Volkswagen was, for the Volkswagen's heady cultural appeal and unchanging design are simply unmatched. More broadly, the SUV will come to be associated with the communications boom. Both the SUV and communications technology ostensibly offer the promises of versatility, mobility and go-anywhere multi-functionality.

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Selected specifications, 2 small cars, U.S. figures.
 (Car and Driver, 2001 New car guide.)

Honda Insight
 Most fuel efficient car sold

Ford Focus
 Regular small car

	Honda Insight	Ford Focus
Price	\$19,500	\$12,590–\$15,725
Weight	1850–1900 lbs	2550 lbs
Length	155.1 inches	168.1–174.9 inches
Width	66.7 inches	66.9 inches
Height	53.3 inches	56.3 inches
Wheelbase	94.5 inches	103.0 inches
Engine type(s)	3 cyl. + electric motor	4 cyl.
Engine size (litre displacement)	1.0 L	2.0 L
Horsepower	67 + 10	110, 130
EPA fuel economy, miles per gallon	61–70	25–35

Selected specifications, Ford station wagon and Ford small SUV, U.S. figures.
 (Car and Driver, 2001 New car guide.)

Ford Taurus Wagon
 Mid-size station wagon

Ford Escape
 Compact SUV

	Ford Taurus Wagon	Ford Escape
Price	\$20,790	\$18,160–\$21,335
Weight	3700–3900 lbs	3000–3350 lbs
Length	190.4 inches	173.0 inches
Width	70.8 inches	70.1 inches
Height	59.3 inches	67.0 inches
Wheelbase	111.5 inches	103.1 inches
Engine type(s)	V6	4 cyl., V6
Engine size (litre displacement)	3.0 L	2.0 L, 3.0 L
Horsepower	155, 200	127, 201
EPA fuel economy, miles per gallon	19–28	18–28

Selected specifications, midsize and full-size Ford SUVs, U.S. figures.
 (Car and Driver, 2001 New car guide.)

Ford Explorer
 Mid-size SUV

Ford Expedition
 Full-size SUV

	Ford Explorer	Ford Expedition
Price	\$25,500–34,000	\$30,535
Weight	4100–4350 lbs	4900–5450 lbs
Length	189.5 inches	204.6 inches
Width	72.1 inches	78.6 inches
Height	71.9 inches	74.3–76.6 inches
Wheelbase	113.7 inches	119.1 inches
Engine type(s)	V6, V8	V8
Engine size (litre displacement)	4.0 L, 4.6 L	4.6 L, 5.4 L
Horsepower	210, 240	215, 260
EPA fuel economy, miles per gallon	14–22	12–22

Selected specifications, the two biggest SUVs, U.S. figures.
(Car and Driver, 2001 New car guide.)

Ford Excursion
Biggest SUV on the planet

AM General Hummer H1
Civilian version of its military counterpart
(seen frequently during news coverage of
"Operation Desert Storm.")

	Ford Excursion	Hummer
Price	\$34,970–41,710	95,404
Weight	6650–7700 lbs	6000–7000 lbs
Length	226.7 inches	184.5 inches
Width	79.9 inches	86.5 inches
Height	77.2–80.2 inches	76.8 inches
Wheelbase	137.0 inches	130.0 inches
Engine type(s)	V8, V10, diesel V8	V8
Engine size (litre displacement)	5.4 L, 6.8 L, 7.3 L	6.5 L
Horsepower	255, 310, 250	195
EPA fuel economy, miles per gallon	10–15	13–17