THE AMERICAN EXPERIENCE

PLANNED OBSOLESCENCE

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INTRODUCTION

The society we live in is a changing one. The rapid advance of technology, that some would call progress, is a fundamental influence on this society. The changes it causes are not merely bettering our standard of living or understanding, but changing the way we perceive the world about us.

As our values have changed old symbols and systems have become defunct and we require new and better ones to help us understand not only where we stand but the changing society we live in.

The problem of creating products for a society which is changing, has been and is being tackled but as the conditions change so do the requirements. What held true in the 19th century may no longer do so.

During the late 19th and early 20th centuries two architects sought to define the consequences of technology with particular reference to products. R. Buckmiester Fuller saw the development of technology as "a trend towards constantly accelerating change,"* where obsolescence could only be avoided by turning products (as far as possible) into machines where their symbols and styling could not become defunct.

Le Corbusier saw technology, through the city, as man's

*Rayner Banham 'Theory & Design in the first machine age pp. 327

grip on nature. It was his belief that a final type or norm could be arrived at through a series of prototypes, even though these prototypes would involve a high rate of scrapping - the final type or norm would preclude forced obsolescence.

Both of these architects rejected consumerism and individual choice choosing products that were as efficient as they were rejections of human nature.

This thesis is concerned with the development of structures that created planned obsolescence and its effect on society. It deals with America and its development through the first half of this century and is viewed mainly through its automotive industry.

A TIME OF CHANGE

The Industrial revolution produced an acceleration of development and production due to mechanical power. This acceleration, which had never previously been encountered, became one of the main problems of the time, a problem which is still being addressed. The rapidity and complexity of changes, from production to consumption, led to the difficulty of producing suitable products. This problem of suitability covers all aspects of a product's design from manufacture to aesthetics.

Before the Industrial revolution innovations and material developments were slow processes. Products were designed by those who made them. These craftsmen had intimate knowledge of the materials they used, their properties and uses. The 'tools' which were made had a guaranteed market, thus when a craftsman produced a sickle his knowledge of the material and production involved would guarantee a reliable tool. His knowledge of the uses to which the sickle would be put helped him to design a product suitable for harvesting. This relationship between the designer, maker and user was challenged by the Industrial revolution.

As the developments in technology increased, so did the difficulty in reconciling the new materials, products and processes. This was further compounded by the divorce of the maker from the end user.

Not only does the Industrial revolution mark a change in the physical production of products but also in the structure of the production organization. Where previously products were produced by a small number of people for a limited market, now many were producing for the masses. Entrepreneurs who could see a gap in the large markets now became the producers of products. The era of the craftsman as producers for the masses had come to a close. Its passing was lamented by those who understood his importance and the lack of a replacement to design new products. Among those who recognized his importance were Ruskin and Morris. Although both saw the entrepreneur as someone who was primarily concerned with profit often to the detriment of design, their attitudes to design differed greatly. Whilst Ruskin called for a return to the craft aesthetic, Morris sought a new form for new products, though he did not practice what he preached. It was clear to Morris that change was inevitable and he sought to come to terms with these new developments. Essentially he saw a bond between the user and the maker and argued "a happiness for the user and maker."* This bond was to become increasingly stretched and the happiness increasingly dampened as society moved into the 19th century.

Morris saw products as indicative of the society that produced and consumed them, thus he saw products of the time as shabby and pretentiously ugly but did not divorce

*Pevsner The Sources of Modern Architecture and Design p20

this from their production and the suffering it caused.

The end of the craftsman as the essential producer of products was effected by mass production and the need of producers to guarantee standard as a quality. This could not be effected by hundreds of craftsmen producing individual items, as each one would be different if only slightly. The power of the entrepreneur would also be undermined. Boulton and Wedgewood implemented many of the standards which precluded the involvement of the worker in defining the end product. Primarily, businessmen were influenced by what the market could consume and their production capabilities.

The market for products in England up to the 1930's was dominated by the mid and upper classes. It was not until the late 50's that mass consumer markets had a major impact. This was due to the rigid structure of the society which had developed slowly over a long period of time and was resistant to any change that would alter the status quo. Only a radical change of scene could provide an alternative. For this we must look to America.

Although Britain was the cradle of the Industrial revolution, by the turn of the century American patent applications (the pulse of technical developments) had far outstripped those of Britain. At the Great Exhibition of 1851, held in the Crystal Palace, the range and quality of American products surprised the European producers. Among

the greatest of achievements was the development of standardization where the parts of one product would fit another of the same model. This allowed for a greater flexibility in the mass production of goods. The American success was due to its large markets which were comprised not only of the upper and middle classes but also the working classes. The lack of labour in the country forced wages up and elevated the worker to the status of consumer as well as producer. By 1892 it was declared in congress that American was a billion dollar country. The standardization of work methods and the removal of value judgements made by the workers were already underway, covered by the loose term 'scientific management'. As in Britain, this allowed the production of goods which were of standard quality and could be produced in great quantity at little expense. The utilization of standardization allowed such developments as the production line and further, removed power from the worker in determining the nature of the end product.

Developments in the purchasing of goods were also taking place before the turn of the century. When Singer was trying to sell his newly developed sewing machines, he encountered many customers who, although interested, found them expensive. He thus instituted the concept of installment purchasing. Both the concept of standardization and the use of installment purchasing were attempts at increasing the number of products sold, essentially producing a more consumable product.

This increase in products sold was not only due to the techniques in manufacture and sales but consumers themselves were becoming richer. In the period 1920 - 1926 real incomes rose by over 25%. This new affluence was to affect the nature of products as profoundly as the new developments in manufacturing, as the customer could now afford to exercise a choice in the type of product he/she sought.

The ability of a consumer to choose or reject a product or service is the essence of consumerism. It exists only for products where competitive options are available. These options are to be found mainly in the purchase of economically irrelevant goods i.e. goods that are not used to preserve life ; food, clothing, shelter etc. However the impact of consumerism on even these commodities has had a major effect.

The effect of consumerism as a factor in the purchase of goods and thus their production has led to the development of 'sciences,' directly employed to understand the market and its requirements. In large organizations this resulted in planning, a primary requirement in the production of any consumer product, as a company operating in the free market is susceptible to and dependent on the market.

The manufacture of goods for industry and social uses involves the application of technology and the anticipation

of user requirements since these requirements are normally functional. The resulting changes are changes in function. However, the choice of the consumer is open to consideration particular to his/her requirements ; How compatible will this unit be with existing plant, cost, function, etc? The availability of competitors' products and their comparative values will also feature in his calculations.

The ability of the manufacturer to plan for these decisions is decisive in the success or failure of the product. Planning is an attempt to reduce the susceptibility of the product to commercial failure.

As manufacturer's requirements become more complex, as in the purchasing of consumer goods, the 'need' for planning became greater. It is the consumer choice in the free market that creates this need for planning. This is further compounded by a competitors attempt to produce a more consumable product.

The effect of consumerism and technology can be seen in the brief history of the Ford Motor company : more specifically a comparison between the launch of two of its products the Model T and the 'Mustang'.

Although in 1905 the Oldsmobile company were selling about 7000 units of their gasoline runabout, its cars were designed for the wealthy and were operable only on the well surfaced roads of large cities. Ford's Model T on the other hand was capable of being used on dirt tracks and

affordable by those who used them.

The first Model T rolled off the production line in October 1903, three months after the formation of the Company. Their eventual production run was to be determined by the number sold. Although they did not know this number at the time, they felt confident of the Model T's eventual success. This was well founded. By 1927 15,000,000 units had been sold and production plants had opened in Europe. If the project had failed, as Ford's previous projects had, the results would not have been disastrous and Ford would have started again.

Some sixty years later the Ford company launched the 'Mustang' after 3 and a half years lead time. This coupled with styling engineering and tooling up costs of 59 million dollars, respectively required the planning of sales long in advance of the first car rolling off the production line. Although the 'Mustang' sold well, its' failure to do so would have been disastrous for the company.

Because of the rudimentary planning of the model T, parts that performed inefficiently could be substituted without difficulty during the production run. It required few men of much talent to make the model 'T' an ongoing success.

Unlike the model T, the production of the 'Mustang' involved many men with a deep knowledge of specialized

fields to produce the required product. All the planning had to be done before production began as no amount of talent could change a production run "where the wheels turn wrong." * Had this happened the only reasonable recourse would be to have a sample recall, as happened with the Duracell bike light.+

The failure of the Mustang's precursor, the 'Edsel'; was due not to mechanical failure, but rather it's failure as a concept. Conceived years before its production, it entered a market which had changed fundamentally. It was a social and aesthetic flop.

* L.A. Car dealer speaking of the Model 'T'
New Industrial State p37.
+ Some 250,000 units were recalled, at a cost of £9.50 pr unit after the clamping mechanism failed.

NEW SOCIETY

Technology plays a major role in the development of new products and the improvement of existing ones. The implementation of technology requires large sums of money and generally involves a number of people operating with specialized knowledge in concise fields of technology : metallurgists developing light weight alloys suitable for engines. Engineers dealing solely with entropy, hysteresis or areodynamics all are involved in the manufacture of the automobile.

As products become more complex, it becomes more difficult to understand the function of their technical parts. Accordingly, consumers are wary of these new products. Early electrical products and electricity are perhaps most typical of this product category.

Early electrical products were designed to level the output of generating stations. Previously, electricity was consumed at night for lighting and was not consumed domestically during the daytime. This led to a huge demand at night and fall offs during daylight hours.

Because of its intangible nature, advertisers sought to ascribe it intangible qualities; health, cleanliness, and efficiency. All these images were to assuage fears of the new 'electrickery'. The sales strategy was to present products as advertised and thus white products; namely

large electrical kitchen products: fridges, cookers, etc, These products reached their typeforms early in their development and still retain this whiteness long after the need to convince people of their efficiency or their ability to enhance cleanliness in the home. A more zealous role was played by those who told mothers that not having a certain product would seriously reduce her child's success of reaching adulthood in a healthy state. Nevertheless, it must be seen that many of these products whilst not effecting all the advertisers claims, did reduce dirt and thus disease. General awareness of hygiene also helped to bring down the infant mortality rate.

The sale of domestic products relied heavily on their visual appearance and consumer expectation fostered by the advertisers. Accordingly, salesmen could not sell an intangible product, nor could the house-wife buy anything but a physical product. This guaranteed the success of the mobile vacuum cleaner over the central vacuum cleaner. Although difficult to install, the central unit was more economical than the mobile one, but no-one was going to purchase a product they couldn't see on the spur of a salesman, or had not seen advertised.

As technology became more complex, people came to rely on the visual appearance of the product as confirmation of its function. It was not as Sullivan enthused, a fact of

"form follow function"* but quite the reverse : form denoted the function.

With the rapid rise in the number and type of products, manufacturers contrived in educating people to new products. As technical advancements came about, these were packaged within the framework of an existing formal style. With this in mind, Raymond Loewy formulated this approach in his MAYA (most advanced yet acceptable) principle! Many other designers during the thirties sought to mirror this approach. Thus the use of dummy fuel tanks on some motor cycles which, although functionally obsolete, were formally conventional.

More recently, the rise of black box products further compounds our suspicion of technology and its trappings, in which a black box of tricks performs functions that tickle our imagination - products such as video recorders, televisions and stereos. These defy the visual explanation of their function through traditional visual language.

The success of one particular child's toy is perhaps more telling of our conceptions in its success. The 'transformer' range of toys plays with the 'Ghost in the machine,' as we discover technical monsters under the bonnets of cars and the fuselage of planes, just as there were trolls under bridges and ogres under our beds.

*Louis Sullivan

Because of the complexity of technology and the volumes one might consume in understanding all its facets, a visual language helps to explain its function and purpose quicker than the written word. The difficulty with this was that no formal visual language had emerged. The craftsman of the middle ages had become defunct and industry was unable to translate technology into products. A new craftsman for a new age was required.

The early years of this century saw the rise of consumerism in America. This developed healthily along the lines of current economics and the American dream. In the late twenties, annual product updates stimulated sales and was enhanced by the increased ability of the average American to purchase products. However, the over-investment and resultant bloated stock market burst in 1929. The 30's were to prove a depressing time.

This collapse was inevitable with over 9 million investors and touts selling shares on the sidewalk. It provoked an optimism that was returning 12% investments, a profit which gave less headaches and greater return than a day's work. By 1927 the frailty of the bubble was apparent but the complacency of the Mellon Treasury and the lack of an economic model allowed the economy to slide. The Hoover Administration languished through 3 years of depression.

In 1933, America elected Franklin D. Roosevelt - a democrat. That same year he opened the banks that had remained shut for so long. Urging the public 'to go out and buy anything' he began 33 massive employment schemes. America began to stand again, though somewhat shakily.

Roosevelt's economic policy, the 'new deal', reflected America's hope in the future and provided a stimulant for economic recovery. However it was not until 1949 that automobile sales reached 1929 levels. The economic policy that Roosevelt followed had only recently been developed, in the wake of consumerism.

In order to stimulate sales, manufacturers turned towards the visual appearance of their products relying on designers to create an optimism for the future, an optimism with which the manufacturers hoped to raise flagging sales. This hope was reflected in the new streamlining of products. Nowhere was this more effective than in the motor industry.

However the tear drop shape was to prove a limited style as products could only progress so far towards the 'ideal' form, without reaching it or limiting their utility.

By the mid- forties streamlining and the teardrop shape as symbols were becoming redundant. After the war its values as a symbol, but not as a mechanism of sales, were defunct. What had once been a symbol of progress was

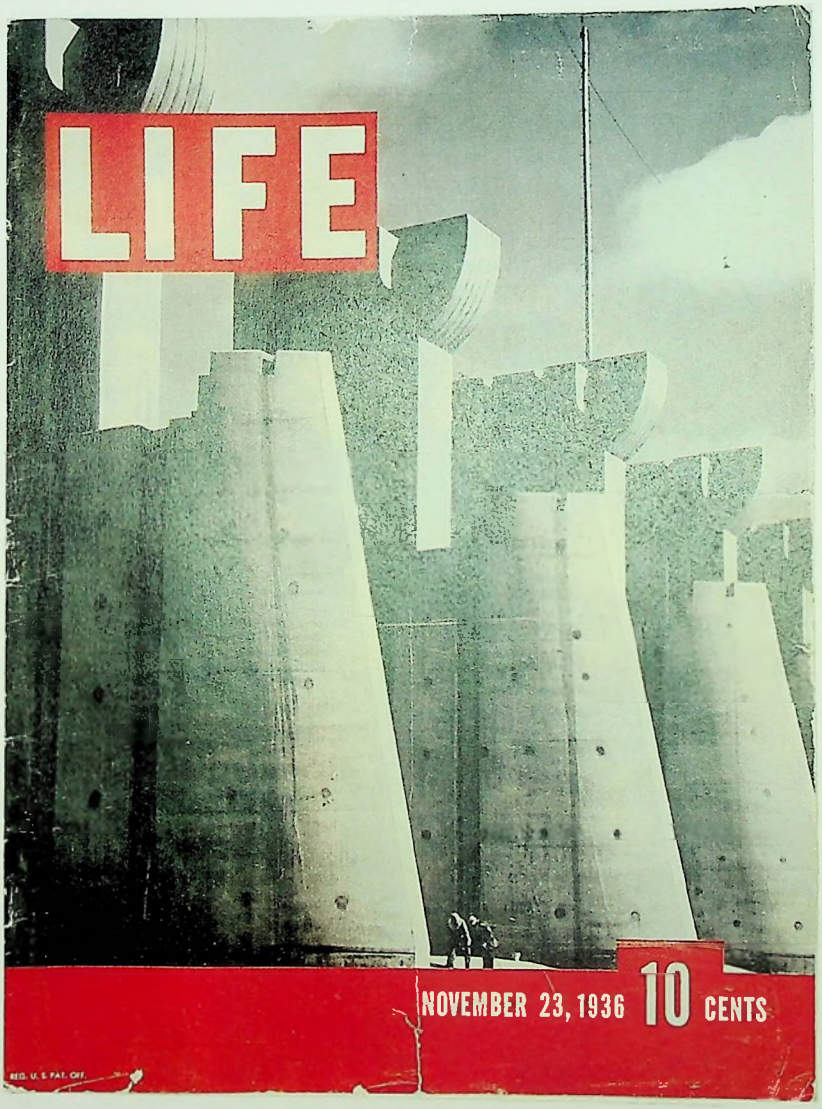


Fig.1 Fort Peck Dam - Mantana, 1936:
A symbol of Roosevelt's new deal

COMPARISONS OF A FEW LEADING AMERICAN INDUSTRIAL DESIGNERS

	Age	Years as Industrial Designer	Previous Experience	Compensations (Royalties are subject to special arrangements)	Staff Members	Typical achievements (starred item is work in progress)	Client Manufacturer
Donner	41	7	University design teacher Free-lance designer	Cost of design department; $75,000 per year	8	Vacuum cleaner Mechanical water Cooler *Air-conditioning units	Westinghouse " "
Dreyfus	29	5	Theatre-sets	Flat fee : $1,000 to $25,000; Hourly consultation : $50	5	Washing machine Alarm Clocks Check protector	Sears, Roebuck Western Clock Co. Todd Co.
Geddes	40	7	Theatre sets and costumes	Flat fee : $1,000 to $100,000 Royalties	30	Gas Range Telephone index Radio	Standard Gas Equipment Corp. Bates Mfg. Co. Philco
Guild	35	10	Art director Furniture expert	Retainer fee up to $25,000; Fee per day $100 to $200; Flat fee : $300 to $25,000; Royalties	4	Refrigerator Cooking utensils *Stoves to roller skates	Norge Corp. Wear-ever Aluminium Co. Montgomery Ward
Jensen	35	6	Artist	Retainer fee : $500 to $20,000	3	Telephone Metal kitchen sink Water heater	A.T. & T. International Nickel Co. L.O Koven & Bros.
Loewy	40	6	Electrical engineer Free-lance advertising	Retainer fee : $10,000 to $60,000; Flat fee $3,000 up; Royalties	1	Motor car Duplicator *Kitchen sink and bathroom units	Hupp Motor Car Corp Gestetner Co. (British) Sears, Roebuck
Sakier	36	11	Mechanical engineer Art director	$15,000 to $25,000 income from design work; Retainers	11	Bathtubs, wash basins, etc. Bathroom units Vacuum equipment	American Radiator & Standard Sanitary The Accessories Co. Schellwood-JohnsonCo
Teague	48	6	Advertising designer	Retainer fee : $12,000 to $24,000; Flat fees: $500 to $10,000	4	Cameras Furnace *Mimeograph	Eastman Kodak National Radiator A. B. Dick Co.
Van Doren	38	4	Painter Ghost writer	Consultation fee : $100 per day; Jobs executed : $500 to $5,000	8	Scales Kitchen grill Paint gun.	Toledo Scale Co. Swartzbaugh Mfg. Co. DeVilbiss
Vassos	35	7	Advertising agency Illustrator	Retainer fee : $12,000; Flat fee : $1,000 to $7,000	3	Drink dispenser Turnstile *Radios	Coca-Cola Perey Mfg. Co. R.C.A.

This list presents ten designers chosen arbitrarily as typical and illustrative.

Fig.2 The New Industrial Designers - 1934

15a

15a

firmly rooted in the past and now existed only as nostalgia.

The symbol of streamlining gave way to a new concept of the future. Conceived in the styling department of General Motors, it was based on development of jet aircraft during the war. It supplanted streamlining as a more modern view of modernity. Employing the same mechanism of streamlining, designers conceived fantastic shapes that became real products. The ability of the manufacturers to temper the stylists creativity with the 'hardnose' of the businessman led to the development of terms that became progressively fantastic as they did absurd, and were considered successful if they sold well. It was as Fuller rightly prophesised the 'discard of economic irrelevancies'* fuelled by 'the growing design blindness of the lay level'.*

The rapid rise in the number and type of products available to the consumer led to a marked change in the way products were designed. These products included any that were bought by the general public, most notably among these were the domestic and automotive products.

The new designers were recruited, not from the ranks of architects but from the illustrators, theatre set designers and art agencies of the country. They were chosen for the ability to visualize desirable products

*Theory & Design in the First Machine Age. P132.
*Ibid.

rather than for their technical expertise. Typical of this genre was Norman Bel Geddes, a theatre set designer, whose book of streamlining 'Horizons' made the concept of aerodynamic streamlining a well known and acceptable one. An enthusiasm for technology was linked to a dynamic concept of progress and an ideal of creating a life for everyone, which through technical advantage, would be materially improved and aesthetically advanced. This attitude was displayed in many of Geddes' products and was fundamental to the success of streamlining as a symbol of optimism for a country that was recovering from economic depression.

The use of streamlining was first employed by designers working in the automotive industry. Its origins stemmed from early experiments in aerodynamics and the development of the teardrop shape. As the manufacturers of other products, mainly domestic, began to adapt design as a facet of sales, they recruited heavily from the motor industry, where designers were already 'trained in'. Sears Roebuck, Kelvinator and Frigidare all employed stylists and designers from the motor industry. Thus the use of streamlining was effected both by the employment of automotive designers and the public acceptance of the form.

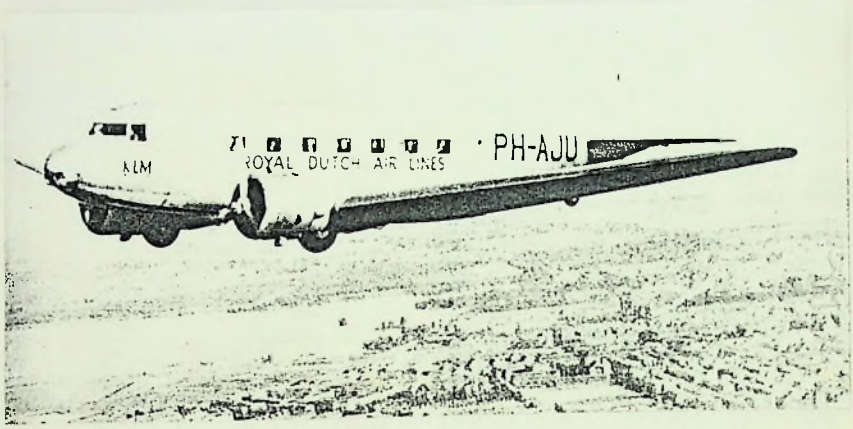
It was during this period when new roles in the design of products were emerging that the divorce of appearance from function became fully apparent. This is highlighted by the difference between designers and stylists. The

former were generally employed to improve the product whereas stylists dealt with the visual appearance without reference to changes in function. At a time when 'design' was seen as a key factor in the commercial success of products, the designers themselves became superstars. Symbols of success just as much as the products they designed became symbols of optimism and modernity and objects of desire. It is perhaps because the products they designed were economically irrelevant that advertisers and illustrators rather than architects were sought to design consumer products, for they had the ability to glamourize what would otherwise be mundane.

Many developments were made during the war but none so telling as the atomic bomb, so devastatingly and experimentally dropped over Japan.

Although the possibility of producing atomic power had been conceived, the problems of getting it into a dropable container were as many as they were great. The achievements of the Manhattan project were previously unequalled and remain a great success in the exploitation of technology.

During the War (WWII) the number of experimental products far out weighed the number of successful products which



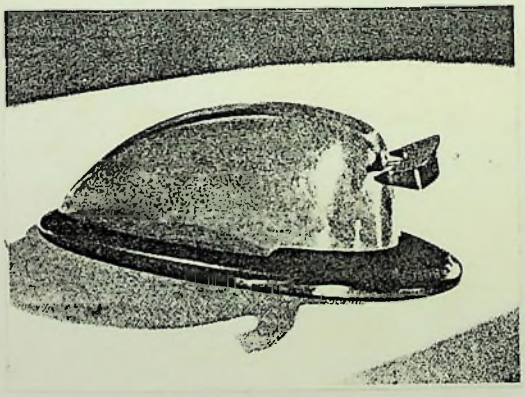


Fig.3 The functional and symbolic uses of streamlining and the teardrop form.

went in to production. It is precisely because governments can afford to develop technically advanced systems and remain solvent that the military remain on the frontiers of technology. The ability of a government to fund research is compounded by the fact that they are selling to themselves.

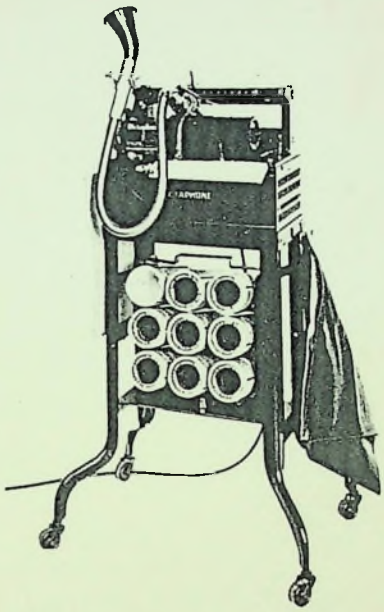
What are characteristics of a technically progressive manufacturer? Primarily, dynamic obsolescence. 50% of all R & D in the science field is spent militarily. The ability of a General to consume more is fed by the governments ability to produce more. It is a question of prestige and more spuriously defense. In a conflict environment, the development of new weapons is increased. As one side produces a new weapon, the other, a counter weapon. The more advanced the weapon the more expensive the counter weapon. A situation that is always progressing, changing, one side always being threatened but never threatening; essentially it is based on fear that we wont have enough and may loose everything.

The absurdity of the situation was that billions were spent on Trident, more on Polaris, a system of weapons whether used or unused are destined to become obsolete. We wont fire ours for fear they will fire theirs and vice versa. Perhaps the only kind of stability we can have in a progressive society is an advancing one.

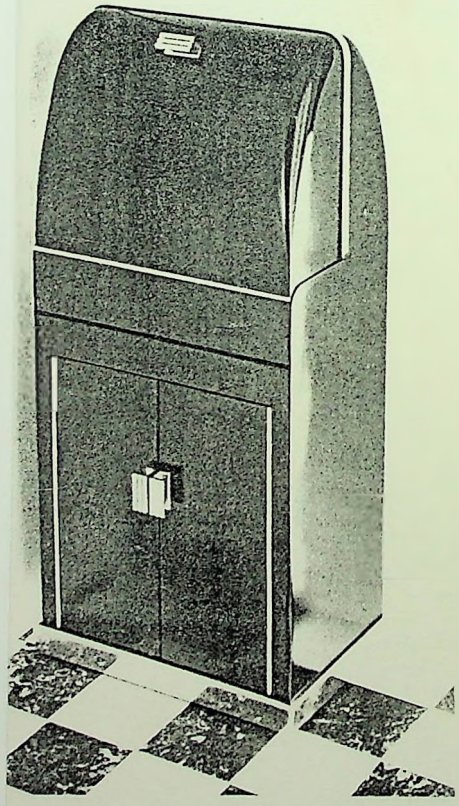
Many manufacturers of consumer and industrial products have divisions that manufacture weaponry for the army,

E V O L U T I O N

It is a matter of general experience that simplicity in design is the result of an evolutionary process. Compare the old and new model of the Dictaphone on this page. In the first example the mechanism is exposed and the shape sprawling and unsatisfactory—the legs recalling period furniture. The neat contemporary model standing firmly on its base and protected from dust or accident is an improvement both in appearance and utility.



The old Dictaphone, Type A, made by the Dictaphone Corporation, New York.



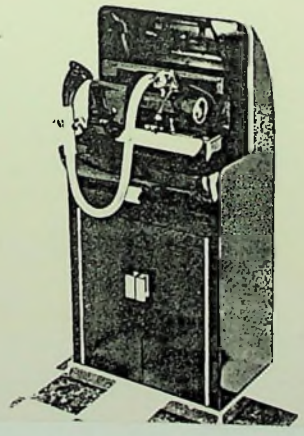


Fig.4 Evolution

companies such as British Leyland, Lucas and General Dynamics. Because of the guaranteed market, expensive research and development projects can be undertaken. The results of these programmes are eventually filtered down to the commercial divisions. It is normally the case that military equipment is more advanced and is subjected to more vigorous demands than commercial products.

The fear of not having enough weaponry is reflected in the manufacturer's fear of losing its competitive edge and ultimately sales. The nature of competition in the military closely parallels that of the major commercial corporations : A small number of powerful manufacturers in competition with one another. This tends to regulate the market, competition is effected in very narrow avenues limiting widespread development.

The main thrust of the military is superiority through advanced technology. This only works where there is parity i.e. both sides are technically progressive. Obsolescence can only occur in a competitive situation where there is a committment to progression.

Since its inception the automobile has remained the product of the twentieth century. Over one in five Americans are engaged in the direct or indirect production of cars. The production and consequently the consumption of automobiles indicates most concisely the state of the American economy. It is to cars that we must again look to understand further developments.

During the 1920's Ford's Model 'T' was the most successful of all automobiles. With the introduction of domestic goods and the influence of styling, primarily due to increased wealth, people began to look for more than the bare bones. Ford's resistance to styling and marketing demands, enforced more by the personality of Henry Ford Snr. than any marketing sense, proved its stumbling block.

By 1927, although Ford were producing over half of all the automobiles sold, its lead was diminishing, as other companies led by G.M. began to whittle away at it's dominance. This was made possible by the progressive attitude of Alfred P. Sloan, elected president of G.M. in 1923. He appointed Harley Earl to design a La Salle car for cadillac in 1927 and thence to take charge of an enlarged styling section.

Earl used this styling section to gradually evolve the streamlined form. This gradual update involved yearly

product changes, each new model being more progressive than the last. This approach made each years new model seem more modern and at the same time tempered the enthusiasm for change with the consumer resistance to radical forms.

Even though the Ford motor company was highly resistant to change, it had to respond to the G.M. challenge. The interval between its model changes began to diminish. In 1927, the Model 'T' stopped production and an all new model 'A' was put on the market. This was followed in 1932 by the V8 and was replaced by a new 'V8' in 1933. The need for novelty was being clearly indicated.

After the war the use of annual model changes and styling updates became de rigeur for manufacturers. As each new model was stylistically more advanced than the previous one, the older model was made seem more redundant than this year's 'all new .....'.

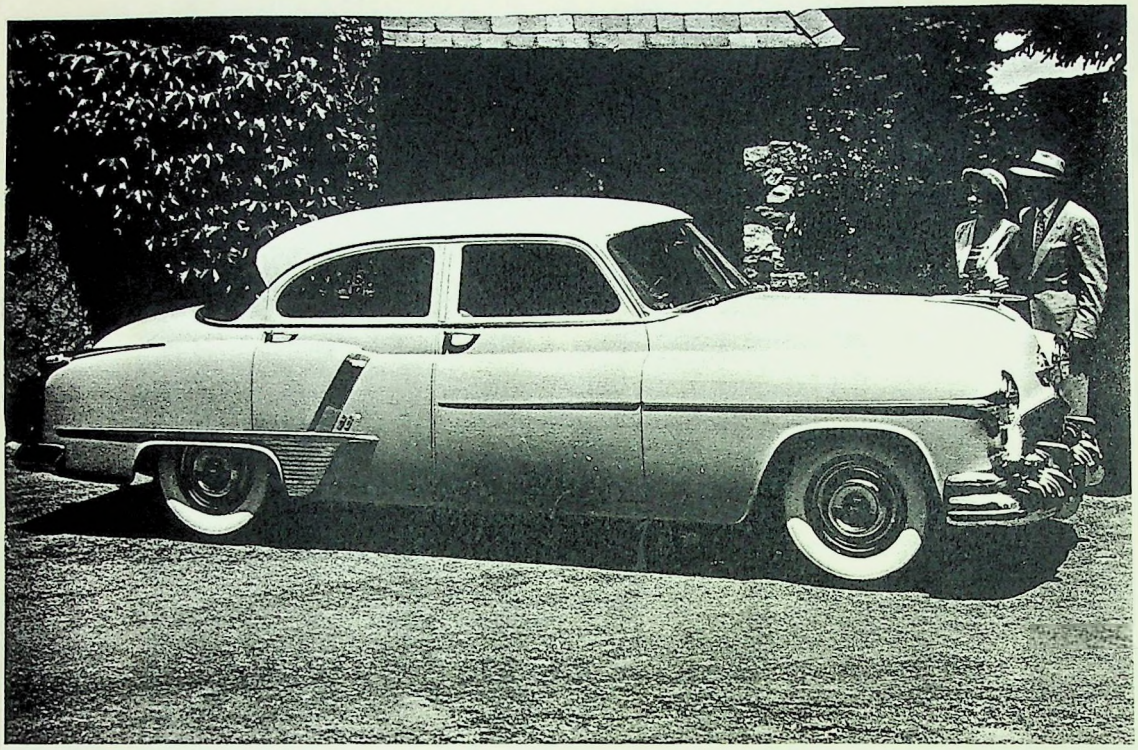
The methods manufacturers employed to effect this redundancy was to attack all aspects of the design and involved making the product technically, socially and functionally obsolete. This was possible because consumers had come to think of automobiles as objects of desire and status symbols. With the belief that the whole country was progressing towards a better future, cars were no longer mere methods of transport from A to B.

Psychologists were employed in an effort to understand the consumer. Discerning that purchases were made based on gratification and novelty, manufacturers sought to play on the excitement of novelty to the expense of the physical value of the product. In order to emphasise the element of novelty, cars were brightly coloured and bedecked with inordinate amounts of chrome. The form was carefully contrived to appear new without being radical.

This gradual evolvement of a final type or norm was enhanced by production methods at the factory. Modular units were produced and parts tagged on to discern top of the range from bottom products. Further, tooling changes were made every other year with styling changes in between, effectively reducing cost, whilst manufacturer's squandered the hoarded loot on advertising and glitz!

Owners of economy models were forced to trade up to more expensive models. The net result of these tactics was the growth of four feet in the length of the cadillac between 1928 and 1958, though people remained the same size.

Technical advances which had been hoarded for years slowly made their way into the cars of the fifties, with timely releases carefully planned in a market where timing and sensitivity were becoming increasingly important. All these advances were portrayed as new developments giving the semblance of progress. The recent introduction of A.B.S. braking systems, was an innovation of the thirties



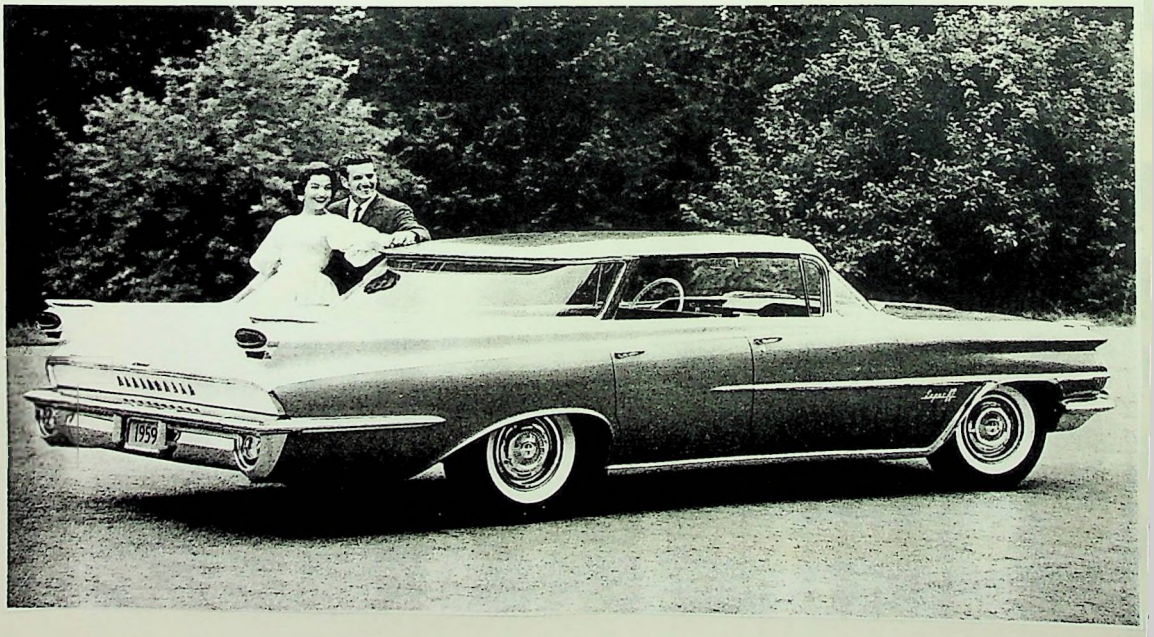


Fig.5 'Four Feet'

and was included on all 'Tucker' cars (a firm crushed by the big brothers of automania). These 'timely releases' were also used in the domestic products of the time. The development of a 'stereo' system for commercial products had been completed by the early 30's though it did not come on the market for almost 30 years. When it did come it was soon surpassed by 3,4,5 and even 6 track recordings. As more advanced models came on the market older models lost the lustre of their chrome and their appeal to their owners. Many of the extra functions so hastily appended began to malfunction as owners traded in their old model for this years. By the mid fifties the average American was replacing his car every third year.

Throughout the fifties G.M. were the market leaders. This was due to its innovative leadership and its styling department chief, Harley Earl. Earl understood the American's optimism in the future and sought to deliver this every year. His product launches to the company executives were accompanied with as much excitement as possible - dancing girls, light shows, and festive drinks were all part of the presentation.

In order to excite the general public, similar presentations were made on television. Concept cars of the future were produced with watered down versions appearing the following year. Earl was showing the public the future they all wanted to be part of.

By 1949 consumer purchasing of automobiles had surpassed the previous high of 29 million units in 1929. Figures continued to grow. Even after the Interstate Highway's Act ear marking 33 billion for building the roads became clogged to such an extent that leisure boat sales rocketed as Americans took to the water. Installment credit grew rapidly and consumer debt went from $27.4 billion (1952) to $42.5 (1956). Automobile installment credit grew by 100% and cars could be bought for as little as $100 and three years to pay.

During this period however, the capacity to consume the same automobile in a hundred different guises was overstretched. The development of the car along the lines of the jet fighter, translating into the fins and rockets of later models, proved to be a confined space in which designers could stylistically progress but inevitably suffered the same fate as the "emperor's new clothes."

By 1957 Ralph Nader's newly launched Consumer Union was receiving complaints that cars were ergonomically inefficient and were in some cases cramped and uncomfortable. Cars had become as low, long and wide as possible, straining the bounds of utility. The Detroit car reached its heyday in the early 1950's. In 1958 riding the crest of Detroit, Ford launched the Edsel, at a cost of $250 million. It crashed against a wall of consumer opposition - the development cost was never recouped.

Fig.6 Soup Kitchen Queue - Louisiana, 1937

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During the time the Edsel was being developed changes had taken place in the market place. Due to a number of reasons people were unhappy with the 'gas guzzling' rocket car. Among these was the oil crisis which threatened the life style of the nation through its wage packet. Economic reasons however were not the only factors which caused this change in attitude.

In 1957 Russia launched the Sputnik and caught America unawares. A poorer country had surpassed the richest in technical achievements. Russia had shattered the American dream through the more appropriate use of technology. This had severe effects on the car industry which relied heavily on imagery and symbolism as a selling point.

Although America reached its peak of consumer spending in the mid fifties, the decline in the economy failed to bring any substantial change in the way products were developed. The emphasis on planned obsolescence to stimulate sales and ever changing designs gave way to an acceptance of transience in which the perceived value, rather that the physical mechanics of the product, became important. People came to rely more on the experience of products for gratification. The exercise of selling enjoyment was primary to the success of Detroit products.

Although General Motors lost its lead in the manufacturing and selling of automobiles in the sixties. This was due to a greater requirement for reliability in the automative market rather than a disdain for planned obsolescence.

The period of the use had increased but people were still going to buy new cars. However, G.M's emphasis on image and its pressure on customers to buy new models more frequently were seriously detrimental to the reliability, quality and safety of its cars.

The effects of these manipulations were to cost G.M. its lead. Their belated reaction to this can be seen in the appointment of a new President Robert Stempel who "admits he's less a stylist than a nuts and bolts engineer." * This reliability is more important to him than glitz... "It's exciting for them (dealers) to see products in their show rooms, they wont have to see back." ** Refuting the use of chrome, the new Pontiac Fiero had none. The use of instant gratification as a sales tool had also lost its lustre. "It's amazing how quick the bloom comes off the shape, amazing how much the chrome doesn't have to shine any more. 'It's I want it to work.'"***

The difficulty with which G.M. had to come to terms with was the life expectancy of the unit in the first owner's hands. G.M. pronounce 'quality' as the successful operation of parts in the first year and 'reliability' as the operation of those parts in successive years. A doctrine founded in the years when people changed their cars every year.

*. Business Week Spt 27th 1987. p.40
**. Ibid.
***. Ibid

The demise of Detroit was hastened by the changing attitudes of the late fifties and the sluggish response of the large corporations, slow to react. This was compounded by an influx of foreign cars, at first Europeans and much more successfully Japanese. The emphasis of both these producers was more heavily directed towards economy and reliability than their American counterparts. This system of corporate structures has led to a stagnation of competitors and development of structures resistant to and afraid of change, a change which is inevitable.

With the production of economically irrelevant goods, producers have had to respond to the desires and aspirations of consumers, the result of which is the production of gratification products. Extreme planning and specialization are needed to produce these products; the result of which is a society where, "individuals are trained for extreme specialization. They are rendered impotent to satisfy their own needs. They depend on commodities and managers who sign their prescriptions for them."*

The complex and diverse fields of science which go to produce those products and the experiences they hold are the result of two hundred years planning. What Architects

* Ivan Illych - The Right to useful employment. pp.96

denied with Loos* is now fulfilled by Coka - Cola : the application of comfort and tribal systems in design, not just the design of systems pertinent to mass manufacture.

The ability of manufacturers to produce consumer items on a global level is severely challenged by these cultural and tribal values.

A product's inability to sell globally in an effective way is countered by its ability to sell well locally, because the products perceived image is important as a selling point.

Product image is carefully construed to project the right kind of image. The power of the product name serves as an impulse to purchasing. "For this reason George Eastman called his camera 'Kodak' because it was 'short, vigorous incapable of being misspelt and meant nothing!"** Before the turn of the century, the importance of brand names was already understood and in 1890 Congress passed the Trademark Act.

The advent of television has led to a greater force in the branding of products. 'The brand manipulates a buyer's perception of the things worth'*** and creates a value added product. 'Take water and sugar....process them into cola drinks and you have a product. Market

*Adolf Loos, a German Architect of the Werkebund period, saw decoration as an evil and likened it to tatooing which he saw as a primitive form of self mutilation.
** The Economist The Year of the Brand. pp96
*** Ibid

them and promote them into Coca Cola and Pepsi Cola you have brands'.* Brands are generally limited in their effectiveness to industrial contries particularly those of their origin. Only one product has a top ten rating in brand imaging across the world : Coca Cola. When Nabisco paid $2.5 billion for Rowntree's last year it was effectively a valuation of the brand image rather than company assets.

Branding a product and creating an image for that product makes it a value added product. Our perception of this product whether it be a Sony or a Coke is changed. In purchasing these products we are guaranteed the satisfaction of our expectations. We do not pay for the physical product but for the image of that product. The cost of producing a cola drink is infinitely smaller than the promotion of the image. The divorce of the image from the physical product has become complete and it is true to say that 'there is more nutrition in a cereal package than its contents if treated in the same way'.**

Just as manufacturers produce consumable products so do service industries. In fact many manufacturers, as do Heineken, see themselves as a marketing company with a production facility. Their products are tailored to meet our desires.

Television is perhaps the greatest value added product, it

* The Economist The Year of the Brand pp97
** Ibid

is the most typical and advanced of service products. 'It is television as an environment that is shaping and reshaping national character and contemporary patterns of thought.'* In the early 50's fewer than 10% of American households had television sets. Within thirty years the figure had jumped to 98% rivalling the use of indoor plumbing. 'Television breaks into two separate modes of communication, visual and linguistic. Visual statements are more direct and more ambiguous, more natural yet less precise than linguistic statements.' This is a key element in its success, because it relies more on a visual language. Its effects are emotional rather than logical. It is thus less demanding.

This is largely what has happened to products. We continue to consume products that are undemanding without understanding how they are produced or the effects of their production. The effect of quickly changing images and stimuli force us to live in a super present, if we only live in this present then instant gratification can be the only release. How am I enjoying myself at this moment?

In '1984' Orwell sees governments controlling the will and desires of the public. Now it seems that we are quite happy to let 'commerce' do this for us, as we are feisted with various types of " ----Speak" with catch phrases such as 'Pubtel', 'Skytel', and 'Super', all of which have developed intensely crass methods of communication

* Josuya Meyrowitz Television Covert Challenge

and gratification through satisfying our needs in the short term. In effect we are only coming to terms with communications technology as consumable products. The rapidity with which programmes become obsolete follows the path of physical products, but with greater speed.

The failure of third world countries to consume our products is testament to the distance we have come. Even in the application of alternative, intermediate or appropriate technology production does little, other than "hot house" mass production in certain areas, rather than produce a better standard of living in general. The ability of other cultures to implement first world detritus in ad hoc design projects is contrasted by our inability to do anything but throw out a broken product. The impact of our culture is contagious and is well exampled by the "Cargo Cults" that sprang up in the wake of Captain Cook's explorations, cults that are still in existence today.

The failure of consumer goods to impact significantly on developing cultures is due to their lack of affluence. Their requisites for basic human needs precludes the purchase of luxury goods, except perhaps those products whose importance as status symbols outweighs their cost. Ivory soap, a mercury based product, that whitens the skin and is exported to Africa from Ireland, is one such product whose importance as a status symbol seems to outweigh its toxicity.

CONCLUSION

The impact of technology and its implementation has affected society, deeply. The division of labour and its consequences has produced a system whereby we are dependant on the techno structure without really understanding the systems that preserve our society. In the development of products we have come to rely on a visual language that could explain in general terms our culture. By imbuing functional products with this we strove towards an ideal state. As society changed and the symbols became defunct we turned to other symbols. This attempt created on obsolescence we now thrive on.

The rapid changes in technology are quick to, and are easily seen to, affect products such as computers, but its affects are more covert as we have come to recognize change as a facet of life whilst we try to stabilize it but are unable.

By divorcing production from the product, the physical from the ephemeral; the problems of production and its effects are dissolved; the product becomes an experience.

In rejecting the methods of production and the qualities of production, companies have sought to capitalize on our desires. However, for a commodity intensive society we depend on systems, such as computers, transport communication etc. These systems must be above forced

obsolescence and engendered with reliability and quality. The B.R. crash at Clapham junction was due, by British Rails own admission, to an overemphasis on service to the detriment of safety. Many other services and manufacturers are feeling this requirement. Recent recalls of Boeing aircraft and silicon chips for repairs and replacement are testament to the requirement for quality and reliability.

These effects are an attitude, not edicts of large corporations or dictators but of the public who are beginning to question the effects of physical products planned for obsolescence.

The change in General Motors perception of reliability as a selling point was brought about by the public attitude that they relied on transport as a functional item, not just a show piece. This change in G.M. is being effected by a break up in its corporate structure, giving individual parts of the company a responsibility they had not shouldered before, and an ability to influence the end product. This creates a greater input for the design, and uses the production line worker as a quality controller. By involving everyone in the production and its processes, we will better understand the technostructure and its systems.

The production of suitable products and systems has always been effected. Whether it was Detroit cars or Victorian

Follies they were always consumed. With the changes in society these products became outdated as we 'progressed!' Planned obsolescence was the consumption of an image that was bought on the never never. In using credit to purchase systems we are fuelling further obsolescence, even in its simplest form ; we discard packages, wrappers, cans and bags - all exceptable as waste products. For the time being we must accept a level of waste as it is a necessary facet of a consumer society.

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