

Research in Practice. Dissertation Proposal. Form, Function & Manufacturing. By Owen Davies

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Proposal for dissertation

For the proposal of my dissertation I will be looking into and developing my views with 3 key words that both reflect my interests and key areas within my chosen practice. I will be researching the three key words of *Form*, *Function* and *Manufacturing*. These words will relate to a range of product designers and artists including Dieter Rams, Donald Norman and Jonathan Ive. With this I will also be going into depth in some design eras with examples such as Bauhaus and Memphis to get a wider range of different designs considered. This research will combine these 3 key words of form, function and manufacturing to combine into a question for my independent study next year.

Form is 'the external appearance of a clearly defined area, as distinguished from colour or material configuration' (Dictionary.com 2020) in terms of product design this will be the physical look of a product as seen by the customer. In the words of Richard Buchanan, it is the 'ability...to fully engage a human being in support of a particular activity.' It is this concept that many designers have in mind while in the development of the form of a project as it is the form itself that the customer will take most notice of when looking upon a product. Form can be used to capture the curiosity of third parties by having a appealing or interesting shape to it. But with form in a product there has been somewhat an argument around form and function, and which should be priority first. This is because both form and function are the most important aspects of a good product. The most popular outlook on this comes from the words of Louis Sullivan an American architect from beginning of the modernist era who proclaimed, 'Form follows function'. This does suggest that form is less important than function as a useful product is better than a good looking one. A popular design movement that designed around this quote is the Bauhaus design movement. Bauhaus was widely known for putting forwards this ideal. The movement was based around making structures rather than painting and arts. 'The ultimate goal of all art is the building!' (Walter Gropius, 1919) is a famous line from one of the heads of the Bauhaus movement and it perfectly describes what they were about. Even though function came first building is overall form more so than function as it is architecture. This is a way shows importance in the form of a design as it is what makes up the main physical appearance of how it looks so if it was a ugly building that Bauhaus had designed it would not of succeeded as well as they have as they designed unique buildings that inspired many a designer. One big designer that has influenced the design world today with their design ideals and statements is Dieter Rams who has made many comments on form that has helped shape many future aspects of design. In his manifesto for 10 principles of good design a few points in it help show what form is can how it needs to be used within product design to make a product as successful as can be. His fourth principle 'Good design makes a product understandable' is a useful point in considering the place form has in product



Figure 1: T 1000 world receiver, 1963, by Dieter Rams

design as it shows just how important it is. While most times form usually dictates how aesthetically pleasing it can be to some people, in this case it shows how it can be used to help people understand something better.

One example can be seen with his world receiver product where he has designed it as such so it can be understood very easily. The buttons are arranged as such so they can be easily deduced to what each do and it makes it self-explanatory which in many products today is not considered. But while form can be used in the aspect of creating meaning such as this it can also just be plainly seen as just form. By this it is only taken into account on it's appealing aesthetics alone as summed up by (Kenneth Burke quoted within Contingency blues) 'The appeal of form...is obvious: form is the appeal' which just means that sometimes the pure look of the form on a product is enough for it to be successful and for it to sell well which in essence is the goal of every product out on the market. To further understand this keyword and its many perceptions a wide range of different designers and movements would have to be considered for the full grasp of this word to be understood. So taking into account quotes from well renowned designers and popular movements that challenge each other's views seem to be the best path forward.

This then leads me onto this next keyword of function which is a very commonly referred to word when on the topic of function. As these two words are put together so much in the design world I am able to go back to past sources and evaluate the other side of this design thinking to learn deeper into the understanding of function. By definition in Cambridge dictionary in the context of work function means 'The way in which something works or operates' this definition associates to what designers think most commonly of the keyword and is therefore most appropriate. In a product function is an important factor on if it is a success or not as faulty products are usually unsuccessful. Many good product designers take pride in the function of the products over form and such have many quite simple looking products that work very well to their purpose. One such example is again Dieter Rams. Many of his products are simple looking but its from their functionality that their success's came. His second principle from his manifesto 'Good design makes a product useful' is a clear indication on his views of designing. Another popular area within design that focus's on the aspect of functionality can be found within the company Dyson with its owner James Dyson. His ideas and his dedication to functionality is known throughout product design as he started from just an inspired idea to growing to one of the biggest household names in the world. 'Engineering is a state of mind, or at least a method of working. You *can* become expert on anything in six months, but steer clear of projects that require too much maths, and stick to empirical things. You can achieve major breakthroughs by a bit of lateral thinking' (James Dyson 2000) This quote in particular conveys a uniqueness to the thinking towards functionality, in his opinion stated here he mentions no wording hinting towards aesthetics but only towards engineering and functionality. His meaning behind this quote is not to go about designing towards a very specific goal in a product and to rather think outside the box. This way of thinking can be integral towards functionality and can be shown once more through this guardian article 'He seeks to remind a society increasingly addicted to instant thrills and conspicuous consumption of the pleasures and virtues of high quality, function-focused design.' It comes to show that functionality over form can be successful in many cases and is a point to be

considered when thinking of a question for my dissertation as this topic of argument can have many points on both sides. But another point to be considered can be found in Bauhaus as many of the artists in this era believed that 'Form and Function should be in harmony' and evidence of this working can be seen throughout the Bauhaus era in their productions. Two good examples of this can be seen in the baby cradle and wassily chair shown here. Both products here fit their function very well and have no problems when in use but they also have an aspect of having an aesthetically pleasing form to each of them and in all are very good products. In a way this way of thinking does contradict that found with modern day themes of functionality over form which in itself is something to consider for my dissertation as I can decide which approach is more beneficial to me and which would work best currently. In this sense I could look towards some of the more bigger companies in the world and their approaches to functionality such as apple who have notoriously simple looking designs which are easy to use but perform very well. They have even been given praise by dieter rams which would show a little that functionality based products do indeed work best in the modern market.



Figure 2: Baby cradle by Peter Keler 1923



Figure 3: Wassily Chair by Marcel Breuer

The final keyword that I have chosen explores into the areas associated with construction of products. This area is usually found with many arguments for and against some forms of it due to many environmental, social and moral issues. While some companies go about manufacturing in a good way there are also some who do not. Manufacturing is defined as 'the making of goods by hand or by machine that upon completion the business sells to a customer.' (Shopify.co.uk) Although there were many definitions, I thought this one fit best. Manufacturing has 3 main types of MTS, MTO AND MTA with MTS being most prominent as it is a form of mass

production. Its methods like these that are found in big companies such as Apple. One of the big main issues that I will go into depth with is the actual cost for manufacturing, in many cases this can have a huge toll on the environment with material cost and waste. The sustainability of manufacturing can be in many ways bad but can be improved when taking into account the life cycle a good phrase I found to sum this up is 'Seeing not only a product but taking into consideration its entire life cycle' (Medium.com 2017) doing this would help big companies reduce costs and help have less of a toll on the environment.

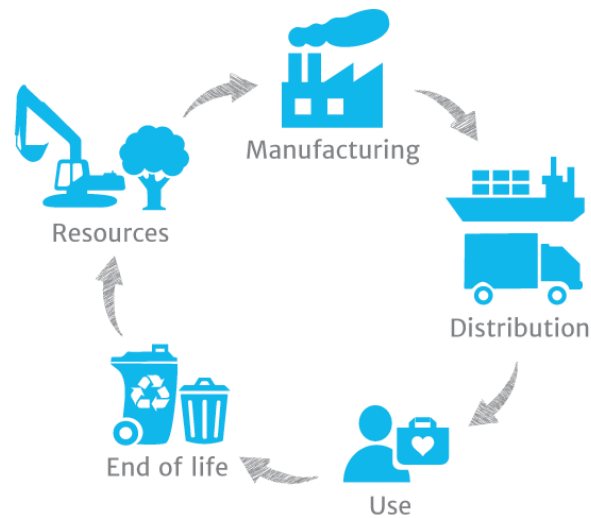


Figure 4: Product life cycle by medium.com (2017)

'A preoccupation with differentiation is the concern of many corporations rather than trying to innovate and genuinely taking the time, investing the resources and caring enough to try and make something better.' (Jonathan Ive) This quote shows that even high end designers such as Ive here see the problem within some mass production manufacturing with many companies producing many poor quality products with the focus of money which in turn means they cut corners and harm the environment more. Dieter Rams is also designing in positivity of the environment as his 9th design principle is 'Good design is environmentally friendly' (Dieter Rams) He believe that 'Design makes an important contribution to the preservation of the environment. It conserves resources and minimises physical and visual pollution throughout the lifecycle of the product'. Which is a valid point for every product designed as a product is a man-made product as well as pollution, so they go hand in hand. So the fact that waste from such things does exist in such vast quantity is concerning but in general means companies are being too money focused rather than focusing on the consumer which is what I believe to be the true heart of product design. Looking into the issues of manufacturing within money focused companies may make for good information towards a question for my dissertation only when taken into account with my other key words. Thinking about why these companies have started to decline in their quality of manufacturing could be due to certain laws and economical issues and how they force these companies to branch out towards cheaper and more efficient options. It can also be due to the changing of machinery and technology present that forces them to alter manufacturing techniques. This has been a cause of issue in the past with even famous designers like Rams who had to change his easy to recognise white and simplistic design to obtain more colour and additional looks as technology evolved design.

To conclude my dissertation proposal I have went into detail and explained how manufacturing issues have evolved along with new laws places and evolving technology which all comes round to harm the environment. From the explanation of form of how its shape can dictate the design with aesthetics from its current era to how simplicity can lead to innovation and shapes that give the product its own meaning. This is then added onto with function and how 'form follows function' to be a successful way of design and that function itself dictates a design. This had

led me to evaluate and come up with possible sub questions in my head such as can form and function dictate how the manufacturing goes? Or is it due to laws and economical issues in that these problems arise. This therefore leads to if it is the fault of the companies themselves and if they are trying to bring in as many customers as possible by cutting corners. Form would tie into this as in product design it is heavily reliant on material properties and they may go for the cheapest option which usually results in a very bad material for the environment. For my dissertation I would say it would be around these issues that cause the environmental problems and from where these issues arise and if they may be solved by an alteration of form, function or manufacturing. This in summary has led me to come up with the question of 'Where do the main environmental problems come with manufacturing and can they be solved with a change through form and function?'

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Image reference (Online)

Figure 1 Available at: <https://www.vitsoe.com/gb/about/good-design>

Figure 2 Available at: <https://www.dezeen.com/2018/11/08/bauhaus-furniture-designs-chair-tables-chess-set-baby-cradle/>

Figure 3 Available at: <https://www.dezeen.com/2018/11/08/bauhaus-furniture-designs-chair-tables-chess-set-baby-cradle/>

Figure 4 Available at: <https://medium.com/@Danone/designing-the-products-to-meet-environmental-challenges-is-possible-and-needed-3f251d912420>

