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The Development of Generic Product Identity in *Popular Mechanics* and *Work* Magazine, 1900 - 1930.

By

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TABLE OF CONTENTS.

List of Illustrations.

INTRODUCTION.

INTRODUCTION.

This thesis will deal with the development of the generic product identities of domestic household products as portrayed in the magazines *Work* (1902 - 1913), *Popular Mechanics* (1927 - 1930) and with reference to *The Junior Army & Navy Stores Limited catalogue* (1912).

This collection of books and journals came into my possesion last year. They previously belonged to Mr. Lingard from Wicklow town, Co. Wicklow. While doing some renovation work for Mr. Lingard it was noticed that he was disposing of this large collection of design related material which was aquired for ten pounds. These magazines and journals showed the development of domestic house hold products from 1900 to 1930 and they contain many articles on the subject of the development of products at their respective issue times. It was the discovery of this material which influanced the writing of this thesis. There were many other books in the collection which could have been used but they were too technically based, concentrating on the mechanical engineering of products rather than on the novelty and promotion of new products. The *Junior Army & Navy Stores catalogue* was chosen as reference because of the large number of illustrations it contains of early domestic products and also because it was a world wide operation.

The magazine *Work* was published by Cassell & Company, Limited., London, Paris, New York & Melbourne. It was advertised as an " Illustrated Weekly Journal For Mechanics" and cost one penny. The most important information contained in this magazine in relation to this essay is that of the advertising. Although the magazine was published in London it had offices in Paris, New York and Melbourne so the information contained is that of an international perspective.

The magazine *Popular Mechanics* was published by H.H. Windsor, Jr., 200 E . Ontario Street, Chicago, U.S.A. It was sold for 25 cents for each issue or $2.50 for an annual subscription. It concentrated on new technological developments which were taking place at the time of each publication. It is an important and useful magazine in that it discussed not only the technological developments which were taking place but also the design of objects. This is unusual in that it discussed the aesthetics of objects before the design was considered to be of any great importance. It is a magazine which is still in publication to this date.

1. Junior Army & Navy Stores building D'Olier Street, Dublin, 1913, From, Harrison & Sons, *Junior Army & Navy Stores catalogue,* London, 1913.

The Junior Army & Navy Stores Limited Catalogue was a catalogue which was produced for the Junior Army & Navy Store which was at 21 - 22, D'Olier Street,

Dublin. It is a catalogue which contains absolutely everything that a person could wish to buy. It has illustrations of everything which was available at that time (1912) with descriptions. You could buy anything from a car to a kitchen stove using it. These two journals and catalogue will form the parameters of this essay. Domestic products which we are familliar with today gained there generic product identity during the period between 1900 and 1930. The generic development of products can be broken down into three major phases of development. The first stage of their development was the period when they first appeared on the market as inventions in forms which were denoted by the products functions. The function of the product and heir labour saving abilities was what was considered all important to the consumer. Products during this phase were promoted as new inventions which could save labour by manufacturers. The next phase was the improvement of these products by manufacturers through addition of extra functions. The reason for the addition of these extra functions by manufacturers was in order to improve sales.

The general form of these products did not change but they became more and more complex to the extent that many of the ordinary consumers no longer understood these products. The third phase in the development of domestic products is the change from function to form. Due to the over complication of these products concentration changed by the consumer from the function of the product to its form. Consumers now when buying products bought them by their form which for consumer now denoted the products function. This lead to the final formation of a products generic identity. This thesis will show how each of these three phases affected the formation of generic identities. This will be completed by

concentrating on the American market between 1900 - 1930 with reference to the British and Irish markets. The reason for the concentration on the American market is that it is a market which developed relatively unaffected between 1900 - 1930 into a successful consumer market. Where as the British & Irish market places also were developing they did not have as developed a system of production as the Americans. Also even though America took part in World War I it was not nearly as much affected as Britian. To show how products gained their identity, where these products originated from will be examined. This will involve looking at the era of the inventors and patent crazy society which occurred between 1865 and 1915. The marketing of these objects as labour saving devices. The consumer market which was available for these labour saving devices and the public perception of them. The aesthetic which was applied to these products when they first appeared in the market place will be looked at as will the technology which was contained within them.

What happened when competition increased due to the wearing off of patents will be examined. How the manufacturers responded to this increase in competition by the addition of extra functions to their products. Also how then people began to relate to the form of objects as confirmation of their function as their functions and operation became more and more complex. Looking at how the manufacturers endeavoured to educate the general public so that they could understand these objects and create a need for more advanced products.

The advent of industrial design and the events which sparked the development of industrial design. The immediate effect that the development of industrial design had on the styling of products and the change in concentration from function to the

form of objects. The relationship between the development of generic product identity between 1900 - 1930 and the design process which is used to develop new products for the maket today, also discussing the exceptions to this rule. This period of 1900 - 1930 is one of great importance to the industrial designer as developments which took place during this time lead to the development of industrial design and the development of the design process. A large number of the products which we are familliar with today gained their generic identity between 1900 & 1930. These products took many years to reach their generic identity from being first launched as new concepts, the process by which these products developed over a long period of time is used in a much condensed form today. When a product is being launched for the first time it is the job of the designer to ensure that the product sets its generic identity. It is also the job of the designer to understand existing generic product identities when redesigning products and to recognise and use the strong points of the generic identiy to their advantage thus helping to develop a products identity inorder to make it easier for the user to use and acceptably aesthetically styled. It could be argued that a products generic identity is constantly in a state of flux and this is true to a large extend for styling details, but it also must be remembered that the overall form of these objects rarely changes.

The reasons as to why there is such a thing as a products generic identity will be examined in this thesis and why a generic product identity was developed for objects whose function did not force one upon them but rather had one developed. The main concentration of this essay will be on the information which is contained within these magazines any further historical information will be mentioned in order

to give context to the information or topics which are being discussed.

Chapter 1:

INVENTION, OBSESSION & THE AMERICAN INDUSTRIAL BOOM.

Invention, Obsession & The American Industrial Boom.

This chapter will examine the era of the inventors and the patent obsessed society which occurred between 1865 and 1915. How this along with the American industrial boom influenced the accelerated invention and development of many new products. I will also be examining how these products looked, functioned and the way in which they were advertised.

2. Ever Ready Electric Torch, from advertisement, *Work,* Vol. No. 702, August 30 1902, p 127

When looking at advertising contained in the 1902 editions of work magazine one can start to imagine the huge amount of interest in, and number of products which were reaching the market place for the first time. For example there is the 'EVEREADY' electric torch which is advertised as having being used in war to great success and is now available for the public to buy for the first time. There are

several patent offices advertising their services in all of the magazines editions. One such example is that of J.B. Fleuret, 5, Hatton Garden, London, E.C. who advertises " Patents & Protections For Inventions, Low cost. Pamphlet free. Inventors Assisted. Patents and trade marks secured in all countries,(*Work,* 1902, p. 63). Not only are there patent offices advertised but there are also books advertised on how to patent inventions. One such example is that of the advert by F. Cassell which reads "How To Patent An Invention., A book, giving full particulars, cost, etc., free from F. Cassell, Registered Patent Agent, Crown Chambers, 9, Regent Street, London, W. Advice Gratis," (*Work*, 1902, p. 63). There are even items of clothing advertised as being patented, for example you could buy a pair of " Southhalls Patent Boots," (*Work,* 1902, p. 16).

One can only imagine the extent of American concentration on patenting and invention since it is recorded that at the turn of the century American patent developments had far outstripped those of Britian. There are many reasons why America was so far ahead of Britian in terms of general industrial development, some of these are as follows : America had a the system of interchangeable parts and mass production before the British. This resulted in the fact that the Americans were able to produce goods faster and to higher quality than the British. The fact that there was an over supply of people who were willing to work in Britian resulted in low take home pay for the working class. The result of this was that the ordinary British worker had less disposable income and required every penny they were paid just inorder to survive. So any company who tried to produce products for mass consumption could not succeed because there was a lack of a large consumer base.

Where as in America the situation was the complete opposite, due to a huge lack of labour the wages which were paid to American workers were substantially higher than those paid to their English counterparts. This left most American workers with a substantial disposable income.

The fact that these American workers now had this disposable income mean't that they could buy products other than those needed for survival, thus creating a large consumer base. The products which they were patenting, producing and developing in Britian were of a far less sophisticated standard than those of the Americans. In fact at the turn of the century American patent developments had far outstripped those of Britian. The quality and range of American products surprised their European counterparts. In 1851 as a result of the Great Exhibition in London the British became aware of the new methods of manufacturing which were being established in America. These new developments were characterised by standardisation of products, with interchangeable parts and using powered machine-tools in a sequence of simplified mechanacial operations. These products produced by these new production methods because of their simplicity were cruder than products produced using traditional methods and of inferior quality. Thus these new production methods when made available to the British business men were rejected. Another factor was that the British workforce was highly skilled whereas the American work force was not. This might seem a strange point to make as to why the Americans were ahead of the British, but the reason is simple. The new 'American System' (HESKETT, 1980, p. 50), as it became known of mass production was more suited to unskilled workforce carring out simple single tasks whereas in Britian many of the craftsmen when producing a product carried out all

the tasks. As Samuel Colt noticed to teach an unskilled worker to carry out one single simple task was far easier than to unteach a skilled craft worker who was used to carrying out all of the tasks. Although the British took note of these developments which were taking place in America the only significant place that these new methods of manufacture were used in Britian was in the production of armaments at the Lee Enfield factory in 1853. As John Heskett states:

> *A British commission investigating the American system in 1853 noted 'the dissatisfaction frequently expressed in America with regard to present attainment in the manufacture and application of labour -saving machinery, and the avidity with which any new idea is laid hold of, and improved upon...*(HESKETT, 1980, p. 53).

So with a culmination of all of these factors it is understandable why America was so far ahead of Britian and the rest of the world by the begining of the twenthieth century. Also by this time people such as Edison had been made into national heros and as with most societies many people decided to follow his example and themselves became inventors.

In this new found wealthy American society there were new products appearing at a tremendous rate. These products were launched into a wealthy consumer driven market and inevitabily were succesful. Many of these products which were developed were those of household domestic products. These domestic products were developed in order to take Some of the druggery out of house hold chores. Items such as refridgerators, cookers, lawnmowers and ventilating fans appeared on the market and even though they were inefficient, dangerous and expensive, many people purchased them. They were marketed as labour saving devices which

seemed to work effectively as many of these objects were sold. In the *Popular Mechanics* magazine there are several articles which are under the general heading " To Save Work In Your Home ". These articles promoted the use and sale of new inventions to the general public. Examples of objects which are promoted are those of electric cookers, storage units, electric vacuum cleaners, electric irons, electric blankets etc.

3. Labour saving article from, *Popular Mechanics,* 1931, p. 991.

These objects were styled in what many people refer to as the machine aesthetic. They were often very crude and very dangerous with many moving parts exposed. There controls were confused and their shape and form did not in many ways reflect their function. They often had floral motifs embossed into them and in many ways

their design often reflected the furniture which surrounded them. To look at these objects one could almost think that there was no design input in their styling. It seems as if these objects were manufactured so that they could function and then placed into a wooden or metal box with no design consideration. It is easy to come to this conclusion when thinking in a nineteen ninties context but the actual fact is that there was in many cases a considerable design input placed in the styling of these objects. The reasons why there was a considerable design input is best explained by Peter Dormer in his introduction to the book, *The Illustrated Dictionary Of Twientieth Century Designers* . In that book he writes:

> *Occaisionally designers do invent but generally design follows in the wake of earlier traditions, styles and fashions. Early railway locomotives looked little more than water-pumping machines on wheels and the carriges they drew looked exactly like the stage coaches that they were replacing. This was not just because of the limited technology and skills available at the time; it was essentially because the imagination of the designers concerned could not-as our own imaginations cannot-stretch much beyond the known. Not even Henry Ford, the great American automobile designer, could make the mental leap from a Model T to a streamlined saloon without the running boards. Like everything else, design evolves. Of course , from time to time, designers, flirting with the most recent developments in late 20th century art, experiment with "outrageous" design - especially in furniture and interior furnishings. But the price the designer frequently pays for this is to be ignored by the consumer* (*The Illustrated Dictionary Of Twentieth Century Designers,* 1991, p. 10).

This quote helps to explain the early styling of products. In that what the designers had to work from in terms of evolutionary design was that of furniture, ceramic and or architectural design. When these new products appeared for the first time it was obevious that the designers when commissioned to style them used the design that they were familliar with; this was the design which already existed and had

evolved. As mentioned this evolved design was that of furniture etc.

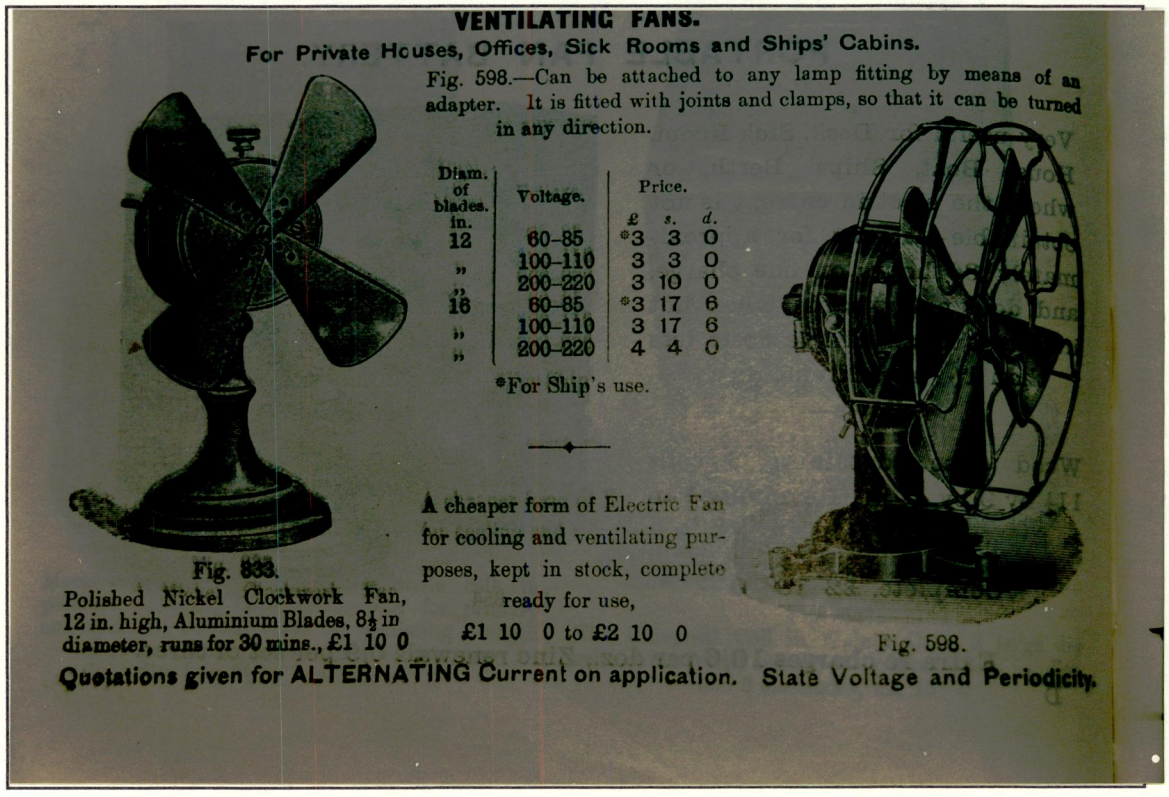
A concentration on furniture design and styling seems only natural for these new domestic products as they were going to be placed into the same environment as the furniture. It is not unusual that new products such as cookers, telephones, electric heaters, radios etc. in there styling were given the same attributes as there surrounding objects. This would seem like the logical approach to follow.

Cast electric heaters were styled with ornate flower patterns cast into them and beared a strong resemblence to their gas predecessors. Radios were placed into large wooden boxes -which resembled the furniture that surrounded them. Cookers were placed up on legs which resembled those of cabriole chair legs. Cars looked like advanced horse drawn carriages and items such as lawnmowers strongly resembled horse drawn ploughs. These items had no predecessor or generic form that the designers could work from and evolve. They in their design of these products were starting with a clean white page and no preconcieved ideas of what forms would be appropriate for these products. So to find a start point they looked either at the environment, function or use of the object. They found some other object either in the environment or with a similar function and proceeded to apply a similar design aesthetic to the new object.

This was the case for much of the design of this era but there were two other exceptions to this rule. These exceptions were when the objects function denoted its shape and when the strong marketing of a service or object denoted a particular shape or form.

An example of an objects function denoting its shape or form is that of the electric fan. In order to function the electric fan has to have a blade which is much more

sizeable than the components which are required to run it. These factors when placed together pointed strongly to one particular solution. This solution arrived at was that of placing the blade with driving motor on top of a large stem inorder to give clearance to the blade. Designers quickly arrived at this solution and the generic identity of the electric fan was formed.



VENTILATING FANS.

For Private Houses, Offices, Sick Rooms and Ships' Cabins.

Fig. 598.—Can be attached to any lamp fitting by means of an adapter. It is fitted with joints and clamps, so that it can be turned in any direction.

Diam. of blades. in.	Voltage.	Price. £	s.	d.
12	60–85	*3	3	0
,,	100–110	3	3	0
,,	200–220	3	10	0
16	60–85	*3	17	6
,,	100–110	3	17	6
,,	200–220	4	4	0

*For Ship's use.

A cheaper form of Electric Fan for cooling and ventilating purposes, kept in stock, complete ready for use,

£1 10 0 to £2 10 0

Fig. 598.

Fig. 833.

Polished Nickel Clockwork Fan, 12 in. high, Aluminium Blades, 8½ in diameter, runs for 30 mins., £1 10 0

Quotations given for ALTERNATING Current on application. State Voltage and Periodicity.

4. Early electrical fan from an advert in the *Junior Army & Navy Stores,* 1913, p. 630.

An example of effective marketing influancing the generic identity of object is that of the early marketing used to sell electricity. Early electrical products were designed to suit the output of generating stations. Electricity was consumed at night for lighting and not used during the day. This led to huge demand at night

time and low demand demand during the daytime. In trying to persuade the ordinary person to start using electricity an advertising campagin was started. In this campagin advertisers ascribed the new "electrickry" qualities because of its intangible nature, some of these were health, cleanliness and efficiency. Images were used to prevent fears of the new electricity. Products were presented and advertised as white products. This whiteness was used by the product designers in the design of electrical products. This whiteness has been retained ever since and has formed a strong part of the generic identity of household kitchen products. It formed such a strong impression that these products are now generically branded as being white goods.

In terms of competition in the market place in the early ninteen hundreds it was relatively relaxed. Many of the new products which appeared had patents taken out on them. This resulted in the fact that the competition in America was low in the early ninteen hundreds. Also in America there was a large wealthy consumer base which could afford easily to buy these new labour saving devices. The American income was growing rapidly each year in real terms and the consumer market was becoming stronger and stronger.

In Britian at this time the markets as already mentioned were controlled mainly by the aristocracy and upperclasses. Whereas in America the idea of stores in which the ordinary person could walk of the street and view the goods had developed. In the UK. there was a completely different scene. In the large cities such as London, Dublin, Glasgow and Belfast there were many shops in which you could buy these new products which were becoming available. But in many cases the people who could afford these new products lived outside the towns in large country houses.

They tended to purchase these products by catalogue. An example of one of these catalogues is the catalogue which I have already mentioned, the Junior Army & Navy Stores Limited.

The Junior Army & Navy Stores Catalogue was a typical example of the catalogues which were distributed to the Gentry. You could buy anything from clothing to a car using these - Catalogues. The copy of the Junior Army & Navy Stores catalogue which I am using for reference in this essay was optained on loan from the Maher family, Ballinkeele House, Ballymurn, Enniscorthy, Co. Wexford.

5. Early lawn mower illustration *Junior Army & Navy Stores,* 1913, p.1156.

They were an example of the type of people who used such a catalogue. At the time of issue of the catalogue which was ninteen thirteen the Mahers were M.P's. They lived on an estate in a large Georgian House with a number of servants. Instead of travelling to Dublin to purchase items which they required would look

through this catalogue choose an item and have it delivered. So what proved to be more important to families like this when purchasing objects was the way objects looked as they were going to purchase the object from only viewing it in the catalogue.

All they had to rely on was what the nearest neighbour had bought and the illustrations with captions in the catalogue. An example of a group of objects which could be purchased from this catalogue is that of lawn mowers. One of the adverts for a lawn mower is pictured above. It is reputed to be the first motor driven lawn mower to be brought out on sale. As can be seen from the advert the lawn mower looks like a very complex dangerous piece of machinery. It's form has been copied from that of the earlier harvesting machines. It is an example of an object which has had no forerunner and where the designer has looked at the nearest object whose function is closest to that of the new machine. The object which the designer has been influenced by is that of a hay harvesting machine which was horse drawn. Elements such as the seating arrangement, steering mechanism and the use of chains have been copied from the hay harvester and incorporated into this new lawn mower. In the catalogue the lawn mower is advertised as having a reputation for simplicity, compactness and ease of handling. From the illustration the lawn mower looks to contain none of these qualities.

The listing of these qualities also probably did not interest the prospective buyer as much as the part of the advert which was listed below. In this part of the advert the prospective buyer is informed that over five hundred machines were sold and that the mower is in use in the grounds of the H.M. The King, H.R.H. The Duke Of Connaught, H.H. The Grand Duke Michael Of Russia. It is this information

which probably would have made more of an impact since the buyer often was the person who would not use the mower and would strive to purchase a mower which was suitable to their social class. This advert demonstrates the fact that the consumer market was controlled by the upper classes in Great Britian & Ireland at this time. It also demonstrates that the form of the lawn mower had importance since the lawn mower would be purchased without the buyer seeing how well it actually did function. The first time that the buyer would see the lawn mower was when it was delivered to their home in which case it had already been paid for. This was a typical example of how the British market operated and how these catalogues were used.

In this chapter how products were appearing on the American and British markets has been examined. Also the main differences between these two markets and the products which were appearing on them and where the forms of these new products originated from. Other areas looked at were how people who were designing these new products used the forms of existing evolved products and applied their attributes to these new products. Examples such as the first electric cookers which had the attributes of the surrounding furniture applied to them. How people in the U.K. and America purchased these products and which classes in society purchased them. The way in which they were marketed as labour saving devices used to "avoid home drudgery" and the effect these adverts had. In this chapter the first appearance of these new inventions, the background behind these inventions and the reasons for there preliminary styling has been examined.

It is important to have this information when trying to understand the

development of the generic identities. As with every object in its preliminary development there were parameters which influanced its first form. It is also important to understand that although it is the form which is being examined throughout this dissertation the early forms of these objects although valuble were not in most cases the reason why the general public purchased these objects. The reason these objects were purchased was as they were marketed i.e. in order to save time. This whole idea of saving time was becoming more and more important as the amount of time people had, was as society changed becoming smaller and smaller. People were now working more regular hours with less free time to carry out house hold chores. People also purchased these objects because of their function and the idea of buying one of these new products just because it looked exciting or interesting as was done with items of furniture or china was relatively unheard of. Also the general understanding by the public of how these objects worked was quite good as these objects were crude.

Chapter 2:

THE ESTABLISHING OF GENERIC IDENTITIES & ADDITION OF FUNCTIONS.

The Establishing of Generic Identities & Addition of Extra Functions.

This chapter will examine how these products developed from the raw state which they first appeared on the market. Looking at how some of the examples mentioned earlier developed as products and how their generic identity was further established. Also the addition of functions to these objects as a way in which to improve sales and the way in which the ordinary person greeted these new functions. The education of the ordinary person by these companies in order to create a need for these extra functions and the way in which the people reacted as these products became more complex. Ideas such as the education of people through advertising. Also the effect of the first world war on the development of products in both America and Britian.

Up until World War I products developed relatively slowly with product development in America being in advance of that in Britian. But with the drawing closer of World War I product development especially in the military sectors began to accelerate. This reached a stage when Britian was glad to go to war to test all their new military toys which had been created. It was this war which was to drag the Great Britian into the twientieth century changing the way in which society was structured thus creating a consumer society. What caused this change was that the British had not accounted for the development of these new military machines in the warfare stratagies which they put into action on the ground. War had changed to a great extend with such developments as the armoured tank. This resulted in thousands of young people being sent to the front lines at which they were slaughtered. The aristocracy whom were always given the commanding roles in the

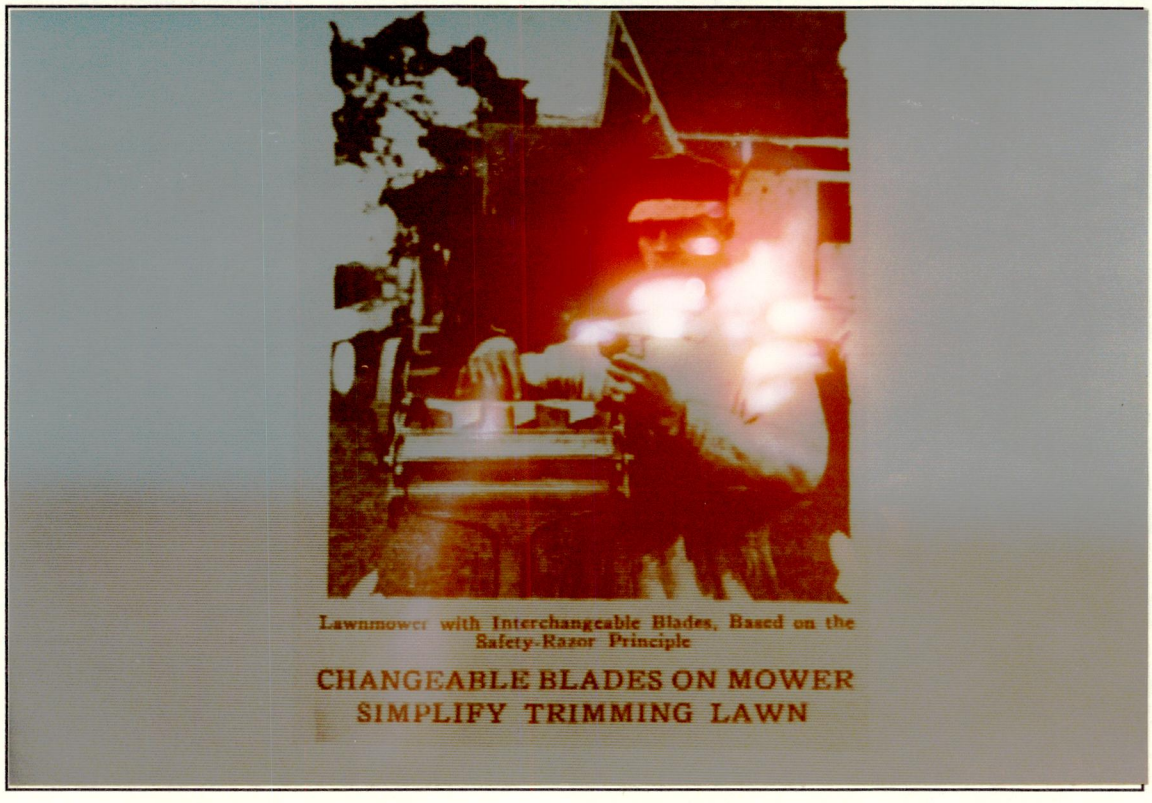
military made of mess of things resulting in even more losses. The end result was the begining of the end of the British empire and a devestated Great Britian and Europe. The aristocracy had lost much of their power and wealth and the country had to start into a huge phase of rebuilding. Another big change was that more and more women had been forced to take up jobs in factories in order to produce weapons for the war effort. The result of this was that while the men were at the front lines the women were experiencing working in industry for the first time. So when the war ended women were not happy to return back to their jobs as housewives but rather wanted to be earning money for themselves working in industry. Proof of this was the founding of The Women's Engineering Society in (1919) and the Electrical Association for Women (1924)(Domer, 1991, p. 20). With more and more women in industry this left less time for traditional household chores to be completed. This created a need for quicker more efficient ways of completing these household chores. So products such as cookers vacuum cleaners etc. became more and more in demand. Also with dual incomes the ordinary British public could afford to purchase more of these objects.

Whereas in America although involved in the latter part of the war they did not directly experience its traumatic effects. America it would be reasonable to say actually benefitted from the war. Americans were able to continue the development of products right through the war and its consumer market continued to develope relatively unaffected. In Britian the consumer market during the war practically disappeared with people finding it difficult to obtain food in order to live. Also in Britian factories which were capable of manufacturing products had their machines used to produce items such as weapons in order to help the war effort. Another

form in which America benefitted was that of financially since it gave huge sums of money to Europe to help in its rebuilding and charged interest on it.

One of the main benefits from the war in both countries was that through military needs products were developed to a higher standard and the engineering abilities and mass production of goods development was accelerated.

With these changes products which appeared on the market before the First World War as crude prototypes now started to be improved upon since manufacturing and engineering had improved immensily. Also many patents had been relaxed or dropped so there was more of an open market inviting competition. Manufacturers now in America decided in order to improve sales and fight competition that they would start adding extra functions to the objects which they were producing.



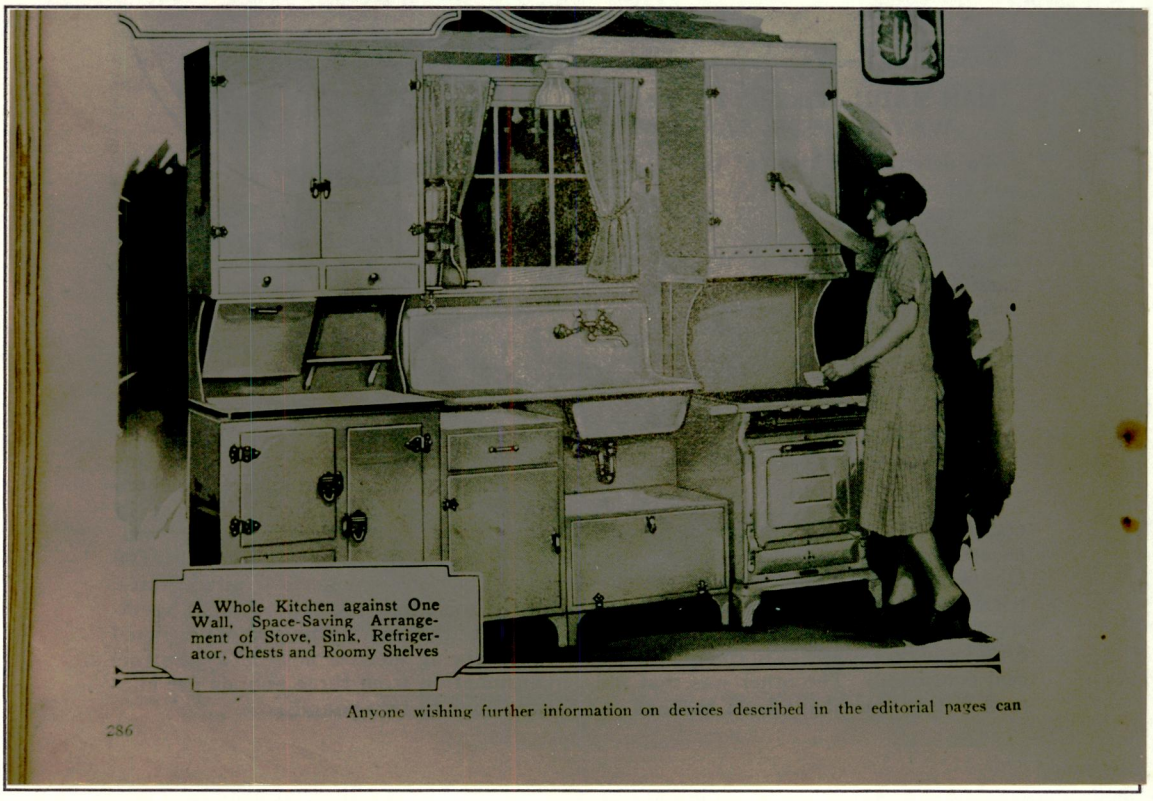
6. Lawn mower with interchangeable blades from *Popular Mechanics,* 1927, p. 423.

This in turn started to make these objects more and more complex but it was a plan which seemed to work. Also America had now entered what was to become known as the roaring twienties in which the ordinary working class person was far better off than ever before and had a sizeable disposable imcome to spend on these new improved products. In the period between 1920 and 1926 real incomes in the United States rose by over 25%. The objects started to improve in their efficiency and aesthetically but the concentration in the design of these objects was in the addition of extra functions rather than aesthetics. Patents were being taken out on improvements to these objects. Designers when redesigning objects were also starting to look at other objects which were closely related for ideas. An example of this is in the 1927 edition of Popular Mechanics where a new lawn mower with interchangeable blades is being looked at. In this article which comes under the heading of " How To Sell Your Invention" the designer of the new lawn mower freely admitts that the idea for this new lawn mower with interchangeable blades comes from the safety razor principle. The article states that:

> Marking a radical departure from the ordinary types, a lawn mower now on the market has interchangeable blades which may be disgarded and replaced almost as easily as those of a safety razor. There are thirty-six on the twelve inch model cutter , each being a small square of stamped steel. They are fastened in six rows, extending around the revolving unit and present a solid cutting surface (*Popular Mechanics,* 1927, p. 423).

This new lawn mower even though it has a new operating system looks identical to its predecessors. The only difference is in its function. It is this new function which the manufacturers expect to sell this product. Other examples of where manufacturers included more functions into products was in the domestic

environment. The overall look of cookers remained the same as the first cookers which were brought out in the period before the war. These cookers remained aesthetically the same with more functions being added to them in order to make them easer to use and more efficient. This was especially the case for gas and electric cookers. In some cases the cookers whose design originated by copying the furniture in their surrounding environment now influanced the design of the surrounding environment including kitchen units etc. An example of this can be found in the 1927 edition of popular mechanics.


A Whole Kitchen against One Wall, Space-Saving Arrangement of Stove, Sink, Refrigerator, Chests and Roomy Shelves

Anyone wishing further information on devices described in the editorial pages can

286

7. Kitchen from *Popular Mechanics,* 1927, p.286 .

In the kitchen which is depicted it is easy to see that the of the kitchen which has been designed bears strong resemblance to the cooker which was fitted into it. Items such as the handles on the kitchen doors, the whiteness of the units and form

of the overall structure suggests that of a large cooker.

The form of an object was only changed or altered if it had to be in order to facilitate a functional improvement in the object. A functional improvement was one which added another feature to an object rather than a functional change which made the product easier to use. Even though the difference between function, style and meaning has no clear divisory line manufacturers when producing products did not seem to recoginse this close relationship. The explaination of the relationship between function, style and meaning is best explained by Peter Dormer in his introduction to *The Illustrated Dictionary Of Twientieth Century Designers*. In this introduction he writes:

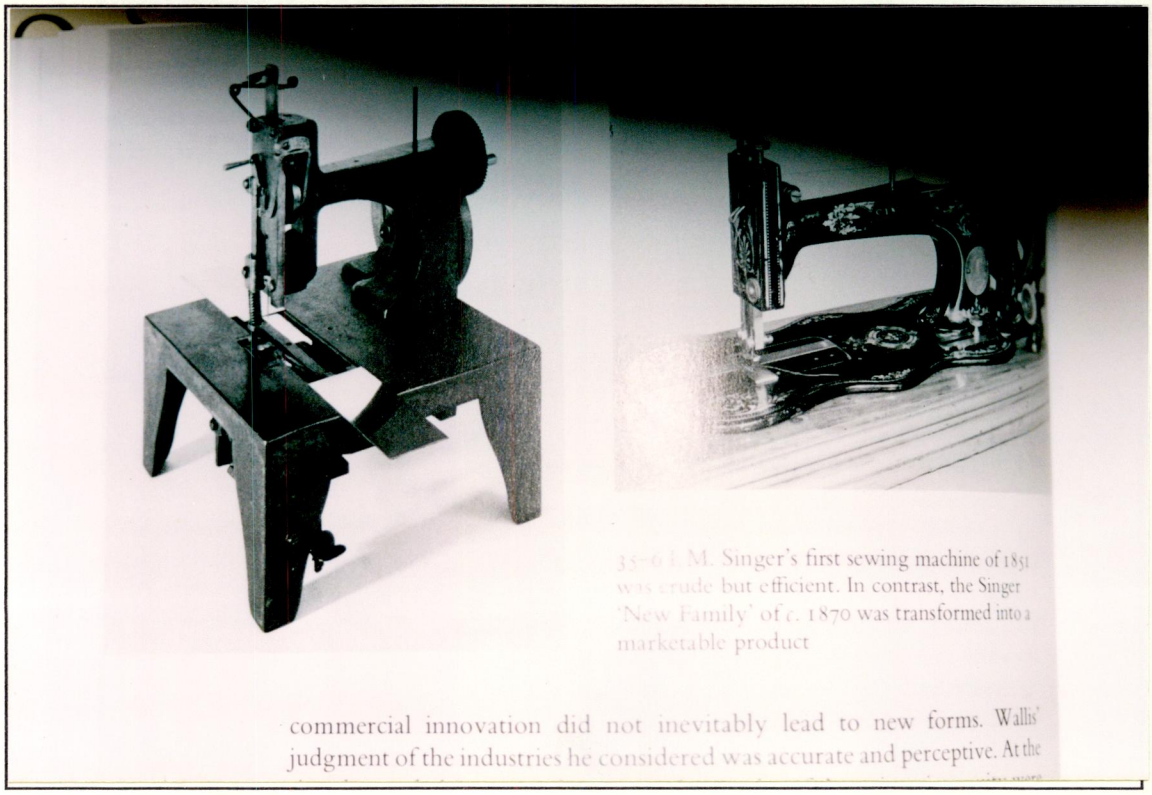
> There is no clear dividing line between function and style. This is because there are close links between the function of an object and how people feel about it, what it means to them. If one were invited to redesign a field radio (a piece of communication equipment used by the army and police) it might be possible to design it in the form of a Mickey Mouse telephone, without any loss of durability or reliability. However, the design would be rejected, mainly because its image would subvert the importance of the soldier's or policeman's job and would not enhance his view of himself (DOMER, 1991, p. 17).

Products as long as they carried out their function effectively were accepted by the consumer. As many of these products were still relatively new the novelty of obtaining a gadget which the consumer precieved would make life easier was enough to sell these products. Also the working class person had the money to experiment and experience these products and it seems that they enjoyed doing so. In terms of the generic development of products they were not changing radically from the original form in which they first appeared. They still looked like raw machines with the exception of becoming more and more complex. These products

when they first appeared on the market were simple and most people with a little concentration could understand how they worked; they now with the addition of extra functions or the improvement of contained technology were becoming more complex. Americans had a keen interest on developments and how things worked and spent much time reading about and learning about these new developments thus enabling them to somewhat keep up with developments. In American society technology was regarded as being unquestionably good and many parents encouraged an interest in their children in this technology believing that it would prepare their children for the business world. Toys such as " Mecano " in Europe and " Erector " in the United States proved very popular with children and there was endless amounts of literature available which explained new developments in technology. A good example of the literature which was available was that of *Popular Mechanics* the magazine which I have used as reference in this essay. Another factor which contributed to these products becoming more and more complicated was that in the early 1920s manufacturers in order to stimulate sales started yearly product updates. In these updates they as already mentioned added extra functions to the product. Manufacturers continued with this right through the twienties as it worked as a successful marketing ploy. So while products were developing, their generic identities were stabilising as forms of the original prototypes which were launched. The only diffenence between the styling of products in the early twienties and the period between nineteen hundred and nineteen twienty was the addition of these extra functions.

This marketing ploy of annual updates also along with the wealth of the American economy contributed to a new idea in American society which also encouraged

accelerated product development. This new concept was that of "keeping up with Jones's". In America at this time it was all important to be successful. In order to demonstrate financial success Americans would purchase the latest product and almost parade it infront of the neighbour. The neighbour then felt a compulsion to search out a product which was an improvement on the one which his neighbour had and then would parade it infront of his neighbour. This along with the strength of the American economy fuelled a market for improving products. It was at this time also that the concept of installment purchasing was introduced. The concept of installment purchasing was first introduced by Singer.



35–6 I. M. Singer's first sewing machine of 1851 was crude but efficient. In contrast, the Singer 'New Family' of c. 1870 was transformed into a marketable product

commercial innovation did not inevitably lead to new forms. Wallis' judgment of the industries he considered was accurate and perceptive. At the

8. Singer sewing machines from *Industrial Design,* 1980, p. 56.

The reason that Singer introduced his installment purchasing idea was that he found it difficult to sell his product which was a sewing machine. So instead of

compremising by making his product cheaper and a less high quality Singer came up with this installment scheme. He found that it worked effectively increasing sales. This whole new idea of installment selling was copied by many other manufacturers and was found to work well for most products.

The result of this new development was that people now could afford new products which were previously well out of their price range. The result of this was that these products which were previously too expensive now were being bought by a mass consumer market. The manufacturers of these previously hard to sell products had more money to invest in their development and thus a wider band of products experienced accellerated development.

To gain understanding of the development of products during this time it is also important to look at what was considered to consitute good design. As Reyner Banham said, the most effective American way of improving the human situation has been by means of such " crafty and usually compact little devices" which gave the generic name "gizmo". In their ideal form " you peel off the packaging, fix four bolts and press the go button" (Domer, 1991, p. 15).

Peter Dormer uses Banhams example of the Evinrude out board motor in his introduction to " The Illustrated Dictionary Of Twientieth Century Designers" when discussing a similar topic; he states:

> As an example , Banham cited the Evinrude outboard motor , first devised in 1909. Fitting an inboard motor is a very difficult task but the Evinrude, ordered from a catalogue, could be attached easily with the two clamps that came with it. The purchaser added fuel, pulled the starter and off he went. (The main feature of American Inventions, however, is their robustness - they had to get by without constant attention or the life of the support system of maintenance shops: The adjustment or repair of machines had to be capable of being done by ordinary people, not specialised craftsmen.)(Domer, 1991, p. 15).

So as can be understood the important things for American design was that the product saved time, money, was robust, looked robust and was durable with any servicing which was required capable of being performed by the owner user who necessarily did not have to be a specialised mechanic, electrical engineer, etc. Another example of a product which contained all the right attributes to be considered of good design was that of the Ford Model T. It should also be noted when discussing the Model T, that it played a strong role in the development of the generic identity that we associate as being a car. Even though as mentioned earlier that it looked like a carriage with a petrol engine which replaced the horse it still was the first vechile that formed the true generic identity that we associate as being a car. It is not only the fact that it has four wheels arranged in a rectangular position with the engine at the front, but it is the whole understanding of what the people wanted and were given in the package which was supplied to them as a motor car. The Model T set the brief which people were going to use from then on when they were looking for a motor car; each of the attributes which I will mention the Model T had, and they functioned well. These attributes set the Model T out from the other cars and it's predecessor the Model N. They were that the car was cheap, owner servicible and made of few components which were replaceable. The new owner got value also in the sence that the car had many new functions which had not been seen before. These were as follows: It was the first car to have a single cylinder block and seperate boltdown cylinder block.; it had semi-automatic gearbox, magneto system which did away with dry-storage batteries and had a suspension system.

These two products the Evinrude outboard and the Ford Model T demonstrate the

way in which products were developing at this time. But in terms of generic identity the car and the outboard engine have change relatively little since then. Out board motors are still attached to boats by the same system which was used by the first Evinrude motor in 1909 and its form also has change relatively little also. The car as developed by Ford contained all the requirements which made it look like and form the generic look of the motor car. Also just as important as the aesthetic qualities the Ford Model T provided the generic identity of what people would look for when they wanted to by a car.

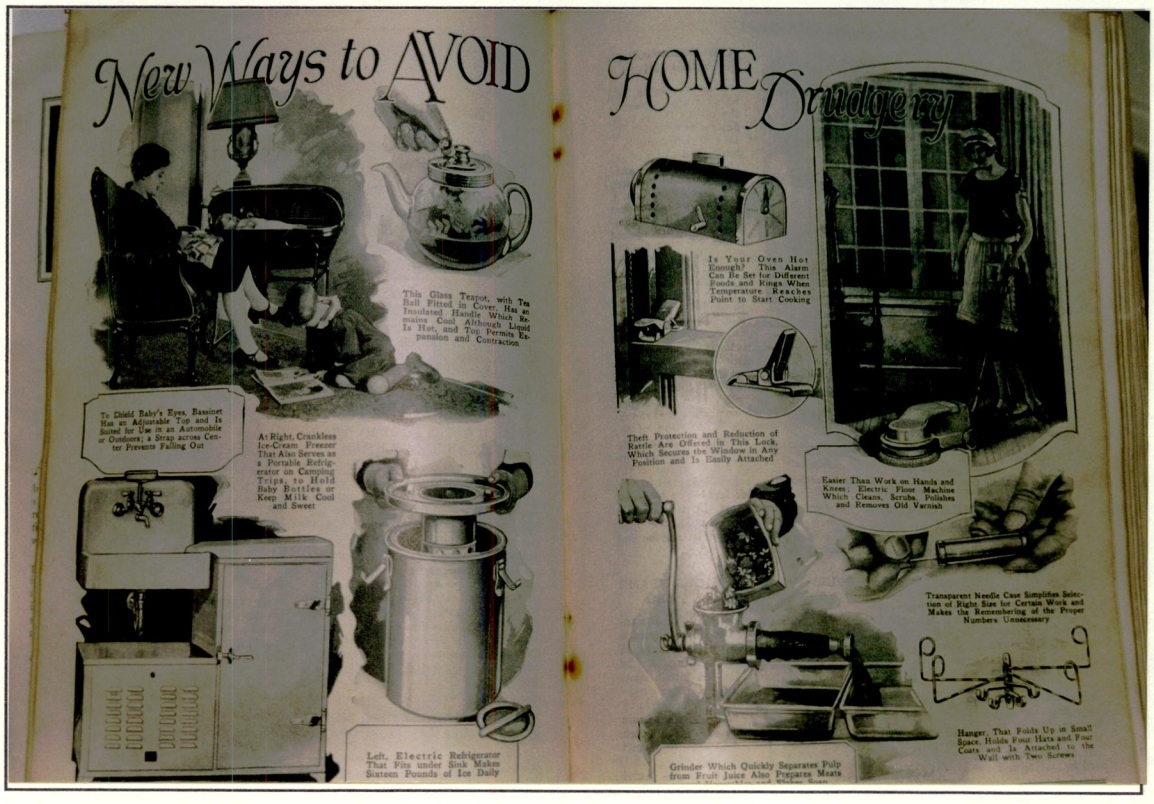
In terms of the form of the Model T it is different in many ways to todays generic car. The main differences being that the cars of today are more streamlined and function more efficiently. This has come about through the development of the car and technology through out the years. In terms of the automoblile this development has been one of an evolutionary nature. But as today if you were going to purchase a car you would look for a car which is reliable, fuel efficient, comfortable, requires little maintainance and is easy and cheap to repair. Today you might end up with one of the major brand names such as Toyota, Opel, Ford, Mitsubishi etc., back in the nineteen twienties you more than likely would have purchased a Ford Model T as it was able to offer many of these features which are still looked for today when purchasing a car. This is just one of the many ways in which the generic identities of objects back in the nineteen twienties can be related to the objects of today. This is not true for all objects in the nineteen twienties when related to todays objects. Even though many of the objects which we have today that existed in the nineteen twienties and have many features in common with todays objects they may not be completely generically related. It is difficult to draw

the line as to what constitutes a true generic relationship with regard to products. As the definition which can be found in the dictionary says "Generic - having to with or characteristic of a genus." (BARNHART, 1985) Using this definition in the true sence the fact that an object was called a lawn mower in nineteen twenty and is still called a lawn mower today would be sufficient grounds to label them as being generically related. In this essay I have looked at these objects as being related through their generic identity. So when the term generic is used it is meant as the generic relationship of form and function as recognised by the ordinary person. For example you could have an object such as a car which when first developed had three wheels and looked more like horseless carriage. In terms of its form you would have to look at it carefully to understand what its function was. It could have been easily mistaken for a portable generator etc. But when looking at cars such as the Model T Ford it seems obevious to the consumer that the function of the object is to carry people with some degree of comfort. It can be understood almost immediately that the Model T is a car by looking at its form where as in the case of the earlier three wheeled car it is an examination of the objects function which brings you to the conclusion that it is a car, or at least a device for transporting people.

Another area which I feel it is important to look at is the education of the consumer by advertising which took place in the in the early nineteen twenties and has continued up until today. Advertisers in the early nineteen twienties when they added extra functions to objects had to make the public aware of these extra functions in the hope that this would help to generate sales. They in their advertisements would demonstrate their new product and the new functions

which it had. As a result of these advertisements coupled with articles like those found in the magazine *Popular Mechanics* on how to save "Drudgery In The Home" the manufacturers hoped to create a need for these new improved products thus improving

sales. These articles also helped to bring competition between products out into the open helping the consumer to make a more informed choice. These advertisements helped to inform the consumer as to what was available while at the same time educating them about the mechanics of a new object. This advertising also helped products to develop faster since quicker developments could be placed into production as there was an effective medium for teaching the public about these developments.



9. Advertisement On How To Save Work from *Popular Mechanics,* 1927, p.111.

Were it not for advertising and had manufacturers ploughed ahead with these new developments they ran the risk of having their products segregated in the market place for the simple reason that the public would not be able to understand them. The public would also not have been able to see what use these extra functions would be to them and thus would have been reluctant to purchase a new product with these extra added functions if they already had a product which they perceived could do exactly the same operation.

A recent example of were manufacturers advertised to educate the public about a new additional function which they were making available on a product is that of the air bags which were made available in cars. The manufacturers through advertising educated the public as to the advantages of having an air bag thus creating a need among the public. This was so successful that the consumer now when buying a car would require this product to be fitted. It was the similar method which was used by the manufacturers in the nineteen twienties. Where as now a more effective medium of television was mainly used, in the nineteen twienties bilboards and articles in popular magazines were used to reach the public. Examples of this type of advertising can be found in the *Popular Mechanics* magazine.

This chapter has examined the way in which products changed from being the raw objects which appeared first on the market into raw objects with many functions. Looking at the addition of extra functions to objects and the way in which this was used to sell products. The change in lifestyles as a result of World War I has also been examined and the way in which it influenced the development of products (ie. the development of more effective and advanced production

methodology). Advertising and how it was used to educate the consumer and how this advertising was used to create sales alond with introduction of yearly product updates. The way in which products were advertised as labour saving devices and the reasons why people bought these products. It is important to understand that people bought these products up until this time as mentioned earlier for the products function rather than its aesthetic and that these products were becoming more and more complex in their function. In terms of the generic development of products it was functional development which took place up to this time (c. 1928).

Chapter 3:

FUNCTION TO FORM

Function To Form.

This chapter will analyse the change in terms of generic product development from function to form. It will be examining what influenced this change and why it occurred at this time. The immediate effects that the input by new industrial designers had on products and the publics perception of these changes made to products by industral designers. In this chapter the concreting of generic identities will also be discussed and the effect that this had on products.

Up until 1929 product design concentrated on the products function and how this product could in some way make life easier. As already discussed the advertising of products as labour saving devices shows this to be true. Whereas these products in many cases did not save much labour or time the preception of the public as influenced by the advertisers was that they did. So people who had a good precentage of their overall income available to them as disposeable income bought these products for their function. Products by the end of the 1920s in many cases had been developed to best that they could be by manufacturers due to the availability of technology which they had. This resulted in many different brand names outputing the a very similar product on the maket. These products were generally able to carry out similar functions equally well. These products were also equally dangerous to use and equally user unfriendly to operate. But manufacturers were able to sell them due to the large wealthy market which was available.

To develop these products to the to the detail which the manufacturers had, made them extremely complex with few of the consumer base understanding how they Mechanically functioned. This led to manufacturers looking for ways in which to improve their competitiveness in order to overcome competition from their

competitors in the market place. Strong advertising campaigns were undertaken by manufacturers in order to do this, but this still did not give them sufficient advantage over their competitors as equally stong campagains were undertaken by all the manufacturers.

Products up to this time had gained some generic identity but these generic identities were strongly based as functional rather than form. Although there was a strong relationship in terms of form among the products which were on the market in what became known as the machine aesthetic manufacturers continued to search for a way in which to gain an edge over competition, but they were not willing to try any new radical ideas which involved taking to many risks. The reason for this was that they all were managing relatively well in the market place due to the wealth available. Some companies such as car manufacturers had dabbled a little bit in the area of design but did not fully understand of what tremendous benefit design could be for them. What was needed was a spark to force companies to look at other ways in which these products could be developed. The spark came in the form of the wall street crash on "Black Wednesday" 1929. World war I had increased Americas productive capacity enormously which led to an economic boom after 1918. This is why the nineteen twenties became known as the roaring twenties with companies in America experiencing huge growth. Companies were floated on the stock exchange and the ordinary people began to invest in these companies. These ordinary people experience huge dividends which encouraged them to invest more and more money in these companies. Many people mortaged their property in order to buy shares and looked forward to good dividends at the end of the year. Due to lack of control being exercised in the stock market it

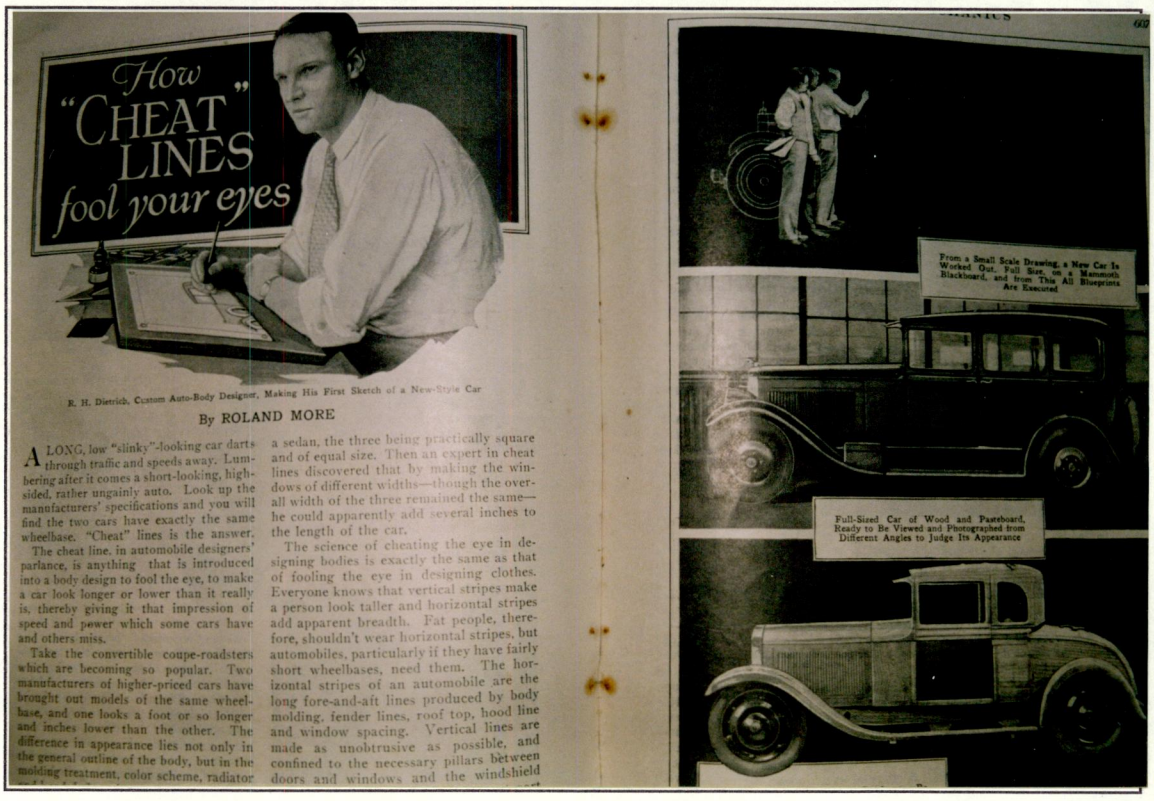
resulted that companies became overvalued. They were not just overvalued by one or two percent but by hundreds of percent. Effectively what happened was that towards the end of the nineteen twienties the American economy lost control of its true value and was literaly printing money. When this was discovered it resulted in millions of dollars being wiped of the value of the American market. The result of this was tremendous on the economy. The wealthy American economy had reached a climax and now was to suffer for its well enjoyed wealth throughout the early twenities. This wiping of millions off the American market value not only affected the large companies who were involved but it also affected the ordinary person on the street. The main reason for this was that as mentioned earlier the ordinary person had invested in many cases everything that they owned in these companies. These companies borrowed large sums of money against their false value. When they had to pay back the loans which they had borrowed against untrue company value these companies could not. This in turn made the shareholders liable for the rest of the debt repayment. The ordinary people who had invested in these companies had not realised that they would become automatically liable. People who were very wealthy one day literally overnight saw themselves losing everything and being with their families turned out onto the street. In a short few weeks the American economy went from booming into deep recession. It has never been as wealthy or as sucessful since.

This wealthy successful phase of the American economy had served its purpose in terms of the development of these products and their generic identity, but it now as a result of its misfortune it was going to lead these products into a new phase of development.

The idea that this destroying of the American economy was going to spark new product developments almost in terms of the Industrial Design profession sound contradictionary since economic success and Industrial Design usually are seen to be closely related. It seems strange that it was the lead up to and the depression which sparked the development of industrial design. Although as I have mentioned it was the Wall Street crash of 1929 which saw the start of major recession the American economy had stared to deteriorate from early 1927. It was in early 1927 that the first Industrial designers started to appear and a stronger concentration on the design of the form of objects began. An example of one of the designers which appeared at this time was that of Walter Dorwin Teague. He was a succesful graphic artist who started to turn his talents towards three dimensional design. Teague was comissioned by Eastman Kodak in 1927 to design packaging and cameras. He introduced the fashion element to the camera with the launch of the 'Vanity Kodak.' in 1928. Although design was not necessarily completely understood at this stage it was slowly developing and manufacturers were realising just how important this styling of objects could be in terms of the sales of products they produced. In the October 1927 edition of *Popular Mechanics* there is a good example of the realisation by manufacturers as to how design can change the look of an object. The article is titled " How Cheat Lines Fool Your Eyes". In this article the design of automobiles is examined and the way in which different body styles seem to give cars which have exactly the same engine & chasis different attributes. The following is stated:

> A long, low slinky -looking car darts through the traffic and speeds away. Lumbering after it comes a short looking, high sided, rather ungainly auto. Look up the manufacturers specifications and you will find these two cars

have exactily the same wheel base."Cheat " lines is the answer. The cheat line, in automobile designers parlance, is anything that is introduced into a body design to fool the eye, to make a car look longer or lower than it really is, there by giving it that impression of speed and power which some cars have and others miss..... The difference in appearance lies not only in the general outline of the body but in the moulding treatment, color scheme, radiator and hood design, the curve of the fenders, and the size and shape of the windows (MORE, 1927, pp. 548-550).



How "CHEAT" LINES fool your eyes

R. H. Dietrich, Custom Auto-Body Designer, Making His First Sketch of a New-Style Car

By ROLAND MORE

A LONG, low "slinky"-looking car darts through traffic and speeds away. Lumbering after it comes a short-looking, high-sided, rather ungainly auto. Look up the manufacturers' specifications and you will find the two cars have exactly the same wheelbase. "Cheat" lines is the answer.

The cheat line, in automobile designers' parlance, is anything that is introduced into a body design to fool the eye, to make a car look longer or lower than it really is, thereby giving it that impression of speed and power which some cars have and others miss.

Take the convertible coupe-roadsters which are becoming so popular. Two manufacturers of higher-priced cars have brought out models of the same wheelbase, and one looks a foot or so longer and inches lower than the other. The difference in appearance lies not only in the general outline of the body, but in the molding treatment, color scheme, radiator

a sedan, the three being practically square and of equal size. Then an expert in cheat lines discovered that by making the windows of different widths—though the overall width of the three remained the same—he could apparently add several inches to the length of the car.

The science of cheating the eye in designing bodies is exactly the same as that of fooling the eye in designing clothes. Everyone knows that vertical stripes make a person look taller and horizontal stripes add apparent breadth. Fat people, therefore, shouldn't wear horizontal stripes, but automobiles, particularly if they have fairly short wheelbases, need them. The horizontal stripes of an automobile are the long fore-and-aft lines produced by body molding, fender lines, roof top, hood line and window spacing. Vertical lines are made as unobtrusive as possible, and confined to the necessary pillars between doors and windows and the windshield

From a Small Scale Drawing, a New Car Is Worked Out, Full Size, on a Mammoth Blackboard, and from This All Blueprints Are Executed

Full-Sized Car of Wood and Pasteboard, Ready to Be Viewed and Photographed from Different Angles to Judge Its Appearance

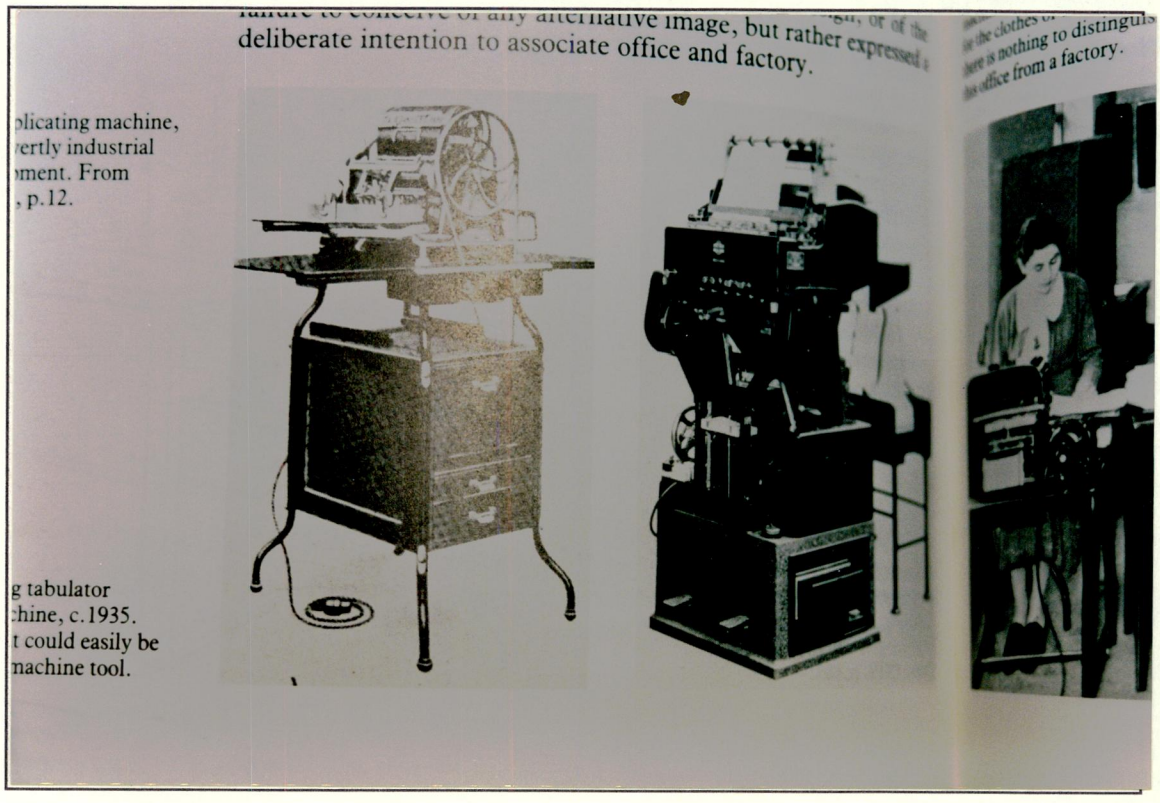
10. Article On " How 'Cheat Lines' Fool Your Eyes" from *Popular Mechanics,* 1927, pp. 548-550.

This shows how the auto industry was starting to develop an aesthetic science in regard to the exterior design of cars. It also should be noted that cars had not changed significantly in terms of their exterior and interior aesthetic since the development of the Ford Model T. But towards the end of the nineteen twenties and early nineteen thirties car design was to under go a radical change in terms of design aesthetics. Cars which had developed relatively slowly in terms of exterior

design now in the late twienties and early thirties experienced huge development. As a result of intense competition among competitors in the early 1930's and the development of industrial design, streamlining as a form of styling became popular. This streamlining when applied to cars forced their development into more beautiful shapes than had been seen before. Many of these cars still today are regarded by many people to be objects of great beauty and the are avidly collected. With this new form of styling the generic identity of the automobile was sealed. This idea of streamlining led the way for Ferninand Porsche to design the VolksWagen Beetle in 1934. This is a car which is still in production today, although it has not been produced in Germany since 1978 it is still manufactured in third world countries such as Brazil and Nigeria.

When trying to discuss the publics perception of these products one only has to look at the success of these newly styled products when they reached the market place. Some good examples of they way in which this new styling affected a products sales are the Gesetner Duplicating machine and the Sears, Robuck 'Coldspot' refridgerator. When both of these products were launched they made a big impact on the market increasing sales. The aesthetics of these products were much better than their predecessors as also was there ease of use and function. An example of where this new aesthetic improved not only the beauty of an object but also its function was the new design automobiles. With the advent of streamlining cars became more aerodynamic thus having an improved function of transporting people. In terms of the Gesetner Duplicating machine it was not just the aesthetic appeal which improved its popularity, but its new percieved simplicity. The reason for referring to its new percieved simplicity was that the gesetner was not

necessarily easier to use but looked as if it was easier to use. Before the Gestetner got its cover it looked like a complex peice of equipment. When you fed a peice of paper in one end and operated it you had many parts moving which were visable and made the task more daunting than it actually was.



11. Gestetner Duplicating Machine Before & After from *Objects Of Desire Design And Society,* 1992, p.132.

Where as with its cover even though it worked in exactly the same fashion, the fact that you placed a peice of paper in one slot pressed a button and watched the finished work come out the other side minus the operational complexities changed the operators perception of the machine from being difficult, to easy to operate. Another important factor was that this machine with its new cover went from being a complex, industrial looking peice of machinery into a more friendly desireable

product. It was the broad application of design to products that changed peoples perception of them and helped to completed the change by the consumer from buying products for their labour saving function to buying products because of their aesthetics and ease of use. This was the final step in the development of the generic design of products and it is the basic principle which designers use today when designing new products.

Chapter 4:

EXCEPTIONS TO THE RULE.

EXCEPTIONS TO THE RULE.

To nearly every rule ever formulated there are the exceptions. The rule discussed with regard to the development of the generic development of products there also are many exceptions. Where as most objects which were designed between 1900 & 1930 followed the development from labour saving device to a concentration on function to a conentration on form denoting function, there are exceptions to this rule. These exceptions tend to be those objects which were more closely related to objects whose design was highly developed by the begining of the 1900s. That is those object which were closely related to furniture design or ceramic design etc. A good example of this is that of the thermos flask. In the *Junior Army & Navy Stores, catalogue* the full range of the thermos flasks available at this time (1912) is displayed.

12. Thermos patent flasks from *Junior Army & Navy Stores,* London, 1913, p.1444.

While there were many flasks available at that time and many of them which we today are unfamiliar with there is one which is still in production in its relatively unchanged form. This is the long cylindrical flask which contains the cups on top. This was the first form in which this flask appeared and whereas many of the other forms have dissappeared this one has remained almost timeless in design and still very successful. The reason for this can be associated with the degree to which objects such as picnic baskets were highly developed in terms of design. These thermosflasks had to be made as functional as possible to hold as much volume as possible, as durable as possible and to take up as little space as possible in these picnic baskets. A culmination of all of these factors being taken into account in the design of the origional thermosflask resulted in its simple cylindrical form without any unecessary decoration. The resulting object was one of simple beauty which has remained relatively unchanged since. There are many other objects which have been designed during this time which also are regarded as things of great beauty and still remain relatively unchanged today. This is one of the examples which demonstrates that when it comes to the world of design there are no-hardened fast rules of thumb and that some of the most successful designs which are regarded by many to be things of beauty, break the conventional rules of design.

CONCLUSION.

CONCLUSION

This thesis has analysed the generic development of products developed from 1900 to 1930 as illustrated in the journal *Work*, the magazine *Popular Mechanics* and the *Junior Army & Navy Stores Catalogue*. The development of generic design identity developed through three phases, the advent of labour saving devices, the addition of functions and over complication of the labour saving devices and the change from function to form with the development of industrial design. It took thirty years approximately for the change to take place from the labour saving machine aesthetic to the industrial designed generic identity. It was what took place in terms of the development of products which was to form the foundation for the design process in basic form. While the design of many of the products which appeared in the early 1900s does not refect the forms which these same products have today, many of the forms which the same products had in the 1930s can be strongly related to the forms which these products have today. Examples of this are fridges, vaccumn cleaners and type writers. The fact that the forms of the 1930s reflects the forms of products today means that this early design process which took thirty years to develop was a successful one. The design development of many of these products since has mainly been one of an evolutionary process. With greatly improved technology and manufacturing processes since 1930 one would almost expect these products to have changed form more radically than they did between 1900 and 1930 but they have not. This demonstrates the effectiveness of this design process and the strength of generic product identities in the market place. The fact that many products now competing with each other have exactly the same mechanics in their interior with different designs on their exterior also

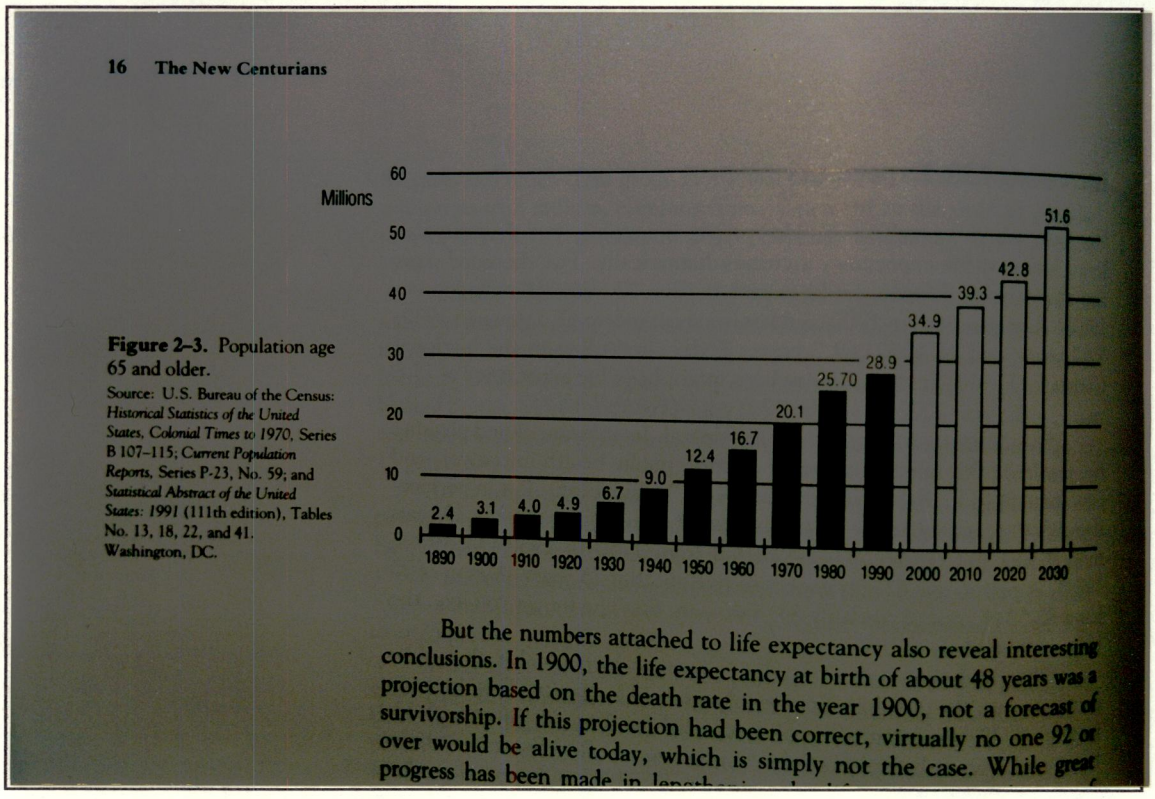
reinforces the point that people in many cases relate to products by form rather than function. The fact that the consumer now purchases a product because they find It aestheticaly desireable also reinforces the change of concentration by the consumer from function to form.

In terms of the design process when a designer is designing a product he/she starts with a raw mechanical object which carries out a function. This raw mechanical object could be compared to the original labour saving devices which first appeared on the market in the early 1900s. It is the designers job to evaluate the function which is to be carried out by the object and to propose further improvements or functions which could be improved upon in order to make the product more appealing to the consumer. This phase could be compared to the addition of functions to an object in order to boost sales which took place during the 1920s. The third phase of the design project is to enclose the mechanical operation of the object with a cover which makes the object safe, easy to use, percieved as being easy to use, cost effective, manufacturable and desirable. This phase could be compared to the change during the late 1920s from function to form since it is what the consumer perceives from the form of the object that will influance them as wheather to purchase it or not. Whereas products from 1900 to 1930 took thirty years in order to reach a stage where they received an outer casing which was aimed at satisfying the needs of consumers, this process today usually for domestic products takes six to eight months from start to finished mockup models and commencement of engineering. This although it is a simplistic view of the design process, it nevertheless is true one.

In terms of the generic identity of products from a design perspective, generic

identities have change very little from the 1930s for many products. The reason for this as discussed in this essay is the fact that people tend to associate a products function by its form. Although ideas in design such as the use of product semantics should enable designers to come up with new shapes or forms to replace existing evolutionary forms and thus enable new products to be just as successful as their predecessors, however this has not been the case. The reason for this is that industrial design is part of a manufacturing process and exists in order to increase sales, cost effectiveness and to produce an object for manufacture which is desireable and reliable. The cost and risks which would be required for a firm to develop many of these generic house hold products in a distinctly different fashion would be for most manufacturers too great. What is needed is a great change in America such as that after the Wall Street crash of 1929.

That great change is slowly approaching and is only now being realised by manufacturers. The great change is that society from the results of demographic surveys is shown to be rapidily growing older. Projected statistics show that if the current demographic trends continue by the year 2030, 51.6 million people in the united states will be of 65years of age and over compared to 28.9 million in 1990.(U.S Bureau of the census). This shows that it is projected that in the next thirty years the number of people of 65 years and older will almost have doubled. This means that the mass market for consumer goods will have transferred from the youth and middle aged markets to the older age groups. So designers because of the distinct differences between people in older age categories and youth will have to look at the whole area of design for the chronologically chalanged. Also as industrial designs right arm is capitalism the time span for which this market will be



13. Age population projections from *Transgenerational Design, Products For An Aging Population,* London, 1994, p. 16.

left ignored is soon coming to an end, especially since these people in this age catagory due to high occupational pensions will be wealthier than any other age catagory. Just as the wall street crash was a precursor to industrial design and the final phase in a story of the development of generic product identities, these socioeconomic factors are a precursor to design for the future; design for the old.

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