FETISHISM AND THE CULTURE OF THE AUTOMOBILE

by

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ABSTRACT

This thesis explores the notion of fetishism as an appropriate instrument of cultural criticism to investigate the rites and rituals surrounding the automobile. The car is a medium of social communication and a special object of veneration in American, indeed North American, culture. It possesses a sacred or magical power to shape everyday life.

Drawing on 19th century concepts of fetishism in the anthropological literature, the political economy of Marx, and Freudian psychoanalysis, a basic framework is set out in which to examine automobile culture. The study of the car as fetish provokes discussion of three central issues: autonomous technology, the constitution of human parts and machine parts, and the relationship between technology and gender.

The thesis argues that we invest the automobile with power and significance in social and cultural rituals and it appears to take on the character of an independent, autonomous force. A closer examination reveals that human beings are engaged in a struggle to control the more perverse or pathological elements of car culture.

DEDICATION

To the memory
of my father
James Douglas Mackintosh
1916-1989

ACKNOWLEDGEMENT

I wish to thank Judy Schlachter for her editorial assistance, techno-wizardry, and humor.

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INTRODUCTION

> I think that cars today are almost the exact equivalent of the great Gothic cathedrals: I mean the supreme creation of an era, conceived with passion by unknown artists, and consumed in image if not usage by a whole population which appropriates them as a purely magical object.
>
> Roland Barthes

> O maternal ditch, almost full of muddy water! Fair factory drain! I gulped down your nourishing sludge; and I remembered the blessed black breast of my Sudanese nurse...When I came up--torn, filthy and stinking--from under the capsized car, I felt the white-hot iron of joy pass through my heart!
>
> Filipo Tommaso Marinetti

Technology is wrapped in everything from religious illusions to totalitarian visions of apocalypse. While technological innovation is often held aloft as the benign harbinger of progress and as an example of the creativity and ingenuity of the human species, technology has a dark side that haunts the accounts of social theorists, science fiction writers, and Hollywood film makers. Since it entered Western culture in the late nineteenth century as a symbol of progress, the automobile has been represented and experienced in many ways. The relationship between human beings and cars has not always been a very graceful one. In the introduction to *Automobile and Culture*, Pontus Hulten writes, it is "more like a passionate liaison that has its elements of love and hate, where one blames the other for one's defects" (1984:14).

Few technologies have had a greater impact on the world than the automobile. Gerald Silk, who has written extensively on the car motif in art, notes that the automobile began as "a symbol of the dawn of the modern era, often compared with the great figures and achievements of the classical world, which not only stressed the magnitude of the accomplishments of the modern era, but also provided it with a certain legitimacy and power" (1984:35). The invention of the internal combustion engine was part of the sweeping scientific revolution at the turn of the century that brought about the telephone, the airplane, the wireless telegraph, the electric light, and moving pictures. In its role as emblem of an age in transition, the car became deeply ingrained in the everyday life of the Western world. The automobile is an indispensable part of the twentieth century for business and pleasure and has given people undreamed of mobility, allowing a certain personal freedom and individual liberty. But the automobile has a dark side. Adolf Ciborowski, chief architect responsible for the reconstruction of Warsaw after World War II, writes, "[It] broke apart the orderly ecology of urban living, burdened movement, congested the most valuable places, wasted resources, and killed people" (1972:12). Juxtaposed to the images of emancipation and progress is the reality of our experience with labouring machines, congestion on the highways, and death.

This thesis explores the notion of fetishism as a way to characterize the messianic zeal with which we embrace technology, particularly the automobile. First coined by the Portuguese in the 15th century to describe religious practices they observed in West Africa, fetishism became a central concept of the emerging science of anthropology. Anthropologist E.B. Tylor

described fetishism as the worship of inanimate objects by endowing them with magical powers and ascribing to them a life of their own, expanding the concept beyond religious practices specific to West Africa. In the 19th century, fetishism extended beyond anthropology into theology and political economy where it became a polemical weapon with a wider range of references and was used to apply more broadly "to describe the operations of a misguided and miscreating society" (Simpson 1982:13). In addition, Freud used the term fetishism to apply to a pathological manifestation of abnormal psychosexual development, which became a central part of his theories of psychoanalysis.

There is no generally agreed upon version of fetishism and many of the early accounts by missionaries and ethnocentric anthropologists rendered them unreliable. As Sut Jhally has pointed out, the concept of fetishism was part of the early and immature development of anthropology and "has been dropped from serious usage for at least the last 50 years, as it fell into a conceptual slush from which rescue proved impossible" (1984:133). It is beyond the intentions of this work to outline the varied and often contradictory versions of fetishism, but rather, I wish to draw some connections from some of these views to our contemporary relationship with technology.

To divide history into discrete, self-contained units, to differentiate between pre-capitalist and capitalist, industrial and post-industrial, or modern and postmodern societies, tends to deny a certain continuity that runs through all history. Fetishism is a cultural practice that, in some form, is common to all historical periods, and thus useful to investigate the rites

and rituals of automobile culture. Technology assumes a certain god-like presence in our culture, endowed with magical powers and wrapped in religious illusions. The notion that technology has a life of its own parallels the early anthropological accounts of animism in "primitive" fetishism.

In discussions of technological cultures and notions of fetishism three central issues arise that may represent any remaining vestiges of a contentious relationship with technology. Firstly, the fear of autonomous technology, the proposition that technology is out of control, that it has a life of its own, has existed from the time of the Prometheus myth and has persisted into contemporary culture. Indeed, technological animism has been one of the more spectacular themes in Hollywood cinema. The notion of autonomous technology persists in modern thought, in social criticism as well as in fiction and popular culture. Langdon Winner claims that the idea of autonomous technology is part of our modern experience with machines and a "symptom of profound stress" (1977:13).

Secondly, our relationship with the machine serves up many questions about how to characterize our essential humanness. Computers, for example, "sort of think" and are even susceptible to "viruses", which is suggestive of an organic nature. In the introduction to *How To Keep Your VW Alive*, Fred Muir offers this advice:

> Talk to the car, then shut up and listen. Feel with your car; use all of your receptive senses and when you find out what it needs, seek the operation out and perform it with love. The type of life your car contains differs from yours by time scale, logic level, and conceptual anomalies, but it is 'life' none the less. Its Karma depends on your desire to make and keep it...ALIVE!
> (1989:3)

The "horror" of fetishism in nineteenth century anthropology is that this practice of endowing inanimate objects with magical powers, whereby they appear to take on a life of their own, drains the humanity from the idolater. How are human parts and machine parts constituted in our complex technological world? The notion of fetishism implies that human parts get pulled more effectively and efficiently into the gears and the wheels of the machine. Humans become slaves to their technologies. As we humanize technology in a flourish of creative genius, do we necessarily mechanize our culture in the process? Concepts of mastery and the master-slave metaphor are some of the dominant ways of viewing our cultural relationship to nature and to technology. Winner notes that much of the existing literature "holds that technology and the human slave are exact equivalents, even to the point that they are functionally interchangeable" (1977:20).

The third issue this paper explores is the relationship of technology to gender. Women have a different relationship to automobiles than men. The rites and rituals of car culture have traditionally excluded women from the magic circle. From Futurist car poetry, and hot rods and customs, to the patriarchy built into the family cars of Detroit, women have been marginalized and relegated to the passenger seat of car culture. As Margret Benston points out, "men seem to identify with their cars as expressions of themselves more than women do and are often explicit in using them as symbols" (1988:20).

How naturalized and matter-of-fact has our technological environment become that the fear of machines is largely a concern of the past and the

struggle over losing our humanity is waged these days mainly in academic circles, or more playfully in the movies or science fiction novels? Has the presence of the automobile naturalized itself into a benign nature that is non-threatening, that there is no evidence in our culture of some evaluative reflection, some critical assessment of our unconditional love affair with the motorcar?

The first chapter of this work applies the notion of fetishism to technological cultures. The second chapter describes the rites and rituals of car culture. And finally, the issues that have arisen in exploring the fetishistic practices of car culture--the relation between technology and gender, the constitution of human and machine components, and the spectre of autonomous technology--will be outlined in the last two chapters.

CHAPTER I

TECHNOLOGICAL FETISHISM

The culture of technology coalesces around concepts of nature, rationality, and progress. Since the Scientific Revolution of the seventeenth century, a prevalent conviction that human beings are separate from and superior to nature has been ubiquitous throughout Western culture, from political rhetoric to theological tomes. A biblical myth, for example, tells us to "subdue the earth and have dominion...over every living thing that moveth upon the earth". Francis Bacon wrote about an idealized scientific community whose name, "The College of the Six Day's Works", made reference to the bible story. Its objective was the extension of power over Nature and, in Bacon's words, "the enlarging of the bounds of Human Empire, to the effecting of all things possible" (cited in Pacey 1983:87).

The mechanical view of nature, cloaked in rationality and promoted by the likes of Francis Bacon, Rene Descartes, and Issac Newton, is ultilitarian and practical and informs much of the ideological basis of our contemporary relationship with nature and technology. The men of the "new philosophy" sought to liberate themselves from myth and superstition while proclaiming to know the "true nature" of the universe. The founders of Western science sought to emphasize the universal and eternal character of natural laws. Descartes maintained that unravelling the mysteries of the universe could only be accomplished with mathematics. He stated: "To speak freely, I am convinced that it is a more powerful instrument of knowledge than any other that has been bequeathed to us by human agency, as being the

source of all things!" (Randall 1940:241). Newton wished to identify the causal relations between (material) phenomena, proclaiming, "I am induced by many reasons to suspect that all phenomena of nature may depend upon certain forces by which particles of bodies, by some causes hitherto unknown, regular figures, or are repelled and recede from each other" (Randall 1940:259).

In his *Novum Organum* published in 1620, Bacon is disdainful of the ancient Greeks, Plato, Aristotle, and Homer, for what he called "contentious thinking". Bacon's philosophy revealed more of an interest in controlling nature rather than contemplating it. Although Bacon argues for compassion and disciple in the use of knowledge and mastery over nature, in his view, science and technology are the tools that enable us to rearrange nature, in a flourish of self-interest, creating greater and greater material abundance. In so doing, a more ordered world is established. Criticizing the illusions, dogmas, and methods of inquiry of past philosophies, Bacon claims we must throw off, and steel ourselves against, "the idols and false notions" that cloud human understanding.

The commitment to progress through the idea of scientific and technical advance remains one of the hallmarks of Western civilization. The idea of human control over Nature and human nature through scientific knowledge to a large extent still shapes the conditions under which we live in our contemporary technological world. Winner notes that "the success of Bacon's program as a way of knowing, as a vision of the world, and as a way of operating on material reality is perhaps the most important of all accomplishments in modern history" (1977:23).

For Bacon, the methods of inquiry of quasi "scientific" traditions stand in the way of his utopian visions of progress. But there is a note of "iconoclastic rhetoric" that accompanies Bacon's pronouncements. Indeed, as W.J.T. Mitchell argues in *Iconology*, a fear of imagery can be found in the work of every major philosopher from Bacon to Kant to Wittgenstein. This is not simply a fear of the "false" idols of primitive ritual, "but of idols which insinuate themselves into language and thought, the false models which mystify both perception and representation" (1986:113).

The concept of fetishism has commonly been used to describe certain rituals in pre-capitalist societies, a so-called "primitive" world of superstition and irrationality, and not a practice found in rational, enlightened and technological cultures. How can it possibly be said that the cultural practices of contemporary society in any way resemble the so-called irrational "pagan" rituals of fetishism?

The founders of Western science sought to formulate general schemes that would coincide with the very ideal of rationality. But a mechanistic view of nature, in reducing "all things" to mathematical principles, to quantifible substances, leaves the world tasteless, colourless, and odorless, and doesn't exactly cohere to some of the messy and chaotic dimensions of nature. Rationality merely constrains rather than negates these so-called "irrational" dimensions of cultural practice. Charles De Brosses in <u>*Du Culte des diex fetiches*</u> (1760), noted that the practice of personifying physical objects or moral beings had not come to an end with the Age of Reason, and he noticed the particular tendency of fetishism to become incorporated into

contemporary forms of behavior: "These irrational practices do not disappear in a country in proportion as reason gains sway there: above all when they are sanctified by inveterate custom and pious credulity...they even mix themselves with other dominate cults, and more recently established dogmas" (cited in Simpson 1982:16).

Tylor was the first to use fetishism to describe cultural practices outside West Africa such as among the Aborigines of Australia and the Dayaks of Borneo. He even observed fetishistic practices in more so called enlightened and rational societies, such as among "old-fashioned English conchologists" in nineteenth century England. The same inclination to endow objects with power and significance exists in all cultures: "The turn of mind which in a Gold-Coast negro would manifest itself in a museum of monstrous and most potent fetishes, might impel an Englishman to collect scarce postage stamps or queer walking sticks" (Tylor 1958:231).

THE MAGIC

In *Religion in Primitive Culture*, Tylor sets out to define the minimum condition that must be present in any philosophy to be considered a religion, and in so doing, counter the widespread mid-nineteenth century belief that "primitive" peoples had been without some form of religious practice. Tylor argues that animism provides this basic groundwork. Animism characterizes all religious philosophies from "primitive" to "civilized" societies, and is used to describe any belief in spiritual beings, or "the doctrine of spirits in general". The notion of fetishism is a special case,

within animism, and, according to Tylor, should be confined to "that subordinate department which it properly belongs to, namely the doctrine of spirits embodied in, or attached to, or conveying influence through, certain material objects" (1958:230). These external objects are then regarded as "animated by a life analogous to man's". Tylor notes the origin of the word fetish came from Portuguese encounters with the culture of West Africa:

> Over a century ago, the Portuguese in West Africa, noticing the veneration paid by the negroes to certain objects, such as trees, fish, plants, idols very fairly compared these objects to the amulets or talismans with which they were themselves familiar, and called them feitico, or 'charms', a word derived from the Latin facititius, or in the sense of 'magically artful'. Modern French and English adopted this word from the Portuguese as fetich, fetish...
> (1958:229)

In a broad sense then, fetishism describes the worship of inanimate objects, by endowing them with magical powers, and ascribing to them a life of their own. Tylor claims that "any object whatsoever may be a fetish". De Brosses claimed that a fetish is "anything which people like to select for adoration". Frank Manuel notes, in *The Eighteenth Century Confronts the Gods*, that DeBrosses' definition "was so all-embracing that it covered the divinization of or the imputation of sacred power to any object, animate or inanimate--trees, birds, beasts, rocks, springs, rivers, groves, staffs, weapons" (1959:196).

An object is classified as a fetish when a spirit is considered embodied in it or communicating by it. It must be demonstrated that the object is treated as having personal consciousness and power, "is talked with,

worshipped, prayed to, sacrificed to, petted or ill-treated with reference to its past or future behavior to its votaries" (Tylor 1958:231). In this context, these objects become gods to whom sacrifice and prayer are offered for assistance and protection. The evidence suggests that the fetish works its magic at an everyday level and involves the practical welfare of its possessors. According to Tylor, there is nothing that the fetish cannot do or undo, if it is the right fetish. In West Africa, "the traveller finds them on every path, at every ford, on every house-door, they hang as amulets round every man's neck, they guard against sickness or inflict it if neglected, they bring rain, they fill the sea with fishes willing to swim into the fisherman's net, they catch and punish thieves, they give their owner a bold heart and confound enemies..." (Tylor 1958:244).

There is some confusion in the early anthropological literature as to whether the object *itself* possesses animate life or it simply acts as a vehicle or vessel in which the spirit dwells. Tylor is unable to separate as distinct from each other, the spirit itself and the material object in which it is located. He does not maintain the distinction throughout his work between instances where the spirit dwells in the object and instances where the object itself is thought to produce animate life, and he eventually collapses animism and fetishism "as similar developments of the same original idea, that of the human soul". Tylor claims: "Theoretically we can distinguish the notion of the object acting as it were by the will and force of its own proper soul or spirit, from the notion of some foreign spirit entering its substance or acting on it from without, and so using it as a body or instrument. But in practice these conceptions blend almost inextricably" (1958:239).

Subsequent anthropological research has repudiated the idea that fetishism involves seeing the object itself as having a life of its own. The fetish itself is more properly regarded as a dwelling place for the spirit, imputed into the object in a social and cultural ritual by a priest or a shaman. As Jhally notes, "Once this spirit is installed in the object then it is treated as being able to see, hear, understand and act" (1984:136).

There is some argument in the literature about whether Tylor's definition is too extensive to be useful and some anthropologists have attempted to limit its reference and distinguish it from other "pagan" forms of worship, particularly idolatry. A familiar distinction is offered by F. Max Muller in *Lectures on the Origin and Growth of Religion* (1878): "A fetish, properly so called, is itself regarded as something supernatural; the idol, on the contrary, was originally meant as image only, a similitude or symbol of something else" (cited in Simpson 1982:13). For Tylor, image-worship is connected to the belief in spiritual beings and is a subordinate development of animism. To the extent that it belongs to the theory of spirit-embodiment it must combine elements of portrait and fetish: "to the one it may be a symbol, a portrait, a momento; while to the other it is an active intelligent being, by virtue of a life or spirit dwelling in it or acting through it" (Tylor 1958:255). The distinctions between fetishism and idolatry often blur in practice. As Tylor points out: "it is only so far as the image approximates to the nature of a material body provided for the spirit, that Idolatry comes properly into connexion with Fetishism" (1958:255).

Until now I have argued that fetishism is a natural tendency in humankind and is evident in all cultures and ages. As both De Brosses and Tylor have

claimed, it is a natural inclination to personify inanimate objects and, indeed, worship them in certain ritualistic contexts. However, fetishism later extended into theology, political economy, and psychoanalysis, to become a term of derision, most notably, as a polemical weapon in Marx and a perverse one in Freud. David Simpson notes that when fetishism became associated with idolatry in the nineteenth century, "in the 'protestant' vocabulary directed against the endowing of inanimate objects with the values and powers which properly belong to human states of mind and feeling", it expanded the terms of reference outside anthropology to apply more broadly "to describe the operations of a misguided and miscreating society" (1982:13).

Fetishism in this context was a derisive term used to denigrate any "false" idolatrous practice not only because it presents a threat to the existing order, but also to confirm the validity of one's own cultural practices. This was particularly evident in the theological rhetoric of the nineteenth century. As Mitchell points out, fetishism was a key concept in the vocabularies of nineteenth-century missionaries and anthropologists who went out to convert "native" peoples to the privileges of enlightened Christian capitalism. Western Europe, particularly England at this time, was changing its view of the underdeveloped world "from an unknown, blank space, a source of slave labor, to a place of darkness to be illuminated, a frontier for imperialist expansion and wage-slavery" (Mitchell 1986:205).

Idolatry, like fetishism, is not just a province of Christian polemics, however, and it is important to recognize the cultural flexibility of the label. As a polemical weapon to sublimate the threat of the "other", the label

"idolatry" is struggled over and appropriated by all manner of societies. Fetishism is a threat because it posits a social and cultural construction of reality. Simpson notes, idolatry is "in the eye of the beholder". Voltaire, for example, refused to distinguish between paganism and Christianity, and in an article on "Idolatry", he wrote:

> The Moslems who filled Greece, Asia Minor, Syria, Persia, India and Africa, called the Christians idolators, *giaours*, because they believed that the Christians worshipped images. They smashed several statues they found in Constantinople in Santa Sophia, in the church of the holy apostles, and in others which they converted into Mosques.
>
> (cited in Simpson 1982:17)

The tendency of rationality, the governing principle of science and technological cultures, to negate the validity of other dimensions of culture and human nature, and label them as "irrational" and to deny utterly the label of fetishism, is indicative of a certain historical continuity. The values and beliefs of each successive culture will repudiate any prior worship of idols, "embracing some new sort of image that contains guarantees against mystification and idolatry" (Mitchell 1986:164). The worship of technology avoids being labeled fetishism, and thus "irrational", and at the same time, claims validity for its own worship of "images", those that embrace rationality and technology. As Mitchell points out, "The iconoclast prefers to think that he worships no images of any sort, but when pressed, he is generally content with the rather different claim that his images are purer or truer than those of mere idolaters" (1986:198).

Under the broad definition proposed by Tylor, in defining a fetish as an object regarded with awe because of its supposed magical or spiritual

powers, one is persuaded that human beings in all cultures are fetishists to some degree. Any broad application of the term fetishism to contemporary society must be cognizant of the historical context within which the literature exists, and must account for any qualitative shifts in historical continuity. Nevertheless, De Brosses claims:

> We know that man has a natural tendency to imagine beings similar to himself, and suppose in external things the qualities he experiences in himself...The practice of personifying such things, whether into physical or moral beings, is a metaphor natural to man, whether in his civilized or primitive condition.
> (cited in Simpson 1982:14)

Ernst Cassirer writes that all cultural work, whether technical or intellectual, proceeds by the gradual shift from the direct relation between people and their environment to an indirect relation, and is characterized by increasing mediation between will and the object of that will. Cassirer notes that in pre-industrial societies, tools such as axes and hammers were objects of special veneration and religious significance: "as soon as man employs a tool, he views it not as a mere artifact of which he is the recognized maker, but a Being in its own right, endowed with powers of its own. Instead of being governed by his will, it becomes a god or daemon on whose will he depends--to which he feels subjected, and which he adores with the rites of a religious cult" (1946:59). Lewis Mumford writes that the machine has become modern society's main source of magic. It has become Western culture's totem animal--half god, half slave (1952:16).

The Centennial Exposition held in Philadelphia in the summer of 1876 featured George Corliss's forty-foot steam engine which supplied all the

power to the exhibition hall. This magnificent technological spectacle wowed the crowds with its prowess--a fascination that went well beyond any admiration of a purely utilitarian function. John F. Kasson writes in *Civilizing the Machine*, that descriptions of this magnificent machine by fairgoers, "frequently became incipient narratives in which, like some mythological creature, the Corliss engine was endowed with life and all its movements construed as gestures. The machine emerged as a kind of fabulous automaton--part animal, part machine, part god" (1976:162:145).

As Tylor makes clear, a fetish "is talked with, worshiped, prayed to, sacrificed to, petted or ill-treated with reference to its past or future behavior to its votaries". The wonder that filled American Henry Adams in his walk through the Hall of Dynamos at the Great Exposition in Paris in 1900 is indicative of the sensuous fervor that engulfs our relationship to technology. For Adams, the Dynamo was an "occult mechanism" and "a symbol of infinity". Awed by the magnificence of the machines before him, he "began to feel the forty foot dynamos as a moral force, much as the early Christians felt the cross...Before the end, one began to pray to it; inherited instinct taught the natural expression of man before silent and infinite force" (Adams 1918:380).

Tylor claims, "the tendency runs through all human nature to collect and admire objects remarkable in beauty, form, quality, or sacredness" (1958:321). As Barthes has made clear, the car is appropriated and consumed as "a purely magical object" and is the equivalent of the great Gothic cathedrals (1972:88). The automobile is worshipped as an object remarkable in beauty, form and sacredness, if not always in quality.

The image of the car is wrapped in religious illusions. Stephen Bayley in *Sex, Drink, and Fast Cars* claims the automobile in the nineteenth and early twentieth century was "the ultimate talisman" of the age (1988:45). In car culture, the automobile has a special resonance as an object of worship and personification. In some ways, it is offered up in prayer and sacrifice, and in return, assistance and protection is received. The car is a fetish that works its magic at an everyday level offering assistance in business and pleasure and protection from the wind and rain--and the crowded Hastings Street bus. As the talisman of our age, the automobile wards off evil and inflicts harm if neglected. Cynthia Dettelbach, in her book *In The Driver's Seat,* explores the place of the automobile in American literature and popular culture, and claims that the car in the United States is handled in much the same way that peoples in traditional cultures handled the mysteries and terrors of nature.

> In their attempts both to appropriate and understand the automobile, Americans name and anthropomorphize, ritualize and exult their cars. They create myths and 'momentary' gods out of the machines that affect them most personally.
>
> (1976:91)

The worship of the automobile represents one of the most graphic examples of tool-worship in the twentieth century. From Futurist car poetry to the hot rods and customs of the 50s, the exultation of the automobile has been an important part of cultural practice. From monster truck pulls and demolition derbys, to "cruisin" down Robson Street in Vancouver on a Friday night, the automobile is wrapped in ritual. Automobile culture has its own rites of passage. People are conceived in cars, are born in cars and die

in cars. Andrew Greely makes an explicit connection between the annual automobile showcase and a highly ritualized religious performance.

> The colors, the lights, the music, the awe of the worshippers, the presence of temple priestesses (fashion models), the thronging crowds--all these would represent in any other culture a clearly liturgical service...The cult of the sacred car has its adepts and its initati. No Gnostic more eagerly awaited a revelation from an oracle than does an automobile worshipper await the first rumors about the new models.
> (cited in Dettelbach 1976:99)

The first American World's Fair, the 1893 World's Columbian Exposition in Chicago, featured one automobile on display. But the car quickly became an essential part of subsequent World's Fairs and was often displayed in settings of futuristic architecture and traffic planning. At the 1939 New York World's Fair, the Ford Motor Company commissioned Walt Disney to build the "Magic Skyway", which Elizabeth Smith describes as, "a fantasy ride through a constructed panorama of a 'Space City', where high-speed automobile travel on giant expressways was meant to express the ultimate futuristic mode of transportation" (1984:298). The 1939 New York World's Fair reflected a shift in America's way of seeing technology. As Michael Smith argues, in "Selling the Moon", technological display now revealed more about the corporate sponsorship of these new devices than their design and functioned to teach consumers to equate personal and social progress with technology. Smith argues that the Machinery Hall of past fairs had given way to structures like the cash register-shaped National Cash Register Building and the market place was replacing the workplace as the source of popular attitudes toward science and technology: "The 1939 World's Fair, as one of its designers lamented, did not resemble the

engineered society of the future so much as a 'huge department store'" (1976:1985).

For the people with access to the automobile marketplace, a dazzling array of choices is offered the consumer. The worship of technology so prominent at World Fairs and automobile showrooms are good indicators of how social meaning is assigned to technology and its products that goes beyond any utility or function. Beginning in the 1920s when automakers discovered that molding sheet metal into fantastic shapes was cheaper than to continually tool up new engines, transmissions or suspensions, *appearance* was used to sell cars. As former GM chairman Alfred P. Sloan writes: "New styling features were introduced that were far removed from utility, yet they seemed demonstrably effective in capturing public taste" (1963:278). The wondrous shape of the Citroen, for example, described by Barthes in his essay, "The New Citroen", had its wheels removed when it was unveiled, thereby stripping it of any semblance of utility. Ogden Nash, in a poem called Detroit, Spare That Wheel!, claims that the automakers of American cars hate wheels so much that they stray far from "the concept of earthly vision":

> ...They look on wheels as limbs were looked on by Victorian aunts/They conceal them in skirts and pants/.../They are ashamed of wheels/Their minds are on higher things/Their minds are wings...
> (cited in Jewell 1966:154)

The literature is full of references to technology in terms of Egyptian pyramids and medieval cathedrals that go beyond any utilitarian purposes. Some critics dismiss these references to cathedrals as inimical to the

rational, materialistic, and economic goals of technological societies, but nevertheless they are indicative of the creativity and ingenuity of human beings. Peter Medawer claims that a space probe "like a cathedral...is economically pointless, a shocking waste of public money; but like a cathedral, it is also a symbol of aspiration towards higher things" (1972:116). In the 1930s, electrical engineers referred to their generating stations as "cathedrals of power". As Pacey points out: "With upwardly-thrusting, gravity-defying lines and elaborate buttressing against wind pressures, a cathedral structure may seem to conquer elemental force just as surely as Concorde..." (Pacey 1983:91).

Barthes links the automobile to the great Gothic cathedrals. Cathedrals aspire, as cars do, to higher things. They are also the material embodiment of inequalities and power relationships in the society that built them. The power of medieval cathedrals, of course, was wrapped in political significance and served to reinforce the hegemony of the church authorities. The cathedrals were a means of control over vigorously developing urban communities, providing a carefully regulated outlet for their wealth, enthusiasm, and civic pride. David Dickson in *Alternative Technology* describes the "almost mystical" significance attached to technology that goes beyond any instrumental purpose or aesthetic satisfactions and under these circumstances often disguises "the exploitive and alienating role technology plays within industrial societies" (1974:182).

Dickson notes that the medieval church often set out "to destroy any technological activity that seemed to challenge its hegemony" (1974:70). The church elders of automobile culture also, have systematically sought to

prevent allegiance to any "graven image". David St. Clair in *The Motorization of American Cities* argues that the decline in public transportation in the United States was due to a politically engineered "preference" for private automobiles. St. Clair argues that motorization was the result of a "willful campaign designed to debilitate transit operations" in the United States (1986:16). The most famous case was the purchase of various municipal trolley and railway systems--most notably in Los Angeles--by General Motors Corporation and then converting them to inferior motorbuses manufactured by GM. GM purposefully sought to destroy public transportation systems by forcing an inferior technology on them.

Certainly, humankind has always struggled for a mastery over nature and revelled in its virtuosity and that is a testament to the creativity and ingenuity of human beings. This has always been part of the great utopian visions of progress. But beneath the metaphors of the machine as a "beneficent servant of mythological proportions" in the nineteenth century, some commentators discovered "a countervailing metaphor of the machine as monster, suddenly throwing off human control and unleashing its destructive force" (Kasson 1976:165). This worship of technology, so prominent at World's Fairs and automobile showrooms, has always been tempered with the more sobering attitude of those who have had a more direct relationship with labouring machines and automobiles on congested highways. As Ciborowski writes, "Although the automobile was invented as a good, sympathetic creation to help and assist man, it has become, it seems, a dangerous tool in human hands which able not only to advance development but to destroy or deny life to its creator" (Schneider 1972:12).

Beneath the utopian World of Tomorrow celebrated at the great expositions and World's Fairs were intimations of danger. What Henry Adams saw in 1900 was the next century entralled by a "new force" unleashed by the Dynamo, leaving humanity dizzy and afraid in its wake. In a letter to his brother, Charles, Adams later tempered his sensuous fervor with fear and intrepidation in the face of this power.

> ...You may think all this nonsense, but I tell you these are great times. Man has mounted science and is now run away with it. I firmly believe that before many centuries more, science will be master of man. The engines he will have invented will be beyond his strength to control...
> (cited in L. Marx 1964:359)

The "horror" of fetishism, in nineteenth century anthropology, is that this practice of endowing inanimate objects with magical powers, whereby they appear to take on a life of their own, drains the humanity from the idolater. The cultural practice of animating inert objects thus has a dark side. As the stocks and stones come alive, De Brosses claimed the idolater falls into a kind of living death, "a state of brutal stupidity", "in which the idol is more alive than the idolater" (cited in Mitchell 1986:190). By investing inanimate objects with life, humanizing technology, we are somehow exchanging our humanity. Marcel Mauss, in his discussion of Maori exchange in cultural rituals, claims that the object that is produced and exchanged contains the life-force [hua] of the person and object in nature from whence it came. According to Mauss, "the Maoris believed that the very goods themselves were thought to be persons or pertain to a person, and in exchanging something one was in effect exchanging part of oneself" (cited in Taussig 1980:37).

In extending human capabilities in time and space we have transferred human life into artifice. According to Winner, as humans export their own vital powers, such as the ability to move, to experience, to work, and to think, into the devices of their making, they become spiritually and materially impoverished: "The transference is absolute: insofar as men pour their own life into the apparatus, their own vitality is that much diminished. The transference of human energy and character leaves men empty, although they may never acknowledge the void" (1977:34). Mumford, in the most explicit version of a mechanized humanity, notes that when Francis Bacon exulted in humankind's mastery over nature, and hailed the advancement of scientific learning and technical innovation, he didn't see it through to its ultimate conclusion: "Bacon did not foresee that the humanization of the machine might have the paradoxical effect of mechanizing humanity..." (1952:5).

COMMODITY FETISHISM

Portraying the idol as more alive than the idolater is precisely the same logic Marx uses in his metaphorical application of fetishism to commodity production, an exchange, producing material relations between persons and social relations between things. There is ample evidence that Marx read widely in eighteenth and nineteenth century anthropology, particularly the study of "primitive" religion. As Mitchell points out, "As early as 1842 he had read Charles De Brosses' classic *Du Culte des deux fetiches* and he continued to take voluminous notes on ethnology and history of religion throughout his life" (1986:186). Marx wrote that traditional societies

disguised the real basis of their existence in the form of religious illusions. He claims that to understand the social relations between people that assume "the fantastic relation between things", "we must take flight into the misty realm of religion" (1967:165).

Marx borrowed heavily from the anthropological literature in his polemical indictment of capitalist production. In calling commodities "fetishes", Marx was linking the material basis of bourgeois economy with the myths and superstitions of "primitive" religions, which he claims, had about them the force and illusion of superstition. Part of the force of his argument was a marvellous rhetorical flourish. For Marx, commodities are products of human labour but, like religion which is a product of the human brain, they "appear as autonomous figures endowed with a life of their own, which enter into relations both with each other and with the human race" (1967:165).

The notion of commodity fetishism developed out of Marx's discussion of use-value and exchange-value and plays an analytical role in *Capital* as well as a rhetorical one. Marx said of the commodity that it is at first sight a very trivial thing, and easily understood, but it is at the same time, "a very queer thing, abounding in metaphysical subtleties and theological niceties" (1967:163). For Marx, the use-value (UV) of the commodity is objective and perfectly intelligible. It satisfies human needs and there is nothing mysterious about it. The mystery of the commodity flows instead from its form, its exchange value (EV). The EV appears as an objective and intrinsic property of the commodity itself, what should more properly be viewed as being a product of human labour. The "fetishism of commodities" refers to

people's misconception of the products of labour once they enter into exchange, a misconception about the activities of inanimate objects, attributing to them qualities which only human beings could possess.

Fetishism consists of naturalizing properties in commodities which are in fact social. It is to see historically specific social relations as eternal and natural. Commodities naturalize themselves as timeless, objective, "the way things are". What remains hidden in the "fantastic" form of the commodity is the investment of meanings as a material social process. The relations between people are wrapped in mystery and disguised as a relation between things. Commodity fetishism is the disposition of commodities to conceal the social nature of their production as intrinsic to the object itself. As Marx argues: "The mysterious character of the commodity consists therefore simply in the fact that the commodity reflects the social characteristics of man's own labour as objective characteristics of the products of labour themselves, as the socio-natural properties of these things" (1967:164).

There is a difference between "primitive" fetishism and the modern form of fetishism. According to Mitchell, in insisting commodities have a magical character, Marx recognized that there would be considerable resistance to this claim, "and that this resistance is precisely what distinguishes modern fetishism from ancient" (1986:102). In traditional societies, the fetishist would project consciousness into an inanimate object, and then forget that projection. As Simpson notes, "by being a material embodiment of a human aspiration or motive, it tends by the very fact of its objective form to cause its creator to forget that he is himself responsible for its creation or

continued existence" (1982:11). The "primitive" fetishist would not deny that there is magic contained in his talismans and amulets. A West African *knows* that these magical objects contain a supernatural presence.

The deepest magic of the commodity fetish, involves a second forgetting, a denial that there is anything magical about it. As Mitchell points out, "The commodity veils itself in familiarity and triviality, in the rationality of purely quantitative relations and 'natural, self-understood forms of social life'" (1986:193). The modern fetishist forgets the historical character of his/her own mode of production and denies that the commodity is a fetish.

We will have reason to put utility, so much a part of the Fordian values of use that still surround the automobile, into a universe of symbolic flux. Sahlins (1976), Leiss (1976), and Baudrillard (1972), have detected what they claim is a crucial flaw in Marx, which erroneously separates out a use-value from the symbolic construction of its exchange value. Jhally maintains that "the reading advanced by Sahlins, Leiss and Baudrillard argues that Marx was *forced* to trade away the symbolic element of use to make comprehensible his theory of commodity fetishism" (1984:112).

As William Leiss points out, "the idea of the *symbolic constitution of utility* is indispensable for a critique of consumer behavior" (1976:xix). Marshall Sahlins argues that values concerned with rational, materialistic and economic goals are subsumed in the symbolic. From a cultural understanding "all utilities are symbolic". Sahlins maintains: "In so far as 'utility' is the concept of 'need' appropriate to a certain cultural order, it must include a representation, by way of concrete properties of the object,

of the differential relation between persons..." (1976:150). He agrees with Marx that humans are social beings but argues that his materialist conception of history was "never fully symbolic" (1976:127).

Marx stated that commodity fetishism was not a result of the commodity being defined *simultaneously* as exchange value and use value, but of exchange value alone. It is important to remember, in Marx's view, fetishism only arises with respect to the form of the product when it enters into exchange, not from its materiality or its physical nature. However, Jean Baudrillard maintains that Marx is wrong in claiming use value appears neither as a social relation nor as the locus of fetishism. Baudrillard's argument turns on the same point as Sahlins in claiming that Marx has no symbolic version of use value. Instead, UV is not only symbolic but, "just like the abstract equivalences of commodities", is a fetishized social relation:

> Use value is an abstraction. It is an abstraction of the *system of needs* cloaked in the false evidence of a concrete destination and purpose, an intrinsic finality of goods and products. It is just like the abstraction of social labor, which is the basis for the logic of equivalence (exchange value), hiding beneath the "innate" value of commodities.
> (Baudrillard 1981:131)

For Baudrillard use value has no special independent status above and beyond its symbolic construction: "In effect, our hypothesis is that needs (ie., the system of needs) are the *equivalent of abstract social labor*: on them is erected the system of exchange value" (1981:131).

Utility for Sahlins is symbolic, and for Baudrillard use-value is a mystified relation. While mystification and fetishism are wrapped in exchange value

there is nothing to prevent the use value of the commodity from having a number of possible symbolic attributes. Jhally argues that there is indeed a cultural/symbolic element of utility in Marx's writings. Jhally claims that some distinction must be made between symbolic and mystification in this regard. The theory of fetishism is a theory of mystification: "Mystification is distinguished from symbolic because the former seeks *to give false meaning to something that already has meaning*" (Jhally 1984:115). "Symbolic", on the other hand, refers to "the *giving of meaning to something that has no meaning* separate from this symbolism. Attributing status to objects is not necessarily false but is a location of them as part of a symbolic/code" (Jhally 1984:115). Marx stated that there is nothing mysterious about use, and the commodity only becomes mystified when it enters into exchange. But this is not to say that the use-value of the commodity cannot be "conditioned" by social context.

Marx did not posit an objective utility existing beyond any cultural mediation. An object does not have one fixed, immutable meaning, one use that is inherent in its physical property that can't (or shouldn't be) manipulated symbolically by culture. Marx claims: "Every useful thing is a whole composed of many properties; it can therefore be useful in various ways" (1967:125). He suggests that even their use-value can have a symbolic life by virtue of its social mediation. This usefulness is not intrinsic only to the object itself but is given a social life by cultural context. As Marx argues: "If commodities could speak, they would say this: our use-value may interest men but it does not belong to us as objects" (1967:176).

Marx recognized that the uses inherent in the physical properties of the commodity are not linked to one intrinsic meaning nor are they infinite in variety. He further suggests that the physical properties of the commodity "conditions" their use value.

> The usefulness of a thing makes it a UV. But this usefulness does not dangle in mid-air. It is conditioned by the physical properties of the commodity, and has no existence apart from the latter. ...Use-values are only realized in use or in consumption. They constitute the material content of wealth, whatever its social form may be.
>
> (1967:120)

The automobile is "easily understood" as a means of transportation, as a vehicle of utility, indeed, a "self-understood form of social life". But there is nothing intrinsic to the automobile itself to suggest one fixed, immutable meaning, though certain material attributes constrain the possibilities of its use. Within the broad conception of utility there are various uses and meanings. Certainly the automobile can be used to get groceries as well as serve as a home, but it can't dig a hole in the ground or act as a word-processor. There are then, a finite set of meanings, but constrained by some physical, material characteristics of the object itself, some inherent capabilities built into the machine by productive relations.

Marx said of the commodity that it is "at first sight, a very trivial thing, and easily understood". Cars too, are at first sight, a very trivial thing, and easily understood. Car owners, for example, talk incessantly about the usefulness of their vehicles, their utility of getting to B from A, the efficiency of their machines; they deny that there is anything magical about them. Henry Ford in his autobiography pointed out that "from the day the first

motor car appeared on the streets it had appeared to me a necessity" (1923:67). To appeal to the "common man", Ford surmised, the automobile must be easily understood and he stressed the interchangeability of parts and ease of repair: "The machinery of today, especially that which is used in general life away from the machine shop, has to have its parts absolutely interchangeable, so that it can be repaired by non-skilled men" (1930:128). The interchangeability of parts was an important concern of later versions of the assembly line, especially as to the constitution of its human/machine components.

In 1938, the automotive engineer Delmar G. Roos, who contributed to the development of the jeep, offered a commonsense utilitarian version of rational automobile design: "The object of an automobile is to transport a given number of people with reasonable comfort, with the least consumption of gasoline, oil, and rubber, and for the slightest operating cost and prime price" (cited in Flink 1988:238). While these utilitarian, functional values might have appealed to Henry Ford, it soon became clear in the automobile industry that form--*appearance*--could be used to sell automobiles. This is not to say that in car design and promotion automakers haven't "been nagged by a functional conscience" (Wernick 1989:207). But such a functional/instrumental interpretation of the automobile posited by Roos denies how much it is shaped by culture.

The automobile has always been much more than simply a form of transportation. We do indeed use automobiles. But so much of the automobile has meaning in terms of self-expression and liberation. The automobile is consumed at the conjunction of the tool and the symbol, it's

conveyance function wrapped up in dreams, fantasies, and illusions. As Wayne Ellwood points out, "Cars are the mechanical embodiment of personal freedom, of the ability to be in control, to go where you want when you please" (1989:4). The automobile is "a very strange thing, abounding in metaphysical subtleties and theological niceties". According to Kerry Brougher, "the auto is an icon with an inherent rhythm and energy that it transmits to its surroundings" (1984:174). In the object of the automobile resides a metaphysics that complicates any purely functional interpretation.

By the twenties, cars had become sufficiently complicated that people did not understand the fine points of the engineering of their vehicles. Because improvements in engineering were made less often than automakers wanted the public to believe, industrial designers were enlisted to give form, indeed many different forms, to the annual model change. Barthes claims that with the Citroen we are witnessing a "new phenomenolgy of assembling". It is "as if one progressed from a world where elements are welded to a world where they are juxtaposed and hold together by sole virtue of their wondrous shape" (1972:88). What Barthes describes as the "beginning of a new phenomenology" in the 1950s is, of course, not new. The mystification of the production and consumption processes, the separation of people from any adequate understanding of these processes, has been a very important part of the automobile industry from its beginnings. The product takes on a mysterious character that denies the reality of human participation in production, but also denies the ability of humans to understand their mystified nature. Barthes writes:

> We must not forget that an object is the best messenger of a world above that of nature: one can easily see in an object at once a perfection and an absence of origin, a closure and a brilliance, a transformation of life into matter (matter is more magical than life), and in a word a *silence* which belongs to the realm of fairy-tales.
> (1972:88)

Barthes claims that automobiles come full-blown from the sky, "an object at once a perfection and an absence of origin", an understanding of the processes involved in their creation subsumed in its "wondrous shape". This prepares the consumer for "the idea of a more benign Nature" (1972:89). It is the "benign Nature" of this superlative object that appears to float by sole virtue of itself "above that of nature". Barthes further claims that like Christ's seamless robe and the unbroken metal of science fiction, "it is well known that smoothness is always an attribute of perfection because its opposite reveals technical and typically human operation of assembling..." (Barthes 1972:88). Although the automobile has added its own proclivities, these mystifications of the production process are not new and applicable to only automobiles but, as Marx has made clear, are rooted deeply in the history of industrial capitalism.

Why has a culture that is so entrenched in a myriad of technological devices so willing to take this condition for granted? Technologies such as cars and telephones have naturalized into self-understood forms of social life. Winner in *The Whale and the Reactor* calls this state of affairs "technological somnambulism": "For the interesting puzzle in our times is that we so willingly sleepwalk through the process of reconstituting the conditions of human existence" (1986:10).

One reason for this condition is the extraordinary hold that the idea of "progress" has had on social thought since the industrial age. We unquestioningly accept the notion that the introduction of any new technology will unproblematically improve the human condition. Another reason, Winner explains, is "the deceptively reasonable notion that we have inherited from much earlier and less complicated times [that] divides the range of possible concerns about technology into two basic categories: *making* and *use*" (1986:5). We tend to leave the question of how things work to the makers of these objects, to the world of inventors, technicians, engineers, and the like, who make technological artifacts and keep them working. The rest of us are concerned with tools and uses. This again is understood in a straightforward manner. We pick up a tool, use it, and put it down. A person gets in a car, drives somewhere, gets out. In this regard, Winner points out: "The proper interpretation of the meaning of technology in the mode of use seems to be nothing more complicated than an occasional, limited, and nonproblematic interaction" (1986:6).

However, the human encounter with technologies cannot be summarized solely (or even primarily) as a matter of "use". A purely instrumental/functional analysis of car culture doesn't offer very much insight into the automobile as "a very trivial thing" and at the same time "a very strange thing". As Winner points out, "Knowing how automobiles are made, how they operate, and how they are used and knowing about traffic laws and urban transportation polices does little to help us understand how automobiles affect the texture of modern life" (1986:9). As technologies are being built and put to use, significant alterations in patterns of human activity and human institutions are already taking place. Our experience

with machines shows us "that technologies are not merely aids to human activity, but also powerful forces acting to reshape that activity and its meaning" (Winner 1986:6).

Humans are social beings. Marx recognized that by changing the shape of material things, we also change ourselves. Marx describes a situation where individuals are actively involved in the daily remaking of their world, in the production and reproduction of that world:

> This mode of production must not be considered simply as being the reproduction of the physical existence of individuals. Rather it is a definite form of activity of these individuals a definite *mode of life* on their part. As individuals express their life, so they are.
> (Marx and Engels 1970:31)

We don't so much as use technologies as live them. As automobiles become woven into the texture of everyday existence, they shed their tool-like qualities to become part of our very humanity. Automobiles come to dominate as forms of transportation, and naturalize themselves as self-understood forms of social life, as essential tools for modern living. As Winner argues,

> We do indeed 'use' telephones, automobiles, electric lights, and computers in the conventional sense of picking them up and putting them down. But our world soon becomes one in which telephony, automobility, electric lighting, and computing are forms of life in the most powerful sense: life would scarcely be thinkable without them.
> (1986:11)

TOYS FOR THE BOYS

Tylor claimed that the sacred objects of "primitive" societies often became the playthings of children in succeeding cultures. In an essay, "The Ritual View of the Mythic", Stanley Edgar Hunan points out that "in material culture, it meant that such important tools as the bow and arrow, the fire drill, and the magician's rattle evolved into toys of children" (cited in Schechter 1981:46). Toys often provide early training in appropriate sex roles. *Harper's Bazar* in 1868 suggested that toy fire engines, trains, stores, ships and animals were suitable presents for boys while claiming that miniature china sets, sewing kits, paints, toilette sets and doll furniture would be more appropriate gifts for girls (Motz 1981:59). To a large extent automobiles are the playthings of our enlightened, rational, and technological culture. The current trend towards humanizing technology, building user-friendliness into computers and cars is a testament to our willingness to treat things as forms of life. As Winner points out, "But then children have always fantasized that their dolls were alive and talking" (1986:14).

One of the most popular characterizations of fetishism in the eighteenth century involved its sexual significance, a theme that later became central to Freud. Sometimes the relationship between humans and their cars regresses into the world of infantile sexuality. Bayley claims that Freud offers some reasons for the "curious link" between fast cars and sexuality and that it resides in childhood. In his 1905 essay on "Infantile Sexuality", Freud identified the production of sexual excitation by rhythmic mechanical agitation of the body in such activities as swinging and being thrown up into

the air. Later on, these pleasurable sensations were produced by the shaking of carriages and trains while travelling.

> ...It is a puzzling fact that boys take such an extraordinary intense interest in things connected with railways and, at the age at which the production of fantasies is most active (shortly before puberty), use those things as the nucleus of a symbolism that is particularly sexual. A compulsive link of this kind between railway travel and sexuality is clearly derived from the pleasurable character of the sensations of movement...
> (Freud 1956:201)

Freud regarded fetishism as a "perversion"--an indication of abnormal psychosexual development and strictly a male phenomenon. In his 1927 paper entitled "Fetishism", Freud defined a fetish as "a substitute for the woman's (mother's) phallus which the little boy once believed in and did not wish to forego" (1963:215). This definition connects the classical psychoanalytic meaning of the fetish to the castration complex. According to Freud, all male children must at one time suffer the "terrifying shock of threatened castration at the sight of female genitals" (1963:216). The normal prototype of the fetish in this view, is a man's penis. The Freudian meaning of the fetish concerns a symbolic subsitute for the genitals. In his paper on "Fetishism", Freud attributed the fetishist's behavior to the advantages offered by sexual grafification that allows him to deny that the woman has no penis. The horror of castration forces the fetishist to establish a substitute, permitting him to overcome his fear.

Fetishism, in Freud's account, is a behavior of adult males, with its roots in the phallic-oedipal stage, whereby sexual satisfaction is impossible without a non-genital part of the body or some inanimate object being

present. In the popular imagination the shoe-fetish has gained the most notoriety. In *General Introduction to Psychoanalysis*, Freud details a case study in which he describes "a foot-fetichist" whose libido was prematurely fixated when he was six years old and manifested itself as fetishism in adulthood. An "irresistible sexual excitation" would overcome this man in the presence of "a certain shape", any shoe-clad foot that resembled that of the English governess who had come to give him lessons as a boy. He remembers this event: "She was a plain, elderly, shrivelled old maid, with watery blue eyes and snub nose, on this day she had hurt her foot and had it therefore stretched out on a cushion in a velvet slipper with the leg itself most decorously concealed" (Freud 1935:305). Freud identifies another class of fetishist who doesn't even require a non-genital part of the body to be present for sexual gratification: "There are others yet to whom even a part of the body is meaningless, while a particular article of clothing, a shoe or a piece of underclothing, will gratify their desires: these are the fetichists" (1935:268).

As industrialization got rolling the more benign version of fetishism proposed by Tylor, was tempered with the more dark versions of Freud and Marx. As the experience with labouring machines began to take hold in the nineteenth century, the more threatening aspects of technology was often represented as woman. As Andreas Huyssen points out, "Historically, then, we can conclude that as soon as the machine came to be perceived as a demonic, inexplicable threat and as harbinger of chaos and destruction--a view which typically characterizes many 19th century reactions to the railroad to give but one major example--writers began to imagine the *Maschinenmensch* as woman" (1986:70). Huyssen notes that we see in this

view a complex process of what Freud called projection and displacement: "The fears and perceptual anxieties emanating from ever more powerful machines are recast and reconstructed in terms of the male fear of female sexuality, reflecting in the Freudian account, the male's castration anxiety" (1986:70).

Sex and automobiles have always been linked in a symbolic construction, but as Freud argues, there is a material aspect to this relation. Barthes makes clear the sensuous nature of the relationship of idolater to wondrous auto, a physical relation between object and human touch that suggests making love to a machine. In describing the human caress of the automobile, Barthes writes: "The body work, the lines of union are touched, the upholstery palpitated, the seats tried, the doors caressed, the cushions fondled; before the wheel, one pretends to drive with one's whole body" (1972:90).

Mumford has written that the humanization of the machine has mechanized our culture. When this humanization of machines turns to eroticization, sex becomes mechanized. Harold Schechter sees a trend in contemporary America in the production of high-tech machines, sources of instant gratification that intervene between strictly human expressions of sexuality, everything from prosthetic devices to "genuinely scary mechanical masturbators" that claim to be "technical breakthroughs in science and technology". These include "the 'Remote Control Electro Erecto', the 'New and Improved Auto Suck', the 'Heat-Sealed Vibrating Tongue', and for a mere $129.50, an incredibly complex piece of machinery, somewhat resembling a miniature vacuum cleaner, called an 'Accu-Jet Pneumatic Penis

Milker'--a 'professionally engineered massaging device that took four years of research and development'" (Schechter 1981:49).

Automobiles are high-tech sources of gratification, which come to interpose themselves between, indeed substitute for, human beings. A perversion of this sort in automobile culture results in a male achieving sexual satisfaction by substituting the automobile for the presence of another human being. It is an example of the more benign tendencies of fetishism, those that Tylor recognized in all cultures, becoming perverse in a psychopathological sense. In his novel *Crash*, science fiction writer J.G. Ballard describes the masturbatory fantasies of young men in an alienated relationship with their cars: "Young men alone behind the wheels of their first cars, near-wrecks picked up in scrap-yards, masturbate as they move on worn tyres to aimless destinations" (1973:17). In *Crash*, the power of the automobile is a sexual power that promises gratification. The protagonist of Ballard's novel, Vaughan, wraps his sexual fantasies around the automobile: "I could bring myself to orgasm simply by thinking of the car in which we performed our sexual acts" (1973:24).

Wilhelm Stekel notes in his study *Sexual Aberrations*, that fetishism "always develops into a depreciation of the female...Succinctly, the essence of such a condition can be totally explained as a retreat from the female, flight from woman" (1971:3). Fetishism that manifests itself in a "flight from woman" has been a part of our culture since the Industrial Revolution. As Schechter argues, this misogynistic tendency has been reinforced in recent years by runaway consumerism: "American materialism increasingly breeds a kind of fetishism (especially, though not exclusively, in males), the ultimate

effects of which are both (in Stekel's terms) the further 'depreciation of the female' and increased isolation of the sexes from one another" (1981:45).

Of course, automobile culture and questions of gender pose a more complex relationship than the one posited by Freud. As Jeremiah Creedon writes: "We must look beyond the car into the artificial heart of modern society if we are to save ourselves from an object that is but a projection of our own unsatisfied desires" (1989:10). A strictly Freudian account of automobile culture doesn't fully describe men's relationship to cars or adequately account for women's political and social role in automobile culture. But it shows us how machines can come to interpose themselves between, indeed substitute for, the presence of human beings, and become a person/thing mediation of obsessive, exaggerated alienation.

Joyce Nelson notes that "patriarchal capitalism" is supported by the loss of the body as a social condition. Unlimited technological innovation supplants the human being and "proceeds on the basis of machine values and technological 'needs' rather than human values and bodily needs" (1987:166). The automobile becomes a surrogate human that offers comfort that social relations with people cannot offer. As Creedon points out, "It brings to mind those experiments where orphaned monkeys, in lieu of real mothers, have settled for rags and wire wound round a ticking clock" (1989:10). In extending human capabilities in time and space, and humanizing the machine in a flourish of user-friendliness, a person's presence is not required for an action to take place. In complex technological cultures, all manner of communication can take place through

remote channels. As Winner notes, "Individuals can substitute 'being there' with a number of sophisticated devices" (1977:197).

CHAPTER II

CAR CULTURE

The idea of a self-propelled road vehicle dates from at least as early as the thirteenth and fifteenth centuries in the fertile imaginations of Roger Bacon and Leonardo da Vinci. The first motorcars on the road were created in a spirit of internationalism of shared scientific and technological knowledge in the nineteenth century in Western Europe and the United States. Early automotive pioneers did not work in isolation from one another's accomplishments, but the automobile quickly became a most important object of veneration in American culture. As James Flink points out in his exhaustive study of American car culture: "The early speculations of Roger Bacon and Leonardo da Vinci would turn out to be as American as apple pie, the Declaration of Independence, and the stars and stripes" (1975:17). America is the quintessential car culture, in John Jerome's words, "a road epic". Americans "have developed a body of road art, Huck Finn to *The Grapes of Wrath* to *Easy Rider*, cutting loose to pursue the dream" (1972:104).

In 1871 E.B. Tylor defined culture as "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" (1958:1). Culture is a way of life of a people. We can define car culture, then, as "that complex whole" that includes the beliefs, attitudes, symbols, values, behavior and institutions which have surrounded the production and use of the automobile. Automobiles are a way of life for North Americans. Car culture

has its own rituals, taboos, folk songs, and legendary heroes. The car, according to Bayley, is "a curiously precise tool for calibrating cultural values" (1986:62).

Edward T. Hall claims "the automobile is just as much an expression of the culture as is the language and, therefore, has its characteristic niche in the cultural biotope" (1969:145). For Hall, culture affects behavior "in deep and persisting ways, many of which are outside awareness" (1959:35). The car has altered social relationships, individual habits, concepts of self, and ideas of time and space. The automobile has conditioned the texture of modern life in obvious and subtle ways. As an American way of life, car culture "invests a machine with values transcending in importance that of efficient, economical transportation" (Sanford 1983:138). The automobile has become increasingly weaved into the fabric of everyday life. According to Hall, as a technical artifact built into our culture, the car has extensively altered our way of life that "we are now so completely dependent on it to satisfy so many needs that it is difficult to conceive of our giving it up" (1969:175).

THE FANTASY MACHINE

Henry Ford, in his free-wheeling enterprise philosophy and his concern for the "common man", was the first to recognize the democratic possibilities of the motorcar. Marshall Fishwick claims that Henry Ford is an American Wizard whose mass-produced automobile was perhaps the most revolutionary fetish of this century and "to many millions of Ford-owners,

then and now, Old Henry is a Prometheus who brought the secret of the new mechanized fire from heaven" (1981:305). Ford's vision was to transform a luxury item like the automobile of 1900 into a form of transportation for the great multitude. At the turn of the century, the automobile industry was faced with the problem of mass production, building a most complex mechanism by the millions. By the mid-twenties, fifteen million Model T's had been built, cranked out at a rate of one every ten seconds, and sold for the relatively modest price of $290 each. At the heart of Ford's power was mass production and the assembly line. The first historical period of automobile culture in the United States was dominated by Ford's philosophy of replaceable parts, mechanical simplicity, and rock bottom prices.

But beginning in the twenties with the marketing strategy of "planned obsolescence" and with the introduction of colour into its product line, General Motors captured a large market share of the imagination of the buying public. As Jerome notes, the second phase in automotive history was dominated by General Motors with "diverse products to cover the range of market possibilities, advertising tidal waves to stimulate those markets, credit financing, cost accounting, the sharp wedge of the business mentality..." (1972:28).

Fordism gave way to GM's "sharp wedge of the business mentality", and cars became produced, marketed, and sold not simply as a means of transportation, but as packages of dreams, fantasies, and illusions. An internal memorandum written by GM executive Alfred P. Sloan, in the early twenties, called attention to the idea that *appearance* could be used to sell

his cars, in order to counter the saturation of the market by the ubiquitous black Ford. The automobile industry, thus, began a furious race to stimulate buying with "planned obsolescence", what Sloan chose to call "constant upgrading of product". As Flink points out: "In diametric opposition to the Ford Model T product philosophy of a single, static model at an ever decreasing unit price, GM attempted to produce 'a car for every purse and purpose'" (1988:234). This strategy called for producing a model at every price range and encouraging people to upgrade their cars as their social status rose, for example, to trade up from Chevrolet to Cadillac via Pontiac, Oldsmobile, or Buick. Sloan, in this finely honed strategy of planned obsolescence, wanted to put a GM car in every driveway in America. Planned or "built-in obsolescence" was particularly frenetic in the 1950s, and fierce competition among major automakers Ford, General Motors, and Chrysler led to frequent and drastic restyling of their products. As Kenneth Schneider notes, "By 1957 GM had 75 body styles and 450 trim combinations. By 1969 it produced 175 body styles and 918 trim combinations" (1972:178).

In contrast to the Model T, which was painted black enamel because it dried fast enough for Ford's production schedule, GM introduced colour into its product line, further differentiating its products from the static Ford. The Du Pont chemical company (an early shareholder in General Motors) developed a synthetic lacquer, under the trade name Duco, making possible mass-produced cars in all the hues of the rainbow. As Bayley points out: "Detroit--released from its chromatic limitations--entered a phase when strange contortions of the imagination were to take place in the service of industry" (1986:10). Colours broke up the homogeneity of the black Ford

and its hold on the buying public's imagination and later played a prominent role in car customizing by the youth cultures of the fifties. Sloan wrote in his autobiography, *My Years With General Motors*, that "one of the striking scenes of America today viewed from the air in the daytime is the splash of jewel-like color presented by every parking lot. The colors are of enormous variety, and the finishes are nearly indestructible" (1963:235).

It was Alfred P. Sloan in the 1920s who took the responsibility for the shape and colour of cars away from pragmatic engineers and put it in the hands of stylists. The most notable of these was Harley J. Earl, head of the design department at GM which, at the time, was called the "Art and Color Section". Earl had been working in Hollywood for Don Lee, a Los Angeles Cadillac dealer who had been customizing cars with flashy aesthetics for the nouveau riche of the booming movie business. Sloan was later to credit GM's success to Earl's "Hollywood styling". Earl left no doubt as to the direction he felt the style of automobiles should be taken. He said in 1954: "My primary purpose for twenty-eight years has been to lengthen and lower the American automobile, at times in reality and always at least in appearance. Why? Because my sense of proportion tells me that oblongs are more attractive than squares" (cited in Sloan 1963:274). California was the breeding ground for fantasy machines like cars and movies. As automobile journalist Brock Yates points out, California was becoming an enchanted place that embodied the American dream:

> Within its dazzling Hollywood fantasies there was a place for big, whopping automobiles with daring lines and California sunshine colors. The California materialist ethos was being translated into rolling dreamboats by Earl, and through his daring eyes General Motors was taping the hunger for status among the middle class. (1983:183)

As we shall see, the Futurists exulted in the speed of automobiles and airplanes as the cutting edge of progress. Harley Earl too was obsessed with motor racing and with military aviation. After WW II, aircraft design characteristics were expressed in such features as fins and wraparound windshields. Earl was apparently inspired in his design ideas by his appreciation of the dramatically profiled twin tails on Lockheed's P-38 World War II fighter. As Bayley points out, Earl "loved the *look* of planes, and in his dream cars he aimed to give the same impression of speed which fighters had when parked on the flight line" (1986:13). Small fins housing the taillights appeared on the 1948 Cadillac and the soaring tail fin graced most makes of cars by the mid-fifties increasing in size throughout the decade until it reached its most exaggerated zenith in the 1959 Cadillac. It is interesting to note that, in the beginning, within GM itself, those opposed to this soaring tail fin outnumbered those who thought it would sell. The public, however, loved it.

In the 1950s space became the new frontier. A frontier autonomy suffused to a new visual imagery, inspired by the jet and the rocket, manifested itself in automobiles, home appliances, lampshades, fabric patterns and roadside architecture, anything that could be infused with progress and dynamism. Americans expected their nation, their cars, and their careers to move forward at ever-increasing speed. Thomas Hine notes that *House Beautiful* magazine told its readers in 1953 that "the greatness of America would be expressed by enrichment of the environment, and by the addition of new equipment to the household, and by giving up European models and, instead finding inspiration in the American past and, most of all,

in its promising future" (1986:4). The national ritual of unveiling new car models, promoted by automakers as "cars of the future", demonstrated "that the future was happening faster all the time, and the automakers were manufacturing the vehicles to get there" (Hine 1987:20).

Richard Burns Carson argues that the enthusiasm for streamlining that had begun among automotive designers in the 1930s emanated from a "new consciousness of aviation that permeated all mechanized transportation after Lindberg's flight" (cited in Flink 1988:237). The new emphasis on styling promoted by Sloan, and carried out with such flair by Earl, was not in the beginning dysfunctional, especially in the designs of cars of the 1930s. As more powerful engines in automobiles meant higher speeds, lower-slung, wider, aerodynamically designed cars became essential for safety and performance. But by the 1950s, the question of safety was no longer a consideration. Stuart Ewen writes that, from the mid-fifties on, automobiles took on "a swept wing appearance" and "many had 'cockpits' styled more to Buck Rogers specifications than designed to be functional for driving on the road" (1976:210).

The obsessive concern of stylists and engineers with creating gadgets such as opera lights or automatic headlight dimmers meant that many of the essentials of the automobile--the brakes, suspension, steering--were left virtually unimproved. By the 1950s, form had overwhelmed function in wild and excessive proportion. Raymond Loewy, industrial designer of Studebakers from the late 1940s to early 1950s, cars that Hine calls "relatively plain and honest", denounced the typical new car model at the time as loud and vulgar. In a speech to the Society of Automobile

Engineers, Loewy asked: "Is it responsible to camouflage one of America's most remarkable machines as a piece of gaudy merchandise?...Form, which should be the cleancut expression of mechanical excellence, has become sensuous and organic" (cited in Hine 1986:93). Cars of the fifties combined animism and streamlining in exaggerated self-parody. Bayley describes the long boat-like American cars of the mid-fifties as looking "like vast, melted briquettes of Neopolitan ice cream with gaping chrome jaws and chrome dib-dabs" (1986:16).

Clearly, the dynamics of fashion are at play in the consumption of automobiles. We wear our cars. Marshall McLuhan claims that an American is a "four wheel creature" and that the automobile is "an article of dress without which we feel uncertain, unclad, and incomplete in the urban compound" (1964:194). Andrew Wernick claims that cars are similar to clothes in that they constitute "a kind of third skin for ambient man" (1989:202). The automobile in its function as transportation always carries with it a rich symbolic baggage, involving fashion dynamics and competitive display. As Sloan himself wrote, "it is not too much to say that the 'laws' of the Paris dressmakers have come to be a factor in the automobile industry..." (1963:265). General Motors, according to Sloan, is in harmony with not only the "laws" of Paris dressmakers but also with "consumer desire".

Sloan claimed that the reason the automobile industry brings out a new model every year is really quite simple, "we want to make you dissatisfied with your current car so you will buy a new one, you who can afford it...The changes should be so novel and attractive as to create demand for a new

value and, so to speak, create a certain amount of dissatisfaction with the past model" (1963:265). This is the same aspect of consumerism that William Leiss identifies as an "ensemble of satisfactions and dissatisfactions" in the consumption activities of people in a "high-intensity market setting". Varying degrees of satisfactions attained in the purchase of goods are simultaneously accompanied by a set of dissatisfactions: "Messages about new products, for example, attempt to arouse feelings of dissatisfaction with existing products, and today individuals are continually bombarded with such messages" (Leiss 1976:49). When a fetish loses its power to satisfy, when it no longer offers the magic, it is discarded.

As an object in everyday life, the automobile mediates social relations. For McLuhan, the automobile "is a hot, explosive medium of social communication" (1964:197). Cars are a form of display, projecting a sense of power and status, and also the owner's relative social standing. At the heart of any fetish, talisman, or amulet is power. Cars carry a class/cultural identification into a social domain. In *Cruise-O-Matic,* Yasutoshi Ikuta claims that each make of car in the 1950s had a specific image that people were encouraged to buy into and upgrade as their social status changed. For example, managers owned Cadillacs and Imperials; intellectuals drove Buicks and Packards; schoolteachers had Pontiacs; and Nashes were for housewives. The automobile was the American dream. Reflecting the beginnings of a zenophobia that currently characterizes automobile advertising on TV in the U.S., an American professor explained to a Japanese visitor:

> In this country there is only one way to judge people: see what kind of car he drives. Now that doesn't mean that those who drive high class cars are always high class people, but those who drive low class cars are without a doubt low class people. Watch out for them!
> (cited in Ikuta 1988:20)

The power and social standing offered by ownership of an automobile can however, often be illusory. With reference to "muscle cars", Benston argues that "it would seem that the working-class or Black men who most often drive these cars are using this image as a substitute for the actual power and control over their lives that they lack" (1988:20).

LUXURY CARS AND FAMILY SEDANS

In the fifties, automobiles reached for the sky and the inter-state highways took them to infinity, but heavy sculptural chrome elements and aggressive styling meant most cars of this era were profoundly mixed metaphors. They strove to express characteristics that were inherently contradictory. As Hine points out: "Contradicting the desire to look sleek and fleet was the need to look sufficiently weighty. Increasingly, every car was being sold as a variation of a luxury car, and one thing Americans knew about the luxurious was that it should be big, soft and heavy" (1987:96).

At the turn of the century, prior to Henry Ford's mass-produced Model T, the automobile was a luxury item, a plaything for the wealthy. Cars of this period were principally used for fun, and actual journeys of any distance were made by train, but they reflected the rich heritage of the coachbuilding tradition. Angelo Anselmi points out, "Early automobiles, whether just

imagined or actually built, whether powered by hand cranks, springs, or sails, had often borrowed their decorations from royal carriages, church pulpits, and Renaissance or Baroque decoration" (1987:265).

The freeing of the automobile from the technology of horse-drawn carriage manufacture was a necessary prerequisite for its mass-production, but in the early years of this century the machinery in the factories lacked this industrial capacity. Automobile factories were small workshops that lacked adequate tooling and machinery to deal with repetitive tasks and lacked the tradition and influence of long-established carriage coachbuilders.

Automakers were eventually able to turn this industrial capacity to their own purposes but industrialization never totally transformed the process of making luxury automobiles. As Anselmi notes, "Industrial bodywork failed to achieve the dignity and aesthetic perfection of the coachbuilt automobile, particularly as regards detailing, choice of materials, and finish" (1984:267). As a consequence, the coachbuilding tradition florished until the forties, and even today the luxury car carries associations with the upper-class carriage that came before. As Wernick points out, "Such archaism, marked even today by the use of wood and the relative 'boxiness' of limousines, has functioned not just as a salve against future shock, but as a sign of that abstract Tradition that industrialism itself has converted into a token of status" (1989:204).

The great coachbuilding firms in Europe, with their long-standing tradition of making quality coaches, skilled masters of craft with an eye for fine detail, held a superiority over the American car. Flink writes, "Nothing better

illustrates the early superiority of European automotive design than the sharp contrast between this first Mercedes model and the 1901 American 3-horsepower, curved-dash Olds, which was in all significant respects merely a motorized horse buggy" (1988:33). This superiority of the European luxury car over the American one continues today. Given a choice between a Cadillac and a Rolls Royce, Mercedes Benz, or Porsche, clothed in Old World Tradition, it would be a European luxury car that best expresses grace and dignity, and wealth and tastefulness. In the seventies, shifting cultural values, fear of oil shortages and long line-ups at the pumps meant that status was wrapped up in more modest and astute purchases. As Bayley notes, a massive public revulsion to the large American car meant that on Long Island, where residents of Manhattan spend the weekend, a 1974 Honda Civic carried more prestige than a Lincoln Town car: "Lincoln used to like to supply the sort of thing that looked fine at a spangled, Dralon resort hotel in the Catskills where they measure a car's worth by the length of its hood, but it would mean society death if you were to drive off the Nantucket and Martha's Vineyard ferry in one" (1986:63).

This is not to say that automakers in America were entirely deficient in the area of the luxury car. As Ansemli points out, "it seems incredible that a mere two years after the Wall Street crash, American's prestige automobile manufacturers involved themselves in a multicylinder race for what they described as the ultimate refinement in luxury automobiles" (1984:228). The first American World's Fair, the 1893 Columbian Exposition in Chicago, featured one automobile on display. But forty years later, at the 1933 World's Fair in Chicago, called Century of Progress, many stellar examples of the luxury car were on display. As Ansemli explains, Chicago reasserted

itself as the centre of the civilized world with its display of the luxury car: "Gordon Buehrig designed, and Rollston built, an intimate, four-passenger sports sedan on a long wheelbase supercharged chassis with a name derived from the no-holds cost of 'twenty grand'. It was the hit of the show--the fabled fantasy of power, riches, and speed come to life" (1984:231).

Robert and Helen Lynd in *Middletown in Transition* claim that for working class Americans the automobile serves as a great symbol of advancement, that "car ownership stands to them for a large share of the 'American dream': they cling to it as they cling to self-respect, and it was not unusual to see a family drive up to the relief commissary in 1935 to stand in line for its four- or five-dollar food dole" (1937:26). Social and economic considerations, in both urban and rural regions, structured automobile use in complicated ways. Such factors as class and race shaped people's identities as consumers and their relationship to their cars. The Lynds' study found that for the working class, car ownership served as a share of the American dream. In contrast, the "business class" viewed the automobile as a luxury item that "is more appropriate for well-to-do people to have ...than poor people". Indeed they found it scandalous "that some people on relief still manage to operate their cars" (1937:26).

The Cadillac is probably the quintessential American luxury car. It is, according to Jerome, what automobile executives reassure each other that every American really wants. The Cadillac represents "the essence of all that is avaricious and trivial in our middle-class life style". In legend, it is "the first hasty purchase of the extra lucky, the blessed few who somehow stumble into the scattershot bonanzas strewn about the American scene. It is also

the single standard of thousands of middling-successful Middle-American small businessmen who emulate the tastes of those other economic sultans of the domestic midway" (Jerome 1972:27).

In the 1950s, advertisers exhorted people to indulge in luxury and automakers tried to build it into every car. As Hine points out, Americans revelled in "a kind of innocent hedonism", in an age of prosperity and convenience with all manner of objects styled to celebrate progress and dynamism: "To the simple mass-produced artifact that was known to be at the heart of every consumable, from salt shaker to house, was added an overlay of fantasy, of personalization, of style" (1987:11). The 1955 Chevrolet embodied the aspirations of the time. With its modest tailfins (in comparison to what was to come later) it stood in dramatic contrast to the image of basic transportation. It was one of the most affordable cars of the age and if this commodity could speak it would say that anyone can share in the American Dream. As Hine points out:

> It was as people said at the time, a baby Cadillac, powerful, exciting, available in an array of lively color schemes. It was still a Chevy, and everyone knew that, but it allowed the Chevy buyer to partake fully of a moment when the act of breaking the sound barrier had taken on truly heroic qualities and rocketing into space was just around the corner.
> (1987:12)

GM's "Motoramas" and "dream cars" of the fifties toured the United States accompanied by a full scale musical extravaganza and were designed to stimulate buying with new styling excitements. These were exercises in marketing, not technology. Few of the dream cars got into the *hands* of the consuming public but no doubt roared about in their hearts and minds.

Automakers found it in their interests to install an element of luxury in every car. Schneider notes that automakers "were building cars for the new American voluptuaries. The single central goal was the appearance of luxury, even in the 'small' 'economy' models" (1972:27).

The car that became a reality for most Americans was the family sedan. The family car has always been a staple of the American automobile industry. For the middle class in the 1920s and for the working class in the 1950s, automobility radically changed the lifestyle of the American family. As Flink notes, "the family car remains a uniquely American institution" (1984:158). While it may be argued that automobile culture is a consciousness and an ideology, it is surely and more concretely a social relation. Indeed to some, the car is a family member: "At an earlier period the garage appeared in back of the family house. Then both car and garage came right into the house..." (Schneider 1972:114).

In the golden age of automobility, the car almost creeped into the living room. In 1958, *House and Garden* magazine, reasoning that cars were becoming more beautiful and people should have the opportunity to more intimately pay homage to these marvelous machines, touted the "living garage" as a major future trend. As Hine points out: "The garage was to receive a new tile floor, be decorated with house plants and furnished with tables and chairs and the kind of furniture you might find on a porch or even in a living kitchen" (1987:56). Though carbon monoxide poisoning was never written into the social contract, this rather dubious live-in relationship never really caught on with the buying public. However, it is indicative of

how automobilists become so transfixed by this venerated machine so as to not realize or not care that it suffocates them.

The family car is the backbone of automobile production, but in appealing to a wide spectrum of tastes and a variety of incomes, it has been necessary for automakers to soften the edges of its coachbuilding tradition as well as the more flamboyant masculinist elements associated with sports cars, Porsches and Trans Ams, and such. Wernick notes the family car has come to "serve as a condensation point for all the image clusters cars can attract". It was designed to appeal to a wide range of socio-economic groups. As Wernick writes:

> For that reason, too, since artisanal traditionalism, techno-futurism and the values surrounding 'the family' (not to mention their class/ethnic variants), do not exactly cohere, its imagery has tended towards ambiguity and compromise.
>
> (1989:205)

A car ad in the early fifties trumpeted a "Dream car for a heavenly honeymoon!". It featured a threesome, a yellow Studebaker convertible and a just-married couple, nestled in a pastoral setting at sunset. The car is promoted as an integral part of any marriage. The ad boldly proclaims: "This honeymoon actually is a threesome, believe it or not. Look close and you find that there's a welcome 'third' on the trip. It's that thrill-packed new Studebaker convertible!" The ad promotes *itself* as well, claiming that "Hollywood photographer Paul Hesse says he never did a color shot that intrigued him more. Everything's in the right mood--the car--the people--the setting!" Transposed from the Victorian Landau, in its incarnation as a sedan, the family car has reflected a patriarchal structure and the assumption

that the family is nuclear. As Wernick observes, the family car "sets up a seating grid within which, by custom, the father/husband drives, the wife sits at his side, and the children form a row at the back" (1989:205).

HOT RODS AND CUSTOMS

There has always been a struggle and negotiation over the automobile as a benign family member or threat to traditional family values. The fetish is a threat to the established order. Robert and Helen Lynd in their 1929 study called *Middletown* (read America) note that the cultural invasion of the automobile, the "graven image" that replaced the horse in pastoral America, had threatened the insularity of the middle and upper class white family of Muncie, Indiana, the area of their study:

> No one questions the use of the auto for transporting groceries, getting to one's place of work or the golf course, or in place of the porch for 'cooling off after supper'. But when auto riding tends to replace the traditional call to the family parlour as a way of approach between the unmarried, 'the home is endangered', and all-day Sunday motor trips are a 'threat against the church'; it is in the activities concerned with the home and religion that the automobile occasions the greatest emotional conflicts.
>
> (1956:254)

The family sedan, and the establishment values it represents, is rather a universal, though particular, type of car. Hot rods in the late thirties and customs in the fifties represented a struggle over the benign, ubiquitous nature of the automobile, and raised consternation over the radical departure of these cars from family values. As Wernick notes, the family car

"has been built to appear respectable, functional, and safe" (1989:204). In contrast, hot rods were "mean-eyed" and sinister and customs were more flamboyant than anything Detroit manufactured for the multitudes.

Hot rods and street racing developed in the thirties and were in the beginning indistinguishable. Drag racing, which Tom Wolfe notes "was quite, but quite illegal", involved in its classic form a side-by-side, straight-line, standing-start acceleration contest. Groups of teenagers would meet in the parking lot of a drive-in restaurant and plan a rendezvous on some little-used section of a straight, flat road. George Barris, who later achieved fame for his superlative customizing activities in the fifties, started out as a teenage hot rodder in 1940 and remembers hundreds of kids lined up along a blocked-off section of road to watch this spectacle, sitting on the hoods of their cars with the lights shining across the highway.

Wolfe writes in *The Kandy Kolored Tangerine Flake Streamline Baby*, "it was a hell of a show, all the weird-looking roadsters and custom cars, with very loud varoom-varoom motors" (1965:87). As Barris points out, the most famous meeting place of all was the Piccadilly, a drive-in restaurant out near Spulveda Boulevard in Culver City, where "guys would start challenging each others". As Barris explains to Wolfe:

> You know, a guy goes up to another guy's car and looks it up and down like it has gangrene or something, and he says: 'You wanna *go*?' Or, if it was a real grudge match for some reason, he'd say, "You wanna go for pink slips?' The registrations on the cars were pink; in other words, the winner got the other guy's car.
> (Wolfe 1965:88)

Henry Robert explains that certain cars were better suited for these activities than the establishment models of Detroit, "from the point of view of both performance and image--light cars, inexpensive cars, coupes or roadsters, as opposed to sedans, and V-8's instead of fours and sixes" (1984:181). Interestingly, the favoured car among hot rodders and in the early days of customs was a Ford, particularly 1928 to 1935 Ford roadsters. The hot colour was black. The quintessential hot rod was the 1932 Ford Model B, affectionally known as the Deuce. This was not simply because the establishment drove gaudy, colourful GM products, although this might have been part of it, but the Ford was popular because it was light weight, inexpensive, and its parts easily interchanged. Ironically, "the innate conservatism of hot rodders--who would carefully adhere to an unwritten code of what was proper in the process of expressing their individuality--took over and helped to solidify Ford's status as *the* hot rodder's vehicle" (Robert 1984:185).

One of the most famous hot rods of all time, according to Robert, was built in the late fifties--Tom McMullen's 1932 Ford Highboy--"because everything was done right, and because it embodies the essence of the classic Ford hot rod". It expresses an adoration and devotion to speed and accelerative power. All non-essential parts were removed, such as running boards, fenders, bumpers, ornaments, and handles, any componenents not contributing to this speed and power. As Robert describes it:

> The car was raked: the rear raised and the front lowered. Aggressive-looking tires and cast magnesium wheels replaced the originals. The front suspension trailing arm was drilled for lightness and chromed. The car was painted a deep black to show off the quality of the bodywork, and simple pinstripes were added to define

> the major body lines. Flames lick out from behind the radiator and the extensively louvered hood. (1984:186)

There was more behind these modifications than simple weight reduction and improvement of aerodynamics, however. The actual weight of ornamentation is negligible, and the removal of certain items, such as fenders can actually degrade aerodynamic performance. The real reason for these changes is aesthetic effect. What really lay behind the changes was the cultivation of an image: the image of the single-minded, no-nonsense pursuit of speed. As Robert points out: "Especially in the case of chopping, the effect produced is mean-eyed and sinister--just the ticket to set a rodder's heart on fire" (1984:186).

In the early 1940s, the hot rod phenomenon gave birth to a new incarnation--the street machine. In Southern California, perpetually good weather, close proximity to dry lake beds, and good roads encouraged an explosion in hot rodding and customizing that quickly spread across the U.S. Street machines, which flourished after World War II applied the hot rodder's traditional interest in speed and performance to a new interest in late- and current model cars. As Robert observes, "A good street machine was 'clean and mean': its modified engine and drive train followed the lead of the hot rodder, but its body followed the lead of the customizer, who was beginning to blossom about the same time" (1984:189).

The difference between street machines and customs is not easily delineated, but essentially the hot rod, and its evolution as the street machine, was designed to go fast while the custom was created to look

good. Customizers were not interested in the speed and engineering that so fascinated the hot-rodder and street-rodder. As Robert notes, the classic customizer was *only* interested in self-expression: "The classic custom car is a lead sled, a car too loaded down with the materials of the customizer's art for racing, but just right for showing and cruising" (1984:189). Both derived from the same roots, however, the worship of the car as a means of self-expression.

That the automobile subverted parental supervision and authority is unequivocal. Customizers co-opted the automobile, making over the ultimate establishment symbol into their own image, even gaining their inspiration from the classic elegant styling of Italian sports cars and the futuristic styling of the dream cars of GM's motoramas. As Dettelbach points out, "In Henry Ford's day, the car was praised as the great equalizer; to the young afficionados of car customizing, the automobile is the great differentiator--between themselves and adults" (1976:10).

The "teenage netherworld", as Wolfe calls it, was decidedly more wild and Dionysian. The "crusty old arteriosclerotic bastards" drove their staid "Mondrian solids" straight off the assembly lines of Detroit. As Wolfe maintains: "The Mondrian principle, those straight edges, is very tight, very Apollonian" (1965:85). The offspring of these arteriosclerotic old guys, "alienated from their parents and their establishment values, drive customized and/or hopped-up cars designed on the freer, Dionysiac principles of 'loop-the-loop'" (Dettelbach 1976:10). The fifties echo with many Futurist sentiments, discussed in the next chapter, the celebration of youth, the disavowal of tradition, and a Dionysian rush for freedom. As

Wolfe notes with regard to customizers, "cars mean more to these kids than architecture did in Europe's great formal century, say, 1750 to 1850. They are freedom, style, sex, power, motion, color--everything is right there" (1965:79).

George Barris, Wolfe notes, "is a good example of a kid who grew up completely absorbed in this teenage world of cars, who pursued the pure flame and its forms with such devotion that he emerged an artist" (1965:82). Barris ran a studio called Kustom City in North Hollywood, where he used a number of elaborate processes and a whole line of "Kandy Kolors"--purple, carnal yellow, various violets and lavenders and fushsias--to create his art objects, and often completed his elaborate finishes with flames, scallops, or pinstripes. Customizers slavishly poured their energies into painting their dreams: "These deep finishes were achieved by applying a base coat, usually with powdered fish scales, crushed simulated pearls, or metal flake, followed by as many as forty to fifty coats of lightly tinted, translucent lacquer that created the illusion of looking into the color through a lustrous surface" (Robert 1984:193).

De Brosses wrote in his *Du Cult de diex fetiches*, that a fetish for traditional peoples is anything that they like to select for adoration, such things as the tail of a lion, a pebble, a shell, a fish, a plant, or a flower. Customizers in the 1950s selected automobiles for veneration and lavishly adorned them with coats of powdered fish scales and crushed simulated pearls. The rituals surrounding car customizing most dramatically illustrates the worship of technology, and the endowing of it with magical powers, found in the literature on fetishism. As Wolfe writes: "Those objects, those

cars...have to do with the gods, the spirit, and a lot of mystic stuff in the community" (1965:70). The special devotion and attention, lovingly bestowed on these cars, is, according to Wolfe, "absolutely maniacal" and "practically religious".

There was a sense of belonging to a special group that coalesced around their own set of rites, rituals, cult objects, heroes, codes, proprieties, and language. Customizers adhered to a strict code of conduct and persona. Wolfe notes that these kids "were all slaves to form". Ironically, "the bouffant kids all had form, wild form, but form with rigid standards...They have created their own style of life, and they were much more authoritarian about enforcing it than are adults" (Wolfe 1965:79). Despite the presence of "bouffant nymphets in stretch pants", Wolfe notes that customizing is an essentially all-male world: "the kids who own these cars are probably skinny little hoods who wear T shirts and carry their cigarette packs by winding them around in the T shirt up near the shoulder" (1965:78). Car clubs sprang up on every high school campus around the U.S. Bolstered by an economic prosperity after World War II, they sought group and individual solidarity in untraditional ways. As Robert points out:

> Members drove whatever street machine or pseudo street machine they could afford, usually an older car, mildly customized, often painted in flat gray primer. Such names as 'The Drifters' and 'The Dominators' were emblazoned on jackets, shirts, overalls, and on plaques floating in rear windows amid seas of tuck-and-roll. Drive-in restaurants were meeting places. Drive-in movie theatres were for experiments in backseat sex, and main streets were for cruising.
> (1984:199)

Hot rods took a different line of development than customs with respect to image and peformance. As Wolfe notes, "all teen-age car nuts had elements of both in their work--customizing and hot-rodding, form and power--but tended to concentrate on one or the other" (1965:87). But both hot rodders and customizers used their cars to differentiate between themselves and establishment family values, taking the automobile, that epitome of mass production and uniformity, and modifying it into "fantastic" shapes. They made over their cars in their own image, a "graven" image to parents and police who were less than enthusiastic about their activities.

As we have seen, the label of fetishism posits a social construction of reality, a threat to the existing order. As Simpson points out, "Fetishism is a dangerous potentiality in all perception and representation precisely because reality is open to construction" (1982:11). Hot rods and customs were a false idolatrous practice, a worship of graven images. Hot Rods and custom cars were a horrible degradation of the most cherished establishment symbol of American culture.

It was for this reason that steps were taken by authority figures to drive the early hot rods towards respectability and legitimacy. To take the sting out of these threatening activities, and its Dionysian spontaneity, hot rodding became *organized*. As Robert points out: "In 1937, the Southern California Timing Association was formed, and under its aegis, street racers ran high-speed events on the dry lake beds in the Mojave Desert northeast of Los Angeles" (1984:182). Hot rodding thus became a sport, a big time enterprise, often attracting major commercial sponsorship, with an emphasis

on safety regulations and organizing the cars into different classes. As Wolf explains,

> The professional hot-rodders--such as the Petersen magazine syndicate (*Hot Rod Magazine* and many others) and the National Hot Rod Association--have gone to great lengths to obliterate the memory of the gamey hot-rod days, and they try to give everybody in the field transfusions of Halazone so that the public will look at the hot-rodders as nice boys with short-sleeved sport shirts just back from the laundry and a chemistry set, such an interesting hobby.
> (1965:87)

The idea was to get the hot rods off the streets and under control by a stopwatch. They moved on to the dry lake beds in places like Murdoc and El Mirage. After the war, the hot rodders shared the flats at Lake Murdoc with the Air Force, which was trying out their prototypes of experimental jets and rocket planes. Chuck Yeager broke the sound barrier over Lake Murdoc in 1947. As Robert points out, "Drag racers and experimental pilots loved the dry lakes for the same reasons: they were smooth, they were flat, they were big, and they were out of the way" (1984:182). Lake Murdoc became Edwards Air Force Base and by 1950 the hot rodders had moved on to the Great Salt Lake flats of Bonneville, Utah. It was there that these huge, sleek cars would push the speedometer eventually beyond three hundred, four hundred, five hundred, and even six hundred miles an hour, "sometimes in vehicles that were little more than jet aircraft with fancy wheels and no wings" (Robert 1984:183).

Mild and wild customizing began as a backyard enterprise but quickly evolved into a commercial business. Exemplifying an interest in futuristic styling, particularly in the late 1950s and early 1960s, these cars played a custom car show circuit that helped to promote the idea of the hot rod and

custom phenomena across the United States. It was here, at the Ford Custom Car Caravan, which Ford was sending all over the country, that Tom Wolfe discovered what he called the "teenage netherworld" of cars.

In the late 1950s, Barris started hearing from the Detroit auto manufacturers. For example, the Cadillac styling center in Detroit was interested in his colors. As Wolfe writes: "The auto companies, mainly GM and Ford, pump him for ideas about what the kids are going for. He tells them what's wrong with their cars, mainly that they aren't streamlined and sexy enough" (1965:97). But inevitably a compromise is struck because, as these automakers told Barris, "they have to design a car they can sell to the farmer in Kansas as well as the hot dog in Hollywood" (Wolfe 1965:97).

Inevitably, the young male customizers of the fifties grew older and graduated from high school, found regular jobs or moved on to college, likely graduating to sports cars and family sedans. Dettelbach claims that when dream or fantasy breaks down, a "threatening underside of nightmare" takes its place: "Hence youth and its innocence drift into the nightmare of aging and the shocks of unplanned experience; the dream of freedom is often thwarted by constraint..." (1976:5).

But each new generation of kids are resilient in rejuvenating a teenage automobile ritual, an adolescent rite that has existed since the dawn of the automobile age and which "authority" still tries to control. The city of Modesto, in Southern California, immortalized in the film *American Graffiti* (1973) and billed as the Cruising Capital of the World, still attracts Friday night visitors from hundreds of miles around. But *American Graffiti* turned

any threatening aspects of youth car culture into nostalgia. And now in an attempt in put the final nail in the coffin, city Councillers want to ban cruising because they say it attracts drug dealers and gang activity and creates massive traffic jams. The mayor, Carol Whiteside, says: "Modesto will always be identified with cruising. But people have to realize things have changed. It's not the small-town, innocent atmosphere any more that people saw in *American Graffiti*" (Vancouver Sun, April 7, 1990).

In *American Graffiti*, cars and music were inextricably linked. The influence of late-1950s cars ended up transforming the jukebox, turning it into a kind of vehicle. The heavy-looking jukebox with its familiar, flashy, curved top, that played Glenn Miller records, gave way to the newer models that played 45 rpm records which had become the new standard for pop singles. These new jukeboxes had a transparent glass top that wrapped around the record storage area and playing mechanism. Hine argues that the jukebox had turned into a vehicle of sorts, and with its wraparound transparency, mimicked a jet plane or a new car: "The new-style jukebox, which was both larger and airier-looking than the old one, matched the new Chevy V-8 as a symbol of teenage liberation and was the appropriate vessel for 'Rock Around the Clock,' 'Peggy Sue' and 'Hound Dog'" (1987:108). In a speech to the Society of Automobile Engineers in 1955, Studebaker designer Raymond Loewy called the more garish of the Detroit product a "jukebox on wheels" because he felt jukeboxes embodied the worst excesses of American culture.

As teenagers have always known, cars make excellent listening booths. Locally, emanating from a caravan of "Boom cars" creeping along Robson

Street in Vancouver on a Friday night is a cacophony of sound. While there is nothing special about the cars themselves, they are transformed into Boom cars with thousands of dollars worth of stereo equipment that can be cranked up louder than the average home sound system. The mega-systems are being fitted to sedans, low-slung sports cars and trucks and vans. *The Province* (Vancouver) reports that "one city stereo dealer stocks momogrammed amplifiers plated in 24kt gold. But he keeps them locked in a genuine bank vault" (April 16, 1989).

Curt, a 26-year-old labourer with four kids who lives in the suburbs of Vancouver, says his Boom car makes him feel like a millionaire. He says: "I have four kids to support and I really can't afford it but I wanted it so bad I wouldn't let anything stand in my way". It is a rather pathetic cry from the powerless. Boom cars can rattle the dishes in the restaurants along Robson street, but it is not a power that translates into other areas of life. Curt put $1200 worth of sound into his car, ironically an ex-police cruiser, and says it has really changed his life: "I like the jolt I get from the system when I'm driving. I can feel the bass, the seat vibrates--it's like having a live band in the car" (The Province, April 16, 1989). A Lower Mainland organization called Right to Quiet is campaigning to have noise controls spelled out in the Motor Vehicles Act in order to pull the plug on Boom cars. The fetish is a threat to the established order.

HIGHWAY TO FREEDOM

The stagecoach was a technology built by civilized hands and hearts for the taming of the vast, uncivilized wilderness. As Schneider argues, nobody has ever been as road-possessed as the Americans: " The Westward movement, the history of the nation, is woven of 'Trails': Cumberland, Overland, Oregon, Santa Fe, Chislom--stringing together the gaps and notches and passes which allowed the movement of men, then conveyances, then goods across our vast distances" (1972:103). The automobile is the Conestoga wagon of the twentieth century. Just as the stagecoach opened up the American West for settlement and helped push back the "frontier", there is no doubt that the automobile has continued the expansionist ways set in motion by the stagecoach. Edward T. Hall claims that "the automobile is the greatest consumer of public and personal space yet created by man" (1969:175). Eric Draper notes that all space devoted to the automobile--parking lots, expressways, cloverleafs and roundabouts, bridges, gas-stations and garages--gobbles up close to a third of the land in American cities: "In the US, 60 thousand square miles (10 percent of the country's arable land) have been paved" (1989:12).

Early in the nineteenth century a new technique of highway design and construction had been developed in Great Britain that made for more durable, tougher roads. But the enthusiasm for highways ran out of gas in competition with the steam locomotive running on fixed rails. It was not until later in the century that interest in improved roads was revived again by the bicycle craze of the 1880s and 1890s. Flink notes, "With the introduction of the geared, low-wheeled 'safety bicycle' by James Kemp

Starley of Coventry, England, in 1885 and after quantity production reduced the price of a bicycle to about $30, use of the bicycle became widespread" (1975:7). And bicycle organizations in the U.S. and Europe energetically lobbied for better roads. While the bicycle helped to provide roads for the automobile and contributed some technologies, for example, steel-tube framing, ball bearings, chain drive, and the pneumatic bicycle tire, its greatest contribution to automobile culture, according to Flink, "was that it made the average person aware of the possibilities of individualized, long distance highway transportation" (1975:8). In 1900 Albert A. Pope, America's leading bicycle manufacturer, claimed the automobile "will in time be the universal means of transportation, and the future of the American Bicycle Co. rests on the automobile" (cited in Flink 1975:19).

It is unequivocal that the automobile has reshaped the urban environment. In the years before World War I, the Italian Futurist architect Antonia Sant'Elia produced a revolutionary scheme in his designs for "La Citta Nuova" (New City) which accompanied his Futurist Manifesto on Architecture. Sant'Elia's New city was conceived as an environment for the Futurist's exulted transportation systems. Sant'Elia's projected Central City Station for Milan (1913-14) brings together seven levels of separated railway and motor traffic. Like Marinetti, one of the founders of the Futurist movement, Sant'Elia, spoke out against superimposed decoration (including painting and sculpture), because, in his words, "the decorative value of futurist architecture depends solely on the use and the original disposition of raw or bare or violently coloured material" (cited in Martin 1969:189). And further, Sant'Elia writes in his Manifesto of a new ideal of beauty: "[Thus] the house of cement, glass, iron...[will be] enriched only by the

inherent beauty of its lines and its plastic relief, extraordinarily ugly in its mechanical simplicity" (cited in Martin 1968:189).

Martin notes that Sant'Elia's philosophy of the New City was guided by a "very Marinetti machine aesthetic" in likening the modern building "to a gigantic machine". Sant'Elia proclaims, "Modern man 'materially and spiritually artificial, must find...inspiration in the new mechanical world we have created, of which architecture must be the fairest expression, the fullest synthesis, the most artistic integration'" (cited Martin 1968:189). The automobile has shaped and conditioned architecture and urban centres and has served as a conceptual tool for city planners. But as Mumford points out, "to assume that the machine alone should dominate the forms of twentieth century architecture, symbolically as well as functionally, does not show any real insight into either the dangers of mechanization or into the pressing need of bringing other human motives and purposes back into the center of the picture" (1952:123).

Throughout the 1920s and 1930s, futuristic conceptions of skyscrapers and integrated traffic systems continued to develop on the drawing boards of architects and planners. Elizabeth Smith notes that Lloyd Wright's unbuilt proposal for a Los Angeles Civic Center in 1925 corresponds closely to Sant'Elia's vision of a single massive urban building complex molded around many diverse traffic systems. Frank Lloyd Wright, on the other hand, guided by a very American sensibility of the frontier and freedom, envisioned a more horizontal world for the automobile. As Smith points out, "Frank Lloyd Wright's Broadacre City, circa 1932-34, was shaped by the American ideals of personal liberty and individualism or, as phrased by historian

Vincent Scully, by 'the uninhibited automobile road, the decentralized city, the endless horizontal expansion across the land'" (E. Smith 1984:287). In contrast to Sant'Elia's single vertical urban complex, Frank Lloyd Wright's plan was horizontal in nature, like the automobile, spreading to suburban residential areas and the single family dwelling with carport or garage. As Smith notes, Broadacre City's archetype was the individualized housing unit, the one- or two-car single family home.

Actual highway systems did not change significantly until the 1930s and 1940s, when the first parkways and freeways began to emerge across the United States. These were actually quite modest compared to the grandiose conceptions of the early modern planners, and more aesthetically pleasing. As Elizabeth Smith explains, "Parkways built between the twenties and forties in the northeastern United States were generally landscaped, localized, limited-access routes designed to save the motorist time and money in fuel costs" (1984:297). For Mumford, Frank Lloyd Wright united the mechanical and the personal and refused to be intimidated by the machine. Wright's designs were an interplay between form and function in an egalitarian flux where neither is dominate: "Here form follows function and function follows form, in a rhythmic interplay between necessity and freedom, between construction and choice, between the object-determined self and the self-determined object" (Mumford 1952:128).

Futuristic traffic systems were not actually built for the car consuming public until after World War II, when the country's economy shifted to peacetime production. The Pennsylvania Turnpike and Arroyo Seco Parkway, later renamed the Pasadena Freeway in Southern California,

opened in 1940 to enthusiastic motorist response, and prefiguring the construction of the expressways and superhighways of the postwar period, more closely resembled the utopian concepts of early twentieth-century planners.

American World's Fairs and industrial expositions played out these scenarios and thrilled millions of visitors with imaginative and futuristic city and traffic planning. The 1939 New York World's Fair attracted huge crowds to General Motors' "Futurama" exhibit and the Ford Motor Company's "City of Tomorrow". The GM pavilion featured an exhibit called, "Highways and Horizons", the largest model of its time, and involved a participatory presentation where the audience rode in moving chairs through a third-of-a-mile display of vast expressways. GM's Futurama provided a vision of automobiles speeding down multi-lane highways into the future. As Hine notes, "people emerged from that popular exhibit wearing buttons that said "I have seen the future'" (1987::41).

Henry Ford's solution to urban congestion, indicative of a kind of social planning through automobility, was to state: "We shall solve the city problem by leaving the city" (cited in Flink 1988:139). Ford saw the automobile as the great liberator for those oppressed by congested urban conditions. As Flink notes, Henry Ford's "facile answer to the slum was that tenement dweller's should buy motorcars and commute to suburbia" (1988:139). Beginning with the white middle-class flight in a car to suburban areas in the 1920s, the automobile opened up the suburbs to the white working class in the fifties and served to consolidate its position as the only viable means of transportation. Passage of the 1956 Interstate Highway Act

ensured the complete triumph of the automobile over mass-transit alternatives in the United States and killed off, except in a few large cities, the vestiges of balanced public transportation systems that remained in fifties America. Ambitious highway improvement programs at the state level resulted in the Interstate Highway Act, which "committed the federal government to pay 90% of the construction costs for 41,000 miles of toll-free express highways" (Flink 1975:190). To be auto-less in the United states now is almost un-American, an act of treason. To be without a drivers license quite literally means you have no identity. As Creedon points out, "The assumption now is that cars are 'natural' while man on foot is not. In regions that have fallen completely to the car ethos, like Southern California, walking may even be considered a crime" (1989:9).

Kenneth Schneider argues that the city takes its basic form from the thousands of drive-in fast-food stands that dotted the edges of towns in the 1920s and 1930s. The first drive-in restaurant was reportedly Royce Hailey's Pig Stand opened in Dallas, Texas in 1921, but by the 1950s, the drive-in idea had expanded beyond services to the hungry traveller to include drive-in banks, cleaners, and outdoor theatres, even churches. That "untrammeled automobility" has remodeled the city is unequivocal. In its cultural invasion of the city it has penetrated vertically as well as horizontally to the suburbs and beyond. As Schneider has pointed out:

> As the automobile accelerated the break-up of the city, the drive-in idea also spread to all major activities of the city: industrial plants, major stores, office buildings, and even city hall. Subsequently industrial districts, shopping centers--all really collective drive-ins--were developed to retain a semblance of coherence and convenience.
> (1972:114)

Initially conceived as a solution to traffic congestion on local roads and urban streets, the superhighways and expressways often had unforeseen consequences. They were built entirely around the idea of accommodating the presence of the automobile, proceeding on the basis of machine values and technological "needs", rather than human values and social needs. Because they were not conceived as parts of a broader social context, accounting for human needs rather than the needs of the automobile, some commentators have identified a dehumanizing aspect to these superhighways. As Flink points out, "The urban expressways built as part of the system have not, as we were led to anticipate, alleviated traffic congestion at peak hours. Instead, the building of urban expressways has destroyed cohesive urban neighborhoods and city parks, further alienated racial minorities, and contributed to the declining tax base of the central city" (1975:215).

Helen Leavitt in *Superhighways--Superhoax* claims that freeways generate their own traffic, and in fact promote congestion rather than alleviate it. Cars need vast tracts of land, but the more space devoted to automobiles the more they demand. Leavitt calls this "a variation on Parkinson's law that expenditures rise to meet income...congestion rises to meet highway capacity" (1970:36). Freeways attract cars like flies to rotting fish heads. The automobile as a symbol of freedom and emancipation is often illusory. As Mumford has pointed out, the promise of escape encapsulated by the automobile has been thwarted and ruined by the very popularity of this method of escape:

> In using the car to flee from the metropolis, the motorist finds that he has merely transferred congestion to the highway and thereby doubled it. When he reaches his destination in a distant suburb, he finds the countryside he sought has disappeared; beyond him, thanks to the motorway, lies only another suburb, just as dull as his own.
>
> (1963:234)

Cars need roads and roads needs cars but where is this highway to freedom taking them? From the early days of automobile culture a myriad of lobby groups with powerful connections to state and federal governments in the U.S. have campaigned to expand the use and owership of automobiles by vigourously promoting the building of highways, often with spurious arguments. As part of his response to the market saturation of the 1920s, David St.Clair claims that Alfred P. Sloan "engineered a campaign designed to alter the environment in which automobiles were sold. The goal was to reorder society to accomodate increased automobile use and ownership, and therefore increased automobiles in cities" (cited in Flink 1988:368). In 1932, Alfred Sloan formed the National Highway Users Conference to prevent gasoline taxes from being diverted to other purposes during the Great Depression.

More cars have meant more congestion on the highways and byways and Americans' cherished mobility has been seriously hampered. The term gridlock came into common use in New York City during a transit strike in 1980, when a surge of automobile-empowered people took to the road and paralysed Manhattan's street grid. Time magazine reports that in Boston during rush hour, traffic comes to an absolute standstill on the city's Central Artery: "Twice each weekday, for a total of seven hours, it becomes a virtual parking lot" (September 12, 1988). The rapid growth in auto traffic in the

1980s has led to a very real concern that as the automobile paves over everything that moves, the frenetic pursuit of freedom comes unceremoniously to a halt in one giant parking lot.

By 1927 every American who could afford a car already owned one. Henry Ford's "common man" could be found in the rural population and the white urban middle-class. By the mid-twenties, the Model T had become a necessity for an overwhelmingly rural population in the United States. With rising farm incomes and declining Model T prices, the overwhelming majority of farmers could afford an automobile. But in the cities, according to Flink, "the income distribution of Coolidge prosperity put the ownership of a $50 junker beyond the reach of most working-class families. The automobile trade journals were agreed in 1923 that 'illiterate, immigrant, Negro, and 'other families' were 'obviously outside' the market for motorcars" (1988:131). The American Dream, embodied in the automobile, did not extend to everyone.

By 1950, where ownership extended to the working class, 41 percent of American families (in contrast to 13 percent at present) still lacked personal automobility in the form of a family car (Flink 1988:131). At the level of social relations not everyone was to share in a piece of American pie. For example, Flink notes: "Significantly, blacks...were not to share proportionately in the extension of the 'American Dream' of the automobile commute to a suburban home that was opened to the working class in the post-World War II period..." (1988:135). The white exodus to the promised land of the suburbs, aided and abetted by the automobile, developed along

race and class lines, and its role as the great equalizer must thus be tempered.

Winner describes how Robert Moses, the master builder of roads, parks, bridges, and other public works in New York from 1920 well into the 1970s, built a systematic social inequality into his monumental structures of concrete and steel. For Moses, "automobile-owning whites of 'upper' and 'comfortably middle' classes, as he called them, would be free to use the parkways for recreation and commuting. Poor people and blacks, who normally used public transit, were kept off the roads because twelve-foot tall buses could not handle the overpasses" (Winner 1986:23). Moses' bridges embodied social and political choices in their design and construction. After a while these structures naturalize themselves and disappear beyond awareness. After travelling over a road again and again the social class bias and racial prejudice built into the objects that shape automobile culture become second nature, "a way of engineering relationships among people that, after a time, became just another part of the landscape" (Winner 1986:23). Social inequality has shaped the relationship of people to their cars in complicated ways. The mass production of goods may have *democratized* consumption to the extent of creating a larger potential market for goods like cars. But by making car ownership contingent solely on the ability to pay, it did not *equalize* consumption.

CHAPTER III

THE MAGIC CIRCLE

The high priests and church elders of car culture are male. The stamp of patriarchy pervades automobile culture from Futurist car poetry to luxury cars, family sedans, and hot rods and customs. The history of automobile culture is a story written by men about men and their cars: Henry Ford, and his son Edsel and his son Henry Ford II, Alfred P. Sloan, Harley Earl, to Lee Iacocca and Japanese auto plant managers. Automobile executives, car designers, race car drivers, and garage mechanics, are almost always male.

Women have a different relationship to cars than men. George Dupuy commented in "The Conquering Automobile", an article published in 1906 by the American magazine *Independent*:

> the automobile is the idol of the modern age...The man who owns a motor car gets for himself, besides the joys of touring, the adulation of the walking crowd, and the daring of a racing machine that bounds and disappears...in a thunder of explosions is a god to the women.
>
> (cited in Silk 1984:47)

Racing car culture is a particular subculture within automobile culture that is almost exclusively male-dominated and coalesces around male appreciation of speed and power. It seems fitting that the trophies awarded to the winners of auto races frequently portray the most explicit car/woman motifs. Futurist car poetry celebrates the power and dynamism of the racing car and exults in the control of a female Nature through the mystical

relationship of "man" and machine. The power and dynamism of the male/machine fusion figured in the automobile as a male power. The sentiments of the Futurists go beyond racing cars, and indeed, pervade all of automobile culture. Lydia Simmons claims, in her essay "Not from the Back Seat", that, like everything else in America that involves speed, power and "a lot of reckless insanity", the automobile has always been associated with the male.

> ...he got drunk in it and usually wrecked it and miraculously survived (or didn't), he used it to bolster a failed ego. He made it into a dangerous weapon, he transformed it into a substitute for the penis he wondered if he had (enough of), he used it to ensure upward mobility, he went on the road to escape in it, and he made time, and babies, with as many women as he could persuade to explore the back seat with him. (1983:153)

The automobile is a social technology and a technology of gender. As Margret Benston points out, "the very existence of 'muscle cars' and the image these cars project comes out of a particular ideal of macho masculinity" (1988:20). In America, the male-driver/virgin car motif has also been an important part of car culture. But the relationship between women and cars is more dimensional than the one posited by a male possession and control of a female machine. Women drive cars too. While Futurist sentiment colors all automobile culture, it does not fully account for women's material relationship to automobiles. This chapter looks at the cultural role played by the automobile in promoting representations of gender, as affects women as well as men.

THE FUTURISTS

The Italian Futurists gained inspiration from the revolutionary affects of developing technology in the early part of the twentieth century. According to Reyner Banham the impact of Futurism reverberated beyond the philosophical origins of Fascism most often attributed to it, and "as far as the visual arts are concerned, the appearance of the Foundation Manifesto of Futurism on February 20, 1909, was an event of more immediate--and more lasting--consequence" (1959:77). Fillipo Tomaso Marinetti published his "Founding and First Manifesto" of Futurism, in the Paris newspaper *Le Figaro* in 1909, and as Banham writes in 1959, "as we look back from the threshold of the space age, we see the Foundation Manifesto standing up, the farthest familiar landmark in the fog of history, the first point in which we can recognize an image of our Machine Age attitudes" (1959:78).

The Futurists appropriated the symbol of the automobile as *the* paradigmatic innovation of the time, lauding its potential to transmute the psychology and physiology of the human race, to physically alter the environment, and change humankind's perception of itself. In extolling the capacity of the car to induce a sense of power, exhilaration, and emancipation, in its celebration of the machine, the Futurists raised many of the issues explored in this work, i.e., autonomous technology, human parts and machine parts, and technologies of gender. The car as alive, as a superior being of man/machine fusion in motion, and as a celebration of male power, finds its most frenetic enthusiasts among the Futurists.

It is Futurist poetry, particularly in the early days of the movement, that most graphically illustrates and articulates the frenzied celebration of the automobile. It is here that the orgasmic union of "man" and machine as some kind of spiritual transport found their richest expression. In a 1905 poem, Marinetti identifies the racing car with Pegasus, the famed winged horse that stood for poetic inspiration, and "seems to be casting the car in the role of modern muse for the modern world" (Silk 1984:67). The poem relates a frenetic car ride in which "man" and machine achieve an orgasmic union in a conquest of nature. This is mindful of the explosive acclaim following Lindberg's solo transatlantic flight in 1927 which celebrated both man and machine. Michael Smith notes: "As Lindberg himself insisted, neither he nor his plane but rather a third entity that they formed together--'we'--had performed the feat" (1976:187). Marinetti's poem celebrates an intimate and sensual union of this sort.

> I am at your mercy...Take me!/.../I become inflamed with the fever and desire/ of the steely breaths from your full nostrils!/I finally unleash your metallic bridal...you launch yourself, /intoxicatingly, into the liberating Infinite!/a vehement God of a race of steel/an automobile drunk with space,/pawing the ground with anguish, strident teeth biting at the bit/Hurray! No longer contact with the impure earth!.../Finally, I am unleashed and I supplely fly/on the intoxicating plenitude/of the streaming stars in the great bed of the sky!
>
> (cited in Silk 1984:67)

Joshua Taylor claims that in substituting the modern racing car for Pegasus, the symbol of poetry, Marinetti sets the frenetic pace for much that comes after in the Futurist movement. Taylor writes: "Not only did the automobile with its violently pulsing, noisy life typify the modern world, spawned on science and devoted to mechanical achievement, it stood as

well for a staggering speed that surpassed in its power the wings of Pegasus...It became the symbol of a new kind of spiritual transport" (1961:11). Prefiguring many of Marinetti's ideas, particularly the notion of man/machine union described in his first Manifesto, Italian nationalist thinker and writer Mario Morasso wrote a poem called *The New Weapon--The Machine* in 1905, in which the car is described as "an iron monster, awed by the heart beat of its motor...breaking loose a repressed vibration and trembling". To Morasso, the machine lives in continuous communion with "man", so that consequently and unavoidably he becomes accustomed to considering it a living part of himself, creating an "amazingly strong being, a strange species, a centaur of flesh and metal and of wheels and limbs" (cited in Silk 1984:66).

McLuhan too conceived of a being composed of human parts and machine parts. All media are extensions of some human capability, either psychic or physical. In this view, the wheel is the extension of the foot, electric circuitry an extension of the central nervous system. By multiplying human forces, cars are machines that create super beings. As McLuhan points out, "the simple and obvious fact about the car is that, more than any horse, it is an extension of man that turns the rider into a superman" (1964:197). In the figure of the automobile, "the crossing of electricity, the biological form, with the mechanical form was never to release a greater form" (McLuhan 1964:197).

The centaur is important to Futurist representations of the automobile in art and poetry. It is at that point where the tool conjoins with the symbol that in Futurist philosophy is the cutting edge of progress, where metal

meets flesh. As Silk maintains: "In Futurist symbology, the Centaur represented a hybrid of artist and machine that was to become the basis of a new cultural order fusing art and technology" (1984:67). In the iconography of Detroit, and Hollywood cinema as well, the automobile has always been much more than mere transportation, and can't stand alone outside a symbolic flux. As Joshua Taylor explains, for the Futurists, object and environment interact in a continuous reciprocal relationship and that "no object, moving or still, can be seen in isolation, but absorbs its surroundings just as it contributes to them" (1961:12). In the United States, the quintessential car culture, the automobile has often been configured as a kind of centaur, as well. For example, Todd Gitlin writes: "Throughout the twentieth century cars have been chariots, wheels, throne rooms, sedan chairs, tickets to the suburbs, homes away from home, couches of sexual initiation, tickets out of the suburbs...and at each stage the car has been a kind of centaur: half conveyance, half fantasy" (1987:140).

The notion of a humanized machine and a mechanized humanity, explored throughout this work, implied by the notion of fetishism and realized in the assembly line, finds its expression in Futurist philosophy. But as Taylor notes, the Futurists "were forced to humanize the machine, rather than mechanize man, because underneath their ruthless pronouncements and praise of war was an intensely personal idealism. Only through the revivification of personal experience, through a new definition of self, could they triumph over a threatening world to reach a sublime spiritual peace" (1961:14).

Futurist representations of a communion between man and machine symbolized the idea that through intuition of the internal workings of machines a more profound understanding of the forces characterizing existence would be manifest. Marinetti argues in one of his latter manifestos, that "through intuition we will conquer the seemingly unconquerable hostility that separates our human flesh from the metal of motors" (cited in Silk 1984:67). When automobilists enter their cars, a strange metamorphosis takes place. As Alisdair Aird points out, in *The Automotive Nightmare*, "They become part of a compelling mechanical mythology, as bio-robots--curious mechanical centaurs whose behavior is such an elevated mystery that it needs the canons of an entirely new science to interpret" (1972:183).

Marinetti's "Founding and Manifesto of Futurism", from which all else in Futurist literature, art, architecture, and performance flows, was divided into three parts, the first two being of the greatest interest in the present context of this paper. A prologue describes a turbulent car ride in which "man" and auto, in symbiotic union, undertake an erotic and aggressive joyride through the outer suburbs of Milan. The journey is interrupted when the car swerves to avoid a pair of cyclists and veers into a ditch. But it doesn't end there. Marinetti claims the car and "man" must inspire and rejuvenate each other:

> They thought it was dead, my beautiful shark, but a caress from me was enough to revive it; and there it was, alive again, running on its own powerful fins. And so, face covered in good factory mud--plastered in swaft and slag, sweat and soot--bruised and in splints, but undaunted yet, we pronounce our fundamental will to all the live spirits of the world.
>
> (cited in Banham 1959:78)

The most famous proposition of the manifesto exults in the speed and dynamism offered by the automobile. As Marinetti writes: "We declare that the world's splendor has been enriched by a new beauty--the beauty of speed" (cited in Banham 1959:78). Subsequent Futurist manifestos give many examples of the various kinds of rapid motion, ranging from movement made possible by the new automobile and the airplane to speed extolled as the only absolute universal. With regard to racing, Walter White of the White Motor Company once confessed his feelings: "There is one thing I never get over when I race. Once you are off you have a maniacal desire to run over everybody and everything that comes in your way" (cited in Schneider 1972:173).

Marinetti and his racing car swerved to avoid a pair of cyclists, and "looped into a ditch", because, I assume, bicycles were valued as part of the new technologies of the Machine Age, and because of their capacity to create dynamic motion. Indeed, bicycles, cars and airplanes developed around the same time and shared many of the same technologies. Futurist painter Umberto Boccioni celebrated bicycle and rider in a 1913 painting called *Dynamism of a Cyclist*. Taylor notes that in this painting the bicycle and the rider become one swirling form cutting through space and that "little is left of either bicycle or rider; only the irresistible thrust remains" (1961:96). But the automobile does run over old, tradition-bound technologies, over a contemplative past, with a new technology. The manifesto celebrates the "exultation of the spectacle of turbulent, noisy motion above the contemplation of Classical repose" with its exultation of the dynamic experience of automobilism (Banham 1960:103).

But Futurist philosophy extends beyond the celebration of any vital human activity to embrace the glorification of conflict, violence, misogyny, anarchism, and ultimately war--all welcomed as expressions of universal dynamism. It is easy to see how Futurism, which saw war as the ultimate expression of a mechanized culture, would appeal to Italian Fascism. Marinetti writes, in the second part of his "Founding Manifesto",

> We wish to glorify War--the only health giver of the world--militarism, patriotism, the destructive arm of the anarchist, the beautiful ideals that kill, the contempt for women...we will destroy the museums, libraries and academies of every kind, and will combat moralism, feminism, and all vile opportunist utilitarianism.
> (cited in Banham 1959:79).

The Futurists have been much maligned for their misogyny and glorification of war. The praise of war as the cleanser of society has drawn much criticism, and seems especially horrific to late-twentieth century eyes that have had to speculate on the possibility of a nuclear war. But according to Badham, it "remains understandable when it is remembered that with Italian populations around northern Adriatic still *Irredenti*, the *Risorgimento* remained a war that was still in progress for many Italian patriots" (1960:103). Banham also notes that the misogyny of Marinetti's Manifesto was later tempered somewhat, and he had second thoughts about the statement where the Futurists must "battle against feminism". As Banham explains, "for while the hostility to academies and the past remained, feminism (of a sort) was later built into the futurist programme as (a), the epitome of a new unromantic woman...and (b), as something which would

break up liberal parliamentarism (and thus 'vile opportunism and utilitarianism') as soon as women had the right to vote" (1960:103).

Nevertheless, car racing, and the cultural perceptive it entails, so celebrated by the Futurists, is an exclusive men's club and a spectator sport, that coalesces around notions of speed, power and its attending control. It is what Werwick calls "a powerful ritual of male competitive prowess". It is this ideology that pervades automobile cultures from fifties street machines and their contemporary "muscle car" equivalent to the symbolic matrix surrounding the family car and its patriarchal power structures. According to Wernick, "the racing-car (and the road models derived from it) has emerged as an almost perfect symbol for the masculinist technology values racing itself celebrates; a male identified machine, shaped like a bullet, and experienced from within as an exhilarating rush towards orgasm, death, and the future" (1989:204).

One of the most notable features of Futurist car poetry is the connection between sex and technology and their relationship to death. Mario de Leon's *Fornication of Automobiles* in 1914 describes a car crash as two living things, of "blood-gas" and "heart-motors", copulating.

tra...ta...ra...ta...mbu
Involuntary collision,
furious fornication
of two automobiles--energy,
embrace of two warriors
bold of movement
syncopation of two "heart-motors,"
spilling of "blood-gas".
Stopping of the coming and going
stagnation immobile of curiosity,
moaning. Moaning of the wounded.
coagulation of business.

Cumbersome remainder
of the two dead machines,
rapidly swept
from a heat of hands,
sweeping of the enormous misshapen skeletons.
(cited in Silk 1984:68)

J.G. Ballard, in his science fiction novel *Crash*, asks the question "do we see in the car crash, a sinister portent of a nightmare marriage between sex and technology?" (cited in Bayley 1986:26). Marshall McLuhan, in *The Mechanical Bride*, noted what he called a "strange marriage" between sex and technology and called it "one of the most peculiar features of our modern world". While McLuhan draws attention to particular advertising images, in this case, an Ivory Flakes ad and one for "Nature's Rival" featuring "Four-in-one proportional girdles", the relationship between sex and technology is also the most striking feature of many car ads in the fifties. As he explains: "The trade motto 'Bodies by Fisher' is relevant to the present discussion because it insists on the close relation of motorcar glamour to sex, just as the feminine glamour ads and the modern beauty chorus insist on their relation to the machine" (1951:94).

The frenetic violence of the Futurists, exulting in speed as the only universal value, is figured in the images that coalesce around sex, technology, and death. The persistence of sex and technology in the images of popular culture is accompanied by many of the same elements extolled by Futurist poets before and since Marinetti launched what he called his "manifesto of violence, destructive and incendiary". McLuhan notes that, "hovering around" sex and technology in the images of *Look* and *Life* magazines, "will usually be found images of hectic speed, mayhem, violence, and sudden death" (1951:98). Indeed, in a 1935 article in *Reader's Digest*,

J.C. Furnas wrote that "every time you step on the throttle, death gets in beside you" (cited in Schneider 1972:173).

Indicative of its economic and cultural centrality in American life, as a special object of veneration, the automobile is celebrated in literature, the movies, and poetry and song. The car crash has also been a prominent part of these narratives. Laurence Goldstein, in an essay called "The Automobile and American Poetry", claims that "an auto wreck represents the smash-up of the romance of progress, based as it is on the mechanization of sexual instinct" (1983:233). For many contemporary American artists, the auto wreck graphically illustrates their version of "God's vengence upon the multitude for its worship of false idols" (Goldstein 1983:233). As Allen Ginsberg suggests, in his poem The Car Crash, in his prophetic book *The Fall of America*, death and destruction by automobile have become a central, mad fact of modern life. Goldstein calls J.G. Ballard America's "most acute modern commentator on the ontology of the machine". In *Crash*, Ballard graphically details "a new sexuality born from a perverse technology" through the eyes of his protagonist, Vaughan: "In his mind, Vaughan saw the whole world dying in a simultaneous automobile disaster, millions of vehicles hurled together in a terminal congress of spurting loins and engine coolant" (1973:16).

For the Futurists "the seemingly unconquerable hostility that separates our human flesh from the metal of motors" could be resolved through intuition of the internal workings of the machine. For McLuhan, the mystery of the mechanical bride is "a metaphysical hunger to experience everything sexually, to pluck out the heart of the mystery for a super-thrill" (1951:101).

Further, McLuhan explains that this is not a feature created by advertising executives, "but it seems rather to be born of a hungry curiosity to explore and enlarge the domain of sex by mechanical technique, on the one hand, and on the other, to *possess* machines in a sexually gratifying way" (1951:94).

The death cult and image worship that swirled around the figure of James Dean and the Porsche he was driving at the time of his death is just this celebration of sex, technology, and death, that is exulted by the Futurists and found by Marshall McLuhan in the images of popular culture. Dean died in a spectacular car wreck near Salinas, California, on September 30, 1955. James Dean and his car, like the Lindberg/machine, are greater than the sum of their parts. According to automobile journalist Yates, "James Dean opened big and died bigger...None of them, not even Kennedy or Lennon or Presley, was mourned with more sound and fury and endless hysterical weeping than James Dean" (cited in Bayley 1986:56).

In *Crash*, Vaughan, in "the erotic delirium of the car crash" had woven elaborate fantasties around the car deaths of James Dean and Albert Camus, Jane Mansfield and John Kennedy. In a grisly article called "The car as killer", George Perry lists other famous people who died in automobiles and accompanies this with pictures of the mangled cars they died in. Ernie Kovaacs, the comedian, "died after a party on the night January 13, 1962, when his station wagon skidded off the rain-wet Santa Monica Boulevard and hit a light pole" and dancer Isadora Duncan caught her trailing scarf in the rear wheel of her Bugatti along the Promenada des Anglais in Nice, breaking her spinal column (Perry 1966:206).

Automobiles have long been revered as get away cars for outlaws and misfits in the popular imagination, from the early mobster movies to Jack Kerouac's *On the Road*. Creedon notes that this rather "benign compensation of our discontent" turned perverse with tales of the roving serial killers of the late 1970s and 1980s. The Volkswagen "bug" that Ted Bundy used to stalk his victims achieved almost as much notoriety as Bundy himself in the popular press. As Creedon writes:

> Few believe that a killer's car is inherently evil. Tools have no mind of their own, or do they? The usual attack on the car often contains a deep antipathy of the object itself. This view reinforces the idea that we look on cars as surrogate life forms worthy of hatred as well as love. (1989:10)

In Vancouver recently, a 64-year-old woman pedestrian, Dina Swanson, was knocked down and killed by a hit and run driver while crossing the street. Before anyone stopped or summoned help, 10 people drove around her body and continued on their way--just another road kill. Has death on the road naturalized itself into simply the price we pay for mass automobility, such a "mad fact" of modern life that we never give it a second glance? In our dream state of self absorption, wrapped in our technological cocoons, our private fantasy chambers, are we totally cut off from a social accountability?

Both the dream *and* the nightmare found their expression in Futurist art and poetry. Indeed the nightmare was celebrated and revelled in. But as the Futurists predicted in their inimitable fashion, "untrammeled automobility" doesn't end with a car crash and predictions of the ultimate

demise of the automobile throughout its history have always proved premature. The dark side of an "orgasmic union" between "man" and technology in the figure of the automobile clings to the dream of power and emancipation. As Dettelbach writes, our relationship with cars involve both "the negative extension of fear as well as the positive expression of desire" (1976:5).

The themes raised by Futurism, and expressed in their art, color all history of the automobile. The Futurists set out to provoke, and as Marinetti wrote in the First Manifesto: "We must rattle the doors of life, test the hinges and the bolts" (cited in Banham 1959:78). If anything, their philosophy leads to a questioning of the benign and innocuous nature of the automobile. "Futurism," remarked Giovanni Papini, "has made people laugh, shout, and spit. Let's see if it can make them think" (cited in Taylor 1961:10).

TECHNOLOGY OF GENDER

One of the most pervasive figures in advertising lore is the helmsman, whose mastery over the environment through the products of technology provides the model to which consumers aspire. Antony Easthope claims the image of the Marlboro Man brings the masculine ego in touch with nature. Through his narcissistic daydreaming he imagines "a cowboy, the Lone Ranger, a Western hero". The image presents the illusion of man at one with nature, but his far-away look cloaks his true intention, to dominate nature. As Easthope writes:

> Domination is implied by the smooth backs of the mustangs asking to be broken and ridden. Once on the horse the lone male will have harnessed its previously unbridled natural power. Instead of running wild it will carry him in planned directions across the terrain.
> (1976:47)

The helmsman was nowhere more important than to car ads after World War II which, like the Marlboro cigarette ads, served to perfectly capture the alignment of masculinity and helmsmanship. Michael Smith argues, "The Marlboro Man thus combined stereotypes of masculine America past and present: suffusing frontier autonomy with machine-age know-how, he was the Lone Ranger recast as Lindberg" (1976:188). One of the most dramatic illustrations of this alignment of masculinity and technological virtuosity is the famous poem by e.e. cummings, XIX, in which he describes a male driver and a virgin car. The poem begins...

> she being Brand
> -new; and you
> know consequently a
> little stiff i was
> careful of her and (having
> thoroughly oiled the universal
> joint tested my gas felt of
> her radiator made sure her springs were O.
> K...
> (e.e. cummings 1972:248)

The fetishism of technology gives the machine life. The machine lives in Futurist car poetry and in the conscious and unconscious design characteristics built into the cars of Detroit. Such animism has been given tangible shape in the material structure of the automobile. Wernick writes: "In the first step, the engine radiator, mounted at the front, was given a grille (mouth). Then two separated headlights (eyes) were added, and a

pointed hood (nose)--compensating, presumably for the vanished face of the horse" (1989:206). By virtue of being alive automobiles have a gender. This is due partly to the obvious physical resemblance between the automobile and a human face, but varies considerably from masculine to feminine, and from friendly to sinister, while in some representations it is a kind of Moloch.

Perhaps one of the greatest marketing strategies of the twentieth century has been to relate the automobile to sex, an endeavor amply aided by artists and writers, car designers and engineers, and the readily accepting public, who eagerly seized upon the car's liberating power as a potent symbol. Indeed, cars have been both genders. As David Lewis points out, "As cars became longer and lower, they were pointed to as male phallic symbols; and their long, sleek radiator/hood ornaments the more so. Buxom headlamps and bumper guards and radiator grilles (notably the Edsel's) were perceived as female sexual symbols" (1983:127). Wernick calls the "gender ambiguity" of the automobile one of its most striking symbolic features:

> In the first instance, and from the side of the male driver, it has been projected as Woman: whether a flashy possession, as a boy-toy (as in [e.e.] cummings' car-as-virgin poem, 'XIX'), or wife. But in this (variously nuanced) scene of the male-led couple the car has also figured as rocket, bullet, or gun, i.e. as an extension of the male; while for both sexes, as an enclosed place in which to escape, it has at the same time played the part of a womb.
>
> (1989:207).

In the year leading up to the unveiling of the Edsel, Ford engaged in a promotional campaign that The New York Times called an "automotive striptease". While there had been oohs and awes in the board room, when

it was unveiled in September, 1957, the public liked nothing about the car, including the name. But it was the vertical grille that caused so much controversy and wide disapproval. Up to this time, grilles had been horizontal and had become the most significant identifying feature of an American automobile. The Edsel's grille was described as looking like a toilet seat, an Oldsmobile sucking a lemon, and a horse collar. Ford's PR team discovered that some customers found the Edsel's vertical grille uncomfortably similar to a vagina. One disgruntled consumer sent a letter to Ford's PR department which read in part: "It was bad enough that Studebaker saw fit to design a car whose front reminds me of male testicles, but now you have gone that company one better by designing a car with a front like a female vagina" (cited in Bayley 1986:20).

In 1954, Cadillac unveiled its new models adorned with a pair of airplane-type prop spinners on its front bumper that immediately became known as "Dagmars", as Yates points out, "after a bosomy television personality of the day" (1983:188). For many, the decade of the fifties was a wonderful time and an age of, what Thomas Hine calls, "innocent hedonism". But as Molly Haskell argues with regard to the representation of women in the movies of 1950s: "The mammary fixation is the most infantile--and most American--of the sex fetishes, and indeed the fifties, in which bosom power was supreme, was the least adult decade in movie, and national, history" (1974:105). McLuhan, in the end, undresses the mechanical bride in *Understanding Media* and declares that the car is no more or less a sex object than the wheel or the hammer. The car did its social leveling by horsepower alone. According to McLuhan, "as funny as the Viennese analysts have been able to get about the car as sex object, they have at last, in so doing, drawn

attention to the fact, that like the bees in the plant world, men have always been the sex organs of the technological world" (1964:196).

The Futurists worshipped the automobile for its speed, power, and performance. McLuhan, too, identified the power and explosive violence of the mechanical bride, "the menace and explosive intensity of the hourly and daily experience of the internal combustion engine" (1964:196). McLuhan claims that the car is a "hot and explosive medium", and its impact on social relations "exercised the typical mechanical pressure of explosion and separation of functions" (1964:200). McLuhan's mechanical bride is a man in women's clothing. It is a centrifugal force, like Henry Adams' Dynamo, "proliferating its seed of power and swiftness".

In his *Education* Henry Adams characterized the Western world as divided against itself by "two kingdoms of force which had nothing in common but attraction", the Dynamo and the Virgin. The force symbolized by the "Virgin, the Woman" had given unity and energy to the Age of Faith. As Adams points out, "at the Louvre and at Chartres, as he knew by the record of work actually done and still before his eyes, was the highest energy ever known to man, the creator of four-fifths of his noblest art, exercising vastly more attraction over the human mind than all the steam-engines and dynamos ever dreamed off; and yet this energy was unknown to the American mind" (Adams 1918:385). This force, embodied by Diana of the Ephesians and the Oriental goddesses, was worshipped for her power not her beauty. She was goddess because of her force, the greatest and most mysterious of all energies. But nothing of her spiritual power or moral force had ever crossed the ocean to America. Adams explains: "The force of the

Virgin was still felt at Lourdes, and seemed as potent as X-rays; but in America neither Venus nor Virgin ever had value as force- at most as sentiment. No American had been truly afraid of either" (Adams 1918:383).

In his education, "aching to absorb knowledge, and helpless to find it", Henry Adams had been shown the astonishing complexities of the new Daimler motor, and of the automobile, by Samuel Langley his friend and guide through the great Hall of Dynamos. Adams cared nothing for the sex of the dynamo "until he could measure its energy" (Adams 1918:385). Adams couldn't have imagined what the century would bring in terms of the power of the automobile to reconcile the Dynamo and the Virgin, at least to the extent of giving the Dynamo full rein and turning the Virgin into sentiment and leaving her powerless and lacking in potency. As a Dynamo, the automobile has a violent, explosive power. Marinetti wrote that the experience of a racing motor car was more moving than the sight of classical sculpture in the Louvre. But in America the "Virgin" is sentimentalized, her force turned into sentiment. The reason, Adams maintains, is that evidently America is ashamed of her...

> and she was ashamed of herself, otherwise they would not have strewn fig-leaves all over her. When she was a true force, she was ignorant of fig-leaves, but the monthly-magazine-made American female had not a feature that would have been recognized by Adam.
> (Adams 1918:384).

Adams knew of only one American artist, Walt Whitman, who had insisted on the power of sex as the classics had done. In a poem called, A Woman Waits For Me, part of a larger work called, Children of Adam, Whitman celebrates physical love. The poem reads in part:

Sex contains all, bodies, souls,
Meanings, proofs, purities, delicacies, results, promulgations,
Songs, commands, health, pride, the maternal mystery, the seminal milk,
All hopes, benefactions, bestowals, all the passions, loves, beauties, delights of the earth,
All the governments, judges, gods, follow'd persons of the earth,
These are contain'd in sex as parts of itself and justifications of itself.

Without shame the man I like knows and avows the deliciousness of his sex,
Without shame the woman I like knows and avows hers.
(Whitman 1926:86)

Walt Whitman is America's great poet of manifest destiny. As Goldstein points out, "By his expansive catalogues of American places he fed that hunger for restless movement and raw experience that characterizes the national identity" (1983:226). In a poem called To a Locomotive, Whitman exulted in the locomotive as a "Fierce-throated beauty", and an "emblem of motion and power" and "pulse of the continent", revelling in its conquering spirit to push back the frontier. Although Whitman just barely predated the automobile age, he sensed the open road as a metaphor for America. In Song of the Open Road, Whitman writes: "Oh highway...you express me better than I can express myself" (1926:124).

For all the rest of the artists in America, according to Adams, Venus and the Virgin were devalued and sentimentalized. Neither had value as force. In John Ford's Westerns, for example, woman serves as a civilizing influence. She appears to mediate between the tensions of the man, between the desire for the nomadic life and the desire to settle down, to resolve the tension between the wilderness and the garden. As Peter Wollen writes: "Woman is not a threat to Ford's heroes; she falls into her allotted social

place as wife and mother, bringing up the children, cooking, sewing, in a life of service, drudgery, and subordination. She is repaid for this by being sentimentalized" (1972:88). The myth of the "Western", the myth of America, of the frontier, of the expanding and unsettled West, the "virgin land", the myth of independent men, isolated in their confrontations with Nature and Evil, serves to relegate women to a subordinate or marginal existence, excluded from the "brotherhood of man". As Haskell points out, "the fusion of wife into a character whose chief attributes, even with regard to her husband, are maternal is a reduction through sanctification, a delimiting of the women's role by placing her on a pedestal" (1974:120). For John Ford, the word "wife" was an honorific term, according to Haskell, a combination of his Irish Catholicism and American puritanism: "As a director, Ford is almost a case study of the Madonna complex at its most reverential" (1974:121).

In the movies the car is a fantasy machine within a fantasy machine. Cecil B. De Mille, who is said to have owned a number of luxury cars, a Model A., as well as odd assortment of other machines, maintained that automobiles and movies stemmed from the same cultural roots. De Mille claimed that they both reflected "the love of motion, the restless urge toward improvement and expansion, the kinetic energy of a young, vigorous nation" (cited in Hey 1983:193).

Of all the personalities that lights up the big screen, none has had a more illustrious, multifaceted and long-lived career than the automobile. Automobiles have always been an important motif in Hollywood cinema. In John Ford's *Grapes of Wrath* (1940) and *Tobacco Road* (1941) the car is

represented as a benign harbinger of progress, an innocent tool and a symbol of social well-being and liberation. The automobile embodies so many of the myths found in the Western: the frontier, rugged individualism, the "virgin land", etc. In these movies, John Ford meets Henry Ford. As Will Wright notes in *Six Guns & Society*: "The Marlboro Man made Marlboro the best-selling cigarettes in the world; pintos, mustangs, mavericks are popular automobiles as well as animals and images from the Western...And then there is that fine commercial in which Slim Pickens, in a cowboy hat, is driving across the desert when his car gets a flat tire--so he shoots it" (1977:1).

By 1977, in *The Car*, the automobile had become something malevolent with a life of its own. With severe urban congestion and pressing environmental problems, Hollywood was treating the car as a sinister token of menace. In the 19th century, the machine, in its demonic guise as harbinger of chaos and destruction, was often represented as woman. Eduard Fuchs, the famous art collector and art critic, wrote in 1906 about Jean Veber's "Allegorie sur la machine devourers des hommes": "Woman is the symbol of that terrifying, secret power of the machine which rolls over anything that comes under its wheels, smashes that which gets caught in its cranks, shafts, and belts, and destroys those who attempt to halt the turning of the wheels" (cited in Huyssen 1986:78). The most sinister and seductive automobile in film history was probably *Christine* (1983) based on the book by Stephen King who called the ownership of a car "a disturbing parody of the act of love". Bayley writes: "Christine is a woman and the horrors she visits on all who 'possess', or even 'ride' her reveals a strongly misogynist

streak in the author...and, given the context of the book, we can take Stephen King to stand for Mr. America" (1986:29).

The automobile has been a powerful force in shaping representations of gender. But to reduce automobile culture to a single metaphor of a male-driver in control of a car/woman, a male domination of a female Nature, doesn't fully account for women's material relationship to automobiles. We must wonder how much credence can be given the gender of an automobile as its *only* attraction above other political and socio-economic factors in describing this aspect of car culture. As Sanford points out, "we have too many examples of unsatisfying, shallow sexuality associated with cars and cheap success to have much faith in this kind of magic" (1983:151).

Automobiles are often used to make an individual statement or as a means of expression of dreams, fantasies, and illusions. But some critics argue that women's very identity is not so totally tied up in the automobile and it is men more than women that appropriate the car as "a purely magical object". As Benston points out, the car means something different for men than it does for women, in that women use technology much less as a means of self-expression: "Men seem to identify with their cars as expressions of themselves more than women do and are often explicit in using them as symbols" (1988:20). Lydia Simmons claims that for a man the automobile is an extension of self, but notes, for a women "it is generally a means to an end, a method of most expeditiously getting from one place to another" (1983:153).

This is not to say that some women don't care about speeding cars as passionately as men. For example, one woman in the early part of the century expressed her enthusiasm for the new motorcar: "A recognizably modern woman, also upper class, announced herself in 1911 as a champion of the horseless carriage, which she called 'the finest product of civilization'...regretting the horse lovers would 'miss much of the exhilaration that goes with speed'" (Sanford 1983:140). But the history of women's relationship with automobiles has been decidedly less frenetic.

Women have not been denied access to automobiles, though often in the beginning, dependant on males for the cars they drove. In the twenties, for example, "women took their place with men as drivers of cars, though seldom as owners or mechanics and almost never as afficianados whose very identities were wrapped up in cars" (Sanford 1983:142). With the introduction of Charles Kettering's automatic self-starter for cars in 1912, which was called "the ladies aid", women drivers became much more common. However, as late as 1924, the electric self starter was not standard equipment on the Model T Ford, the car owned by the vast majority of rural America. As a consequence, as Michael Berger points out in *The Devil Wagon in God's Country*, "most farm women during this period either mastered the crank or depended on males for travel" (1979:64).

Automakers have tried to sell cars to women as well as use them to sell cars to men. There have been many attempts by automakers to appeal to women because of the large market they represent and the influence they exert in purchases of the family car. Harley Earl's first assignment at GM was to create an entirely new image for a smaller Cadillac, the La Salle, which

would be developed to appeal to women drivers of an urban, cultured leisure class. As Silk points out: "The entire ensemble expressed grace and dignity, an image that women of culture would appreciate" (1984:223).

How much did auto manufacturers' appeals to women reflect the actual material relationship of women to cars and car culture? Women are often excluded from an understanding of the underlying principles by which machines operate. Men build cars and use their own special magic to keep them running. As Benston points out, "men are assumed to be inside the magic circle and women outside". It is assumed that men are handy with tools and mechanical systems. Engineering and mechanical knowledge about cars and engines are a part of a male culture inside the inner sanctum of automotive patriarchy. Technological virtuosity is assumed to be a definitive male characteristic. As Benston argues: "The exclusion of women not only from active practice in scientific and technical fields but from training in basic physical and mechanical principles means that even when women use tools or machines, they are marginal to a male-created and male-dominated technology" (1988:17).

The literature argues variously between the contention that the car has helped to liberate women and that women have not been liberated at all, with or without their cars. Some studies in the twenties suggest that the automobile contributed to the liberation of women during an age of increased consciousness of women's rights. Robert and Helen Lynd's analysis of small-town American life, for example, credited the car with greatly expanding the roles of women. They suggest that the car freed women from the home, provided opportunities to increase their outside

contacts, and encouraged them to actively pursue work and leisure activities. Ruth Swartz Cowan writes, "the automobile had become, to the American housewife of the middle classes, what the cast-iron stove in the kitchen would have been to her counterpart of 1850--the vehicle through which she did much of her significant work, and the work locale where she could be most often found" (cited in Flink 1988:164).

There is agreement in the literature that the car contributed significantly to important changes in the woman's roles within the family and in society. The car helped loosen family ties, reduce parental authority over children, and introduce women to new opportunities for recreation and work outside the home. But critics have pointed to the automobile as a crucial force in perpetuating women's oppression by increasing the distances from home to workplace, child care, shopping and community life. Car culture suburbia, with its individualized housing unit and carport or garage, is seen as in men's interest and as inimical to women's liberation. As Virginia J. Scharff points out, some commentators assert that "low-density North American metropolitan landscape, if in part a product of the continent's vast spaces, also reflects planning and investments by men, for the convenience of men, as well as an assumption that private automobiles (driven primarily by men) will dominate transportation" (1988:135).

Since industrialization separated home and workplace into public and private domains, American cityscapes have increasingly come to "resemble the ideology of separate spheres for women and men" (Scharff 1988:135). An analysis of the effects of the automobile on women's access to social life must account for early twentieth-century conceptions of middle-class

womanhood. As Scharff observes, gendered conceptions of the appropriate roles for women and men, in terms of home and community, shaped metropolitan America and car culture. This cultural ideology conditioned automobile use and promoted a conflict between domesticity, hearth and home, and the freedom and opportunity offered by the open road. Car ads gave mixed messages: "Auto manufacturers, advertising in such publications as *The Ladies Home Journal* and *Good Housekeeping*, pressed the identification of their products with women's sociability, while trying to refute any idea of conflict between automotive leisure and domestic responsibility" (Schraff 1988:139).

Not until the mid-twentieth century when women began to question this ideal of domestic womanhood "did the auto begin to seem more a trap than a tool for American women" (Schraff 1988:136). To understand the impact of the auto on middle class women's lives, we need to look at both women and cars in the context of suburbanization. The automobile decentralized the city and made cars necessary for much of suburban women's social life and consumption work. But the promise of emancipation was often contradicted by social practices. As Scharff points out,

> This promise of wider public opportunities, embodies not only in the rhetoric of automobility but in concurrent discourses linked with the suffrage crusade, the growth of higher education for women, and the entry of women into the workforce, sometimes complemented, but often contradicted the practice of car culture domesticity (most painfully embodied in Betty Friedan's image of the housewife trapped in a station wagon full of screaming children).
>
> (1988:143)

For at least one group of women, the automobile appears to have genuinely diminished social isolation, and fulfilled the promise of emancipation that had alluded many others. Rural Americans experienced the vast rawness of the landscape more than any other group, and "of all members of the farm family, the farm wife felt the isolation most acutely" (Berger 1979:57). By 1920, more people resided in metropolitan areas than in rural areas, and many country women regarded the automobile as a solution to the problem of distance from community life. Eleanor Arnold describes some Indiana farm women in the 1920s, who used the automobile in a spirit of co-operative creativity to get to a community meeting to learn how to preserve food by the coldpacking method. One woman describes her encounter with the automobile:

> I drove a horse and buggy halfway, and I met up with Crena Cowan Ramesey. She had a car. I could drive a car straight forward, but I could not back one. So I picked her up and Lena Thompson Holler up and Lena had one of those new-fangled coldpackers, and I drove the car up to Farmsville School, and we worked all day canning. When we got ready to go home, Carlena couldn't drive that car straight, but she could back it, so she backs it up, and we loaded Lena in with her precious coldpacker, and I drove the car home, and got my horse and buggy and come on home.
>
> (cited in Scharff 1988:142)

This anecdote indicates that farm women sometimes achieved remarkable feats of technological creativity and co-operation, and as well, that these country women did not see a contradiction between domesticity and sociability, even when the two spheres were spatially separated. It is a most dramatic illustration of the struggle to subordinate technology, to master a technology that has pretensions to be master, to constrain the machine with human values and social context. As Scharff points out, "the auto was only

one tool of housewifery, and a finicky and subordinate one at that (the *coldpacker* was the high-tech item here)!" (1988:142).

Automobile use by women has steadily increased since the twenties. By the fifties, however, despite auto manufacturers' appeals to women, male drivers far outnumbered their female counterparts. Studies of automobile use in the United States and Canada after World War II indicate that proportionately more men than women have obtained driver's licenses, and that men have tended to have greater access to cars than women do. Sanford reports that:

> In 1977, although three-forths of the domestic cars in the United States were owned by men, 42 percent of their principle drivers were women. In the same year 63.7 million women were licensed drivers, their percentage having almost doubled since 1940. In 1977, they bought 25 percent of domestic cars sold and 30 percent of the imported.
>
> (1983:147)

Certainly, with the increased participation of women in the workforce and public life, there has been an increase of the number of women who own and drive cars. The car has materially conditioned women's lives. Wernick claims that "in the imaging of cars, correspondingly, assumptions about family structure, the gender of the driver, and the sexual valency of the car itself became more blurred; combined with which, the Nature/Technology categories to which the car was also tied became loosened, as well, from their patriarchal frame" (1989:211). Wernick further argues that the ascendency of a more egalitarian code has pushed the dominance of males and the "cowboy complex" to the defensive: "With the rise of the women's movement, the emergence of a gay subculture, and the sex/gender *fission* of

the 1970s, the sexual values exemplified by the 'Rocket' also came unstuck" (1989:211).

However, the nature of this emancipation, this new independence, may be largely illusory. Like many who embrace the power of the automobile to bestow freedom, the possibility that women substitute this power for a lack of real power over the conditions of their lives is a notion that can't be readily dismissed. As Benston has argued with regard to "muscle cars", working-class or Black men often use that image of these cars to substitute for real power and control over their lives that is denied to them. The magic circle denies membership to people on the basis of race and class, as well as gender: "We live in a society of institutionalized hierarchy and sexism; in addition to gender, race and class are also factors in determining such access" (Benston 1988:17).

The "cowboy complex" and Futurist frenzy that has been a part of automobile culture through much of its history may have diminished somewhat in recent times as more women have taken to the road, attributable to what Wernick calls a "feminization of culture". However, the possibility that automobility might enable women to transcend the domestic sphere and grasp opportunities for public achievement has often gone unfulfilled. As Scharff points out: "All too often, the cultural fiction of liberty and equality for American women remained a frustrating, even seemingly impossible dream" (1988:143).

CHAPTER IV

THE DECLINE AND RISE

The Italian Futurists prefigured the kind of religious fervor in American car culture of the 1950s. Marinetti's "beautiful shark", alive and "'running on its own powerful fins", echoes with many historical antecedents of the Golden Age of car culture in the 1950s. Reyner Banham claims that the "Founding and Manifesto of Futurism" contained "unconscious prophecies [that] trailer the attitudes of the Beat Generation at a range of forty years", and that it "resolves itself in an orgy of untrammeled automobilism, unlike anything else before *On the Road* and concludes with a car crash that is rendered as sort of a secular mystical experience" (1959:77).

The "fabulous fifties" in the U.S. was the most flamboyant of car cultures. The automobile industry in the U.S. was booming. The full-sized car made in Detroit, with its powerful V-8 engine in a large, five-meter-long body, symbolized the wealth and clout of an American superpower. Although many important styling innovations were developed in the 1930s, American car culture entered its zenith after the Second World War. Auto magic had extended to the working class and had allowed them to partake in the American Dream with their Chevys they called "baby Cadillacs". Youth culture solidified around the rites and rituals of hot rods and customs. As Bayley points out, indefinite economic growth seemed like a realistic goal and "the new inter-state freeways appeared during these Eisenhower years to reinforce the abstract economic vision with tangible evidence that it was possible to travel to infinity" (1986:11).

The "orgy of untrammeled automobilism" in fifties America began to lose its lustre by the end of the decade. America's monopolistic control of the industry had begun to wane. In 1957 the Russians launched *Sputnik* and by the late fifties, small import cars, that automakers and iconoclasts in Detroit called "moveable toilets", had begun to be seen on the American landscape. Large gaudy American cars with poor gas mileage began to lose popularity with consumers. Suddenly its 1960 and the Bugs were followed by the VW vans.

By the late 1950s, the American automobile industry and its cars were coming under increasing criticism for their styling excesses, lack of safety standards, and unscrupulous sales practices. Leon Mandel in *American Cars* maintains that the 1958 Buick and Oldsmobile represented the most grotesque cultural artifacts made by Detroit alchemists for the multitudes: "When reckoning time comes at the end of the era of the automobile, anthropologists specializing in sheet metal will look upon these cars as prime examples of the age of excess. Huge, vulgar, dripping with pot metal, and barely able to stagger down the highway, they were everything people hated about the American automobile" (1982:293). These criticisms were overwhelmingly consumer-oriented and directed at the automobile manufacturers. Unethical sales strategies and technological black magic was rife throughout the industry. As Flink points out, "The sales 'blitz' was introduced in 1953, and high-pressure tactics came to include grillings by teams of salesman in special rooms equipped with bugging devices" (1988:281).

There have been a number of, as it turns out premature, predictions of the ultimate death of the automobile. John Keats wrote in 1959 in *The Insolent Chariots* that "the American's marriage to the American automobile is now at an end, and it is only a matter of minutes to the final pistol shot, although who pulls the trigger has yet to be determined" (1959:13). McLuhan predicted the demise of the automobile as we know it in 1964. The "wheel" will become obsolescent in the electronic age: "The car, in a word, has quite refashioned all the spaces that unite and separate men, and it will continue to do so for a decade more, by which time the electronic successors to the car will be manifest" (McLuhan 1964:201).

In the early 1970s, "death of the automobile" prophecies enjoyed a brief flurry of popularity in the literature. Helen Leavitt's 1970 *Superhighway--Superhoax*, and Kenneth Schneider's 1972 *Autokind vs. Mankind* detail a disillusionment with the automobile, but direct their criticisms at the social costs entailed by its cultural adoption. John Jerome's 1970 *The Death of the Automobile* describes the "fatal" effect of the Golden Era from 1955 to 1970. The crucial period was in the late sixties and the early seventies when the largest industry in the world began to die. Jerome writes, "as our technology becomes increasingly more sophisticated, so does our cost accounting, and new costs--social ones--are being fed into a ledger at a much faster rate than new areas of automotive profitability can be discovered" (1970:13).

By the late seventies these criticisms were compounded by the 1973 and 1979 oil shocks and concern about automotive safety, atmospheric pollution, traffic congestion, urban sprawl, and devastation of the natural environment.

Lester Brown in *Running on Empty* describes a study undertaken by the Worldwatch Institute that describes a growing concern with the precariousness of the world's oil supplies and rising oil prices. The report states: "During the spring of 1979 it became clear to several of us at Worldwatch Institute that there was a wide and growing gap between the projected demand for gasoline for use in automobiles over the remainder of this century and the likely available supply" (1979:vii). The future of the automobile was far from certain. The question on the minds of Detroit automakers was: "Would the world's greatest automobile culture now have to depend not only on OPEC for oil but also on the Japanese for automobiles?"

McLuhan predicted that the automobile will go the way of the horse: "If the motorist is technologically and economically far superior to the armored knight, it may be that electric changes in technology are about to dismount him and return us to the pedestrian scale" (1964:195). The distance shrinking capacity of the automobile will be superseded by the distance shrinking age of electronics. For McLuhan, the car will not disappear completely, but will lose its major role in transportation and move into a subsidiary role in culture. The automobile, like the horse, will have another life in the movies, turned into nostalgia for another time. According to McLuhan: "Today small children plead for a train ride as if it were a stagecoach or horse and cutter: 'Before they're *gone*, Daddy'" (1964:200).

Whether the age of electronics, that is already reshaping everyday life, holds a better or worse future for humankind remains to be seen. It seems clear at the present time, however, that the individual personal automobility

offered by the mechanical bride has become increasingly woven into the rituals of everyday life, to such an extent, that automobilists can not conceive of a life without it. If the automobile were Mark Twain it would say: "Reports of my death have been greatly exaggerated".

Automobile culture reached its zenith in the fifties after which it suffered a decline. Now some predict that we are poised on the threshold of a brillant renaissance engendered by high technology. McLuhan claims that the American car was dealt a heavy blow by television. But the automobile has not been turned into a "graven image" by a tribe that worships some new electronic God like TV, with its "guarantees against mystification and idolatry". Indeed, the sacred cult of the automobile, in McLuhan's words, "the ultimate expression of Gutenberg technology", has incorporated the "uniform and repeatable processes" of Gutenberg, most dramatically illustrated by the assembly line, and mixed them with the worship of other electronic gods. De Brosses noticed the tendency of the so-called irrational practices of fetishism to become incorporated into contemporary forms of behavior, mixing themselves with "other dominant cults, and more recently established dogmas". The worship of the automobile as an expression of Gutenberg technology mingles with other dominate cults, and more recently established dogmas. TV has not called into question all mechanical assumptions about uniformity and standardization, as McLuhan claims, but rather, the automobile and the assembly line have embraced electronic technology and taken the Gutenberg principles of uniformity and standardization to new heights.

Significantly, the current renaissance of the automobile is engendered by the electronic and aerospace technology that is reshaping daily life. It is reshaping the automobile as well. The car of the future, they say, will sport an array of computerized electronic controls that will automatically adjust seats and mirrors to an individual's particular needs, correct the suspension to account for changing road conditions and even choose the best route to the driver's destination. New marketing strategies in contemporary car culture increasingly promote technological innovations and user-friendliness rather than external design and stylistic characteristics. The automobile's entry into the world of high tech has been characterized by a movement to interiorization. As Wernick points out: "On the material side, we have seen growing design attention to seating and driver ergonomics, to dash board setups (now digitalized, and with voice controls), and to car sound-systems, tapedecks, cd's, etc.). In promotion more generally the car has been projected as a king of wraparound experience, or even a mystical inner trip" (1989:212).

A special series called "Exotic Cars" in *Road and Track* magazine celebrates the fantasy machines of 1990. The magazine calls these cars the "World's Most Exciting Dream Machines", "Mystical Marvels", with names such as Cizeta Moroder V16T and Acura NS-X. Also singled out for special consideration were exotic cars with more familiar names like Mercedes Benz, Maserati, Ferrari, and from an old and honored car manufacturer, the CxAuto CX 25 GTi Turbo 2, "obviously, from skin to central nervous system, this is a Citroen" (*Road and Track* Jan. 5, 1990). The Aztec is a creation of Giorgetto Giugiaro, one of Italy's most prolific designers, world renown for his watches and pasta, as well as cars. The Aztec is an automobile in the

sense that it can be driven, "but of greater importance is the Aztec's function as a time machine, a physical rendering of one man's interpretation of the future" (*Road and Track* Jan. 5, 1990). The Aztec is intended to reflect future styling trends. As *Road and Track* desribes it: "With its sharp lines, silvery-metallic coloring, exposed cockpits and multiple panels, the Aztec appears to be more jet fighter than auto, with a bit of Luke Skywalker thrown in for good measure" (Jan. 5, 1990).

Certain tenets in Futurist thought were determined by actual experiences related to the automobile. Seeing or riding in a speeding car through the suburbs of Milan confirmed their belief that dynamic, simultaneous sensations were among the basic forces of nature. Not everyone can afford the "Mystical Marvels" with all wheel drive, satellite navigation, and "electronic everything and a jet helicopter price tag" described by *Road and Track*. The one-of-a-kind Aztec with all its technological wizardry, is intended to reflect future trends and is unlikely to populate the highways. Designed as a car of tomorrow, it doesn't exactly cohere to current practice.

The automobile that falls within most people's experience is much more mundane. The automobile industry has become increasingly multi-national such that it is not possible to talk about an American car. In the early 1980s, Detroit automakers had started design and production of "world cars", a fairly standardized design worldwide assembled from components made in many countries for worldwide distribution.

> The world car is best exemplified by the Ford Escort/Mercury Lynx. With minor local variations, the Escort/Lynx is assembled in the United States, the United Kingdom, West Germany, Portugal, and Brazil. Its

> components are outscored from seventeen countries. It has been the best-selling car in the world since 1981, and its design characteristics have become standard for state-of-the-art small cars.
> (Flink 1988:397)

The family sedan for well into the next century will still be recognizable as a distant cousin of, say, the GM Firebird II, unveiled in 1957 as the car of the future. Although the Firebird had many titanium components, the automobile in the next 20-30 years will still be a steel body wrapped around an internal combustion engine. Nothing is predictable in the automobile industry but it seems clear that the car of the future will still rely on the internal combustion engine because of the large inventory of these motors stockpiled around the world. Automakers will continue to rely on steel, as David E. Davis Jr., publisher of *Automotive* magazine, maintains, "not only because it is not petroleum-based, but because it is cheap, easily formed into gently curved aerodynamic shapes and strong" (*The Globe and Mail* August 5, 1989).

While the basic shape of the automobile is unlikely to change much in the next twenty years, the space between flesh and the hot metal of motors is being taken up with a myriad of technological devices. One of the most likely electronic devices to be installed in automobiles in the next five years is one that skirts the issue of too many cars on the road. Automobiles will come equipped with electronic maps that plot location, direction, and suggest ways to negotiate congestion chaos. Mary Gooderham reports in *The Globe and Mail* that computer-guided automobiles are the "latest weapon in the battle" against congestion and gridlock: "Intelligent Vehicle Highway System is based on the principle of giving drivers more information

about route conditions by making both cars and roads 'smarter'" (August 7, 1989). Traffic management sytems are already being installed on highways and urban streets to control traffic. As well as electronic surveillance systems and closed curcuit cameras, Gooderham notes that other changes include metal loops and computer chips embedded in the pavement to sense traffic flow, changeable message signs to warn drivers of coming problems, and metering systems to limit the number of cars that can enter the flow on a roadway (*The Globe and Mail*, August 7, 1989).

HUMAN PARTS AND MACHINE PARTS

Technology is always constituted in parts human and parts machine. The Industrial Revolution spawned literally hundreds of attempts to construct "human automata" that entertained in the courts and cities of 18th century Europe. As Huyssen points out: "Androids such as Vaucanson's flutist or Jacquet-Droz's organ player captured the imagination of the times and seemed to embody the realization of an age-old human dream" (1986:69). In 1835 Edgar Allan Poe went to see a famous automaton, the "Chess Player", obstensively a machine-man who sat behind a desk and played, by all accounts, a respectable game of chess. Poe declared it a fake, albeit a clever one. "The Chess Player" was designed by Johann Nepomuk Maelzel who had also designed a mechanical brass orchestra, "The Panharmonicon", for Ludwig van Beethoven and whose "chess player" reportedly had astounded Napoleon Bonaparte. But Poe was determined to find a flaw in the mechanism. As Winner describes it: "In a long review of the show, Poe offers comprehensive proof that there is a man hidden in the mechanism.

The clincher in his argument comes when he points out, lo and behold, the 'Chess Player' has been known to lose!" (1977:32).

With the systematic introduction of labouring machines at the end of the 18th century the culture of androids suffered a decline. Accounts of the actual experience with these labouring machines began to mingle with the machine-man themes of the age, and some writers began to discover horrifying traits in these machines which resembled real people. The android is no longer seen as a testimony to the genius of mechanical invention, rather it "becomes a nightmare, a threat to human life" (Huyssen 1986:70).

Part of this sobering attitude is found in the notion of a mechanized humanity that was a prominent part of the 19th century literature in both Europe and America. The Newtonian idea of the clock portrayed the universe as a blindly functioning mechanical automaton and the human body as a machine. A French doctor in 1748, Julien Offray de la Mettrie, in a book entitled *L'Homme machine*, characterized the human being "as a machine composed of a series of distinct, mechanically moving parts, and he concluded that the body is nothing but a clock, subject as all other matter to the laws of mechanics" (Huyssen 1986:69).

Winner notes that the two primary images of the older mechanical tradition--Newton's clockwork universe and the cog and wheel machine of nineteenth century industry--have suffered a decline in subsequent representations of technological societies. Many devices referred to as machines are no longer mechanical and many recent developments in

science and technology--quantum physics, relativity, modern chemistry and biology, the alloys, plastics, the transistor, the computer chip--don't exactly cohere to the "machine" model of the nineteenth century. However, remnants of this analogy remain in contemporary life in references to metabolism, and the biological clock, with regard to sleep patterns and female child-bearing age. A decline in the machine metaphor does not mean the disappearance of the concerns it represented--full capitulation to a technological complex. As Winner warns, "The possibility that man faces an unwitting bondage in his relationships with technical systems is still a living hypothesis" (1977:193). With notions that the human body, like a clock, was subject to the laws of mechanics, as all matter, Huyssen claims that "the age of modern technology and its legitimatory apparatuses had begun" (1986:69).

Barthes claims that automobiles come full-blown from the sky, "an object at once perfection and an absence of origin", an understanding of the process of its creation subsumed in its wondrous shape, "one of those objects from another universe which have supplied fuel for the neomania of the eighteenth century and that of our own science: the *Deese*, is *first* and *foremost* a new *Nautilus*" (1972:88). But what hides behind the benign nature of the automobile, what is not stamped on its wondrous shape, is an historical character of the process of creation. The mystification of the production and consumption processes, the separation of people from any adequate understanding of these processes, has been a very important part of the automobile industry from its beginnings.

What the consumers of Henry Ford's Model T's of 1920 were not aware of in the glow of the benign nature of their shinny machines was the human tension of the assembly line and its integration with the mechanistic philosophies of "scientific management". The assembly line provides the most vivid example of the dehumanizing aspects of technology on the worker. And scientific management exacerbates questions of how to constitute the human/machine components of technology.

The assembly line was introduced in the meat packing houses of Cincinnati and Chicago, thirty years before it was introduced at Ford's Highland Park plant in Michigan. In *Mechanization Takes Command,* Sigfried Giedion explains, "Like mass production in butchering, mass production of a new means of transportation, the automobile, became a stimulus for the assembly line, which from there spread to the inflexibly routinized machine factories" (1948:116). By the 1930s, the assembly line had moved to a central position in all industry. The assembly line and scientific management have overlapping histories in the early days of the mass production of the automobile. As rationalizing principles they reach "into the depths of a basic human problem--labour--and the historical verdict will depend on how far one might expect the human being to become part of an automation" (Giedion 1948:126).

Henry Ford, in his concern for the "common man", was the first to recognize the democratic possibilities of the motor car. His vision was to transform a luxury item like the automobile of 1900 into a form of transportation for "the people". The automobile industry was faced with the problem of mass production, building a most complex mechanism by the

million. The assembly line, coupled with scientific management, arose to the occasion from "the epoch's imperious demand: production, ever-faster production, production at any cost" (Giedion 1948:121). While cars had become increasingly complex since the Model A, the assembly line technology at Ford remained essentially the same into the fifties. As Flink points out, "the need for large amounts of dehumanizing semi-skilled labor had grown and the pace of work in the body plant and in final assembly had intensified since the early 1930s" (1988:306).

The Model T of 1920 still required some knowledge of mechanical process on the part of the consumer. Owned by a largely rural population without access to repair shops, it was the consumer's to repair. But this was already beginning to change. Stuart Ewen observes that "by the 1920s, both advertising and product design moved in the direction of separating products from the general knowledge of mechanics and from technical understanding--moving in the direction of aesthetic and linguistic mystification" (1976:106).

Mumford maintains that technology is not simply a tool that can be separated from the social context that surrounds it. He describes technique as "that part of human activity wherein, by an energetic organization of the process of work, man controls and directs the forces of nature for his own purposes" (1952:15). The history of industrialization is a history of molding human movement to mechanical principles. Giedion claims the basic principle of all mechanization is "replacing the to-and-fro action of the hand by continuous rotary movement" (1948:533). The assembly line dramatically illustrates how human parts get pulled increasingly more effectively into the

gears and wheels of the machine. Automotive technology is not just transistors, motors, and computers, or robots, automated guided vehicles and electrified monorail systems, but as a "form of life", it must include human components. Giedion, in an impressive wide-ranging study of the ways in which complex technological structures confront and modify nature, society, and human behavior, recounts what he calls "an *anonymous history* of our period, tracing our mode of life as affected by mechanization" (1948:vi). It is an anonymous history because its voices are muted beneath the "wondrous shape" of the automobile, and "hidden discourses" lie underneath the enthusiasms of such as Henry Ford and scientific management "expert" Frank Taylor.

Giedion dramically illustrates the contested nature of History when these hidden histories, those of the workers with first-hand experience with Henry Ford's democracy, are juxtaposed next to the statements of the shrill promoters of patriarchal capitalism. A statement by an advocate of scientific management in 1914: "The speed boss does not drive the men at all. He is their servant...The correct speed is the best at which the men can work day after day, year after year, and continuously improve in health" (cited in Giedion 1948:122). A more contemporary example is illustrated by Yasuhiro Monden, author of a manual used at the United Motors Manufacturing Inc plant in California (a joint venture of GM and Toyota): "It is not a conveyor belt that operates men, it is men that operate a conveyor" (Slaughter/Parker 1989:25). The actual experience of workers with the technologies of the assembly line is dramatically different. A worker on the Ford assembly line in the late twenties proclaims:

> ...driven by foremen picked for their brutality. There was never a moment of leisure or opportunity to turn my head...The men have no rest except for fifteen or twenty minutes at lunch time and can go to the toilet only when substitutes are ready to relieve them.
> (Giedion 1948:122)

There was no room for leisure on the assembly line. Henry Ford wrote: "There is not much personal contact. The men do their work and go home--a factory is not a drawing room" (1925:111). Flink writes that straw bosses and company "spotters" introduced a new dimension into the workforce that broke up the worker camaraderie that had up until that time characterized American industry. They enforced rules and regulations that forbade leaning against the machines, sitting, squatting, talking, whistling, or smoking on the job. However, if history tells us anything, human beings do not passively accept their oppression but will find ways to circumvent the strictures placed on them. Flink notes that assembly line workers at Ford "learned to communicate clandestinely without moving their lips in the 'Ford whisper' and wore frozen expressions known as 'Fordization of the face'" (1988:119).

Mumford argues that the first great machine in history, what he calls a "mega-machine", was the forced-labour gangs and bureaucratic organizations that built the Egyptian pyramids. Scientific management became more prominent in the 1920s, refined by the management ideas of Frederick Taylor and the time and motion studies of Frank Gilbreth, and are instructive in the way human components get pulled more efficiently into the gears of the machine. It is a more subtle shading and fine tuning of Mumford's "mega-machine". As Giedion points out: "With Taylor and his successors the stress fell on analysis and organization of operations; with

Gilbreth and the elucidation of human work processes by the visualization of movement comes to the fore: elimination of waste motion, the reduction of fatigue..." (1948:115).

Frank Taylor died in 1915, the year Henry Ford's assembly line hit full stride, by which time the data collected by Taylor had become common knowledge in industry. Ford never mentioned his indebtedness to Taylor, indeed eventually discarding many of his innovations. The conveyor belt, the travelling platform, the overhead rails and material conveyors had replaced the instruction cards on which Taylor placed so much value. But the stopwatch remained, measuring the time of operations to the fraction of a second.

Teresa De Lauretis, in *Alice Doesn't*, describes a time and motion study developed by management "expert" Frank Gilbreth, who designed a device he called the Gilbreth Chronometer which he used to increase the productivity of industrial workers. The Gilbreth Chronometer was essentially a motion picture camera connected to a clock. By determining time/motion ratios of workers, and studying the results "under a microscope", "purposefully slow or useless" movements could be eliminated. De Lauretis quotes a passage from Gilbreth's *The Book of Progress* (1915) which describes the Chronometer.

> Every film (frame) reveals the successive positions of a workman in performing each minute operation of the task entrusted to him. The position of the Chronometer pointer in successive films indicates the length of time between successive operations. These are studied under a microscope and a careful analysis of each operation is made to develop the standard time for each...but the camera cannot be deceived...The film records faithfully

> every movement made, and subsequent analysis and study reveals exactly how many were purposely slow or useless.
>
> (De Lauretis 1982:52)

Mumford calls the clock a piece of "power machinery" in which human labour becomes objectified as products of seconds and minutes. In this view, the clock dissassociated time from human events, thus helping, by "its essential nature", to "create the belief in an independent world of mathematically measurable sequences; the special world of science" (Mumford 1934:15). Mumford in his later writings changed his emphasis from society as a machine to what he called the "Power Complex". The Chronometer as a "power" technology fixes human labour into mechanical principles. The camera that "cannot be deceived" records all "purposefully slow or useless" movements, eliminating from human labour any movements that are human. The images of the Chronometer are invested with an obviousness, a sense of "the way things are", and naturalize themselves as timeless and objective. Science was pre-eminent before technology, but as Geraldine Finn points out, "modern technology feeds off sciences' reputation for objectivity, neutrality, certainty and knowledge and the political power and prestige that goes along with this" (1984:1). But science and technology do not float independent above and outside the social conditions of their creation. As De Lauretis argues, the Chronometer, while it is a device that records the relation of movement of time and space, it is "always embedded in concrete historical practices, often indeed are aimed toward very specific economic or ideological objectives" (1982:52).

In contemporary technological cultures, rationality has become a fetish. The modern fetish is "an icon of rational space-time", in that it "repeats the

structural elements of transference and forgetting, but introduces a new dimension of rationalization" (Mitchell 1986:196). Fetishism consists of naturalizing properties in commodities which are in fact social. In this regard, Mitchell writes that the notion of the image as a "natural sign" is the fetish or idol of Western culture.

> ...the Western idolatry of the natural sign disguises its own nature under the cover of a ritual iconoclasm, a claim that *our* images, unlike "theirs", are constituted by a critical principle of skepticism and self-correction, a demystified rationalism that does not worship its own images but subjects them to correction, verification, and empirical testing against the "facts" about "what we see", "how things appear", or "what they naturally are". (1986:90)

The most common and most advanced technology in manufacturing today is machine vision. Menzies explains that machine vision is a sensor and control system that takes images from a video camera and divides them into tiny picture elements called pixels, which are then analyzed by a computer to produce a program of instructions for the computer. Machine vision systems are in growing demand in manufacturing, particularly in the automobile industry. As Menzies explains: "In 1985 there were nearly two hundred companies in this niche of high technology, with General Motors owning a fifteen-per-cent interest in the leading Canadian company, Diffracto" (1989:119). Machine vision is used in manufacturing to monitor the flow of products through factories, to help transport parts from warehouse to work station in automatic guidance vehicles, and even to position and insert components such as in an automobile.

While the robot is the universal symbol of automation, it is sensors and microprocessors that are the essential components for the remote control of the robots themselves. With the installation of sensors and microprocessors, complex production systems become self-regulating or automatic: "Sensors were critical to the evolution of manufacturing from an automated version of shaping and assembly to production re-configured as a cybernetic--that is, self-adjusting system" (Menzies 198:118). The sensors and microprocessors are essential for the remote control of robotic activity. The sensors and microprocessors give robots the ability to handle complex materials, select and distribute parts, and discriminate in the performance of tasks in ways similar to a human operator.

Estimates vary as to how many jobs will be lost in automobile production with the general adoption of electronic machine tools on the assembly line. Flink notes that an "MIT Report conservatively projects that total employment in automobile manufacturing in the United States, Japan, and the seven Western European Auto Program Countries will shrink up to 37 percent, from 3,642,400 workers in 1979 to 2,279,600 by the turn of the century, even as the number of vehicles in the world grows frrom 396.2 million in 1979 to 678.5 million in the year 2000" (1988:401). Indeed the introduction of electronic components into the assembly line challenges the traditional relationship between human operatives and machines.

One of the most pervasive myths of technological societies involves the magic of labor-saving devices. Scientists in the 1950s enthusiastically predicted the worker of the future would be a robot and a tireless steel collar workforce would free factory workers from the drudgery of their

dehumanizing labour. The push button of the fifties carried a promise that one day all drudgery would disappear and all work that was dirty or dangerous could be carried out by beneficent machinery. A truly automatized apparatus of material production would end servitude forever. However, it is questionable whether the technical innovations added to civilization in the last two hundred years have actually "saved labour" in terms of alleviating human toil. Marx claimed that humans were appendages to the machine in the factory system and the productive system of today still employs human parts as its prime components. Winner points out, "Many have argued that the very nature of advanced technologies--putting aside the matter of ownership and class structure--demands much more of the human being than any previous productive arrangement" (1977:205).

Critics of automation claim that men and women are losing their jobs to machines. Apologists for the technological complex maintain that, rather than the displacement of men and women by machines, only the dirty and dangerous jobs are eliminated to be replaced by clean and safe keyboard jobs in white-washed rooms. When one discovers that people are subtly conditioned by their apparatus, the idea of technology as controlled extension of human capacities becomes confused. One thinks differently about tools when one considers that the tools include people as functioning parts and new technological innovations necessitate configuring the machine and human parts differently. Managers of the industrial order hold the threat of automation over their employees as a way of extracting even more toil from them. As Winner points out, "The crucial difficulty with the existing technological order is not so much that individuals are 'unemployed' by automatic processes (though, certainly, this is a source of grief for the

significant minority) but they are overemployed in ways destructive to their humanity" (1977:203).

Technologies are not merely tools that extend human capabilities but are indeed powerful forces that reshape that activity and its meaning. Winner writes: "The introduction of a robot to an industrial workplace not only increases productivity, but often radically changes the process of production, redefining what 'work' means in that setting" (1986:6). The automobile, with its attendent technological gadgetry, has become a work environment reshaping the ways we do business as well as increasing the work load. Fax machines and lap top computers can be operated through a cellular phone in traffic jams on the long drive to the office or eliminate "the office" completely. But as social theorist Jeremy Rifkin writes in *Time Wars*, "it is ironic that in a culture so committed to saving time we feel increasingly deprived of the very thing we value...Despite our alleged efficiency, as compared to almost every other period in history, we seem to have less time for ourselves and far less time for each other" (1989:19).

Detroit has been forced by Japanese incursions into the car market to radically alter their work practices, and take a different approach to labour relations and production techniques. Although powerful forces within the industry are resisting change, according to *Business Week*, the Big Three are slowly disassembling management and production methods and are remaking them along Japanese lines. General Motors, Ford and Chrysler in the early 1980s put pressure on the Japanese to build cars in the United States with union labour. The Big Three automakers assumed that the Japanese, forced to pay UAW (the United Auto Workers) wages and adopt

American work practices, would lose the cost advantage of producing in Japan. However, *Business Week* reports that the Japanese invasion represents much more than simply a marketing problem for General Motors, Ford, and Chrysler: "It's penetrating the very heart of the domestic industry, challenging managerial mindsets and traditional, often obsolete, relations between producers and suppliers, management and labour" (August 14, 1989).

The Japanese have been criticized for their preference for non-unionized labour and for their racist hiring practices. Only three of the seven Japanese plants in the US are unionized. And *Business Week* reports that some Japanese companies have been criticized for hiring relatively few blacks: "Compared with the Big Three, the Japanese tended not only to choose areas with low percentages of racial minorities but also to hire fewer blacks from the regional labor pool" (August 14, 1989). With few exceptions, Japanese automakers, aided by substantial state subsidies, built their plants in semi-rural areas of the midwest, where they hired young workers with little industrial experience and no love of unions. Responding to charges of job discrimination by the Equal Employment Opportunity Commission, Honda Motor Co. paid $6 million to 370 blacks and women in 1988. As *Business Week* points out: "While giving hiring preference to residents in the Marysville area, the EEOC said, Honda gerrymandered the map to exclude nearby Columbus and its large black population" (August 14, 1989).

Since the 1940s, General Motors, Ford, and Chrysler have lived together with labour, represented by the UAW, in relative harmony in an industrywide environment of adversary bargaining. But by the late 1980s,

GM was saying that the assembly line had a "dampening effect on the creativity and managerial skills of the workers" (Slaughter/Parker 1989:24). General Motors took out a series of ads in *Business Week* in 1987 extolling the virtues of the company's new, co-operative relationship with its workforce--what the company called the "team concept". GM had no intention of eliminating the assembly line "but to replace 'the symbols of confrontation' with 'symbols of co-operation' where 'everyone eats together, parks together, and works together'" (Slaughter/Parker 1989:24).

According to Jane Slaughter and Mike Parker, in "Sparks fly on the factory floor", the New United Motor Manufacturing (Nummi), in Fremont, California--a joint venture of General Motors and Toyota--represents the prototype of how work will be performed through the next decade. The team concept is being considered for the electrical, telephone, steel and paper industries, and has revolutionized the assembly line. In Henry Ford's day, and indeed through much of the twentieth century, the image of a "time study man" with a stopwatch standing over a worker symbolized an authoritarian management and worker alienation. The Japanese plants differ from the traditional auto plants in that *the worker* is encouraged to pull the cord to stop the line if they spot a problem. This is the team concept. As Slaughtert and Parker point out: "Today, the' team concept' asks workers to do the time-study themselves. And all indications are that Taylorism [has] not been abolished; it has been intensified" (1989:24).

The "anbon" board (a Japanese term) represents a more insidious "power" technology than the Gilbreth Chronometer. The "anbon" is a lighted board above the assembly line that shows the status of each work

station. Workers are encouraged to pull a cord when they fall behind or need help and if the cord is not pulled again within one minute the line stops. This disruption is welcomed because it identifies the system's weakpoints. As Slaughter and Parker point out, "The ideal is for all stations to oscillate between lights on and lights off" (1989:24). No matter how well the workers perform, there is always room for "kaizen", the Japanese term for continuous improvement. "Kaizen" groups of workers are formed to observe the assembly line and encouraged to make suggestions how their fellow workers could work more efficiently.

Rather than indicating initiative and promoting harmony on the assembly line it creates tension and conflict. By pulling the cord the worker will get help at the work station but also get the immediate attention of group leaders. A worker at the Mazda plant in Flat Rock, Michigan, describes the experience of a co-worker:

> She had a hard time one day and pulled the cord several times. The next day several management officials observed her and set up a video camera to record her work. She found herself working further into the 'hole' (past her station). She worked into the hole too far and fell off the end of the platform and injured her ankle. They told her it was her fault--she didn't pull the cord when she fell behind.
>
> (Slaughter/Parker 1989:25)

Management journals call the Japanese system "synchronous manufacturing". *Business Week* shows a grudging admiration for the Japanese who "with superb planning and a synergistic mixture of technology and productive labour", intend to garner a large share of the Big Three's domestic markets. Slaughter and Parker call this system something else--

"management-by-stress"--and it is mindful of the scientific management principles of Frank Taylor who made efficiency the *modus operandi* of American industry. The assembly line squeezes the most possible efficiency out of its human components: "A system that constantly rebalances itself, becoming ever more productive, is certainly an elegant idea...Management-by-stress wrings the greatest possible use out of Taylor's principles and methods" (Slaughter/Parker 1989:25). Rifkin reports that today the time-and-motion studies are far more sophisticated on the factory floor than Frank Gilbreth could have imagined at the turn of the century. He decribes a technology where a worker's visual movements can now be timed and standardized: "Through a process called electrooculography, it is possible to time every single shift in eye movement as the worker scans the various monitors and controls with which he or she is working" (1989:131).

Giedion predicts with some "uneasiness" that there are no limits in further innovations to a fully mechanized assembly line that intervenes directly into "organic substance". He claims it is "experimentation with the very roots of being" (1948:44). The bio-cybernetic research being done at McDonnell-Douglas, has special significance for automobilists, and "will one day allow the aeroplane to translate the pilots *thoughts* into actions performed by the plane" (Bayley 1986:109). Giedion notes that the drift and implications of newer developments in mechanization cannot be foreseen. It is no longer a question of replacement of the human hand by the machine, "but the intervention into the substance of organic as well as inorganic nature" (1948:44).

Francis Bacon claimed it was appropriate to break and mould nature to the will of humankind using external controls. Now those controls are internalized through adjustments to the information, the genetic code, from which autonomous identity and destiny are derived. The question of machine life has intrigued technologists since the Sciencific Revolution of the seventeenth century. Computer and "life scientists" at the Los Almos National Laboratory in New Mexico are said to be working on the simulation of life inside a computer. Menzies writes:

> Speaking at the first world conference on artificial life at Los Almos site, one scientist described it in almost mythical terms--as seeking 'the ghost in the machine'. Another was no less mythic in insisting that life and non-life were simply a function of organizational complexity. 'It's just an incidental fact that in real living things the entities that happen to be made of organic soft, squishy stuff, whereas in a computer they're made of hard, non-moving chips'.
>
> (1989:156).

The automatons of the eighteenth century seemed to embody an age-old dream, the perfect machine. But behind the appearance of mechanical perfection these "things" were found to be all too human. There was always a human being behind the smoke and mirrors. The Japanese are said to be working on a driverless car. Toyota Motor Corp. is currently marketing an optional $3,000 navigation system in one car model in Japan. But as Bayley points out, "the zero-defect, driverless car idea might appeal to the oriental taste for perfection and order, but history and experience suggest that, like people, cars have to be flawed to be interesting" (1986:109). This system of electronics and satellites is mindful of the push buttons of the fifties which had much the same magic as "high tech" has today. The push button promised technological complexity at great convience, but as Hine points

out, "it was unnerving because it implied a certain loss of control" (1987:128). You pressed a button to start some complicated process, and after that it went its *own* way no matter what you did to try and alter its course.

AUTONOMOUS TECHNOLOGY

Exxon Shipping Co. president Frank Iarossi stated, when it became clear that the oil spilled in 1989 off the coast of Alaska was out of control, "that slick is moving like a superhighway". It is a sad irony that those gallons of oil still fouling the sea and coastline were destined for the gluttonous car culture of California. The oil spill precluded its being refined into gasoline and spewed into the air as toxic air emissions from the exhaust pipes of automobiles. As Winner points out, "each addition to the technological aggregate contributes to the process of helpless drift, which itself defies solution" (1977:294).

By the late 1950s a proliferation of push buttons appeared on all manner of products offering something more magical that could be achieved at the press of a button. A classic article in *Cosmopolitan* in 1958 promoting a "Push-Button Future" predicted that technological gizmos "will relieve the women of tomorrow of virtually every household chore except the diaper switch" (Hine 1987:125). The push Button offered a promise, a meaning that went beyond mere practicality or convenience. It told its user that this complex machine was competent and could do its job without human intervention. The push button appeared on cars as well. The Edsel, for

example, came equipped with push buttons connected to the transmission and situated in the center of the steering wheel. Hine observes that many magazine articles and car advertisements "told how you would get in your car, push a few buttons, and the car would plan its route along electronically guided, accident-free highways and get you to your destination without a bit of effort" (1987:125).

The push-button embraced "the miracles and the menace of the age", finger tip control of complex technologies but also a fear that like the Sorcerer's Apprentice a series of unalterable events has been set in motion with undesirable consequences. How much control does "fingertip touch" really embody? It was as if we have learned how to make the broom carry the water, but we do not have a spell to turn it off. As Mumford points out: "It is as if we had an automobile that had neither a brake nor a steering wheel, but only an accelerator, so that our sole form of control consisted in making the machine go faster" (1952:105).

The notion of fetishism posits that in the worship of inanimate objects, and by virtue of endowing them with magical powers, these objects take on a life of their own. This work explores the notion that as we infuse our automobiles with power and significance, and these objects take on a life of their own, they acquire a willful, self-determining autonomous character. Michael Taussig notes that in the "primitive" version of fetishism, persons and the products they create are intermeshed, and arise "from the sense of organic unity between persons and their products". In the modern view of fetishism, the one proposed by Marx, persons are subordinated to the "things" they make, "which results from the split between persons and the

things they produce and exchange...which appear independent and self-empowered" (Taussig 1980:36).

To suggest that technology has a life of its own would appear to fly in the face of a common sense rationality when viewed within the constraints of formal logic or rational, objective thought. But it is not a notion that can be dismissed out of hand. As George Grant states, we are expressing a kind of common sense when we represent technology to ourselves as neutral, invented by human beings and under human control, but it is a common sense from within the very technology we are attempting to represent.

> ...modern technology is not simply an extension of human making through the power of a perfected science, but is a new account of what it is to know and to make in which both activities are changed by their co-penetration. We hide the difficulty of thinking that novelty, because in our 'histories' it is assumed that we can understand the novelty only from within its own account of knowing, which has itself become a kind of making.
>
> (Grant 1986:13)

The view that technology has life independent of social forces, that it is self-determining and self-directed, is a notion posited by McLuhan. The automobile is the great leveler of physical space and social distance. But as McLuhan writes: "The talk about the American car as a status symbol has always overlooked the basic fact that it is the *power* of the motorcar that levels all social differences, and makes the pedestrian a second-class citizen" (1964:197). The idea that technology develops independently of society, and social change determined by apparently autonomous technological development, is the position that anthropologist Lynn White takes with regard to the stirrup and heavy-armoured knight. White, in *Medieval*

Technology and Social Change, has traced the development of the feudal system in medieval Europe to the introduction of the stirrup. By increasing the control of a horseman over his mount in battle, White claims that the stirrup revolutionized the military and the whole art of warfare. McLuhan, taking his cue from White, claims: "The car gave to the democratic cavalier his horse and armor an haughty insolence in one package, transmogrifying the knight into a misguided missile" (1964:199).

To suggest that technology has a life of its own, and to countenance the possibility that it is out-of-control, is not to fall into the determinism of McLuhan and White. I argue here the possibility that technology *has* a life of its own, but not independent of social forces. Technology is a *form of life*. We learned that fetishism posits that as we endow "things" with power and significance, ascribe to them a life of their own, in productive and consumptive rituals, these "things" come alive. There are inherent political capacities in the automobile but to attribute these to specific technologies themselves is to deny that they result from a specific configuration of *social* forces, a particular cultural order. There is power inherent in the figure of the automobile but it was put there by social forces. I explore the notion here that technology is self-determining and would appear to be out-of-control but, as a form of life, is always configured in human parts and machine parts.

Jacques Ellul, perhaps the most important promoter of the idea of technology-out-of-control, claims that the technological creations of humankind have a willful, self-determining quality of their own: "At the present time, technique has arrived at such a point in its evolution that it is

being transformed and is progressing without decisive intervention by man" (1964:85). What Elull claims, as well as Lewis Mumford, Marshall McLuhan, George Grant, and Langdon Winner, is that in our technological society we are living a novelty, unlike any other period of history. Ellul writes that *la technique* has appeared in relatively recent times and there is no common denominator between the technique of today and that of yesterday. Today we are dealing with an entirely different phenomenon. According to Ellul:

> As long as technique was represented exclusively by the machine, it was possible to speak of 'man *and* the machine'...[Man] was in a position to assert himself apart from the machine; he was able to adopt a position with respect to it. But when technique enters into every area of life, it ceases to be external to man and becomes his very substance. It is no longer face to face with man but is integrated with him, and it progressively absorbs him. (1964:6)

This transformation that characterizes technological society is the result of the fact that *la technique* has become autonomous. Ellul sees *la technique* as the culmination of a historical development that took root in the eighteenth century, was nourished in the nineteenth century, to become full blown only in our time. He writes: "Today technique has taken over the whole of civilization...Henceforth every component of civilization is subject to the law that technique is itself civilization" (1964:128). Ellul allowed that there are times when a moral or religious social order constrains purely utilitarian activity, for example, among the Greeks and Medieval Christians. But it is only in recent times that *la technique* has come to dominate. Ellul claims all aspects of civilization are controlled by the dictates of rationality, the guiding principle of *la technique*: "Every intervention of technique is, in

effect, a reduction of facts, forces, phenomena, means, and instruments to the schema of logic" (1964:79).

In the complex, large-scale systems that characterize our time, it is seldom the case that any single individual or group has control of a technological process along the whole of its conception, operation, and result. As Winner points out, "the crisis of steering in the technological order does not mean, as some seem to think, that there is no one at the wheel and that the car literally drives itself. It does mean that the relationship between car and driver, continuing the metaphor, is problematic and sometimes not that which ordinary tool-use conceptions lead us to expect" (1977:227). Behind the persistence of the metaphor of technology-out-of-control in social criticism, popular literature, and Hollywood cinema lies a very real condition. Behind the metaphor is a reality. Individual components function in a labyrinth of complex social interconnections and in this sense, the notion of "control" and "use" doesn't adequately describe relationships of this kind. As Winner maintains, "'control' in the sense of autonomous individuals directing technical means to predetermined ends has no significance" (1977:202).

In the complex, large-scale technological systems characterized by complex interconnection--technical rationality and vast scale, concentration and interdependence of major enterprises--the old fashioned, tool-use mode is replaced by many other sorts of relationships between persons, their ends, and the means available. As Menzies observes, "In biotechnology, the science of means is pushed beyond the production of goods and services, and even the care of people in hospitals and daycare centers, beyond the

cradle even into the womb and the seed pod, to transform the conception of life itself" (1989:157).

Marx claimed that to find an analogy to the fetishism we attach to commodities "we must take flight into the misty realm of religion". Technology too is wrapped in religious illusions. For Henry Adams the value of the Dynamo lay chiefly "in its occult mechanism". Adams haunted the Great Exposition of 1900 looking for the mystery of the Dynamo, "aching to absorb knowledge and helpless to find it". Praying before the Dynamo was "inherited instinct taught the natural expression of man before silent and infinite force" (Adams 1918:380). Robert Pirsig in *Zen and the Art of Motorcycle Maintenance* claims that "Buddha, the Godhead, resides quite as comfortably in the circuits of a digital computer or the gears of a cycle transmission as he does at the top of a mountain or in the petals of a flower" (1974:18).

Jacques Ellul too, wraps his technique in religious illusions, claiming that it has a soul, an "instrinsic Geist". In technological cultures everyone is forced to depend upon and have faith in matters about which one has little information or intelligible grasp. It is this condition that Ellul describes as the source of the modern versions of mystery, magic, and the sacred. At the heart of the fetish is power. According to Ellul: "The way differs from man to man, but for all men the feeling of the sacred is expressed in this marvelous instrument of the power instinct which is always joined to mystery and magic" (1964:145).

One of the most striking characteristics of technological societies is their complexity. People are caught between their everyday experience and their wonder at the marvellous works of civilization. Winner notes that "members of the technological society actually know less and less about the fundamental structures and processes sustaining them. The gap between the realities of the world and the pictures individuals have of that world grows ever greater" (1977:295). Technological societies are composed of many components and interconnections between humans and machines and characterized by the unintelligibility of complex socio-technology. People's very lives are dependent on devices that they cannot design, build, repair, or even operate. Winner calls this phenomena "manifest social complexity". It is the *"gap between complex phenomena that are part of our everyday experience and the ability to make such phenomena intelligible and coherent"* (Winner 1977:282). Compounding "manifest social complexity" is a *concealed electronic complexity*. The relationships and connections, that at one time had to be attended to by a person at each step, are now transferred to the instrument. The mundane has become complex: "The unintelligibile mass of sociotechnical interconnections is enshrouded in abstraction" (Winner 1977:285).

Near the end of his life, according to Menzies, McLuhan had misgivings about a world shrunk to a global village by the fast, centripetal forces of electronic technology. He asked: "Is man meant to operate at the speed of light?" (*Maclean's*, Jan 7, 1980). The automobile dream of freedom and emancipation is often thwarted by a crushing reality of labouring machines and congestion on the highways. It is not clear that government policy, traffic rules, surveillance devices, and computer control systems have been

able to constrain the anarchistic tendencies of the motorcar. John Jerome writes that "the reality, whether it is 4 MPH or 55: if there is space in front of you, fill it, move through it as quickly as possible. There is no time for archiac notions about traffic; too many others want to move also" (1972:127). Our attempts to harness the power and violence of the automobile is really a strategy to free up space to move. The impervious centifugal forces of the automobile have naturalized themselves into a fact of everyday life and even our "control" systems are thinly veiled attempts to let loose the menace and explosive intensity of the auto in flight. As Jerome points out: "Watch a traffic cop directing cars out of a lump of congestion. His impulse is *speed;* he snarls and whistles and frantically waves us on, faster, move it *out*...What policeman dares stop the flow long enough to write a citation?" (1972:126).

On an individual level, people are involved in an everyday struggle to control the power and violence of the internal combustion engine. In Paris the police refuse to have anything to do with accidents that involve only damage to the car. The Arc de Triomphe in Paris is surrounded by a multi-lane traffic circle the French call "le cercle de mort" (the circle of death). This juxaposition of images, a symbol of empire and at its feet the chaos, is a microcosm of our dream/nightmare experiences with the automobile. As Hulten points out, "traffic feeds in and out of thirteen different streets and avenues, and the drivers have to sort it out among themselves, something a system of traffic lights and policemen could ever do" (1984:14).

The notion of fetishism posits that as we endow inanimate objects with power and significance, we forget that we are ourselves responsible for them taking on a life of their own. Winner writes that "the loss of mastery

manifests itself in a decline of our abiltiy to know, to judge, or to control our technical means. It is this general waning of intellectual, moral, and political command that the idea of autonomous technology find their basis" (1977:30). In the *Eclipse of Reason* Max Horkheimer observes that "as material productions and social organization grow more complicated and reified, recognition of means as such becomes increasingly difficult, since they assume the appearance of autonomous entities" (1974:102). Winner finds this an apt characterization of the situation. His only criticism of Horkheimer's account is his emphasis on "appearance". Many times, the difference between the distressing appearance and untenable reality blurs totally: "At such times it is the faith that 'man controls technology', rather than the contrary view, which looms as an irrational belief" (Winner 1977:305).

SOME CONCLUSIONS

The impulse to fly was evident long before it was possible. The pleasure of control over mechanical power, mastery of an elemental force, has a long history. As Pacey argues: "Perhaps from the time of the Icarus legend, and certainly since Leonardo's sketches of flying machines and Kepler's discussion, in 1610, on flying to the moon, people were attracted by the prospect" (1983:94). Samual Florman in a book called *The Existential Pleasure of Engineering*, describes "existential joy" as being at the heart of engineering. The existential joy of technology, such as the quiet satisfactions of craft or the adventuring spirit of frontier conquest, is a pleasure that comes from sensual contact with machines. The sensuous attachment of rider to bicycle must surely be the exhilaration of speed and a sense of "anarchistic mobility". One snowmobiler was heard to remark about an "almost animal sense of freedom when you realize that the thing can go practically anywhere--shooting up snowbanks...across frozen lakes" (Pacey 1983:86). But the dream of freedom has too often turned perverse and pathological. The automobile can be a dream machine of fantasy and illusion that exaggerates one's sense of power and control.

The automobile's image of emancipation and freedom has been severely tarnished. Henry Ford's great experiment in democracy did not equalize consumption. The freedom machine is not free. The automobile has indeed acted as a liberator for some, as we have seen with the "dionysian" world of hot rods and customs, and the co-operative effort of rural farm women in the 1920s to master an unwieldy technology, but all too often the power of the automobile to bestow freedom on its believers has proved

illusory. But are we so transfixed by the automobile that we invite them into our homes, as *House and Garden* suggested in 1958 with its "living garage", that we don't notice that this relationship is suffocating under its own toxic fumes? So often the dream is wrapped in a "technological somambulism", where we sleepwalk through reconstructing the historical and social processes of our technologies. As Creedon points out: "A sideward glance at any stoplight is apt to fall on a solitary driver lost in mumbling bemusement--or in mute trance" (1989:10).

People worship cars and even need them in a sense beyond their use as transport. They have become second nature, an indspensible tool for modern living and increasingly weaved into the texture of everyday life. But the car is often "a compensating daydream" for our unsatisfied desires. Creedon argues that "individually the car provides what this denatured world can no longer give: sensual and psychological gratification. The car speaks to certain human needs that modern life cannot otherwise answer" (1989:10).

Menzies warns we are rapidly approaching the moment of complete enclosure within the technological monopoly of knowledge, as a way of knowing and doing. With the demise of alternate ways of relating ends to means in automobile cultures, the car is able to assert its technical solutions within its technical monopoly of knowledge. The automobile expresses its impervious force in rolling over "false idols" on a global scale. In the Third World public transport is downgraded and many human-powered technologies like trishaws, rickshaws, and bicycles are dismissed as "graven images". Transportation policy in many developing nations is skewed

towards the automotive needs of the car-owning elite. In a bicycle culture such as China, for example, over 90% of all travel in the cities is by bicycle. Yet China plans to invest $10 billion in the auto industry and wants to produce a million cars by the turn of the century.

The notion of fetishism posits that in the worship of inanimate objects, and by virtue of endowing them with magical powers, these objects take on a life of their own. In this work, I suggest the possibility that the absolutist end implied by the more iconoclastic theories of fetishism--full capitulation to the machine--may be unnecessarily reductive. The fetish, or idol, as an object of superstition, fantasy, and obsessive behavior, challenges the powerful constraints placed on technological cultures by rationality. In the dream/nightmare experiences of the automobile, in the rich ambivalence of its cultural images, we are offered a metaphysical world that goes up against these constraints. Tylor and DeBrosses have suggested that it is a natural tendency in all human cultures to admire objects remarkable for their power and their beauty. As E.B. Tylor has written: "In the love of abnormal curiosities there shows itself a craving for the marvellous, an endeavor to get free from the tedious sense of law and order" (1958:231). McLuhan wonders with regard to the automobile: "Are people really expected to internalize--live with--all this power and explosive violence, without processing and siphoning it off into some form of fantasy for compensation and balance? (1964:196).

This thesis explores the notion of fetishism as an appropriate way to describe the rites and rituals of car culture. The automobile is a dream machine. Baudrillard calls the concept of fetishism a "metalanguage" for the

magical thinking of others. But, according to Mitchell, Baudrillard forgets his own best insight when he suggests that the notion of fetishism is part of an iconoclastic rhetoric that can turn against its users and "almost has a life of its own". Fetishism as a polemical weapon can come back to haunt those that forget the history of its use, "who abstract from historical criticism in the service of theory" (Mitchell 1986:205).

In *Simulations*, Baudrillard describes a simulated world in which anonynmous actors are governed by "nothing more than an immense script and a perpetual motion picture". Disneyland serves as a metaphor for America, "with its play of illusions and phantasms", and is "the miniaturized and religious revelling in real America". The crowds park outside, line up inside before a mesmerizing array of dazzling gadgets, then are totally abandoned at the exit and channel this solitude into a single gadget: the automobile, for the drive into America where nothing is real. As Baudrillard argues: "Disneyland is presented as imaginary in order to make us believe that the rest is real, when in fact all of Los Angeles and the America surrounding it are no longer real, but of the order of the hyperreal and simulation" (1983:25). Los Angeles is not a real place of vast expessways, crushing congestion, and suffocating pollution, but rather, an imaginary world that conceals the fact "that the real is no longer real".

> Enchanted Village, Magic Mountain, Marine World: Los Angeles is encircled by these 'imaginary stations' which feed reality, reality-energy, to a town whose mystery is precisely that it is nothing more that a network of endless, unreal circulation--a town of fabulous proportions, but without space or dimensions"
> (Baudrillard 1983:26).

To reduce the complex, fragmentary encounter with the automobile in everyday life to a rhetoric of exaggerated alienation, as Baudrillard does, is to embrace, what Chambers calls, "a negative sociology". To countenace Baudrillard's totalitarian vision of media as fabricators of non-communication is to conjure up a world "where differences are reduced to indifference and we all become objects of a meaningless and uncontrollable semiotics" (Chambers 1986:216).

In applying the notion of fetishism as an instrument of cultural criticism as this thesis has done, as a metalanguage for the magical thinking of both pre-capitalist societies and contemporary technological culture, it is not necessary to fall into the "negative sociology" that Baudrillard describes. As an object of beauty and aesthetic significance, the automobile is worshipped in the design sections of art museums. Out on the road it is a medium of social communication. As Mitchell points out, the question then becomes, "how can these truths be brought into some coherent relationship with the fact that the museum is (sometimes) the site of authentic aesthetic experience, the media (sometimes) the vehicle of real communication and enlightenment?" (1986:204).

The ambiguous nature of the automobile is a synthesis of dream *and* nightmare, involving both the positive expression of desire *and* the negative extension of fear. As Mitchell points out, "the possibility that the fetishes of capitalist aesthetics, objects experienced and understood as 'beautiful', 'expressive,' etc., might have *both* an authentic and inauthentic function for their users is exactly the possibility that the radical iconoclast cannot countenance" (1986:203). There is necessarily a negotiation or a "struggle

over meaning", indeed a negotiation over losing our humanity to the all-consuming embrace of technology. We negotiate over making sense of the machine as master or slave, as an instrument of domination or liberation. Fetishism posits a social construction of reality in which the more frightening aspects of fetishism contend with a healthy imagination. As Mitchell notes: "What maintains the line between healthy imagination and fetishism is the insistence on the *changeful* nature of familiar experience, and on the oscillation between activity and passivity of the mind, which thus never enduringly either master or slave" (1986:15).

Automobiles are a social construction of machine parts and human parts, complex socio-technologies of organic and inorganic components. As we shape cars they shape us. Like the cell, the culture was right for the car to thrive. As Schneider writes, "The automobile is the greatest self-generating, self-sustaining development since the living cell first appeared on earth and began to populate the species" (1972:265). But now it spreads over the landscape like a virus and beyond our measures of control. The automobile clogs our air and congests our spaces. It is implicated in, among other things, breaking up the orderly social ecology of the city. As Ciborowski argues: "If transportation in the city is similar to the blood vessels in the body, the automobile explosion occurring in many parts of the world today is now creating the same problems for the health of the city as blood clots for the body" (1972:13).

We must recognize that transport itself is a kind of delicate ecological system. Environmentalists claim that without species diversity there will be no human beings. Michael Replogle, President of the Washington-based

Institute for Transportation and Development Policy, writes that like the environment, transport "requires both diversity and balance and it is at its healthiest when offering many different ways of moving goods and people across short and long distances" (1988:19). Diversity and balance is survival. If we are to reclaim our lives from the automobile, retrieve the human parts that get increasingly pulled into the gears and the wheels of the machine, it is not to give up our fetishistic practices but rather to switch allegiance to a multiple of fetish objects --Tylor's "queer walking sticks", bicycles, trains, efficient public transport systems, and the odd neighbourhood motorcar.

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