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Industrial Design in Former East and West Germany Since 1945

TqlO

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INTRODUCTION

The object of this thesis is twofold. On the one hand to discover how political leanings, such as capitalism and communism, have affected industrial design in the former West and East Germanies respectively. Secondly to investigate what are the worldwide implications of the German case study, in other words how will different political systems continue to affect industrial design in a more global context.

With regard to re-unified Germany the following questions are of considerable importance and will be addressed in this thesis:is the Western perception that the former East German industrial design is substandard true? Did former East Germany have any good features? Is there anything in Eastern German design that should be preserved and continued by all designers in the reunified Germany.

The terminology used to refer to East and West Germany can nowadays be confusing. So for the purpose of this thesis they shall be referred to as former East Germany and former West Germany when describing in the present tense and simply East Germany or GDR and West Germany or FRG when describing in the past tense.

These investigations are important due to the immense political upheaval in Eastern Europe where there is currently a step by step shift from communism to capitalism. Most Eastern European countries, with the inclusion of East Germany in 1990, and even



parts of the Soviet Union, have discarded communism and become democratic, capitalist states.

In the case of East Germany, not only has it converted to capitalism but has also amalgamated with Former West Germany, one of the world's most powerful industrial economies. So, suddenly, a former communist state whose industrial products (with a few exceptions) were geared towards a largely enclosed, state monopolised market, has been plunged in at the deep end and has desperately struggled to maintain economic bouyancy by producing the same products which previously had enabled it to stay afloat

Among the producers in bankrupcy are Carl Zeiss of Jena, the famed maker of quality optics; the two leading auto makers, Wartburg and Trabant; and Deutsche Maschinen and Schiffban, the ship building company that was one of East Germany's biggest exporters (26,p.35).

Why these products are no longer competitive in the new open market can be revealed on deeper analysis.

In capitalist, democratic states contentment of the electorate is of great importance for favour of the political party in power. This is one reason why the state will put vast resources towards industrial development to give the public a large range of consumer products from which to choose. This all goes to improve design standards by increasing competition and by manufacturers efforts to satisfy public demand.

Many governments also came to recognise that enconomic success depended not only on material and cost factors, but also on qualities of workmanship and appearance (8,p.183).

In this thesis a selection of products are analysed which Former West Germany and Former East Germany both produced namely autos



and optics. In this way it is possible to obtain a very distinct and fascinating differentiation, in design terms, between the produce of the two countries, which, previous to July 1990, were separated mainly by the political standpoints of their respective governments.

To verify the discoveries, the conclusion will include a brief look at the comparison between the indigenous design of China and Hong Kong. The reason being that both these countries have a marked similarity in relationship to each other as had former West Germany with East Germany. Both pairs have similar geographical proximity with each other and both pairs were separated mainly by their political borders i.e. West Germany was the capitalist neighbour of the communist East Germany and Hong Kong is the capitalist neighbour of communist China. And since we now have some benefit of hindsight as to how the political transition of East Germany has affected its product design, we can forecast what is likely to occur to the product design of Hong Kong when its lease with Britain expires in 1997 and again becomes part of "Red China". As Europe's common market is now forcing "Eastern" Germany to be competitive, perhaps Hong Kong's industrial base will not be extinguished by the centralised enclosed market of China. Perhaps Hong Kong too may force China to become commercially competitive and open up an enormous new industrial continent and become a political catalyst in the conversion of China's government. If such a transition is to occur the impact of such competition on the quality of industrial design will be immense.



CHAPTER 1

DESIGN IN THE GERMAN PHOTOGRAPHIC INDUSTRY SINCE 1945

Examination of German photographic design presents the ideal opportunity to determine how opposing political systems affect industrial design. Firstly because the camera and lens industry represent products which are produced for both the private and public sectors. Secondly because the camera is a product which embodies the two elements of industrial design in abundance which are form and function. And thirdly because of the fact that Germany, from the turn of the century until the 1970s dominated camera and lens manufacture throughout the world. When Germany was divided by communism and capitalism after the Second World War so too was the German photographic industry. The Carl Zeiss factory in particular is a perfect example to study since it became sub-divided between the New West Germany and East Germany into Zeiss Ikon of Stuttgart and Carl Zeiss of Jena.

Prior to World War II, Germany reigned supreme as the world champion of the photographic industry. Cameras such as the Robot Royal combined elegance with functionality and innovation with quality workmanship. It was the first camera to use the now standard 35mm format. During the war the strength of the German camera continued.

Wars for all their ugliness, have a way of concentrating the minds of the technologists, and from their efforts in the cause of victory emerge advances that may be extremely beneficial in peacetime (12, p.45).

The Robot Royal, which already qualified as an example of





1. THE PRE WORLD WAR 2 ROBOT ROYAL TYPIFIES THE EXCELLENCE OF CAMERA DESIGN WHICH PLACED GERMANY IN THE LEADING POSITION OF WORLD CAMERS PRODUCERS PRIOR TO POLITICAL DIVISION.



excellence in design, was developed further during the war.

Lens coating, now a standard feature for reducing glare in photography was originally developed in the Robot Royal for the purpose of Luftwaffe aerial reconnaissance.

For the purpose of this thesis it is the consequences of the political division of Germany, after the war, which is of real interest to us. When the Soviet Union took control of East Germany it captured the cities of Dresden and Jena. Dresden was the headquarters of Zeiss Ikon and Jena the headquarters of Carl Zeiss optics.

The Soviets were not slow to recognise the potential of the German camera industry. Zeiss Optics was of great interest to the USSR, whose ability to produce cameras and lenses of any quality or reliability had previously been extremely limited (38)). (*interview*)

While Carl Zeiss of Jena was being continued under communism another breakaway factory of Zeiss was restarted in the still democratic but newly named West Germany. This division of Carl Zeiss optics provides us with a unique opportunity to observe how a one time independent camera manufacturer under capitalism would diverge, in design terms, due to political division. How soon would it take differences in camera design of Zeiss of West Gerrmany and Zeiss of East Germany to occur? What would these differences be?

The answer to the first question is - almost immediately. In the early years of World War II, Zeiss had plans to introduce the world's first Single Lens Reflex (SLR) camera, (a camera which allowed the photographer to view the scene directly through the lens instead of through a separate and slightly displaced



viewfinder) and filed patents accordingly. The pre-war Zeiss management had planned to market the camera as a high quality top of the range product. But when development continued at the war's end the camera was made at Carl Zeiss of Jena in East Germany under Soviet control. Despite the major breakthrough in its technology the camera was launched in 1948 as the Contax D, but was notorious for its poor quality and unreliability.

By comparison, the now titled Zeiss Ikon of Stuttgart, simultaneously launched the Contaflex to compete with the Contax D of East Germany. Although Zeiss Ikon had to rebuild itself from ashes, after the war in West Germany, it somehow managed to produce, what is recognised by camera experts, as a superior product to that of its communist counterpart. The Contaflex is undeniably a better looking camera than the Contax D and, as already mentioned, functioned better also. So why the West German camera succeeded when the East German camera did not was mainly due to the fact that

many of the leading camera designers fled to the West when the war ended and also because of the Soviet handling of the Contax D production (38).

The cold war was highly influencial in the camera design of both Germanies. The political division of East and West Germany resulted in diverging market environments which in turn further affected camera design quality within the two Germanies. As the cold war began to thaw the trade restrictions were eased for West Germany but not for the East. So where West German camera designers had market targets as incentives, the East German





ter frances and the second state

CARL ZEISS- COMPAX D FROM JENA, EAST GERMANY 1948

designers did not.

The huge export markets now available to West Germany had both adverse and complimentary affects on camera design. The adverse effects was that it required a massive output in production numbers and

a flood of new camera models appeared to capture the enormous market that waited to be satisfied, and many of these were of such poor quality as not to have survived in any numbers (9, p18)

Obviously to achieve such dramatic benefits to the consumer - to the photographer in the Street - something has had to go. That something is engineering quality, ruggedness, feel, the silky smoothness of hand-crafted precision. As we shall see later that this engineering quality is what the East German camera makers had succeeded in maintaining and what the West Germans have sacrificed to mass production.

Examples of these over mass produced cameras of sub-standard quality from West Germany include the Paxette from Braun, the Voigtlander Vito, Bessa and Brilliant which

can be diabolically and frustratingly unreliable. The lower priced Voigtlanders cameras, were in any case often poorly engineered bodies supporting superb lenses (12,p.63)

This poor engineering quality was a direct result of the capitalist open markets.

As already mentioned the new export markets available in the 1950s also had a complimentary effect on West German camera design. The incentive presented by commercial competition sparked off a series of magnificent innovations in camera





BRAUN PAXETTE , 1957



VOIGTLANDER VITO, 1950



VOIGTLANDER BESSAMATIC

3. SOME OF THE CHEAP CAMERAS PRODUCED IN WEST GERMANY TO SATISFY FOREIGN MARKETS.









4. ALSO INSPIRED BY THE THAWING OF THE COLD WAR IN WEST GERMANY WERE A SERIES OF INNOVATIONS CAMERA DESIGN WITH SUCH MODELS AS THE ZEISS CONTESSA (ABOVE) AND THE MINOX (OVERLEAF).



technology. The Zeiss Contessa, with its folding lens, was the first to incorporate a flash synchronised shutter with clean, uncluttered yet ornamental style. Another of the innovative cameras which was to become commercially viable at this time was the original minature camera, the legendary Minox, subsequently called the "spy camera" because of its small size. Although the Minox designer, Walter Zapp, always denied that espionage was the reason for the camera development, it seems highly coincidental that it emerged at the height of the cold war between East and West Europe. Espionage apart, the Minox encases an array of innovations and a marvel of micro engineering.

It is perhaps one of the earliest attempts at what was later known in industrial design as ergonomics. None of the recent so called pocket cameras have ever shown the degree of original thought embodied in the Minox, and very few subminiature cameras throughout the 150 years since Steinheil and Daguerre have remotely approached the Minox in capabilities (14,p34).

During all this market orientated camera design enjoyed by the West German designers the East German counterparts were carrying on production in spite of little incentive. Although they got off to a bad start with the poor quality Contax D, as seen earlier, they soon learned by their mistakes. By the mid 1950s the engineering quality of the East German cameras had improved considerably even if the styling did not. While the West Germans were racing to produce a mountain of poor quality yet good looking cameras, the East Germans placed the emphasis on mechanically simple cameras with high quality workmanship. They could affort to take their time and continue to design and make the old style cameras with old fashioned engineering which they





MINOX 1952



MINOX 1992



5. MINOX, THE ORIGINAL MINIATURE CAMERA, WALTER ZAPP.



had always made prior to World War II. The reason was that the closed market to which these sold provided inadequate competition and competition in turn provides incentive. Surprisingly in the end, this system of quality over technology has paid off for the East German camera industry, now that Japan has toppled Germany as the world's first producer of cameras. Japan has done this by out gunning the Germans with higher technology and lower production costs. But the East Germans have relied on something else which the Japanese have not yet attained. That something else is a longstanding reputation for quality engineering. And the East German cameras fit this specification just as well as the West German cameras. East German cameras such as the

Praktica range are the Rolls-Royce of cameras because of their simple mechanisms and quality workmanship (38).

this is what the worldwide consumer has come to expect of German cameras.

It is not only cameras which aspire to this goal of purely practical design but also the East German "Pyramids of Zeiss" microscope.

The pyramids of Zeiss ideally combine state-of-the-art technology and an aesthetic functional design. Versatility of application and perfect ergonomics are further outstanding features which set these microscopes apart in a class of their own (5, p269).




6. "THE ROLLS ROYCE OF CAMERAS", AN EARLY PRAKTICA OF EAST GERMANY.1958.











8. THE "PYRAMIDS OF ZEISS" MICROSCOPE. MICROSCOPES FROM FORMER EAST GERMANY REPRESENTED THE COUNTRY'S QUALITY OVER TECHNOLOGY DESIGN POLICY AS DID THE EAST GERMAN CAMERAS.



9. THE VOLKSWAGEN BEETLE OF 1936, THE "PEOPLE'S CAR" BY FERDINAND PORSCHE.

CHAPTER 2

DESIGN IN THE GERMAN AUTOMOTIVE INDUSTRY SINCE 1945

Like the photographic industry the automotive industry in Germany has an esteemed tradition in the country's industrial history. Few other countries have such a prestigious reputation, in the eyes of the world, in car production as Germany, with such famous names as Mercedes-Benz, Volkswagen and BMW. These names originated before Wold War II at a time when there was no political division inside Germany. And like the camera industry it is fascinating to see how the design of cars has differed between East and West Germany since political division after World War II.

However, unlike the photo industry which was exploited mainly by communist East Germany after the war, the established auto makers were able to continue production under capitalism in West For this reason it was necessary for East Germany to Germany. build up its own auto industry from scratch. So in the photo industry we discovered how design of cameras diverged between East and West Germany from more or less an equal standing since 1946 due to political division. But in the auto industry of East Germany we have an opportunity to see what a communist system could do, in terms of design, when it was forced to restart the car industry from nothing, using its own design concepts as opposed to developing already established designs from the West is the case in camera production. The new auto makers in as question were initially Trabant in 1950 and later Wartburg.





TRABANT 1950





TRABANT 1990

10. TRABANT 1950-1990, THE "PEOPLE'S CAR" FROM EAST GERMANY.



To understand what was the trend in car design in Germany before division we must go back to 1936 when the Volkswagen Beetle was first introduced

an attempt to produce a 'people's car' by American mass production methods was the basis of Hitler's plans for a small, inexpensive vehicle, suitable for use on autobahns. the prototype of the Volkswagen designed by Ferdinand Porsche appeared in 1936-7, but it was not actually produced until after the war, when its beetle shape became the most widespread example of 1930s streamlined design (8,p126).

Although the big brother car maker, Mercedes-Benz was still dominant, a definite swing towards a cheap car, affordable to most, had begun. It was a trend which was to be adopted by the East German car makers

faced with providing cheap, standardised mass private transport the German Democratic Republic produced instead of a Volkswagen, the Trabant a crudely, scaled down copy of a 'proper car' whose design concept was overtaken in the West 30 years ago (32,p36).

Like the Volkswagen Beetle, the Trabant, which was introduced in 1950 and continued until reunification in 1990, was a 'people's car' in the true communist tradition. But in contrast to the Beetle, the Trabant is stylistically an ugly car which would do little to attract attention to itself if on display in a western car salesroom. The Beetle on the other hand has become established as a true design classic in terms of style and is the most commercially successful car in automotive history.

The design shortcomings of the Trabant do not end with styling. Neither have its designers given much consideration to ergonomics and this is manifested in the discomfort of driving the car. As Andrew Gumbel, author of the book "Berlin" puts it -



Driving one sounds and feels a bit like mowing the lawn, only your feet don't touch the ground Cool.

Its two cylinder, 600cc two stroke engine is both noisy and smokey, so it does not satisfy modern tastes in environment friendly products.

Other features of the Trabant, or "Trabi" as it has been nicknamed, which leave much to be desired include its primitive performance. Its two stroke engine delivers only twenty five horse power and a top speed of just 62 miles per hour. Compare these specifications to those of the Volkswagen Beetle whose one and a half litre engine delivers over one hundred and fifty horse power and a top speed of 110 miles per hour.

The horrendous time gap between when a customer ordered a Trabant and when it was actually delivered will give some idea as to the retardedness or sluggishness of East German production.

The average waiting time for delivery of a new Trabant was 15 years (38).

It also demonstrated how complacent manufacturers become when they have little or no commercial competition. How long could a manufacturer survive, in any western democracy, if it expected customers to wait fifteen years for delivery. Even the thought of such inefficiency is inconceivable. By compariseon a customer in former West Germany has the option to take delivery of a new car instantaneously if he wishes to do so.

Perhaps the most incredible feature about the Trabant design is the fact that it had not progressed in the forty years of its production. the body style in 1990 was the original concept



from 1950 and

the engine design was out of date when it was first introduced and has barely changed since (3,p.18).

The Beetle itself, one could argue, also changed little in its long period of production, but this was testimony to the popularity of the car's styling features and not because the Volkswagen designers were reluctant to change. In fact the mechanical components of the Beetle, the engine, gearbox and chassis were in constant development throughout the car's long production life.

It is, however, unfair to be entirely critical of the Trabant. The design embodies several features which Western German car designers would do well to copy. For example the body of the Trabant is made of a sort of toughened cardboard, a mixture of PVC, cotton waste and sawdust. Even if the engines did smoke, the designers kept the environmentalists happy by endeavouring to recycle waste materials in the production of the car. Also the small engine size of the "Trabi" is exactly what the world's leading car makers, not only in Western Germany, are continuously striving to achieve for the purposes of fuel efficiency and lowering pollution levels.

As well as the recycling of waste materials in the car's production and its fuel efficient engine size, the Trabant also boasts a reputation for longevity.

A plus point about Trabis is that they are hardy beasts, and most of the 2.5 million that rolled off the production line are still put-putting around somewhere (3,p19)





11. NOT BEAUTIFUL TO LOOK AT, BUT THE TRABANT DOES HAVE REDEEMING FEATURES WHICH ITS WESTERN COUNTERPART WOULD DO WELL TO COPY, SUCH AS EXCELLENT DURABILITY, THE USE OF RECYCLED MATERIALS, AND A FUEL EFFICIENT ENGINE.







In fact the statistics prove that a Trabant is more durable than a high performance, high cost Mercedes, BMW or Porsche from Western Germany. This durability is due to the simple design of the Trabant's mechanical systems, and unlike the increasingly complex systems of Mercedes, BMW and Porsche, the fewer the components the less there is to go wrong.

This pattern repeats the quality over technology system which has already emerged in the West German camera industry. the high style, high technology of West German camera makers such as Zeiss Ikon and Minox is contrasted by the mechanically simple yet highly durable East German camera makers such as Praktica and This all goes to prove that contrary to Carl Zeiss of Jena. popular belief, former East German product design is not sub standard. The Trabant may not look as good or perform as well as its former West German counterparts, but appearance and performance are not the only qualities of good design. So too are durability, fuel efficiency and a consideration for the longterm affects on the environment and on these qualities the Trabant is of a superior design than either Volkswagen, Mercedes, BMW or Porsche.

The divergence in German car design, after political division is best demonstrated by Porsche auto makers of Stuttgart. Both Porsche and Trabant had remarkably similar origins since both were, in effect, developments of the Volkswagen Beetle concept. As already explained the Trabant was an East German attempt to emulate the West German Beetle specification, that is, a cheap 'people's car' which was affordable to most.









- PORSCHE 911, 1965. (TOP) PORSCHE 911 SPORTS TURBO, 1975, (BOTTOM)
- 13. NEXT GENERATIONS FROM THE SPEEDSTER 356

Ferdinand Porsche, when designing the original Porsche 356 in 1952, took much of the styling identity from his earlier 1937 design of the Volkswagen Beetle, as is evident from a glance at the two cars. the difference between the Porsche 356 design brief and that of the Trabant is that the Porsche was aimed at the select and competitive consumer market afforded by the capitalist West Germany, whereas the Trabant when first introduced in 1950 was the only car available to the East Germans, who had far less disposable income than westerners.

So ultimately the Porsche is an expensive marque with features to match. They are renowned for their quality of materials and production standards as well as for their elegance and "timeless beauty". In 1965 the 356 was succeeded by the legendary Porsche 911, which has continued in modified versions such as the 1975 Porsche Turbo, the 1987 Gambella Avalanche Porsche to the 1989 911 Turbo Sport which

has 250% of the 150 horsepower of the original 911. Only improved suspension and tyre technology has enabled the handling of this sports car to keep pace with its massively increased power output (20,p.150).

It is important at this point, to compare the other car designs of Former East and West Germany to see does a similar pattern emerge. The other car makers in former East Germany is Wartburg, who were established in 1968 to provide a choice for the East German motorist and some competition for Trabant. Like the Trabant the style of the Wartburg does little to attract attention to itself even though it is considerably more market orientated. Unlike the Trabant the Wartburg is less ridiculed in





WARTBURG OF THE 1960s



WARTBURG, 1990 EDITION WHICH HAS DEVELOPED LITTLE IN STYLE FROM THE ORIGINAL MODEL , ABOVE.

14, WARTBURG OF FORMER EAST GERMANY.



the West because of its regular grade petrol engine and its more western looking 4-door layout and construction. But the Wartburg still looks like an early 1970s Fiat Saloon imitation and a poor one at that.

By contrast, styling in former West Germany is considered so important, it is exploited as a selling feature in advertising. The other car makers in the saloon car category in the former West Germany are Mercedes Benz and BMW who understood the importance of good design in selling cars.

The message that good design sells has long since been taken on board by the West German manufacturing industry and design is widely recognised for its role in the country's phenomenal economic growth, since the war (35,p.34).

The advertisement issued for the new Mercedes SL demonstrates clearly how prestigious design in terms of style has become in especially in recent years West Germany not only to manufacturers but also in the eyes of the public. But Mercedes although beautiful to look at and flawless and BMW, in performance, are still designed without suitable consideration for the environment. They are inadequately fuel efficient and designers, as yet do not choose materials which will aid in recycling materials, or better still degrade biologically when dismantled. The Wartburg on the other hand has a reputation for extreme longevity because of mechanical simplicity, like the Trabant, and a fuel efficient engine. East Germany also had an excellent system of recycling materials for manufacture. These qualities in design must be retained by the design profession and industry in Eastern Germany in the future.





BY THIS ADVERTISEMENT FOR THE MERCEDES SL. COMPARE THIS TO THE BILLBOARD ON PAGE 18.

MPORARY TRENDS





16. MERCEDES 500 SPORTS COUPE, 1990

¥





17.BMW 5351, 1992


To end this chapter on car design in Germany we should investigate how the design of transport vehicles in the public sector, as opposed to the private sector, differ between the former East and West Germany. There is the argument that it is only in private sector products, such as cars and cameras, that West Germany held design superiority over East Germany.

This idea, when first considered, seems to make sense, since it is a major function of communism, in its true sense, to first attend to the needs of the public sector and secondly to the private sector. But on deeper analysis, this does not appear to hold true, in the case of former East Germany. When we examine the design of products from the public sector, such as trains for example.

West Germany, along with Japan, has been a forerunner in the design of high speed trains such as the Transrapid 07 Meglev express-train, designed for German Federal Railways by Neumeister design and the 401 Intercity Express (ICE) also for German Federal Railways. Both these trains are, stylistically and performance wise, far ahead of any of the train systems in former east Germany. Even

the Western trains interiors, in general, are luxuriously decorated (38).

with full consideration given to the needs of commuters. So East Germany, despite being under communist rule up to July, 1990, put little effort into the development of its public rail system. This fact is testified by Dr. Peter Baumgarten, author of "Baedecker's Berlin"

The East German rail system is, however, very old fashioned and the trains slow and unreliable (2,p.72).







18. TRANSRAPID 07 MEGLEV EXPRESS TRAIN DESIGNED FOR THE GERMAN FEDERAL RAILWAYS OF WEST GERMANY.



CHAPTER 3

DIVERGENCE IN GERMAN INDUSTRIAL DESIGN SINCE WORLD-WAR II AND EXAMINATION OF THE POLITICAL CAUSES

From the exploration into the devergence between post war Western and Eastern German camera and car design we get a very good insight as to how the political extremes, - Capitalism and communism affect the quality of industrial design in general. Although it is unfair to blame all the ills of the world on communism, since politics is rarely the only factor separating two geographical regions. In East and West Germany we had probably the best example in the world of a situation where politics was, more or less, the only dividing factor. Now after just a year and a half of German reunification, and with some benefit of hindsight, we are ideally located in time to judge just how much politics really affects the quality of industrial design.

Of all the unexpected discoveries made, perhaps the most surprising is that East German industrial products, far from being inferior to those of West Germany, have in many cases superior quality and reliability. There is a myth in the established capitalist democracies of the West, that all industrial produce from any communist country, not just former East Germany, is sub standard in terms of styling, technology and reliability. It is true that many Eastern German products do lack styling, but as we have already seen there are many Eastern German industrial products such as the Praktica Camera and "Pyramids of Zeiss" microscope which are beautifully engineered





19. WORLD'S WORST CAR? THIS ADVERTISEMENT CLEARLY DEMONSTATES THE WIDESPREAD, MISPLACED PREJUDICE AGAINST EAST GERMAN PRODUCTS SUCH AS THE TRABANT.



and assembled. And even the infamous Trabant car, the symbol of communist sub standard design is renowned for its mechanical durability.

Even the East Germans themselves have an inferiority complex about their own products and view western products with a Godlike admiration. When the Berlin Wall came down in 1990

Capitalism was jubilantly welcomed back, lock, stock and barrel; any old junk from the west was bought, all indiginous, forward looking and creative potential was simply swept under the carpet (22,p.9).

However, we must remember that in this reunification of Germany, the West Germans are not converting to communism, it is the former East Germans who must uproot and convert to capitalism. So, however, good is the technical advancement or reliability which characterises East German design, it is the East Germans who must adapt their products to the capitalist market. Germany, as a whole, must overcome the features of Eastern German design, which were adequate in the old regime, but which now are not marketable to foreign countries. In general, what Eastern German design lacks is styling and market orientated innovation. East German designers have been suppressed over a period of forty years.

Everything East German design was never allowed to be exotic, challenging, existing somewhere on the borders between design, craft and art (35,pp17-20).

are now sales features which Eastern German designers must now use.

So what exactly are these obstacles which have suppressed East



German designers for so long? The answers can be revealed on deeper analysis.

The fact that the country was centrally controlled by government resulted in

Poor management. The civic and industrial leaders in the old system were encouraged to follow orders, not to show initiative (38).

This was done by the state department of industrial design which had its own regulations and rules.

Designers who worked in industry had to obey these rules. It took a lot of the creative room in which you could move. Designers could not work freelance. True they could ask permission to work independently by filling in a small mountain of paperwork, but they expected the usual result, an eventual refusal (27,p36).

The reason for this was the fact that no manufacturer would or could take the risk. Firstly because the State did not authorise them to do so and secondly the internal market of East Germany was not used to the styles which were in any way radical. Such enforced conservatism in style is well demonstrated by Trabant and Wartburg cars and Practika cameras.

Under the communist system any hopes for more freedom for industrial designers and managers in the future looked bleak. Evan design education in East Germany was controlled indirectly by the State

East Berlin's Kumsthochschule (Art School) at Weissensee, one of the only two in the GDR, took its orders from State controlled industry (27,p10)

and thereby ensured that all future designers had progressed inside the strict, regimental mould of communism. There was little chance that a capitalist orientated student would gain



entry to one of these courses let alone survive long enough to someday have a say, not just in how a product should work, but also in how it should look and what customer it should appeal to. Along with the limitations imposed upon industrial designers and managers by the government of former East Germany, the other major factor which has caused the products to lack style and export potential is the absence of commercial competitions. Like a lot of other professions in communist states East German designers were not, and still are not in the mode of cut throat competition which is needed to survive in capitalist systems. Because the State selected and reared them from childhood and made them secure in the knowledge that they would always be employed, it is only natural that they were complacent and unmotivated.

Its an oddly poignant image of designers, once nurtured and cared for by the State, selected by the State for creativity in their early teens and, like athletes and artists, thereafter guaranteed a job somewhere in the communist universe (27,p.12).

Communist designers were in no fear of losing their jobs no matter how substandard they turned out to be.

It was not only job security which deprived East German industrial designers of competition but also the fact that there were few if any competition brands in any particular industry. Since the State had full control of the one or two manufacturers in any field of industry, there was little point in competing against itself.

Under the division of labour policies in Comecon, the now defunct Soviet-bloc trade organisation, member countries held monoply control over their markets, providing no incentive to improve quality or control prices. Now such industrial relics as the two stroke





20.THE LACK OF COMPETITION IN THE FORMER EAST GERMAN AUTOMOTIVE INDUSTRY IS MANIFESTED BY THE LACK OF VARIETY IN EAST GERMAN CAR PARKS.



Trabant car and Clunky Robotron Computers are unsaleable at any price (26,p.35).

Hence the primitive standards of styling in these products, as it is perceived by the hardened capitalist consumer.

To get some measure as to how unsaleable the indigenous products actually are we need only look at what are considered to be the GDR's best products. Even the oldest and strongest manufacturers are having great difficulty in surviving reunification.

Among the companies in actual or de facto bankrupcy, are Carl Zeiss of Jena, the famed maker of quality optics, the two leading auto makers Wartburg and Trabant (26,p35).

Germany has a bigger task than was originally thought, to truly reunify the East and West because of the huge cultural rift which had developed during the years of political division. Just how much the State policies of East Germany had caused their professional, educational and living standards to lag behind was not realised until the Berlin Wall came down. Few Westerners were prepared for the discovery that they cannot even communicate with the Easterners let alone work with them.

Penned in by the communists, West Berliners are shocked to realise they have nothing in common with their fellow citizens". "They don't even speak the same language as us anymore one West Berlin designer confided (27,p35).

This vast cultural chasm was first discovered by the East Berlin students of a design school there, who on the first day the wall broke, in a naive celebration, were put together with the design students of a neighbouring design school in West Berlin. What the Eastern students encountered must have caused them to believe







21. REDUNDANT EASTERN GERMAN INDUSTRIAL WORKERS.

EASTERN GERMAN PRODUCTS, NOW EXPOSED TO EQUAL COMPETITION AGAINST THE WEST, ARE UNABLE TO SURVIVE DUE TO THE INADEQUATE PRODUCT STYLING.



that their prospects, in the new Germany, were non-existent and that drastic measures would have to be taken to improve their situation in education as well as in industry for them even to be able to compete on equal terms as their Western colleagues in their chosen profession. They were also subdued by the Westerners indifference towards them and realised, therefore, that these drastic measures would have to be self initiated.

They were shocked by the Western arrogance, by everyone working on Macintoshes. They thought they would never make it. They received little help and a few months later they had slipped away, discouraged and disillusioned (30,p.14-19).

These enormous gaps between East and West German industrial design are no better exposed by those Eastern designers who have migrated West and who are desperately struggling to compete inside one of the world's most competitive industrial regions.

East German designers, after forty years of communist control and State rule, have been asking their Western counterparts for jobs and trying to find out how business is done in the West. They want to know how to organise an office, how to approach companies, evan what equipment they need (23, pp.8-10).

They are, metaphorically speaking, helpless newborns of communist parents. But whether their new capitalist foster parents are behaving with apropriate responsibility is doubtful.

In many respects, this is exactly how former West Germany wants it to be. For so long the West has detested communism and was terrified by the thought of its spread. Now that communism, in Europe, has finally collapsed, Western nations are not prepared to forgive and forget so soon. Former West Germany is content to allow its newly adopted child to suffer a little longer just to





THE CAPITALIST SPIRIT, CASHING IN ON THE COLLAPSE OF THE INFAMOUS TRABANT:

WESTERN FURNITURE DESIGNER FRANZ CZIESLIK CONVERTS TRABANTS INTO SOFAS WHICH ARE SOLD IN THE WEST AT A VALUE OF \$1,700.



22. LEARNING TO COMPETE: COMPUTER CLASS AT ROSTOCK FOR THOSE SEEKING NEW SKILLS.



drive home the adage that "communism is evil". Bonn formerly did this by turning West Berlin into one of the brightest, most glamorous and most progressive cities, not just in Germany, but in the World.

The Social milieu which made Berlin's eighties cultural explosion could not have existed anywhere else. Which is just as Bonn wanted it: a showcase for the wonders of Western progress deep within the East (27,pp10-17).



CHAPTER 4

THE FUTURE OF INDUSTRIAL DESIGN IN THE RE-UNIFIED GERMANY, AND THE POLITICAL SOLUTIONS TO THE DESIGN PROBLEMS OF FORMER EAST GERMANY

As has already been established, native East German industrial design was

"a thoroughly worthy affair" (27,9.10),

as was proved by the quality and reliability of its Praktica and Carl Zeiss cameras and by the environmental considerations of the Trabant car. Unfortunately, the coming of democracy to the East has placed the survival of post World War II East German design under threat. Even if West German products are more style and fashion orientated, few of these products will have the durable life span offered by their Eastern competitors. This reputation for durability is something which must be preserved in the product design of former East Germany.

There are two main reasons why the reunification of Germany has put the survival of native Eastern German industrial design under threat. The first being the fact that the Eastern Germans have abandoned their own native country and culture. As James O. Jackson, of Time magazine, reported from Eastern Germany in March, 1991

The native East Germans have an absolutely irrational refusal in the East to buy anything made there. They don't even want to buy food from their own part of the country. The only Eastern products they buy are beer and schnapps (26,99 34-38).

This abandonment of native culture is threatening not only for indigenous product design but consequently for their own



identity. Similarly, as Uta Brandes of Design magazine in May, 1991

In what was still East Germany, large sections of the population panicked when faced with social change. In the midst of the initial euphoria they simply threw all their own social and cultural achievements over board, and with them went design (22,p.9).

All indigenous, forward looking and creative potential was simply swept under the carpet. This meant that many companies in what was East Germany sacked their designers and this jeopardised the continued existence of a specific Eastern German industrial culture.

Even if the Eastern German people are abandoning their own culture it is heartening to discover that the Eastern German professional designers and design educators are not giving up so easily. It is absolutely essential that both working designers and design academics in the East, do not allow the fact that their own people are turning their backs on them, to discourage them into submission. If they do they will lose those qualities which are exclusive to Eastern German design.

East Berlin's newly liberated designers fail to see themselves as some kind of underclass, hawking sub standard design. Many like graphic design consultancy, Grappa, have fought long and hard for their survival (38).

Equally defiant of extinction is Professor Dietmar Palloks, head of industrial design at the Kunsthochschule (Art School) of East Berlin. His school will neither close or be integrated into its bigger, more progressive counterpart on the West side of the city.



There have been political assurances on the subject the finance is there to be fought for (27,p.12).

Palloks deserves the fullest support from Kohl's government, since the Kunsthochschule not only benefits the East but has much to offer the whole of Germany in terms of professional practice in design.

The second great threat to the survival of native East German design and culture is the west bound mass migration of professional people from the East. Because of the huge wage discrepancy between the East and West, estimated at an average of 30%, it is hardly surprising that easterners are heading west in search of a more affluent life style.

This led to capable designers moving to West Germany and seeking to continue their careers there. This has had an impact on the already fraught situation in West German design (22, p.9).

The most worrying consequence of this migration, from a Western German point of view, is the fact that the Eastern German designers are undercutting the standard fees previously demanded by the West German consultancies. Even while undercutting they still earn a good deal more than they would in the East. Even so, one cannot support this sort of business practice, since it devalues the profession of industrial design in general. On the one hand manufacturers will have learnt that they need not pay the high fees which they previously were accustomed to paying for design work. If the Western designers are forced to lower their fees to compete with the Eastern designers, then it will be a very long time before industrial design, as a profession, will





23. HEADING WEST: INDUSTRIAL DESIGNERS ARE AMONG THOUSANDS WHO MIGRATE FROM EAST TO WESTERN GERMANY EVERY MONTH.



regain its status.

More than one designer in West Berlin is ready to claim that Eastern counterparts win their work by vastly undercutting Western rates (38).

On the other hand this practice is damaging to the standard of Western German design because the Eastern designers have not yet learned how to design products for the capitalist, open market. In simple terms they have not learned how to style products and aim them at the affluent sectors of the consumer market. There is now a danger that we will see, in the near future, influences of primitive Eastern German styling in previously stylish and highly fashion conscious, West German products.

Westbound migration causes most harm to Eastern Germany itself.

The best and brightest of Eastern Germans are flocking to the West. Although official statistics are no longer published, economic analysts estimate the East to West movement at an average of 20,000 a month, half from the state of Saxony, the industrial heartland of the East. The migrants tend not only to be the best qualified workers but also the youngest (26,pp.34-38).

This sort of brain drain is detrimental to any country even in times of political and economic strength, but former East Germany cannot expect to restore the standard of living to its people to an equal level to that on the West until the migration is stopped.

Since industrial recovery in the East is heavily dependent on design, steps must be taken, by the German Government to curb migration to the West. The East to West migration can only be expected to stop when job opportunities and pay levels in the East are equal to those in the West. This can be achieved by a process of industrial development in former East Germany with the


close co-operation of the West. If the German government and economists wish to truly reunify East and West Germany they must understand that industrial development, and the subsequent raising of design standards, is necessary to put living standards, in both regions, on an equal level. They must also understand the importance of the role of industrial design in this process. As Frankfurt based, freelance journalist Uta Brandes says

The government and business experts in Germany have no awareness of how quintessential the contribution of design is to the different phases of social, cultural and political development (22.pp 9-12).

At this stage Eastern Germany cannot carry out this development process alone, they, therefore, need the co-operation of the West. At present Western Germany is not interested in the East.

It is only using the East as an extended market place into which just about anything can be sold. This attitude, which former West Germany has taken, is self-centred, short-sighted and most worrying in the long term if it is to continue.

The first stage in the process of rehabilitating Eastern industry and industrial design is the import of management and design expertise from the West.

The management problem may be the single most unexpected element in Eastern Germany's crisis. Too many of the old comrades are still in fairly high-level management jobs. An obvious solution is to bring in experienced western administration (38).

Industrial designers, as well as managers, who have not learned the competitive, capitalist spirit are still in control of Eastern German industry, and unless they are retrained or





PRIMITIVE EASTERN GERMAN ASSEMBLY LINES ARE NO LONGER VIABLE.





24. MERCEDES BENZ ARE ONE OF THE FEW WESTERN COMPANIES TO AID EASTERN INDUSTRY BY SENDING WESTERN EXPERTISE TO EDUCATE THE EASTERN INDUSTRIALISTS AND SET UP FACTORY THERE TO CURB THE WEST BOUND MIGRATION.



replaced by Western experts, they will continue to restrict Eastern German industrial and design development. But Eastern German pay levels are around 30% lower than in the West. So Western management and design experts cannot be expected to work in the East until pay is equal. The irony is that the very reason they are required to bring their skill East, is to raise Eastern German wages by developing the commercial potential of Eastern German industry. So here is a dilemma for Eastern Germany. The government of Helmut Kohl must recognise this dilemma and come to the conclusion that financial assistance is required to subsidise the payment of Western managers and industrial designers working in the East, just until the East can stand on its own feet.

The second stage in the rehabilitation process in Eastern Germany is to, not just send expertise from the West to run existing Eastern factories, but also to set up Western owned factories in the East. In this way it is possible to employ Easterners at Western wage levels without the mass migration of 20,000 or so people per month and to keep some of "the best people" at home where they are needed. One of the first Western German factories to set up plant in the East is

Mercedes Benz which has already bought the site of its new headquarters building on Potzdamer Platz (31,pp14-19).

But whether the company is paying its Eastern employees at the same rate as those in the West, or is taking advantage of the cheap labour, has yet to be revealed.



One other measure that the reunified Germany could take to aid former East German design to become more consumer orientated would be to set up a design council similar to the British Design Council, by the government under Winston Churchill (for the encouragement of Arts, manufacture and commerce). Like Eastern Germany, Britain then had manufacturers producing industrial products of sub standard appearance because the public did not demand anything better. Therefore, the design council had two tasks. Firstly to encourage the public to demand higher standards from manufacturers and secondly to encourage manufacturers to provide the improved goods.

Each year the British Design Council awards prizes for products launched in Britain the same year. These prizes have done much good in publicising and promoting the importance of good design within Britain and consequently raising industrial design standards.

These annual prizegivings have had an immensely beneficial influence on the whole design scene in Britain. They have certainly performed wonders at bridge building between the Council and the successful manufacturers, and more importantly, once a year they produce a great reverberation in the media, which reaches back to government (16,p.40)

This sort of promotion is exactly what design in Eastern Germany needs today since

The government business experts in Germany have no awareness of the contribution of design to political development (22,pp 9-12)

The new Germany has an extremely hard task in the amalgamation of two regions with such extremes of political bacakground over the past forty years. Even though the former German Democratic



Republic is

Accusing its neighbour of neglect (30,pp.14-19) such a reunification process cannot be carried out without very painful teething problems. Perhaps the international community and in the case of design the International Council of Societies of Industrial Design (ICSID) should intervene on behalf of Eastern Germany.

It is up to developed countries to stimulate interest in design by the underdeveloped and the less well developed ones (16,pp.38-42).

So it is the obligation of all design councils, particularly those that are looked after by governments, to spare time and thought for the problems of the underprivileged.



CONCLUSION

Many unexpected discoveries arose in the research for this thesis and the answer to the original question - to what extent do political systems affect industrial design? - is less straightforward than originally thought.

For example one cannot say that the former West German system had a superior standard of industrial design than the former east German system, or that East Germany had higher standards than West Germany in design terms. But as it has been demonstrated, both East and West Germany had exclusive design features which set them apart from one another. Both countries had desigtn features which should be preserved. For example, in the West, products were, and will continue to be, style and fashion orientated. But unfortunately the Western manufacturers are there to make a living as well as to provide products and employment. they are aware that the consumers in a capitalist market have, on average, considerably more disposable income than their communist counterparts. The Western manufacturers take advantage of this fact by giving products a set life span. In other words they set exactly how many miles a car will run before it will break down and how many photographs a camera will take before it will wear out. This is all part of the designer's job, choose the less than the best materials and less to than strongest mechanisms to build into products so their life expectancy is not as long as it could be and the capitalist consumer is forced to renew products more often.



Here lies the real attitude difference between industrial designers in communist and capitalist systems because the industrial designer and manager under communism knows that their customers cannot affort to renew their purchases very often and the state is also aware that such extravagance would be detrimental to its closed economy.

This style conscious and relatively wealthy capitalist consumer has created a situation where products are designed to appear to be of the highest quality both in terms of style and function, but in actual fact the beauty is only skin deep. The products may well be more pleasing to the eye in order to attract attention to the shop window but purchase of these products will bring you right back to the shop sooner or later, and this cycle is not accidental.

If there is something that Western German designers can learn from their Eastern colleagues it is to design for durability. As we have already seen, the record shows that the Trabant car from former East Germany will last longer than a Porsche, BMW or even Mercedes. It is understandable that Western German industrial managers are afraid of such long lasting products since if they don't breakdown, customers will not be back looking for replacements.

But this belief is in fact a fallacy as was accidentally proved by the former East German camera industry. As you will recall, the German camera industry dominated the world camera market prior to and for some years following World War II. Then the



Japanese improved on the Germans in quantity and cost thereby succeeding the German monopoly in the world camera market. But coincidentally the East Germans, whose political system, forced their camera makers at Carl Zeiss and Praktica to abandon the technology race in favour of quality production, actually enabled the East Germans to compete with the West Germans and Japanese by offering the extremely high quality, precisiion cameras which the West Germans and Japanese could not because of high quantity production. The East Germans were trying to compete with their capitalist rivals by using the same policy of high technology and over mass production, but they failed in this respect. What East Germans to remain competitive enabled the in the photographic industry, was their concentration on the quality, and not quantity, policy to production.

The German auto industry is at present undergoing the same experience as did the German photographic industry during the 1960s and 1970s. The Western Germans are under threat once again, this time from the Japanese car producers, because they cannot compete on equal terms when it comes to quantity production, high technology and innovation. The difference of the events in the photographic and auto industries is that the current German car makers are determinedly trying to produce in equal quantities as the Japanese car makers. They are sacrificing their long established reputation for the purpose of high quantity output. As was shown by the East German camera makers, it is the nurturing of this reputation for quality which should be foremost in their list of priorities.



So as with the camera industry, the reunified Germany must employ the quality over quantity and technology policy of design if they are not again to be succeeded by Japan in production. What this ultimately means is the taking of the good features from former East and West German design and discarding the bad features. For example, take the high style, high performance Mercedes, BMW or Porsche and blend with them the durability and environmental qualities of the East German Trabant and Wartburg and we have an auto design policy which is beyond reproach in terms of quality. This quality design policy could also be applied to many other areas of industrial design in Germany, such as the domestic appliance, tool and electronic industries, which are also struggling to maintain their share in the international market place.

To close this conclusion it is appropriate to take a brief look at how the industrial design at China and Hong Kong have evolved under opposing political systems for the purpose of discovering whether the East and West German design conclusions can be verified.

As has already been explained, the Chinese/Hong Kong relationship in many respects similar to the East and West German is relationship prior to reunification in 1991, both being heavily industrialised, communist - capitalist neighbours. However, it stated that there are fundamental socio-economic must be distinguish the German differences which and Chinese circumstances, and which, therefore, prevent full accuracy of verification.



Because of the enormous size of the Chinese population it has not been possible for Chinese manufacturers to concentrate on high quality engineering and small quantity output as did the East German camera manufacturers, for example

Although the Chinese market has changed considerably since 1979, it is still in the stage of demand being higher than supply, and the shortage of many consumer products is obvious. The main concern of both producers and consumers is quantity rather than quality (37,99202).

This situation has resulted in many Chinese products being primitive in style, like those of former East Germany and being of low engineering quality also. An example of this is the most expensive Chinese SLD camera, the "Seagull" which is nearly identical to the East German Contax of the 1940s (39) The Contax, as already seen, was East Germany's first attempt at camera production under Soviet control, after political division. The Contax was notoriously unreliable and the East German camera manufacturers, subsequently improved the mechanical quality if not the styling quality. It is indicative of the extent of Chinese design neglect that their most expensive camera in the 1990s is of a 1940s design which was substandard even then.

In many factories the people who are in charge of beautifying products are called 'art workers'. The job of product design is not carried out by art workers but by engineers who have no knowledge of visual beauty. Art workers are only called to polish the finished products - more of a decorating job (40).

But there are signs that Chinese manufacturers are beginning to acknowledge the importance of good design for export. The Tianjin's Mecof truck is China's first serious attempt at producing a commercial vehicle which can compete with Japanese competitors such as Isuzu, Mitsubishi and Toyota. The Chinese







25. THE DESIGN OF THE CHINESE MECOF TRUCK BY THE BRITISH DESIGN CONSULTANCY MGA, WAS CARRIED OUT USING THE LATEST COMPUTER DESIGN SOFTWARE.

government, at present do not have the internal design expertise to design such a vehicle so they were forced to consult MGA, a vehicle design and engineering group based in Coventry in England. The Chinese also acknowledged the importance of engineering quality as a sales feature.

Quality was the key element of the brief. Quality control had to be exercised throughout the project (32.pp.50),

if the truck was to be competitive on the export market.

Although the Chinese consulted a British design firm the truck still appears primitive and outdated, in terms of style, when placed along side the competitor trucks from Japan such as Toyota, Hiace, Mitsubishi and Isuzu. The reason for this is the unwillingness of the Chinese to spend much time or money on a design project. So even when employing design expertise from abroad, Chinese products still trail behind in terms of style and commercial potential because the State system imposes the same "unreasonable" limits both inside and outside the State. As Jan Erik Jansson of MGA, after completion of the Mecof Truck Project said

An unreasonable low budget meant we had to be a bit clever. There was no room for exploratory design work and no time to revisit the same problem more than once (32,pp.50).

These design characteristics support the theory that communist systems, including those of former East Germany, produce products of high mechanical quality and low styling quality.

It can also be said that the two causes of backward design in Chinese products are essentially the same as in former East







26. TIANJINS MECOF TRUCK DESIGNED IN THE WEST UNDER SEVERE COST AND TIME RESTRICTIONS.

Germany. These two causes are the State control over industry, creating very little commercial competition and the primitive internal market.

There are two main reasons for Chinese industry being so backward: the problem of Chinese economic and political structures and an immature market (37,99.94).

Hong Kong industry, on the other hand, is acknowledging the importance of good design and that its tradition of imitating Western design will no longer ensure economic survival.

It is noticable that Hong Kong has taken off the hat of imitation due to the attaching importance to design. The epoch of investing in design has come. To rely only on performance and quality of product is impossible to win in the competition (42).

It is inevitable, therefore, that Hong Kong will become a design centre for Chinese industry afrter amalgamation in 1997. If this dependence on Hong Kong as a source of design for China is to occur, it would be tragic for China to lose its own design identity, an identity rich in traditional aesthetic beauty. It is reassuring that Professor Nick Stanley at the Birmingham School of Art and Design has noticed

a deliberate switch in Hong Kong to Chinese culture in anticipation of 1997 (41).

Just as the designers of the reunified Germany can learn from the experiences of political divisiion, so too can the designers of Hong Kong and China.

Designers in developing Asian countries must learn from experience - both the good and the bad of design development of other countries (36,pp103-108)

In Germany both East and West had features which should be



discarded, such as low quality style and engineering, and features which should be nurtured such as beauty and durability. If the reunified China and Hong Kong heed this lesson, they may well become the major industrial nation of the twenty first century.



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