

M0053924NC

T2212 ✓

NC 0018016 5



National College of Art and Design

**The Faculty of Design
Industrial Design Department**

**FORDS NEW EDGE DESIGN:
*more than just an aesthetic.***

By

Andrew Burdock

**"Submitted to the Faculty of History of Art and Design and
Complementary Studies in Candidacy for the degree of
Industrial Design Bdes.**

1999

Acknowledgements:

To the **FORD MOTOR COMPANY**, and to
Edmond S. Molloy, Ph.D. for their respective help and
guidance.

Contents

Title	p.1
Acknowledgements	p.2
Contents	p.3
List of Plates	p.5
<u>Introduction</u>	p.6
 <u>Chapter One</u>	
New Edge: an explanation of the ideal	p.8
40% New Edge: the ford ka	p.15
60% New Edge: the ford puma	p.17
80% New Edge: the ford focus	p.20
Differences in global interpretation	p.23
 <u>Chapter Two</u>	
New Edge: modern design strategy	p.26
Ford's realisation of the truth	p.27
Ford's 'new edge' approach: Japanese style	p.28
Three Themes of Effective Product Development	p.29
<i>Product experience as a stimulation of consumer experience.</i>	p.29
<i>Consistency of detail</i>	p.30
<i>Competing on product integrity</i>	p.31
Heavyweight Product Manager	p.32
Ford Turns the Tables: <i>concept to consumer</i>	p.33

Chapter Three

New Edge: marketing meets concept p.36

New Edge: the suggested completion of the ideal p.41

New Edge: Marketing becomes the concept p.45

Conclusion p.48

Bibliography p.51

List of Plates

[fig.1] Front view of the latest 'new edge' Ford Focus	p.10
[fig.2] Typical 1980s 'aero' styled car: the Mondeo	p.11
[fig.3] The 'record breaking' Ford Cortina range	p.13
[fig.4] The Ford ka	p.15
[fig.5] The Ford Puma	p.15
[fig.6] The Ford Focus	p.15
[fig.7 - 12] Details related to the case study of the Ford ka	p.16
[fig.13 – 15] Details related to the Ford ka	p.17
[fig.16] The 'Sporty' Ford Fiesta	p.18
[fig.17] Headlamp detail of the Puma	p.18
[fig.18] Rear light detail of the Ford Puma	p.19
[fig.19] Curved yet linear detail of rear of the Ford Puma	p.19
[fig.20] Linear detail forms at the rear of the Ford Puma	p.19
[fig.21] Black polycarbonate grill front	p.19
[fig.22] Photos showing two full images of the Ford Puma	p.20
[fig.23] The New Ford Focus	p.21
[fig.24] Image of Ford Focus wheelarch detail	p.22
[fig.25] Full image of the Ford Focus	p.22
[fig.26] Headlamp detail of the Ford Focus	p.22
[fig.28] Photo of the rear of the Ford Focus	p.23
[fig.29] Full frontal of the Ford Focus	p.23
[fig.30] The 'Americanized' Ford Cougar	p.24
[fig.31] Ford's conceptual 'new edge' Mustang	p.25
[fig.32] Diagram showing phase development	p.29

[fig.33] Diagram of a Heavyweight product manager structure	p.33
[fig.34] Image from a Ford New Edge brochure	p.38
[fig.35] Image from a Ford New Edge brochure	p.39
[fig.36] The Ford Bridge Symbol	p.39
[fig.37] The legendary Steve Mc Queen	p.41
[fig.38] San Francisco 'Bullet' style	p.41
[fig.39] The New Ford Focus	p.41
[fig.40] Interior of the Ford Focus	p.43

Introduction

Introduction

"Thinking always ahead, thinking always of trying to do more, brings about a state of mind in which nothing is impossible."

(FORD, Henry (1922), New Edge brochure, 1998, p.1)

As we strive towards a new millennium, a new realisation has dawned upon the automotive industry. Companies like Ford are being forced into a rethinking of their progressively 'indistinguishable' design ideals and development strategies by an increasingly powerful and knowledgeable consumer. Within the most competitive and technologically evenly balanced industrial climate ever, auto-motive companies are having to ask themselves the question of what business is it that they are actually in, as a defining of this can inherently lead to a redefining of both strategy and direction. This thesis sets out to examine and determine the success of Ford Motor Company's adoption of a modern design and development strategy. This is carried out through an in-depth analysis of their 'new edge' design concept. It will further show that this 'new edge' concept is more than just an advance in Ford's product aesthetic, suggesting that it is a symbol of where and what they see themselves becoming.

Chapter 1 leads us directly to an examination of Ford's 'new edge' concept. This chapter deals with the inherent aesthetics of the concept and suggests that this aesthetic is as much a reaction against conformity within the automotive industry as it is direct evolution of Ford's existing design ideals. It is further suggested that

Introduction

The purpose of this study is to investigate the effects of the proposed system on the performance of the system.

The study is organized as follows. Section 2 describes the system architecture.

Section 3 describes the experimental setup and the results of the experiments.

Section 4 discusses the conclusions and the future work.

Section 5 describes the system architecture.

Section 6 describes the experimental setup and the results of the experiments.

Section 7 discusses the conclusions and the future work.

Section 8 describes the system architecture.

Section 9 describes the experimental setup and the results of the experiments.

Section 10 discusses the conclusions and the future work.

Section 11 describes the system architecture.

Section 12 describes the experimental setup and the results of the experiments.

Section 13 discusses the conclusions and the future work.

Section 14 describes the system architecture.

Section 15 describes the experimental setup and the results of the experiments.

Section 16 discusses the conclusions and the future work.

Section 17 describes the system architecture.

Section 18 describes the experimental setup and the results of the experiments.

Section 19 discusses the conclusions and the future work.

Section 20 describes the system architecture.

Section 21 describes the experimental setup and the results of the experiments.

'new edge' is largely unconfirming in the execution of its inherent ideals, and that a continued global adoption of the concept, within Ford, is proving ultimately derogatory to the end concept. The chapter also investigates the three production vehicles already on the market, which incorporate this 'challenging' new design aesthetic.

Chapter 2 progresses with a detailed explanation of Ford's newly adopted modern design strategy. The chapter suggests that this 'new edge' design strategy is a reaction against increased competition within the global automotive industry. It is further suggested that the resultant reorganisation of internal structures is a direct adoption of existing Japanese ideals and strategies, and has resulted in a newfound confidence and strength within the company.

Chapter 3 leads us to an examination of Ford's most recent advertising and marketing strategies. An analysis of Ford's use of 'symbolism' and 'association through recognition' is given, suggesting that Ford have failed to integrate effectively the ideals invest in the 'new edge' concept into their marketing strategy. This chapter also highlights Ford's recent move towards a more marketing styled approach to business.

This thesis concludes with an examination and analysis of the success of this 'new edge' concept. It also relates to the direct success of the resultant products in relation to the consumer, and finishes with a summation of all findings and opinions generated in the writing of this thesis.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

PHYSICAL CHEMISTRY

Chapter One

New Edge: *an explanation of the ideal*

The shape of the car of the future will have to do much more than just fulfill the functional requirements of an increasingly demanding and knowledgeable consumer. It will have to appeal to him or her aesthetically. The main problem encountered by the designer's of the 1990s has been that they have created in the modern car a vehicle designed to a very specific pattern.

In the same way as a refrigerator or washing machine has become a competent consumer product that is to most people almost indistinguishable except by it's badge, this too has become true of many modern cars. The modern car could be in danger of becoming a victim of it's own competence.

(TELNACK, Jack, Internal Ford Memo, Aug 1996)

This most recent questioning of the automotive industry has ironically forced companies like Ford into both a rethinking of stance, and a reaction against conformity. Indeed, the most recent challenge for designers at Ford has been to develop a challenging new design concept aimed at confronting this conformity of design. If successful this concept should afford the Ford Motor Company an icon of their 'new edge' approach to the age-old process of automotive design. Just as the Second World War compelled an era of functionalism in design, volatile modern automotive markets have proved most obstructive, causing companies like Ford massive shifts in direction and changes of internal structure. Not since the 1970s and 1980s, has such a change taken place within the automotive industry. During this period a more demanding and knowledgeable consumer, voiced concerns against dramatically increased fuel costs. A global realisation of the finite nature

THE HISTORY OF THE UNITED STATES

BY JAMES M. SMITH

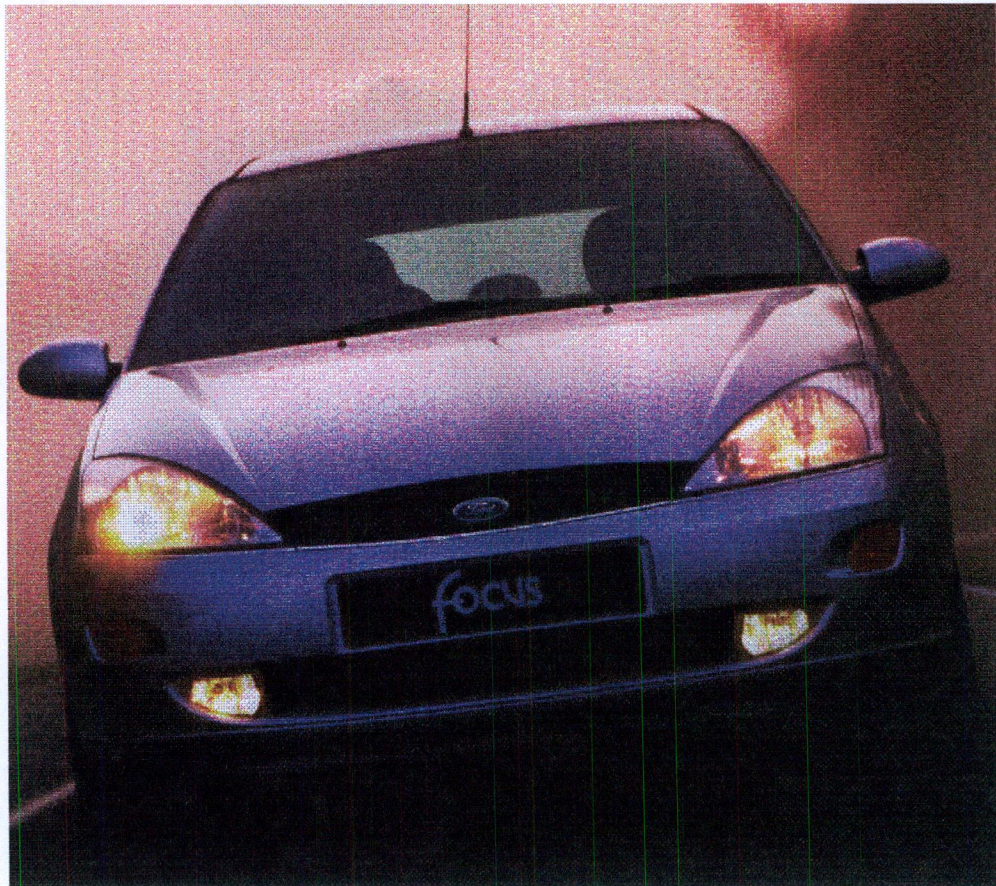
The history of the United States is a story of the growth of a great nation from a small colony of English settlers. The first settlers came to the New World in search of a better life, and they found it. They built a new society, one that was based on the principles of liberty and justice for all. This society grew and grew, and it became the most powerful nation in the world. The story of the United States is a story of the triumph of the human spirit over adversity.

The story of the United States is a story of the triumph of the human spirit over adversity.

The story of the United States is a story of the triumph of the human spirit over adversity. It is a story of the growth of a great nation from a small colony of English settlers. The first settlers came to the New World in search of a better life, and they found it. They built a new society, one that was based on the principles of liberty and justice for all. This society grew and grew, and it became the most powerful nation in the world. The story of the United States is a story of the triumph of the human spirit over adversity.

of fossil fuels was realised forcing automotive companies toward a defined emphasis on aerodynamics in car design. This new aerodynamic approach to car design, was coined 'aero', and represented a shift towards a softer and more organic overall form, which is still widely in evidence today.

Ford's New edge concept is both a direct development and evolution of this aero styling concept. New edge builds upon the smooth sculpted surfaces of aero design by combining it with clean, crisp, intersections of form to produce a sharper, more defined image [fig.1].



[fig.1] Front view of the latest Ford Focus

of the law was passed, and the law was passed.

The law was passed, and the law was passed.

The law was passed, and the law was passed.

The law was passed, and the law was passed.

The law was passed, and the law was passed.

The law was passed, and the law was passed.

The law was passed, and the law was passed.

The law was passed, and the law was passed.

The law was passed, and the law was passed.



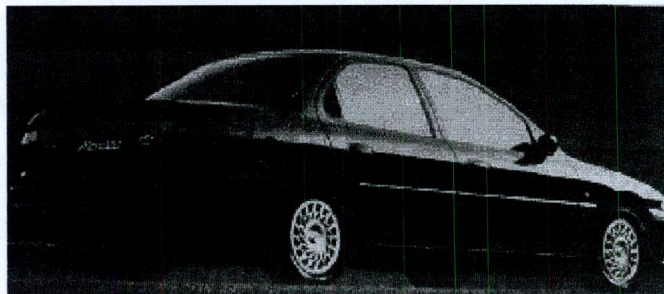
The law was passed, and the law was passed.

"We're reinventing aero and giving it a new edge, a new look," say's
 Jack Telnack, Ford's vice president of design (YUNG, Katherine, The
 Detroit News, Aug 1996).

*The jelly bean look is giving way to some hard edges. After
 more than 10 years of bringing out cars with soft rounded
 shapes Ford Motor Co. has begun to alter the appearance of
 it's vehicles in what could be the next big trend in automotive
 design.*

(YUNG, Katherine, The Detroit News, Aug 1996)

This 'new
 edge' philosophy uses a combination of intersecting shapes and hard
 edges rather than the traditional use of radii, as in aero, to produce the
 desired form. The aim is to create a clean line along the overall form,
 through the use of crisp folds of material at any point where two surfaces
 intersect with one another. This is in sharp contrast to the previous 'aero
 styling' concept, which blended these intersecting forms, in an attempt to
 minimise edge creation in order to maximise the aerodynamic efficiency
 of the overall form [fig.2]. This concept incorporates an aeroesque-



[fig.2] Typical examples of an 1980s 'aero styled car mondeo.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

LECTURE NOTES

BY

PROFESSOR

JOHN

DOUGLAS

CHICAGO, ILL.

1960

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

LECTURE NOTES

BY

PROFESSOR

JOHN

DOUGLAS

CHICAGO, ILL.

1960

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

LECTURE NOTES

BY

PROFESSOR

JOHN

DOUGLAS

CHICAGO, ILL.

1960

sculpted form with exciting individual details in an attempt to highlight the ideal through a contrasting of concepts. In addition to this, a broader expansive use of flat surfaces allows Ford to emphasise this new edge aesthetic by introducing it gradually against an aero styled core element. In fact, 'new edge' only achieves a successful visual coherence when contrasted against a core aero backdrop.

New edge, it is claimed, is as much an expression of Ford's increased precision in their manufacturing and production techniques, as it is one of conceptual idealism and forward thinking. New edge comes at a time when both critics and consumers have expressed that Ford needed to add some excitement into their styling. Modern designers are so concerned with the commercial viability of the product that they often create a steadfast visual of what a product is perceived to be, allowing little room for creative input or change.

"Boredom was beginning to set in", say's Carl Osten, head of transportation design at Ford's centre for creative studies, "We're in a period of exploration, equally in design and development strategies".

(YUNG, Katherine, The Detroit News, Aug 1996)

Ford, and Telnack in particular, go a lot further with their claims into the 'new edge' ideal. One of Ford's main claims for this 'new edge' concept is that, *"The sheer surfaces and defined curves give the overall impression of strength and purpose"* (TELNACK, Jack, www. The Auto Channel .com, July, 1997). This claim, which emanates the company's ambition and proposed

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

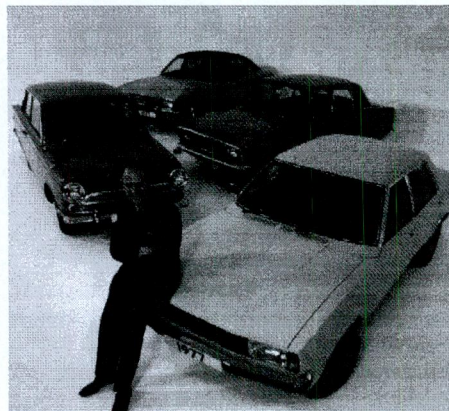
...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

direction, however contrived and forced they may be. *"The result is a strong, almost brutal shape that suggests strength"*, says Telnack, *"In this way form contains function"* (TELNACK, Jack, www. The Auto Channel .com, July, 1997). This public challenging of modern design ideals not only allows Ford a freedom of design expression but also draws much desirable attention to their new concept. Telnack further suggests that new edge, *"is a contemporary reiteration that uses styling from the '60s' in a whole new way – a three dimensional '90s' interpretation"* (YUNG, Katherine, The Detroit News, Aug 1996). This suggests that 'new edge' is a definite evolution of Ford's past design ideals. However, a look back at the 1960s Ford Cortina range [fig.3], shows no conformity with this present day design concept, with the only similarity being that of the brand name. This type of quote is a typical



[fig.3] The 'record breaking' Ford Cortina range.

expression of the suggested idealism within the modern auto industry, who use this type of decade association to help sales through a more direct link with consumer's ideals and memories. Motor companies like Ford, have begun to play even more so on the idealistic viewpoints and

1. The first part of the report is a general introduction to the subject.

2. The second part is a detailed description of the methods used in the study.

3. The third part is a discussion of the results of the study.

4. The fourth part is a conclusion and a list of references.

5. The fifth part is a list of figures and tables.

6. The sixth part is a list of appendices.

7. The seventh part is a list of footnotes.

8. The eighth part is a list of references.

9. The ninth part is a list of figures and tables.

10. The tenth part is a list of appendices.

11. The eleventh part is a list of footnotes.

12. The twelfth part is a list of references.

13. The thirteenth part is a list of figures and tables.

14. The fourteenth part is a list of appendices.

15. The fifteenth part is a list of footnotes.

16. The sixteenth part is a list of references.

17. The seventeenth part is a list of figures and tables.

18. The eighteenth part is a list of appendices.

19. The nineteenth part is a list of footnotes.

20. The twentieth part is a list of references.

21. The twenty-first part is a list of figures and tables.

22. The twenty-second part is a list of appendices.

23. The twenty-third part is a list of footnotes.

24. The twenty-fourth part is a list of references.

elements inherent in the consumer mind through a creation of a lifestyle associated product. This suggests that their product will enhance not only the physical but also the mental aspects of the consumer's life. By claiming 'new edge' owes its origin to a contemporary reiteration of 1960s styling, the company relate the product to that specific era's ideals of peace and freedom of expression.

As automobiles become less distinguishable to the everyday consumer, manufacturers vie with one another to create a distinctive and globally recognisable design. It can be said therefore that Ford's 'new edge' concept is their resolution to this particular problem. Design experts say that 'new edge' could quickly sweep through the industry in both its proposed ideals and associated development strategies.

It's something new in an industry filled with lookalike products. Ford have been really bold to go out on to the stage of putting harder edges on soft forms, says Ron Hill, chairman of the Transportation Dept. at the Art Center College of Design in Pasadena, Calif. The industry will move away from extreme soft forms. A relatively hard-edged (car) can be just as aerodynamic as a soft car.

(YUNG, Katherine, The Detroit News, Aug 1996)

So it appears that new edge is a 'natural' development in the evolution of auto- motive design, however Ford have had to be very careful in the release to the market of these 'hard edged' products. *"Whenever you have something new, it polarizes people"* (TELNACK, Jack, Ford News Brief News Digest Weekly, Aug 1997). This polarizing effect has led Ford to a progressive yet staggered

When a person is in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

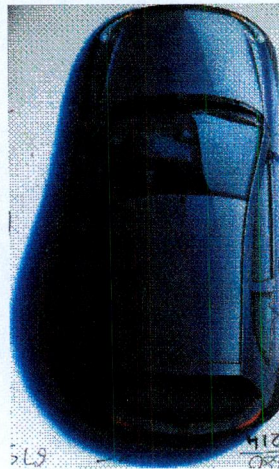
in a state of mind that is not

in a state of mind that is not

in a state of mind that is not

release of the concept. The first to be released was the Ka [fig.4], termed as being 40% new edge concept, which was designed to subtly introduce the consumer to the concept. This was followed by the Puma [fig.5] 60% new edge [fig.6], and the most recent Ford Focus [fig.7], 80% new edge. The three following case studies further exam this new edge concept in aesthetic and technical terms, thus providing a more complete understanding of exactly what new edge entails.

[fig.4] Ford Ka

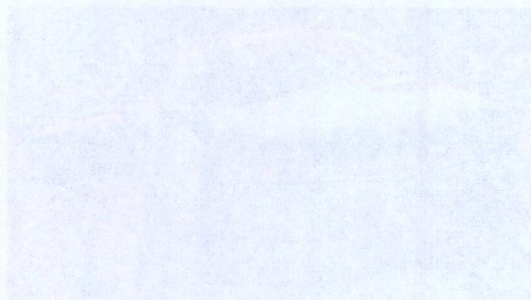
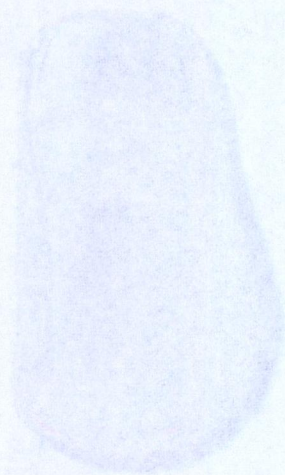


[fig.5] Ford Puma



[fig.6] Ford Focus





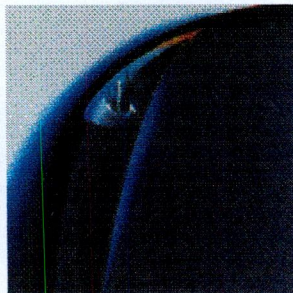
40% New Edge: *the ford ka*

The exterior aesthetic of the Ka has been created to offer the customer a highly individual and distinctive small car that introduces both a unique, sophisticated and new edge look, into the small car market.

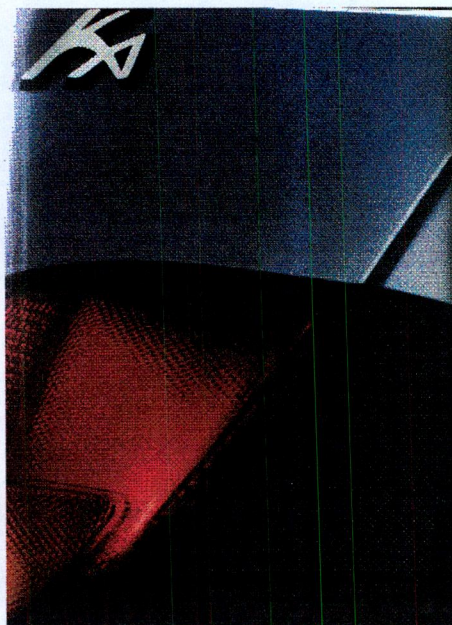
(Ford Public Affairs, FACTSHEET E77, March 1998)

This new look is generated through high, linear belt lines and a 'shape upon shape' technique that results in edge creation where curved planes intersect [fig.8]. The exterior of the car features sheer simple sheet metal surfaces that encapsulate a design feature where these surfaces meet [fig.9]. The headlamps are a good example of this design philosophy. These stretched, almond like lenses [fig.10] further emphasise the wrap around corners usually blended in aero design, thus creating a sharply focused break-line. These intersections [fig.11] form distinct lines that allow the vehicle a unique blend of flowing rounded panels and dramatic linear edged detail [fig.12].

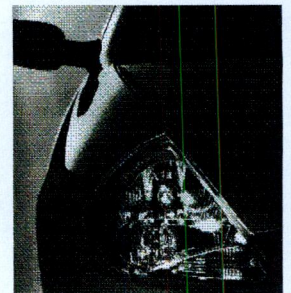
[fig.8]



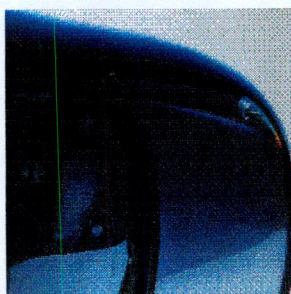
[fig.9]



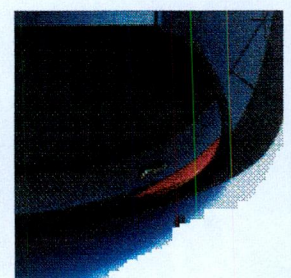
[fig.10]



[fig.11]



[fig.12]



THE NEW YORK PUBLIC LIBRARY

ASTEN LENOX TILDEN FOUNDATION

500 FIFTH AVENUE
NEW YORK, N. Y. 10017

TEL. 212-850-4100

For more information, contact the Reference Department

at the New York Public Library, 500 Fifth Avenue

or call (212) 850-4100, extension 2345

or write to the New York Public Library, 500 Fifth Avenue

or call (212) 850-4100, extension 2345

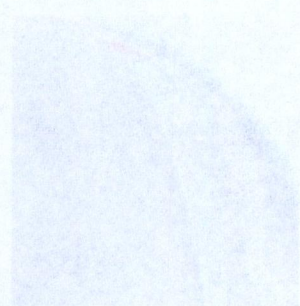
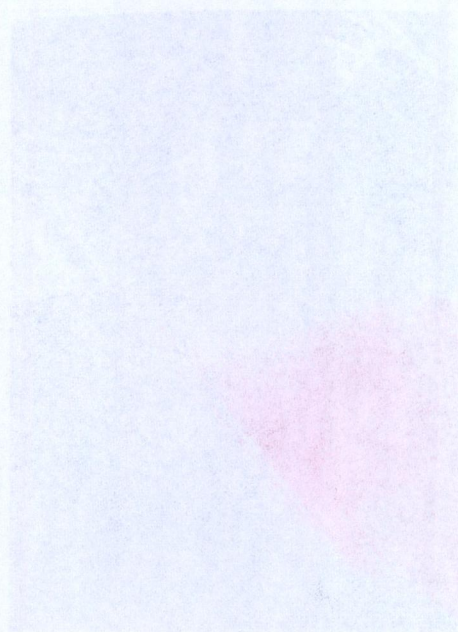
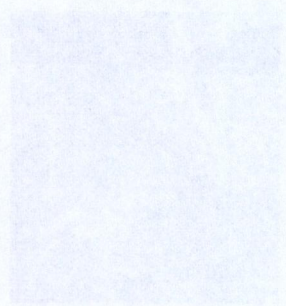
or write to the New York Public Library, 500 Fifth Avenue

or call (212) 850-4100, extension 2345

or write to the New York Public Library, 500 Fifth Avenue

or call (212) 850-4100, extension 2345

or write to the New York Public Library, 500 Fifth Avenue



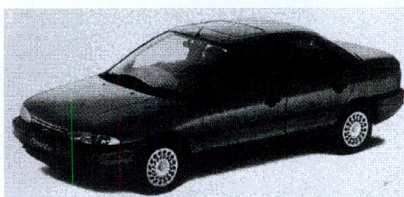
The entire 40% new edge elements hinge upon a successful merging with the 60% aero styled core element. This core element shows a direct correlation with Ford's aero styled concept [fig.13]. The simplicity of the body panel elements is strongly emphasised by the moulded polypropylene front and rear bumpers that wrap around to integrate directly with the wheel-arches, which in themselves exhibit a strong design visual [fig.14]. The bumpers and the mesh radiator grille are self-coloured in a mid blue to contrast with the nine paint colours, which help to reinforce the design statement.

Ford's New Edge design philosophy is awash with contrasting colours and a combination of soft and metallic materials to enhance the car's look and feel.

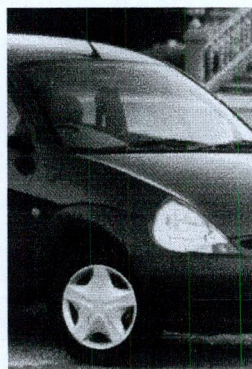
(TELNACK, Jack, Ford News Brief Weekly News Digest, Nov 1998)

The smooth body-side profiles are relieved by two feature lines each side of the car, with the overall appearance further enhanced by black door and tailgate handles, a black tailgate arm and black aerodynamic door mirror's [fig.15]. In essence the Ford 40% new edge Ka is exemplary of the basic ideals and beliefs put forward by the company.

[fig.13]



[fig.14]



[fig.15]



1. The first part of the report is a general introduction to the subject.

2. The second part is a detailed description of the methods used in the study.

3. The third part is a discussion of the results of the study.

4. The fourth part is a conclusion and a list of references.

5. The fifth part is a list of figures and tables.

6. The sixth part is a list of appendices.

7. The seventh part is a list of footnotes.

8. The eighth part is a list of symbols and abbreviations.

9. The ninth part is a list of acknowledgments.

10. The tenth part is a list of references.

11. The eleventh part is a list of figures and tables.

12. The twelfth part is a list of appendices.

13. The thirteenth part is a list of footnotes.

14. The fourteenth part is a list of symbols and abbreviations.

15. The fifteenth part is a list of acknowledgments.

16. The sixteenth part is a list of references.

17. The seventeenth part is a list of figures and tables.

18. The eighteenth part is a list of appendices.

19. The nineteenth part is a list of footnotes.

20. The twentieth part is a list of symbols and abbreviations.

21. The twenty-first part is a list of acknowledgments.

22. The twenty-second part is a list of references.

23. The twenty-third part is a list of figures and tables.

24. The twenty-fourth part is a list of appendices.

25. The twenty-fifth part is a list of footnotes.

26. The twenty-sixth part is a list of symbols and abbreviations.

27. The twenty-seventh part is a list of acknowledgments.

28. The twenty-eighth part is a list of references.

60% New Edge: *the ford puma*

"Puma is highly individual from nose to tailgate, a car whose sleek outward form belies an inner steely character and substance".

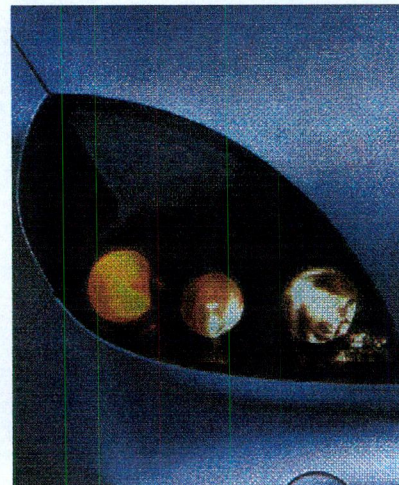
(Ford Public Affairs, FACTSHEET E75, Nov 1997)

The Ford Puma was the second production model to be released by Ford, to incorporate the ideals central to the new edge concept. It was released as a 60% 'new edge' concept and holds the honour of being the first Ford vehicle to be completely designed on computer. The initial concept behind the Puma originated in 1993 when Ford designers were asked to incorporate the new ideals of 'new edge' into a sports coupe based around the existing Ford Fiesta [fig.16]. It took just four months (135 days) to go from an initial design rendering to an approved design, due to advances in computer design technology.

[fig.16]
'Sporty' Ford Fiesta



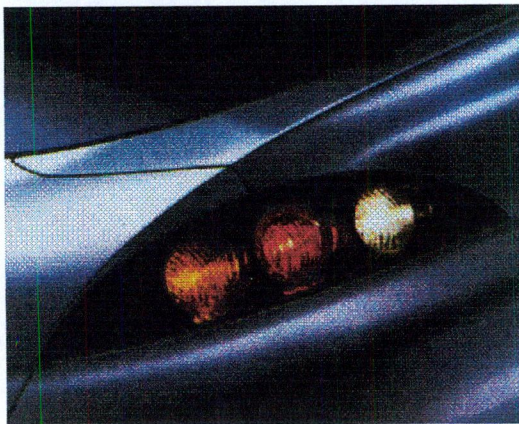
[fig.17]
Headlamp detail of the Puma



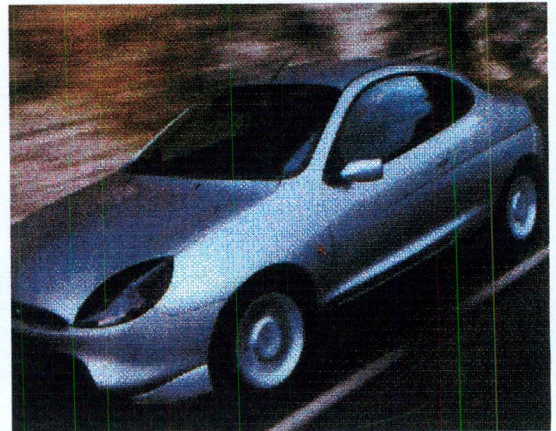
Puma's design attempts to capture 'the spirit' of a classic sports coupe through the 'new edge' detailing of the 1990s. The overall aesthetic lends itself easily to the afforded name

'Puma', with a distinct feline styling play on the overall form and specifically on the front and rear headlamps [fig.17]. The dragged back, 'almond shaped' polycarbonate lamp lenses accentuate a 'cat-like' aesthetic. Each of these details appear at the related intersection of associated forms [fig.18], ensuring that the Puma follows through the ideals set out in the Ka. A linear curved slice above the rear wheel arches which flows smoothly across the rear to form a definite design feature [fig.19] further accentuates these rear lamps. This line goes on to create the distinct rear lipped edge [fig.20] which acts as an inherent spoiler. The new edge ideal is further defined with a black polycarbonate front and rear base grill [fig.21] which contrasts well with the front bumper unit.

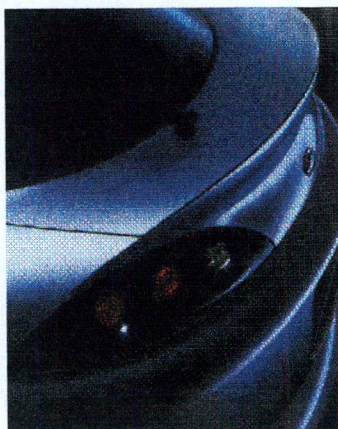
[fig.18]
Rear light detail at intersection.



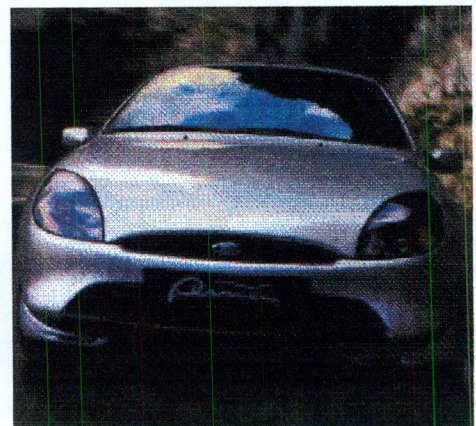
[fig.19]
Curved yet linear detail at rear.



[fig.20]
Linear detail forms rear spoiler.



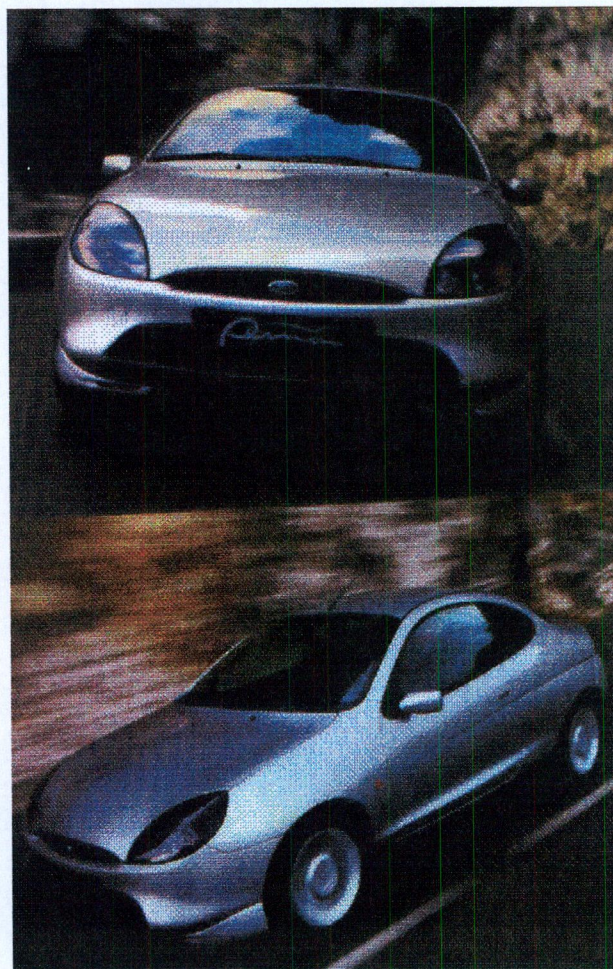
[fig.21]
Black polycarbonate grill front.

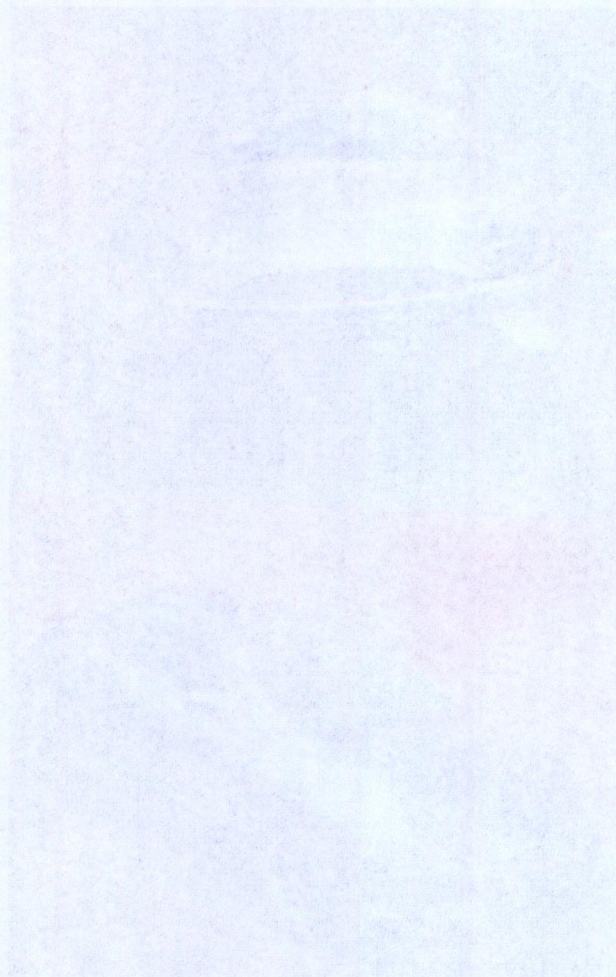


Ford has received critical acclaim for this exciting new concept, with a 12-month waiting list in this country alone. However, there is an underlying element within this product's aesthetic which displays a distinct lack of conformity in design. This concept has been released as a 60% new edge concept, yet the overall aesthetic is more 'aero' inspired [fig.22]. The Puma seems to have a majority of 'aero' styling within it's aesthetic, with a curvaceous 'jelly bean' appearance, contrasted slightly in specific regions by new edge detailing. Thus it seems logical to surmise that the Puma is not being true to the proposed ideals of design at Ford. In direct comparison to the Ka, the Puma exhibits a 30-40% new edge element therefore suggesting an unconformity in Ford's 'idealistic' design approach.

[fig.22]

Overall form seems more aero inspired.





80% New Edge: *the focus*

The latest, and most publicised, release of the Ford new edge concept has come in the form of the Focus [fig.23]. Its 80% new edge aesthetic, along with its superior handling and performance, have already ensured the Focus as the European Car of the Year. In the Focus Ford have returned to a more rigid new edge approach, sticking firmly to their proposed ideals, yet attempting through design to progress the concept to the next level. As the ideal has developed, so too has public expectancy; to state that the Focus has been successful would be notably flattering to company.

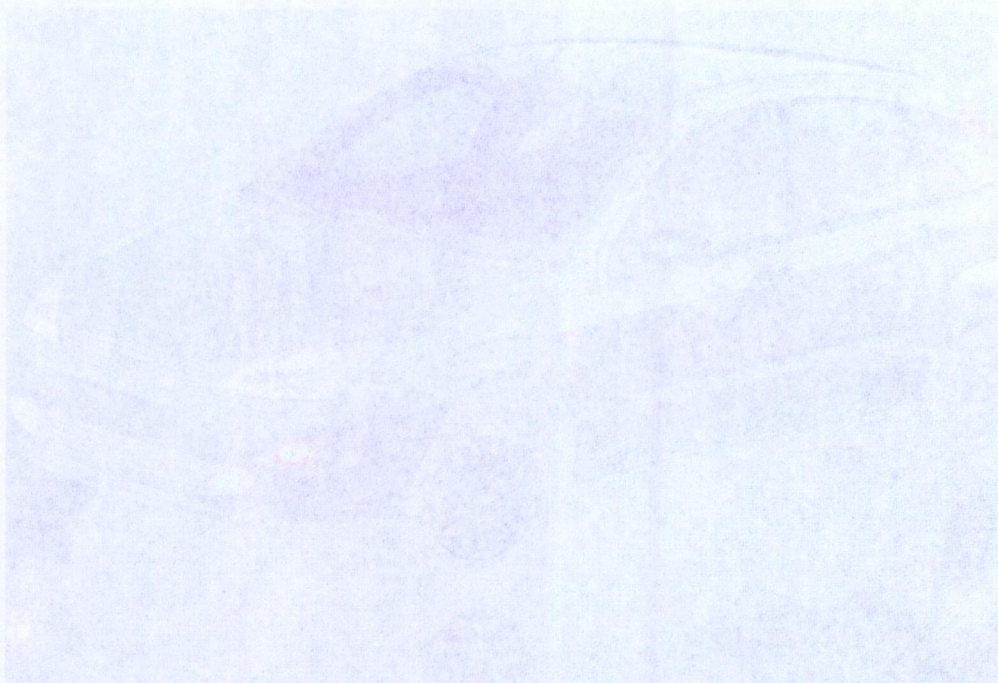
[fig.23]
The New Ford Focus



The Ford Focus exhibits an undoubted flow to its overall form, enhanced with two sweeping sliced lines above each

3. The New England and Midwest

The New England and Midwest regions are characterized by a high concentration of manufacturing and service industries. The New England region, which includes the states of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island, is known for its long history of manufacturing, particularly in the textile and footwear industries. The Midwest region, which includes the states of Ohio, Michigan, Indiana, Illinois, Wisconsin, and Minnesota, is known for its heavy manufacturing base, particularly in the automotive and steel industries. Both regions have a strong tradition of education and research, with many of the leading universities in the United States located in these areas. The New England and Midwest regions are also known for their diverse economies, with a mix of manufacturing, service, and agricultural industries. The New England region has a strong presence in the financial services industry, while the Midwest region has a strong presence in the manufacturing industry. Both regions have a strong tradition of innovation and entrepreneurship, with many of the leading companies in the United States originating in these areas.

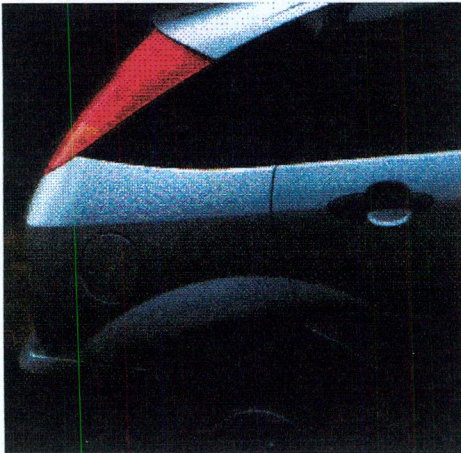


The New England and Midwest regions are also known for their diverse economies, with a mix of manufacturing, service, and agricultural industries. The New England region has a strong presence in the financial services industry, while the Midwest region has a strong presence in the manufacturing industry. Both regions have a strong tradition of innovation and entrepreneurship, with many of the leading companies in the United States originating in these areas.

wheel arch to form an arbitrary continuity within the product [fig.24]. These linear graphic expressions of the 'new edge' philosophy adhere to the stated Ford ideal. However, they unsettle the overall aesthetic by misdirecting the natural line of sight along the direct side horizontal [fig.25]. The vehicle exhibits visible intersecting highlight's where large expansive surfaces meet [fig.26], relating to the much emphasised new edge ideal. The more elaborately stretched and slightly flattened headlamps are now a specific feature of the new edge concept and show a direct sign of evolution from the Puma concept [fig.27], placing themselves at appropriate intersections of form.

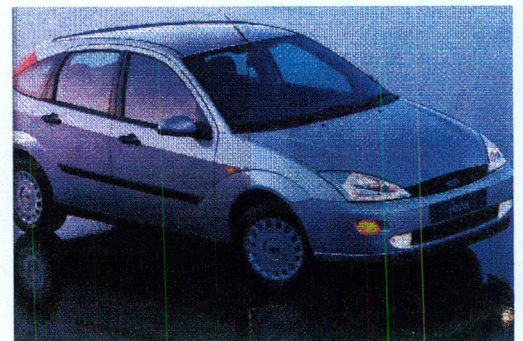
[fig.23]

The slice above wheelarch catches attention.



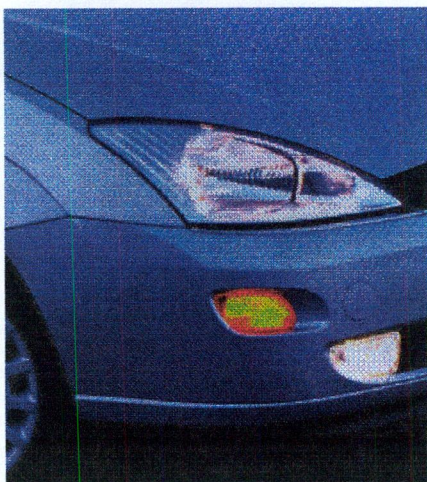
[fig.24]

Misdirect natural line of sight.



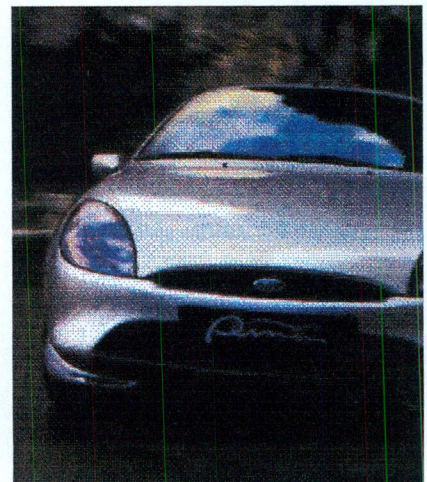
[fig.25]

Detail where two surfaces meet.



[fig.26]

Similar design feature as in Puma.



...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...

Figure 1

Figure 2

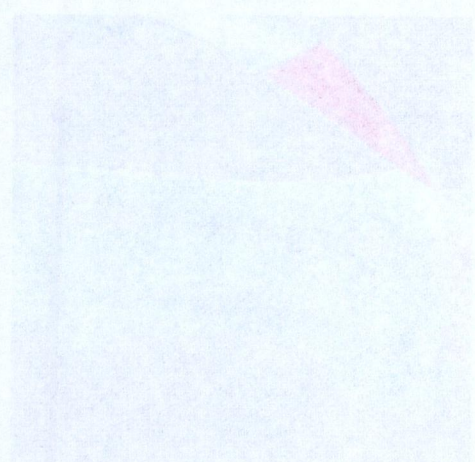
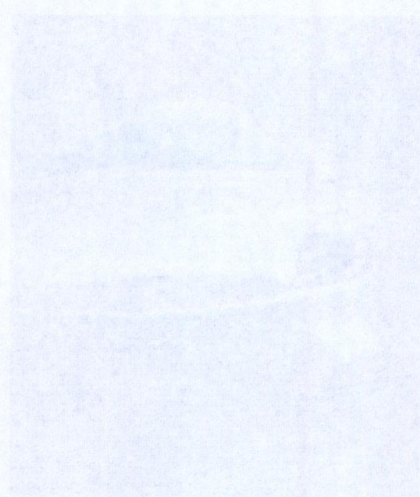


Figure 3

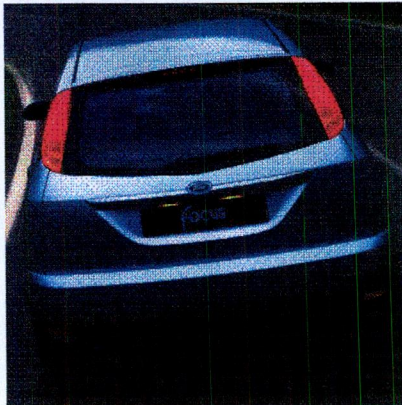
Figure 4



Complying more so than any other feature on all the concepts is the rear of the Focus [fig.28]. Here we see the simple yet effective use of sharp edges and intersecting forms to create an overall 'shape upon shape' aesthetic. However, this seems more confused and haphazard than any of the other concepts, with the shapes becoming almost too individual and distinct. This suggests, therefore, that a truly complete new edge concept would bear a confusing overall aesthetic. The front of the Focus continues the feline like aesthetic of the new edge range, producing a definite sense of strength and aggression in the vehicles overall stance [fig.29]. The Focus is a well-rounded and progressively styled concept, yet its infused new edge ideals seem to create a more undefined and confusing visual aesthetic.

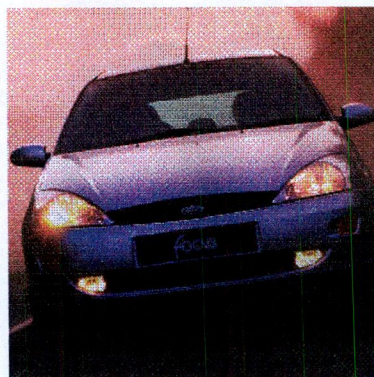
[fig.28]

Striking yet confusing rear of the Focus.



[fig.29]

Suggestive 'New Ford Focus'



Differences in global interpretation

One of the more unnoticed elements of the new edge design philosophy is its seeming ability to adapt itself to almost any type of 'aero styled' product. This is not to say that this resultant adoption of new edge ideals promises or delivers any successful designs or avenues for Ford to pursue. Although Ford has yet to market such hybrid attempt's of the new edge ideal, this does not preclude that this type of crossbreeding of design is not occurring. Indeed, on a global scale, 'new edge' is being adopted by many designers within Ford yet outside the more idealistic confines of the European set-up. This differential approach to new edge design may prove to be harmful to Ford's overall ambition and direction, as such hybrids may eventually confuse an already unconforming concept.

[fig.30]
'Americanised' Cougar



The US division of Ford has already produced a real 'American' off-shot of the Puma concept vehicle, in the form of the Cougar [fig.30].

Introduction and Objectives

The purpose of this study is to investigate the effects of the proposed intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

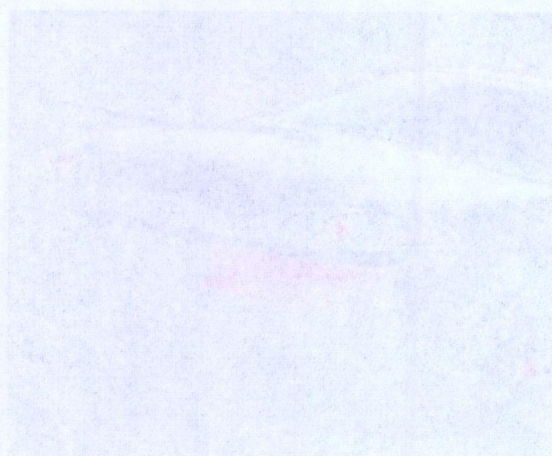
The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

The study is designed to evaluate the impact of the intervention on the target population.

Methodology



This concept, which replaced the Probe, has stretched and trimmed the initial Puma concept to produce a longer and larger typically Americanised product. Even though it may seem that the concept still holds many of the original ideals and still retains a new edge defined form, this concept still disrupts a finely balanced set of design ideals. New Edge, by Ford's own definition, *"does not lend itself to elaboration and up-scaling, as size and distinct form are key elements of the core concept"* (YUNG, Katherine, The Detroit News, Aug 1996). Therefore any further play on a fixed concept must surely upset the planned evolution. A further and more damning 'raping' of the new edge ideal is clearly visible in the latest concept Ford Mustang [fig.31].

[fig.31]
Ford's conceptual Mustang



This American concept is not a play on any existing new edge concept. It is a direct attempt of US designers to apply the new edge ideal to an existing Ford product. Therefore logical progression dictates that these designers, who

were not part of the original developing team, will allow both personal and regional ideals to be included in the final design. Thus creating a hybrid of the chosen concept is created which surely contradicts the information based strategy proposed by Ford. Ford must therefore focus primarily on the original new edge ideals and evolve them appropriately to create a globally accepted concept.

Chapter Two

New Edge: *modern design strategy.*

For senior designers and managers around the world, developing products faster, more efficiently and more effectively is at the top of the competitive agenda. There is evidence to support the theory that effective design and development of new products can ultimately impact on cost, quality, consumer satisfaction and competitive advantage. It has become apparent to companies like Ford that these development strategies must be as carefully designed as the products themselves. Creating new products has been central to competition since the inception of the auto industry. Indeed road races between the latest models were front-page news as early as 1900. Ford's introduction of the Model A in October 1927 attracted 100,000 people to Detroit showrooms and caused near riots in Cleveland and Kansas City. Alfred Sloan's annual model change at GM capitalized on the fascination with new products, by making the introduction of new models as much a part of the fall season as apple cider and raking leaves. Throughout the 1980s, scores of new products, heretofore unrivalled in performance and reliability, arrived in the market at an unprecedented rate. Competition, new technology and a new generation of buyers have created a turbulent environment for the world's automobile industry.

This new industrial competition has forced companies like Ford into an adoption of progressive product development strategies. Largely three major forces that have emerged over the past two decades within the industrial

environment drive this increasingly competitive market. The emergence of intense international competition; the creation of fragmented markets, populated by demanding and sophisticated consumers; and diverse transforming technological change have all combined to push new product development ideals and strategies to the forefront of producers' and designers' minds. In this environment, the advantage goes to the company that can offer a greater variety of new products with higher performance and greater overall aesthetic appeal. American, Japanese and European countries bring different capabilities to the market and use different approaches, but they are all seeking an edge in product development, aesthetic and function. So it is notably apparent that Ford had to seek a 'new edge' to their development strategy, otherwise they would lose market share through non-progression.

Ford's realisation of the truth

It was back in the bleak days of the early to mid 1980s, that Ford began to realise a new approach to product development was necessary, as recession hit Detroit. Ford's executives finally grappled with the fact that fuel economy was not the only reason consumers were flocking to imports.

"It was painfully obvious that we weren't competitive with the rest of the world in quality," said John A. Manogian, who was Ford's chief of quality. "It became our No.1 priority," adds Lewis C. Veraldi, who was at the front of Ford's attempts to incorporate new design and development strategies, " we

decided we had better do something far reaching-or go out of business".

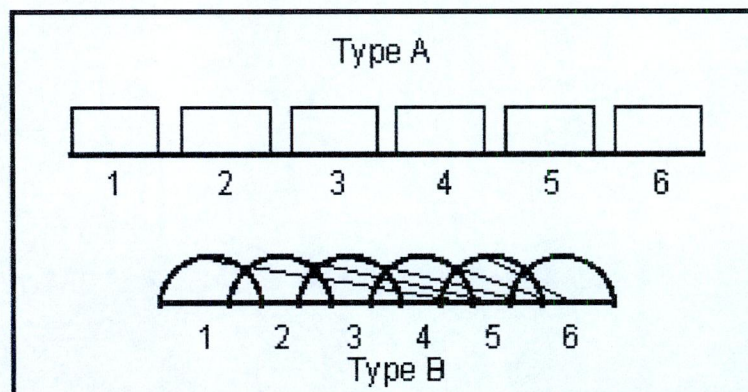
(MITCHELL, Russell, Science & Technology, 1986)

How did Ford pull it off? Largely by taking a leaf from the Japanese.

Ford's 'new edge' approach: *Japanese style*

It was not by accident that the Japanese had become so competitive within the industry. To most, they had always trailed behind the likes of Ford and General Motors, and in principle they did but through highly crafted internal and external product development and design strategies, the Japanese quickly caught up on their American and European counterparts. They brought with them different ways of thinking, not so much a new aesthetic or functionalism but a new approach to the entire design process. They introduced to the industry the idea of an information based design development strategy [fig.32], in which every intricate part of development, albeit designer to assembly worker has a direct and parallel input into the design process.

[fig.32]
Sequential(a) vs Overlapping(b)
Phases of development.



THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

This was completely radical in comparison to Ford's traditional methods. This new information-based strategy brought with it four main ideas which are the basis for Ford's new development strategy, which Ford themselves have termed 'CTC', concept to consumer. These four new ideals allow a focusing on priority and direction. They incorporate every part of the process equally and allow the company to work as a single unit, a collective. Three of these ideals deal with effective product development and the final one, with the management of the process through the atypical Japanese ideal of the Heavyweight Product Manager.

Three Themes of Effective Product Development

Effective product development rests on a product designer's ability to create a positive product experience. This involves a complex translation of product information from consumers. The following three themes have been established and adopted by Ford as guides by which a successful concept can be developed and released as a viable product to the consumer.

Product experience as a stimulation of consumer experience

The development of a new product involves creating a new concept and the resultant building and testing of prototypes. This is carried out by

Page 1

The first part of the report is a summary of the work done during the year.

The second part is a detailed account of the work done during the year.

The third part is a summary of the work done during the year.

The fourth part is a summary of the work done during the year.

The fifth part is a summary of the work done during the year.

The sixth part is a summary of the work done during the year.

The seventh part is a summary of the work done during the year.

The eighth part is a summary of the work done during the year.

The ninth part is a summary of the work done during the year.

The tenth part is a summary of the work done during the year.

The eleventh part is a summary of the work done during the year.

The twelfth part is a summary of the work done during the year.

The thirteenth part is a summary of the work done during the year.

The fourteenth part is a summary of the work done during the year.

The fifteenth part is a summary of the work done during the year.

The sixteenth part is a summary of the work done during the year.

The seventeenth part is a summary of the work done during the year.

The eighteenth part is a summary of the work done during the year.

The nineteenth part is a summary of the work done during the year.

The twentieth part is a summary of the work done during the year.

The twenty-first part is a summary of the work done during the year.

The twenty-second part is a summary of the work done during the year.

The twenty-third part is a summary of the work done during the year.

The twenty-fourth part is a summary of the work done during the year.

The twenty-fifth part is a summary of the work done during the year.

various people, from designers to engineer's, however it is a continuing trend within manufacturers to further integrate the consumer into the process. How well a development group stimulates target customers is critical to the effectiveness of a product development effort. It is critical to manage the linkages between development and the sources of information, i.e. the consumer. This is why it is imperative that an analysis of consumer behaviour and product development is made concurrently. As consumer needs and evaluation criteria change, so do effective patterns of development.

When consumers appreciate more subtle product characteristics such as style, expressiveness and fit with lifestyles-characteristics that are more difficult to articulate in plans and specifications, face to face discussion and physical prototypes become more important as communication media. Effective product development simulates future consumer experience accurately at a detailed level, but because consumer requirements and expectations are difficult to forecast, getting the simulation right is critical. Matching the development and consumer processes at a detailed level seems to be the single most important task for new product development.

Consistency of detail

The second theme that guides Ford's development is the importance of consistency in the detailing of the development process. In particular a focus on the way designers, engineers and marketers frame and solve

There is a great deal of interest in the subject of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

the present state of the world, and the future of the

problems at the working level. This does not mean that details of problem solving can be managed independently, without consideration of the bigger picture, attention to both the whole and the parts is necessary for effective development. Just as capable conductors must attend simultaneously to overall harmony and individual sounds, to produce good symphony music, effective design strategy must incorporate the development system and detailed activities at the same time in order to produce successful products. A consistency of detail at each stage of development, however small or varied, is required in order to create an overall harmony and continuity within the product.

Competing on product integrity

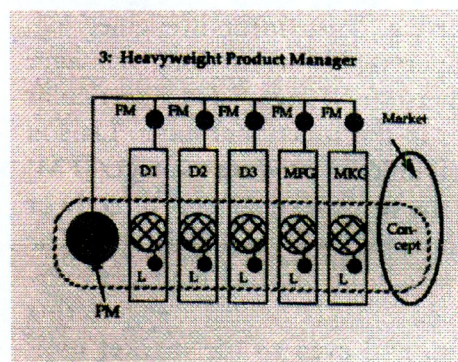
Generally speaking, the focus of competition varies across industry and changes over time. In many of today's industries, product integrity has become a focus within competition. Companies like Ford cannot depend or compete solely on the superiority of a single technology, because the technology in the product is complex and changing, making new product development a critical inherent ingredient within competition. Product integrity has both internal and external dimensions. Internal integrity refers to consistency between the function and structure of a product, e.g. the parts fit well, components match and work well together. External integrity is a measure of how well a product's function, structure and semantics fit the consumer's objectives, values, lifestyles and self-identity.

Heavyweight Product Manager

These three themes of product development brought obvious advantages to the Ford Motor Company. It allowed them a new and accurate perception of consumer needs and wants, they highlighted a continuing need for attention and consistency of detail and focused the company, at every level of input, on creating a defined and assured product integrity. It was realised that a development strategy is no more than the summation of its individual parts. Suggesting that if each variable is to interact and respond efficiently with the other, a combining and overseeing component must be in position, with a competent reference and experience of each variable so as to ensure complete product development success. The heavyweight product manager is a Japanese solution to this problem.

The heavyweight product manager structure [fig.33], stands in sharp contrast to Ford's previous development structure.

[fig.33]
Heavyweight Product Manager Structure.



THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

Although the organization is largely functional, there is now a product manager with broader responsibilities and more 'clout'. They are usually seniors in the organization, often at the same or higher rank as the heads of the functional organizations. Some of their work occurs through liaison representatives, but even so those liaison reps are 'heavier' than those existent in Ford's previous structure. In addition to working directly with the product managers, liaison people serve as local leaders within their functional groups. The heavyweight product managers are responsible not only for internal co-ordination, but also for product planning and concept development.

Ford Turns the Tables: *concept to consumer*

The first step was to throw out Ford's traditional organisation structure and implement the four key elements of modern design development strategies previously discussed. The introduction of these values and ideals revolutionised not only the Ford Motor Company internally but also the way in which critics and consumers viewed the company. The adoption of this information based system coupled with the 'new edge' aesthetic concept has brought designers, engineers etc. together in unison, complying with the ideals inherent in the Japanese styled development structure. Chrysler and General Motors are similarly moving towards this new development approach, but Ford, *"hasn't just been talking about it; they've been able to execute it,"* says William R. Pochiluk Jr., president of Autofacts Inc, a market researcher in Paoli,

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

THE HISTORY OF ARTS

Pa, *"They've really forced GM to play catch up"* (POCHILUK Jr, William R, Autofacts, 1998). Ford engineers turned the tables on the Japanese and did some reverse engineering of their own-to learn how the parts were assembled as well as how they were designed. Ford also made some distinctly un-Ford-like changes in production, asking assembly line workers for their input even before a concept had been formed. *"In the past we hired people for their arms and their legs", say's Manogian, "but we weren't smart enough to make use of their brains"* (UTAL, Bro, Fortune, 1987). This new adoption of ideals helped Ford recapture a strong competitive emphasis and was resultantly coined as bringing the Concept to the Consumer (CTC).

This CTC approach starts at the development end point (Job1) and works backwards defining each gateway when progress against objectives must be reviewed before proceeding. It places all the elements of a new program in a logical sequence, minimising many of the conflicts that might otherwise occur. Each step of the program highlights the interdependencies of each minor variation and its probable effect on the overall timing, so that adjustments can be made progressively to accept any changes and keep the overall running of the program on track. CTC ensures that the original design is maintained, right through from conceptual planning to when the final product arrives in the consumer's hands. The first prototypes are built to much higher quality levels than had been previously the case, thus resolving concerns at a much earlier stage in

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 FIFTH AVENUE, NEW YORK, N. Y.

1911

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 FIFTH AVENUE, NEW YORK, N. Y.

1911

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 FIFTH AVENUE, NEW YORK, N. Y.

1911

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 FIFTH AVENUE, NEW YORK, N. Y.

1911

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 FIFTH AVENUE, NEW YORK, N. Y.

1911

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 FIFTH AVENUE, NEW YORK, N. Y.

1911

the development program, with significant effects on the launch quality and eventual consumer satisfaction achieved.

Chapter Three

New Edge: *marketing meets concept*

Whereas 30 years ago consumers were more concerned with a product's function - efficiency, reliability, value-for-money, durability and convenience – today's customers are prepared to pay more for a stylish product as they become more affluent and visually sophisticated...Aesthetics now play a greater part in portraying the perceived status of a product as functional differences between models are reduced...The visual aspects of design have come to predominate as a means of attracting the consumer.

(WHITELEY, 1993, pg.26-27)

At the release of the 'new edge' concept Ford offered the public not only a new design concept but also a chance for themselves to develop and evolve a marketing and advertising campaign directly along the same idealistic design lines. Ford did not take this opportunity; they simply reverted back to the now typical consumer-led marketing ideals of this age, which inherently reflect the product as a lifestyle accessory. This use of marketing and advertising allows the manufacturer a final medium by which he can relate directly to the consumer, suggesting that this medium or resultant campaign is the most vital link the manufacturer has with the consumer.

.. the market place is continually evolving and competitors are always snapping at each others heels; to be successful, constant fine tuning is required to meet the mood of the consumer or better still to tell him what that mood will be before he has realised it.

(WHITELEY, 1993, pg.23)

THE HISTORY OF THE UNITED STATES

The history of the United States is a story of growth and change. It begins with the first settlers who came to the Americas in search of a new life. They found a land of opportunity, but also one of challenge. The early years were marked by conflict and struggle, as the settlers fought to establish a new society. Over time, the United States grew from a small colony into a powerful nation. It has faced many challenges, but it has always emerged stronger and more united.

The United States has a rich and diverse culture. It is a land of many peoples, each with their own traditions and customs. This diversity has been one of the strengths of the United States, allowing it to embrace change and innovation. The American dream is a powerful idea that has inspired millions of people. It is the belief that anyone can achieve success and happiness through hard work and determination. This dream has been the driving force behind the growth and development of the United States.

The United States is a land of freedom and opportunity. It is a place where people can live their lives as they see fit, without the constraints of a tyrannical government. The Constitution of the United States is a document that has shaped the nation's destiny. It guarantees the rights of all citizens and provides a framework for the government. The United States is a land of hope and possibility. It is a place where the future is bright and the possibilities are endless.

The United States is a land of great achievement. It has produced some of the world's most famous scientists, artists, and leaders. It has been a pioneer in many fields, from space exploration to the development of the internet. The United States is a land of great potential. It has the resources and the talent to continue to lead the world in the future. The United States is a land of great pride and honor. It is a place where the American dream is still alive and well.

This type of 'effective' marketing, by which consumer needs and wants are dictated, has become an ever present in the automotive industry today, with companies like Ford manipulating consumers through various marketing and advertising ploys and media, in an attempt to subconsciously draw them to their product.

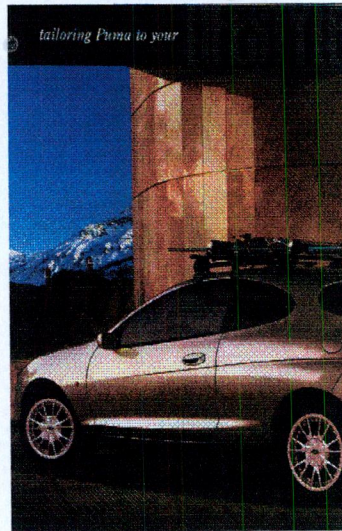
Ford's latest 'new edge' marketing campaign could almost be taken as a case study on design as a lifestyle accessory. Directly from Ford's in dealership catalogues and brochures, to their more public use of TV advertisement's, Ford are relating their product to the lifestyles and favouritism's of the consumer [fig.34]. This transgenerational use of people, allows Ford appeal directly to a wider market, "every day is a new opportunity...we are alive" (Ford Public Affairs, New Edge brochure, 1998), [fig.35] is typical of this statement, portraying smiling and fulfilled Ford clients, emanating 'Ford's belief in the consumer'.

[fig.34]
Ford Puma Showroom brochure.





[fig.35]
Image from New Edge brochure.

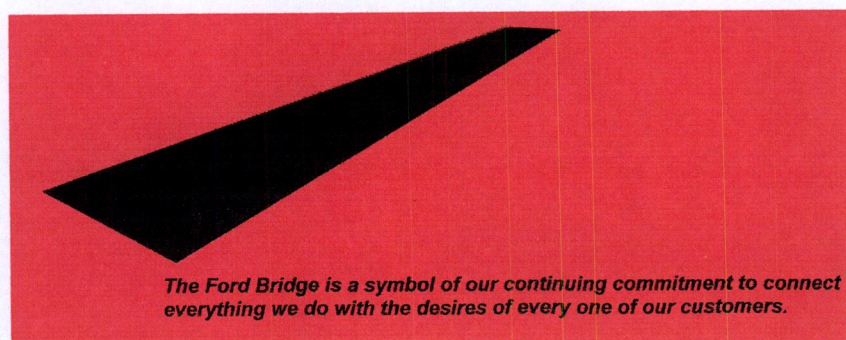


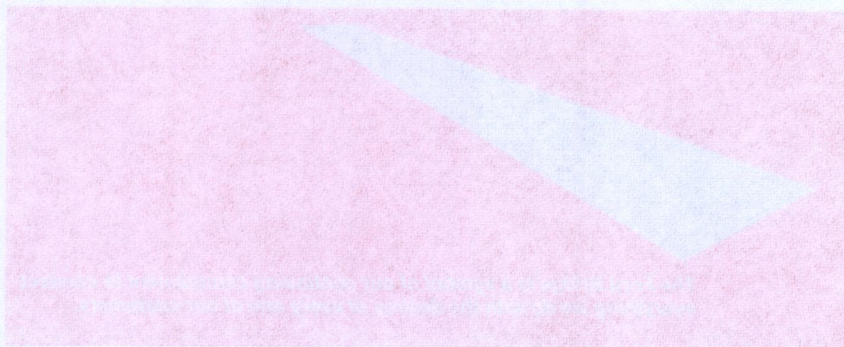
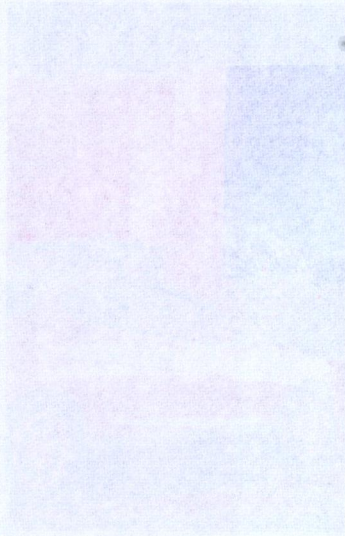
It is not so much a question of fashion. Designers today need more than ever to understand the more complex motivations that prompt consumer purchase decisions, such as the development of a distinctive self-image.

(WHITELEY, 1993, pg.36)

The Ford 'bridge' [fig.36] is "a symbol of our continuing commitment to connect everything we do with the desire's of every one of our consumers" (Ford Public Affairs, New Edge brochure, 1998). This seems in direct contradiction of a previous statement made by Ford's, vice president of design, "we still want emotions with our designs .We are not designing to please everyone...if you did, you would have a very bland product" (Ford Public Affairs, New Edge brochure, 1998).

[fig.36]
The Ford Bridge Symbol.



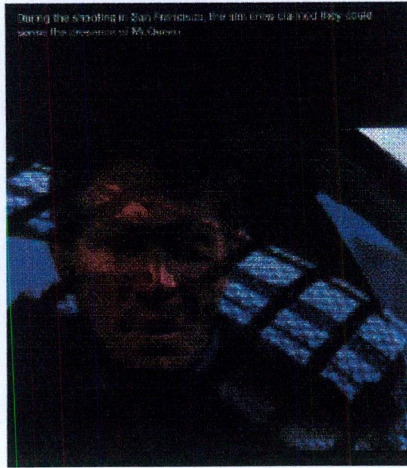


This symbol supposedly carries on Ford's ideals of 'concept to consumer' which are inherently embedded in the 'new edge' concept. Here, we are asked to believe, that this multi-conglomerate's entire purpose, *"is through every day, to work to improve the lives of everyone of our consumer's"* (Ford Public Affairs, New Edge brochure, 1998). This 'bridge' symbol has also appeared on more recent television advertisements. These advertisements show the entire 'new edge' range reaching an impasse, an enormous valley which they must overcome, if they are to be successful in entering the millennium, suggesting that the key to success in the millennium will be a more defined closeness to the consumer 'CTC'. This supposed impasse is nevertheless overcome with the use of the Ford bridge, further reiterating the almost 'god likened' ideals the company allow themselves.

Another tactic used by Ford in this latest campaign, has been the use of association through recognition. An example of this is Ford's recent use of classic Hollywood movies and stars, to which the public relate to affectionately and nostalgically, in the marketing of their product. This approach forces the consumer to recognise the proposed star or movie in direct association with the product. The strongest example of this was the excellent reworking of the classic 1968 movie "Bullet", in which Steve Mc Queen is digitally enhanced into the cockpit of the Ford Puma [fig.37]. The advertisement progresses with Mc Queen driving the Puma along the famous route through San Francisco depicted in the movie [fig.38]. This advertisement excellently associates both the star and the movie with Ford's product.

The first step in the process of the...
and the second step is to...
the third step is to...
the fourth step is to...
the fifth step is to...
the sixth step is to...
the seventh step is to...
the eighth step is to...
the ninth step is to...
the tenth step is to...
the eleventh step is to...
the twelfth step is to...
the thirteenth step is to...
the fourteenth step is to...
the fifteenth step is to...
the sixteenth step is to...
the seventeenth step is to...
the eighteenth step is to...
the nineteenth step is to...
the twentieth step is to...

[fig.37]
The legendary Mc Queen



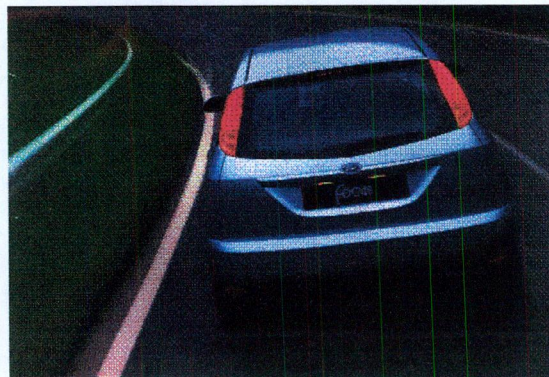
[fig.38]
San Francisco 'Bullet' style

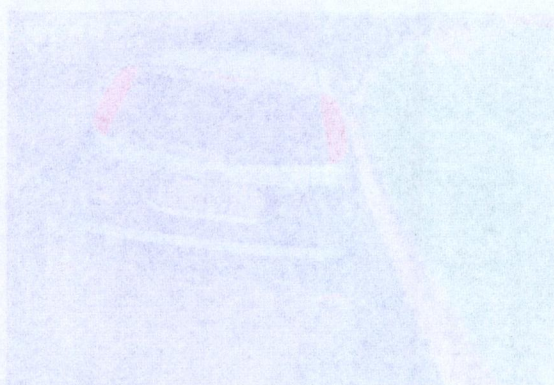
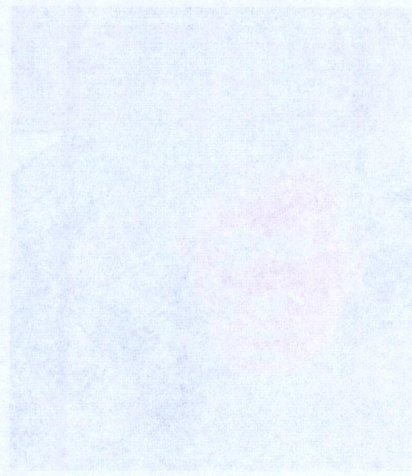


This ad is still suggesting an extraordinary play on the memories and emotions of the consumer.

The final and most recent use of this now-typical approach to advertising and marketing has materialised in the latest of their television advertisements. This campaign is based around the Ford Focus ([fig.39], and once again plays on consumer emotions, but this time on a slightly different key.

[fig.39]
The New Ford Focus





The advertisement depicts a child awaiting collection by his parent's in a schoolyard. As his friends get collected around him, in their parent's impressive 'other cars' the child's face lowers with embarrassment and disappointment. Suddenly, the rain that had been falling stops as his parents arrive in the new Ford Focus to both the glee of the child and the great impression of his friends. In essence this advertisement suggests an assured completion of the family unit and its associated ideals, if a Focus is purchased. An astonishing yet typical example of modern automotive marketing and advertising strategy.

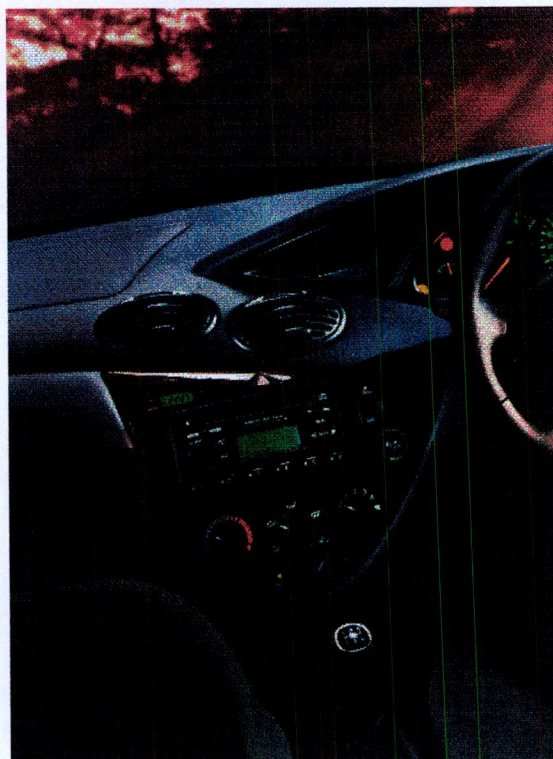
This overplay of modern marketing plans and ideals by Ford in their 'new edge' campaign, suggests that they are either becoming more taken with the profession of the marketer or yet again showing an unconformity in their 'new edge' concept. Surely for such an 'exciting' and diversely idealistic approach to design and development, Ford could have realised a more innovative and truthful approach to their marketing and advertisement efforts.

New Edge: *the suggested completion of the ideal*

As with every product, the aesthetic and core technical elements alone do not provide a totality of design and quality. Various other elements must combine and work in harmony, if the product is to succeed as a complete unit. Within Ford's new edge concept there are important elements inherent in the respective products, which ensure a quality product experience. Ford's 'Fun to drive' ideal concentrates on the direct

and overall physical interactive experience the consumer has with the vehicle. This is a key objective in the development of Ford's new edge chassis and suspension unit's that ensures the consumer receives a rewarding driving experience, through quick steering, stable handling, excellent road-holding and good ride. The concept is further enhanced by Ford's final grasp of the importance of aesthetics within the functionalism of ergonomics. Ford's ergonomists has always afforded themselves as the market leaders in the mass-produced consumer vehicle industry. Ford's continuing research and development into this area has proved vital in their concepts as *"The skill of the ergonomist has been put to good use. Buttons and switches are shaped to the finger"* (Ford Public Affairs, The New Ford Focus, London, 1998). This expected quality of functionality has been greatly enhanced by a definite purpose and confidence in the aesthetic elements of the ergonomic control panels and interfaces [fig.40].

[fig.40]
The interior of the Ford Focus.



Another one of these 'completion' elements concerns itself with assured environmental awareness and safety. One of the more ironic claims held by both Ford and the industry in general, compliance to regulated environmental standards has become a viable and inherent ideal within products. Even though this increased compliance with standards is true, the auto industry is still one of the greatest contributors to global pollution in the world today. Ford claim that,

Environmentally the Ford Focus is well ahead of the game. Recycled consumer goods have been used extensively in the manufacturing process-including denim jeans for soundproofing. Ford Focus is over 85% recyclable by weight.

(Ford Public Affairs, The New Ford Focus, London, 1998)

However, further investigation shows that this statement is based around Ford manufactured parts, of which the Focus owes 78% of its primary make-up. This suggests that the above statement is nothing but misleading, particularly when you realize the existing trend within the industry to share outside suppliers of particular components, in an attempt to cut down on production costs. These suppliers are 'cut throat' in their attempts to secure contracts, more often relying on cost and speed of delivery rather than environmental coherence. This suggests once again an unconformity in their 'new edge' ideals.

The last of these 'completion' ideals deals with the idea of further consumer interaction and support. A realisation was made by the

the first of these is the fact that the
 the second is the fact that the
 the third is the fact that the
 the fourth is the fact that the
 the fifth is the fact that the
 the sixth is the fact that the
 the seventh is the fact that the
 the eighth is the fact that the

the ninth is the fact that the
 the tenth is the fact that the
 the eleventh is the fact that the
 the twelfth is the fact that the

the thirteenth is the fact that the

the fourteenth is the fact that the

the fifteenth is the fact that the

the sixteenth is the fact that the

the seventeenth is the fact that the

the eighteenth is the fact that the

the nineteenth is the fact that the

the twentieth is the fact that the

the twenty-first is the fact that the

the twenty-second is the fact that the

the twenty-third is the fact that the

the twenty-fourth is the fact that the

the twenty-fifth is the fact that the

company, which highlighted that a continuing after sale relationship with the consumer would cut down on overall marketing costs by 20%. This continuing relationship employs a tactic in which the company phones or writes to the consumer at regular intervals after purchase in order to see how they are enjoying the Ford experience. This continuing relationship has already proved very successful for Ford, allowing the company a new link with the consumer after marketing.

New Edge: *Marketing becomes the concept*

The introduction of new edge has visible infused Ford with a new powered enthusiasm. No matter how conforming this may be, this position has materialised due to the inherent restyling of the aesthetic and to the adoption of a modern design strategy. This suggests, therefore, that the combination of these elements has provided Ford with a totality of concept. This is not true, however, as there is an underlying element or strategy previously undisclosed which has allowed Ford make the final touches to its new edge ideal. An in-depth examination of Ford's more recent history uncovers an equally dominant ideal which proves most hardened and mature in its approach. Due to factors that will duly become apparent, Ford has adopted yet another strategic concept. The Ford Motor Co. have slowly begun to adopt a typically Nike style business approach. The Nike approach is simple in its idealism, yet complicated in its totality. Nike employ a base of designers, graphic artists and marketers which duly allow the company direct their full attention towards the selling and marketing of their product range. They sub-contract out the entire manufacturing and packaging side of their business, allowing them a further concentration of attention and investment on the design and marketing of their products. This sub-contraction allows the company a massive reduction in outgoing costs due to the inherent nature of the competitive market and thus incurs a more employee detached business structure.

The similarities between Ford and Nike seem to grow ever stronger, with both companies notably embracing the total-marketing philosophies much adorned by Theodore Levitt. Levitt suggests that a marketing orientated company;

...tries to create value-satisfying goods and services that consumers will want to buy. What it offers for sale includes not only the generic product or service, but also how it is made available to the consumer, in what form, when, under what conditions, and at what terms of trade. Most important, what it offers for sale is determined not by the seller but by the buyer. The seller takes his cue from the buyer in such a way that the product becomes a consequence of the marketing effort, not vice versa.

(WHITELEY, 1993, pg.20)

Ford's recent use of 'recognition through association' in the Puma concept was directly inspired by Nike. Along with Swatch, Nike were one of the first companies to market products with direct reference to the individual consumer lifestyle and in this way were one of the first companies to extensively use sporting celebrities in the marketing of their respective product range.

Although Ford take a typically capitalist approach to sub-contracting, insisting such companies make a viable profit as to safeguard production, they have however begun to sub-contract out the design and manufacture of entire component assemblies. Up to the beginning of this century Ford employed a dual sourcing tactic in the manufacture of component assemblies. This regarded itself with the sourcing of companies who could execute the effective manufacture of

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

...the

such assemblies. This allowed Ford a safeguarding of continuous production, as one suppliers failure to produce the necessary component could be easily offset. A survey carried out at the beginning of the decade, by Ford, showed such dual sourcing was largely unnecessary and such strategies were effectively discarded. This resulted in a massive 30% saving on outgoing costs at Ford, leaving the company an excess of finances, which were duly invested into the both a marketing and strategic change in Ford's set-up. Ford now sub-contract the design and manufacture of certain component assemblies, as such practices allow financial savings and incur an increased attention to individual component design never before realised.

This shift towards sub-contraction and distribution of manufacture, suggest a definite move towards the ideals invest in any marketing driven company. This new direction forces designers at Ford to further concentrate their efforts towards consumer led products, which will allow themselves easily to the medium of marketing. It seems marketing is no longer so concerned with the expression of the products virtues, as the product is with an expression of its inherent marketing ideals.

Designing for the public good...often means design by committee, and then shoving it down an unwilling publics throat. Eastern socialists tried that and produced the Trabant. We did the same, and produced tower blocks for hapless workers to exist in. With all its faults, our system, where design is the hand-maiden of capitalism, beats the alternative hands down.

(WHITELEY, 1993,pg.43)

the first of these is the fact that the

second of these is the fact that the

third of these is the fact that the

fourth of these is the fact that the

fifth of these is the fact that the

sixth of these is the fact that the

seventh of these is the fact that the

eighth of these is the fact that the

ninth of these is the fact that the

tenth of these is the fact that the

eleventh of these is the fact that the

twelfth of these is the fact that the

thirteenth of these is the fact that the

fourteenth of these is the fact that the

fifteenth of these is the fact that the

sixteenth of these is the fact that the

seventeenth of these is the fact that the

eighteenth of these is the fact that the

nineteenth of these is the fact that the

twentieth of these is the fact that the

twenty-first of these is the fact that the

twenty-second of these is the fact that the

twenty-third of these is the fact that the

twenty-fourth of these is the fact that the

twenty-fifth of these is the fact that the

Conclusion

Conclusion

Ford's 'new edge' design concept and strategy is much more than just a superficial aesthetic applied to a competent core technology. It is a response by Ford to the increasingly competitive consumer led marketing ideals inherent in society today. This is not to say that Ford is tackling a moral or social issue, they are not. This response is purely an aggressive reaction to the threat of a loss in market share. New edge is however a definite evolution of Ford's previous design philosophies, owing much of its aesthetic to a contrasting of 80s aero and 90s new edge. Ford claim that this 'new edge' philosophy tackles 'indistinguishability' within the modern auto industry, by creating a new and more intelligent overall aesthetic. Although this new aesthetic is a breath of fresh air into a stale industry, to say that new edge is redefining and challenging the modern perception of what a car should be seems to be nothing but extreme.

To be sceptical of Ford's idealistic claims is an understandable response, however it would be naive to fully discount the attempt or indeed all of the suggested ideals within the proposed concept. One of the strongest points to be taking from this thesis is that 'new edge' is a symbol or suggestion of where and what Ford see themselves in the process of becoming. A fresh, new, clean and intelligent aesthetic, although progressively unconforming, complimented by a well-managed and interdependent interior structure, fully emphasise Ford's proud adoption of an ideal design and

Introduction

The purpose of this study is to investigate the effects of the proposed system on the performance of the system.

The study is divided into two main parts: a theoretical analysis and an experimental evaluation.

The theoretical analysis is based on the principles of the proposed system and the results of previous studies.

The experimental evaluation is based on the results of a series of experiments conducted under controlled conditions.

The results of the experiments are presented in the following sections and are discussed in detail.

The study is organized as follows: Chapter 1 introduces the system and the objectives of the study.

Chapter 2 presents the theoretical analysis of the system and the results of previous studies.

Chapter 3 describes the experimental setup and the results of the experiments.

Chapter 4 discusses the results of the experiments and compares them with the theoretical analysis.

Chapter 5 presents the conclusions of the study and the implications for future research.

The study is organized as follows: Chapter 1 introduces the system and the objectives of the study.

Chapter 2 presents the theoretical analysis of the system and the results of previous studies.

Chapter 3 describes the experimental setup and the results of the experiments.

Chapter 4 discusses the results of the experiments and compares them with the theoretical analysis.

Chapter 5 presents the conclusions of the study and the implications for future research.

The study is organized as follows: Chapter 1 introduces the system and the objectives of the study.

Chapter 2 presents the theoretical analysis of the system and the results of previous studies.

Chapter 3 describes the experimental setup and the results of the experiments.

Chapter 4 discusses the results of the experiments and compares them with the theoretical analysis.

Chapter 5 presents the conclusions of the study and the implications for future research.

The study is organized as follows: Chapter 1 introduces the system and the objectives of the study.

Chapter 2 presents the theoretical analysis of the system and the results of previous studies.

development strategy. This 'new edge' image nevertheless suggests a definite emphasis towards marketing and advertising within Ford. It seems that the resultant questioning of business has lead to an answering within the marketing profession. In essence suggesting that the 'new edge' aesthetic is simply a graphic illustration or symbol of Ford's new development processes and direction. This 'celebrated' design process, however, seems to be vastly unconforming to many of the suggested ideals, emanating a definite lack of continuity throughout the process. This holds through to the directly dominant aero element in the Ford Puma, right through to the to unconforming and almost haphazard rear design of the Ford Focus.

This concept aesthetic needs to commit more to its own suggested ideals, if we are to even begin to accept Ford's overall claims. It seems only logical to suggest that to fully enhance and complete the ideal a definite continuity must be achieved across the various boards. It seems almost contradictory to say, but in all 'new edge' is a successful visual concept. Indeed recent figures dictate that this 'new edge' range is providing Ford with a renewed market dominance and a greater consumer base, and as we know success is viewed from financial gain, not from idealistic conformities. In retrospect, it would seem that this 'new edge' concept is simply an aggressive reaction by Ford, against a continually aggressive competitor(s). Here it seems Ford have finally realised the importance of adaptability within today's ever fluctuating market, with companies brand names remaining the only fixed element.

1. The first part of the report is a general introduction to the subject.

2. The second part is a detailed description of the methods used.

3. The third part is a discussion of the results obtained.

4. The fourth part is a conclusion and a summary of the findings.

5. The fifth part is a list of references.

6. The sixth part is an appendix containing additional data.

7. The seventh part is a list of figures and tables.

8. The eighth part is a list of abbreviations.

9. The ninth part is a list of symbols.

10. The tenth part is a list of footnotes.

11. The eleventh part is a list of appendices.

12. The twelfth part is a list of references.

13. The thirteenth part is a list of figures and tables.

14. The fourteenth part is a list of abbreviations.

15. The fifteenth part is a list of symbols.

16. The sixteenth part is a list of footnotes.

17. The seventeenth part is a list of appendices.

18. The eighteenth part is a list of references.

19. The nineteenth part is a list of figures and tables.

20. The twentieth part is a list of abbreviations.

21. The twenty-first part is a list of symbols.

22. The twenty-second part is a list of footnotes.

23. The twenty-third part is a list of appendices.

24. The twenty-fourth part is a list of references.

25. The twenty-fifth part is a list of figures and tables.

A manufactured product can soon become obsolete in an age of rapidly advancing technology. But the product concept, for which the brand name stands, can live on. For Ford, the model T vehicle, became a museum piece many years ago. But Ford, the concept of reliable, value-for-money transportation, lives on.

(Mc IVER, 1987, p.152)

It would therefore seem logical to suggest, that within such a radical reaction by Ford to consumer demands, belies an underlying truth; that the automotive industry has realised a controlling of consumer trends is no longer a viable option. Leading us to believe that the power of the consumer grows continually stronger. A trend, which in its fruition would prove most flattering to both the consumer and to his/her respective societies, however, a full belief in such an idealistic statement would surely prove inherently dangerous.

Bibliography (Books)

CLARK, B, Kim, Development Product Performance, Boston, Harvard Business School Press, 1991.

EDSON, C, Armi, The Art of American Car Design, University Park, The Pennsylvania State University Press.

Mc IVER, Colin, The Marketing Mirage, London, Mandarin 1990.

OHTANI, Nobuoki, Japanese Design and Development, Hampshire Design Council, Gower Publishing Ltd, 1997.

WHITELEY, Nigel, Design for Society, London, Reaktion Ltd, 1993.

WOODHAM, M. Jonathan, Twentieth Century Design, Oxford University Press, 1997.

Bibliography (Articles)

FORD PUBLIC AFFAIRS, A Driver's Dream (Puma), Cork, 1998.

FORD PUBLIC AFFAIRS, Fact Sheet E06 10/96, Essex, 1996.

FORD PUBLIC AFFAIRS, Fact Sheet E07 4/97, Essex 1997.

FORD PUBLIC AFFAIRS, Fact Sheet E08 12/96, Essex, 1996.

FORD PUBLIC AFFAIRS, Fact Sheet E40 3/97, Essex, 1997.

FORD PUBLIC AFFAIRS, Fact Sheet E42 12/96, Essex, 1996.

FORD PUBLIC AFFAIRS, Fact Sheet E48 03/97, Essex, 1997.

FORD PUBLIC AFFAIRS, Fact Sheet E 75 11/97, Essex, 1997.

FORD PUBLIC AFFAIRS, Fact Sheet E77 03/98, Essex, 1998.

FORD PUBLIC AFFAIRS, New Edge Brochure, Cork, 1997.

FORD PUBLIC AFFAIRS, The New Ford Focus, Essex, 1998.

FORD PUBLIC AFFAIRS, Puma: A Driver's Dream, Cork, 1998.

MITCHELL, Russell, How Ford hit the BULLS EYE with Taurus,
Business Week, 1986.

UTAL, Bro, Speeding New Ideas to Market, Technology, 1987.

Internet reference sites:

INTERNET, www.Ford.com, Various Pages.

INTERNET, www.Ford News Brief Weekly News Digest. com. , Various
pages.

www.ford.com

www.ford.com

www.ford.com

www.ford.com

www.ford.com

www.ford.com