

Function Durability and Development

Research in practice ADAD5004

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Product Design

Word Count: 2280

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Throughout my proposal, I will be providing analysis on 3 Key words, backed up by my own research and understanding on those words along with images when are applicable and required. I will be displaying not only my research but also my thoughts and opinions on my chosen words because I believe it is imperative that I link my proposal to my thoughts and beliefs, otherwise the final outcome, my final question, will not be reflective of me and my views on design and culture. In my analysis on my chosen words I will also be showing the thoughts of other designers and manufacturers in similar industries to which I am studying, this will help me develop my understanding and in all will help me reach a more pertinent question as my final outcome. I will also be linking my words together trying to briefly explain how they are important to one another, I have chosen these words because they are important to me and how I design.

Function

My first key word I have chosen to breakdown is "Function", there is always a continuous debate between designers over the relevance and order in which form, and function should exist in design. There are those designers who believe that form, the visual shape or configuration of a design, should take place ahead of function, the intended purpose for a design. Personally, I believe that function should always take priority over form. I believe this because I think there is no need for a product without an intended function, items should not be made for the express reason as a thing to look at. Art is a perfect example of this, art itself is a difficult subject when you take this principle into account, does art serve a purpose? Or does it exist simply as an item to be viewed? I believe that art can serve many purposes to many different people, therefore not violating my opinion that things should exist without a purpose.

In my own design work I always try to follow the function over form philosophy, whatever it may be that I am designing, that's not to say that I am neglecting form, when the function of a product is completed there is then time to further adapt and change part that may make the product more appealing to its users.

The automotive industry is a perfect example of where manufacturers constantly provide function over form, and in many car, you can see where they have designed to either function or form. Take the Ford GT for example, this is a car that has many examples where function was put ahead of form. Throughout the development of the Ford GT road car, Ford were also aware that this car was to be put into racing, so it was developed together with the race going version of the car, this gave Ford many challenges so as to get the most out the race car whilst keeping the road car legal and attractive to its prospective clients. The best example of this is the cars engine, whilst Ford originally planned to use a V8 engine in their car to give it more appeal both visually and audibly therefore improving its form, they instead realised that a smaller less attractive turbocharged V6 would fit better aerodynamically whilst providing enough power for the car, giving the car a great boost in its overall aerodynamic structure. This showed that Ford were very keen on keeping to the philosophy of function over form. Ultimately this led them to an amazing outcome in their car that went on to prove itself both on the road and on track, winning its class at the 24 hours of Le Mans.



(Image of the 2020 Ford GT - Motor Authority 2020)

Durability

The second word I have chosen to investigate is “Durability”, this can give a range of meaning across the whole design industry, anywhere from the simple life of a product, how long it will be in service, to the longevity of a style or even the designer themselves. To me it means all those things, personally, I always do research into the life and durability of every product I design, it is important to know how long all its components will last, if a product doesn’t reach its required life span then it has failed as a product. This is particularly important to me, as when products are built to last a small amount of time and be replaced, that means waste. Waste that accumulates over time making mountains of rubbish that causes irreparable damage to the planet and its ecosystems, including its wildlife. I feel that we are currently living in a “throw-away” society, where people are happy to buy cheap, worthless products that they use for a short time and then are happy to throw it away and buy another when it breaks. Even if they recycle the product, it is still a huge burden on the planet as companies are still mining vast quantities of raw material in order to keep up with demand, this is a cycle we must break if we are hoping to save the planet.

The pathway by which plastic enters the world's oceans

Estimates of global plastics entering the oceans from land-based sources in 2010 based on the pathway from primary production through to marine plastic inputs.



Global primary plastic production:
270 million tonnes per year



Global plastic waste:
275 million tonnes per year
It can exceed primary production in a given year since it can incorporate production from previous years.



Coastal plastic waste:
99.5 million tonnes per year

This is the total of plastic waste generated by all populations within 50 kilometres of a coastline (therefore at risk of entering the ocean).



Mismanaged coastal plastic waste:
31.9 million tonnes per year

This is the annual sum of inadequately managed and littered plastic waste from coastal populations. Inadequately managed waste is that which is stored in open or insecure landfills (and therefore at risk of leakage or loss).



Plastic inputs to the oceans:
8 million tonnes per year



Plastic in surface waters:
10,000s to 100,000s tonnes

There is a wide range of estimates of the quantity of plastics in surface waters. It remains unclear where the majority of plastic inputs end up — a large quantity might accumulate at greater depths or on the seafloor.



2 billion people living within 50km of coastline

Source: based on Jambeck et al. (2015) and Erksen et al. (2014). Icon graphics from Noun Project.

Data is based on global estimates from Jambeck et al. (2015) based on plastic waste generation rates, coastal population sizes, and waste management practices by country.

This is a visualization from OurWorldInData.org, where you will find data and research on how the world is changing.

Licensed under CC-BY-SA by the authors.

(Graphic showing the levels of plastic waste and how it effects our oceans, Ourworldindata.org 2018)

Design classics are often appreciated because of their timeless aesthetical appeal and durability in popular culture, products like the coke bottle, the original mini, the original red phone box and the London bus al show this quality. This shows very prominently in the original coke bottle, this design is still available in its original glass form even today, more than 100 years since its original conception. This product truly shows what it is to be durable, not only in the literal sense but also in the sense that the design itself has lasted so long without heavy changes and even survived the changing of bottles from glass to plastic, whilst also being so iconic as to keep being made in its original glass form. I think is impossible to tell whether a design will be durable and have a successful life and I believe all product designers would agree with that statement, otherwise they would know instantly how to make classics. This also goes to show in the automotive world, there are hundreds of cars being deigned every year and many get left behind after a mere handful of years in production, but if you take the mini for example. Another design classic, the mini has been in production for many decades since its original Austin and Morris debut, and has most recently continued to be produced by BMW under the MINI brand. The car was in no way deigned to be a classic, but simply a car to battle the smaller car boom caused by a shortage of fuel due to the Suez crisis. Yet since its start in production in 1959, there have been over 10 million minis made according to BMW (BMW Group) as they celebrated the 10 millionth mini in august 2019.



(Image of MINI celebrating their 10 millionth car – BMW 2019)

Durability also has strong ecological themes, many products today are very split on either being throw away items or are being designed to last a lifetime, there are very few products that sit between those extremes. I think it is extremely important that manufacturers and consumers move away from single-use and this throw away mentality as it is highly dangerous for our planet and for us as a species. I think we should be pushing for governments to make a real change to the way create things, if we want to improve as a society, then we need to make sure we care for everything around us most importantly the planet we live on.

Development

My third and final word that I will be unwinding is “Development” this is an important word in the design world and to myself personally. Through design development is vital to keep manufacturers, designers and researchers all moving in the direction of progress, progress which is vital to keep us as a culture, moving forward.

For a designer, development is extremely important, it means not only to continue to improve their products but to also expand their knowledge and understanding of anything that could improve them as designers and people. For me development of my computer aided design (CAD) work gives me further insight into the workings of any product I design, even when I am not using CAD, due to the my improved knowledge on certain aspects that I have developed by using CAD. Developing our design skills and understanding not only makes us better designers but also better people. By expanding what we know about our products helps us understand their users and the problems they face, providing us with what we need to know to be able to help them.

Development is a key part of any industry, most of all, the design industry. Companies and manufacturers must develop, or they will be left behind by their competitors, like in sport those who do not adapt, fail. Even with industry leaders such as Apple, development is vital, even more so than anywhere else. Every year Apple release a new smart phone.



(Image of the evolution of iPhone design – Thepapercut.com 2017)

If it is not better than the previous model they will lose out on an incredible amount of profit which sustains the company and will then stunt further development which could lead to a collapse and might lead to the end of the company. This is the same of any individual, if I do not develop as a designer then I will stunt my career and perhaps even my plans in life. Development is not easy and like change, many often try to resist it. There are many products which have shown great effort in developing and keeping themselves ahead of the kerb, but again Apple have done this better than most in their 44-year existence. Take the iPhone for example, originally a simple sleek design designed to take on market leaders such as Sony and Samsung, but after over a decade it persists in being named one of the best smart phone on the market. This is helped considerably by its wealth of loyal customers, but you cannot doubt that Apple has strived to develop new technology pushing both the limits of what a smart phone is and how it can be used. This is backed up by the development of their staff and facilities, for without the group developing, they would not be able to produce a new phone year after year. Development does not come without its hurdles, even to Apple, before they even released the iPhone one of its founders Steve Wozniak left the company, saying Apple have been “Going in the wrong direction for the last five years” this shows that peoples development does not always follow the same trajectory, in this case both Wozniak and Apple both went on to be successful in their own rights.

Connections

All three of my chosen words link strongly with one another in the design world, Function, Durability and Development, these words are to me what would make the perfect design philosophy. Without function the product would have no purpose, without durability the product will have no life cycle and without development the product will be left in the past, without any one of the three, any product would be worthless. These words do not all come together often, design is the connecting factor which pull these words together, and personally I would like to dig deeper into why that is. I can think of another industry which holds all three words in such high regard. I wish to know how these words can further my design understanding and the entire design community in the future.

When we think of the future, these words define to me what we need to advance. By combining development with durability, we can help further understand how to help our planet and how to further improve our culture in order to help us with more pressing issues in time to come. When joining function with durability we can improve our ability to design for the future which will help us make products that are not a waste but instead are meaningful and helpful to those how use them. And finally by combining function with development we can improve how we go about doing things, anything from how we build products and structures that we use constantly or even improve how we function as a society, like improving our governing systems so that they work for the many not just the few.

Conclusion

The words I have chosen, give me much to think about, not only in terms of design but also in how society works. There are many questions I could ask going forward but given that I must only pursue one question I have to decide based on my feelings about what I have learned during my research and based on what these words mean to me, I have reached the final question as my outcome:

“How can design be changed in order to help us improve our waste culture that is currently destroying our environment?”

This question will help not only me to improve my ideas on design but hopefully it will help others see where we can improve in order to save what we have and maybe to help re-build that which we have lost.

Bibliography

Anonymous (2017) The paper cut: Image of iPhone evolution [Online] Available at:

<https://shsthepapercut.com/18496/entertainment/the-evolution-of-the-iphone/#modal-photo>

(Accessed: 25th April 2020)

Anonymous (2020) Motor Authority news: Ford GT [Online], Available at:

https://www.motorauthority.com/news/1127000_2020-ford-gt-ups-horsepower-to-660-offers-750-000-liquid-carbon-special-edition (Accessed: 23rd April 2020)

Anonymous press release (2019) BMW Group image for mini celebration [Online], Available at:

https://www.press.bmwgroup.com/united-kingdom/article/detail/T0299824EN_GB/10-millionth-mini-built-as-brand-celebrates-60th-year?language=en_GB (Accessed: 23rd April 2020)

Anonymous press release (2019) BMW Group press release[Online], Available at:

https://www.press.bmwgroup.com/united-kingdom/article/detail/T0299824EN_GB/10-millionth-mini-built-as-brand-celebrates-60th-year?language=en_GB (Accessed: 23rd April 2020)

Ritchie, H & Roser, M (2018) Ourworldindata.org, graphic showing plastic waste and how it effects our ecological systems[Online] Available at: <https://ourworldindata.org/plastic-pollution> (Accessed: 26th April 2020)

Wozniak, S (1994) Interview with Valerie Rice, [Online] Available at:

https://books.google.co.uk/books?id=zC4EAAAAMBAJ&lpg=PA13&ots=a_Fs_n1Np8&pg=PA35&redir_esc=y#v=onepage&q&f=false (Accessed: 25th April 2020)