

Research In Practice
Maker, Material Thinking & Sustainable
Design

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Maker, Material Thinking & Sustainable Design

The context of this writing is to explore three key words that reflect my interest within my practice, Surface Pattern Design. **Maker, Material Thinking and Sustainable Design** are all words that are highly relevant within my course, which also link together nicely ready to form a question for my independent research document in my final year of studies. I will support these words with a minimum of 3 artists and thinkers, with corroborative images for each. Within my research I will consider the meanings, origins, and examples of all three words exploring thinkers like Tim Ingold (maker), Paul Carter (material thinking) and Jonathan Chapman (sustainable design). During my research I hope to encounter more relatable theorists that support the ideas that I will be talking about as it is beneficial to read different viewpoints and experiences - this will give me a better insight and understanding of the words.

Maker



Fig 1: Adobe Create (2021) *The Maker*

The Cambridge dictionary has multiple definitions for the term ‘maker’ but the one that is most relevant to me is “someone who creates or invents things, either using traditional crafts or technology” (Cambridge Dictionary, 2021). The maker can be described as the poet, a person who executes a legal document, a constructor or the person who creates something. Originating c. 1300, "one who creates, shapes, forms, or moulds," also "God as creator," (Online Etymology Dictionary 2001-2021). The role of the maker is one of the most important in society as everything must have a maker otherwise it simply would not exist. “The maker begins with both a plan and a finite set of component operations required to implement it” (Ingold, 2013:41). This means even though the maker is the creator of all things, there is not anything that can be made without a plan beforehand which includes designs, instructions and materials needed for the making process; the maker collaborates within a team of roles for the final product to be made. However, in my opinion a design (or

designer) is the most important asset to a maker as it keeps them focused and gives them a vision for the result – it would be difficult for something to be made from a vision inside someone's head as the outcome would not be precise, therefore the need of a design. Not only does the maker stay connected with the roles (designer) they collaborate with but David Gauntlett (2011) states in his book, 'Making is Connecting', that:

“Making is connecting because through making things and sharing them in the world, we increase our engagement and connection with our social and physical environments'...with other people and connecting things together (materials, ideas, or both) to make something new”

By staying connected with all these different areas of making it gives the maker a sense of purpose and motivation. Continuing to make connections also allows you to grow and succeed, you may come across unexpected discoveries and situations that these connections have led you to.

“If the word "Maker" does not mean something related to our human experience of making, then it has no meaning at all. We extend it to the concept of a Maker who can make something out of nothing; we limit it to exclude the concept of employing material tools. It is analogical language simply because it is human language, and it is related to human experience for the same reason” (Sayers, 1941: Chapter 2).

This statement from *The Mind of the Maker* implies that the maker is not just someone who creates something physical and has a purpose but seeks much further than that - the maker is a problem solver, a critical thinker, open minded, innovative, they seek solutions and new ideas. A maker thinks like this because they are creative, allowing yourself to have a creative mind broadens your thoughts and allows you to produce solutions that non creative minds would not. Most people would think of the maker as someone who creates something out of something else, when really this is not the case.

“Looking at man... upon which the "image" of God was modelled, we find only the single assertion, "God created". The characteristic common to God and man is that: the desire and the ability to make things”. (Sayers, 1941: Chapter 2).

Still looking at the same book *The Mind of the Maker*, it talks about how God made the world out of nothing, and that us humans have the desire to create and make – which has turned out to be correct when you look how much we have created, improved, and adapted. We are constantly making improvements or making new ways of working, learning, travelling and so on. Everything we see, touch and use has been made or upgraded by a maker due to innovation, creative thinking and problem solving. The role of the maker is more important than ever during the present as they are seeking ideas of new materials made sustainably to correspond with climate change – this supports the idea of renewable energy, electric cars, and recyclable materials. This illustrates the idea that makers are not just people who make, but they solve and are fundamentally the backbone of everything, without the makers of the world we as humans would not be able to adapt, develop and survive in the ever-changing world.

Sustainable Design



Fig 2: Banks,A.(2004) Chinese Horse and Sign,

“Design has been a human activity since prehistoric times. It is that process of creativity in which forms came into being” (Banks, 2005: 8).

The Chinese horse above is an example of how prehistoric people used design as a ‘leap of their imagination’ and ‘symbolic thinking’ to the best of their ability. They believed that by imitating an animals outline it would capture the drawn animal's spirit and therefor have control over the actual animal. These types of markings were one of the first *drawn* designs that were ever created, the only other form of design that was used was the creation of survival objects that were created out of bone, shells, and animal skin. This outlines the distinct types of design that is spoken about in Banks's book - “(1) those which were made for the purpose of extending their chances of survival, (2) those which had a symbolic meaning or magical character” (Banks,2005:8). These are still the basic forms of design still used today, however the second definition has developed into what us as humans desire rather than having a symbolic meaning, designs for this reason are now influenced by wants, trends and technology. “Thus, gradually, design had begun to function not only for what people needed, but also for what they wanted” (Banks, 2005: 17). This may have been a luxury for humans for an exceptionally long time, but over the years it has been made aware that anything that has been designed unsustainably and produces Co2 is slowly killing the planet in which we live.

“Human destruction of the natural world is a crisis of behaviour, not simply of energy and material. It is about choices we make and the dreams we chase” (Chapman,2015:1)

This expresses that it is not the fault of the designs that has created this huge issue of global warming, but the greed and wants by us humans - our consumption of the designs themselves has led us to this point, therefore designers are now looking into sustainable design. The Oxford definition of sustainable is:

“The property of being environmentally sustainable; the degree to which a process or enterprise is able to be maintained or continued while avoiding the long-term depletion of natural resources “(Oxford English Dictionary,2021).



Fig 3: Meyer,S.(2014-2020) Old world- New World.

This makes the role of the designer even more important as they are now seeking out ways of using sustainable design in both, new ways of making and adapting previous designs. This includes physical products (cars, clothing) and materials we need to survive (energy sources and the making of materials). Sustainable design is one of the most important aspects of the 21st century as everything revolves around sustainability and being designed to last without adding to the harm previous designs have already caused. Design has always been about human survival but never considered the consequences of long-term survival. The consideration of materials used, how and where the materials came from or ended up and how things are made was never an issue until it has gotten to the point, not to be dramatic, but life or death. “The mess we are in today is more likely a result of unsustainable developments in the way we design, manufacture and consume” (Chapman,2015:5). This statement contradicts the viewpoint that it’s the greed and the high consumption of humans that has led to the urgency of sustainable design – however it’s the combination of both, the high consumption of unsustainable designs.

Even though a lot is being done to grow awareness of sustainability not just regarding design, but every aspect of life, I think more needs to be done. As a design student myself I am always looking at ways I can be sustainable in my design process, but that is with my own knowledge not due to education. To encourage sustainable design within every sector it needs to be academically taught within the design industry. “Sustainable design prospects, seeds and activates” (Chapman,2015:9). Sustainable design is already becoming a trend of its own; electric cars instead of petrol, renewable energy sources, plastic free packaging, recyclable materials – are all examples of how designers are becoming sustainably friendly. However, being a sustainable designer can only be effective if most people employ a sustainable lifestyle – which in the end everyone will be forced to do as they will have no choice if they

want to survive. As Chapman states “ The earth does not belong to us, nor does it need nursing like some sick puppy” - if we do not employ sustainable design into our lifestyles and let the earth “replenish itself” from the harm we have caused with unsustainable design “an end to our days will eventually come” (Chapman,2015:168) - stressing the importance of sustainable design.

Material Thinking

Lastly, looking at the term *Material Thinking* I will be referencing from the book *Material thinking: The theory and practice of creative research* by Paul Carter. Through my research I have found that material thinking has yet to have a definite definition and is dependent on different people's views and understanding of the phrase. Material Thinking can be used to better understand your own creativity and innovation- it is the process of thinking about the why, how, where to. The thinking process behind your creativity can lead you to new paths or help you better understand one you are on. Material thinking is where invention ‘is located neither after nor before the process but in the performance itself’ (Carter, 2007, p. 19). This indicates that during the making of an artefact or product, the thoughts you endure throughout is your material thinking. This method of material thinking is what influences you as an artist/designer/maker- it’s what gives you the insight into your own creativity and helps you continue to improve. Applying this form of thinking during the process of making is beneficial in every way, recording your thoughts, hurdles, influences during a task means that your feelings/thoughts are fresh and makes it easier next time you create as you know what your exact thoughts were previously. If you were to record your thoughts after the making process it’s easy to forget or alter thoughts, your insights would not be accurate, and you would struggle to develop your creative thinking and innovation. (Carter, 2004, p. XI) defines material thinking as ‘an intellectual adventure’ - the word adventure according to the Cambridge dictionary “is an unusual, exciting, and possibly dangerous activity, such as a trip or experience, or exciting”. This implies that the process of material thinking is one you cannot predict, the journey that your mind undertakes is a quest through your own thoughts that only appear when you go through each stage of the making process. Therefore, it’s crucial that each thought you encounter is recorded as part of your findings, no matter how small or big as it could change your whole perception. This supports the idea of (Carter, 2007, p. 19) when he stated invention ‘is located neither after nor before the process but in the performance itself’ as previously mentioned. I know fully understand what he meant by this as you cannot anticipate your thoughts beforehand otherwise it would not be seen as an adventure.

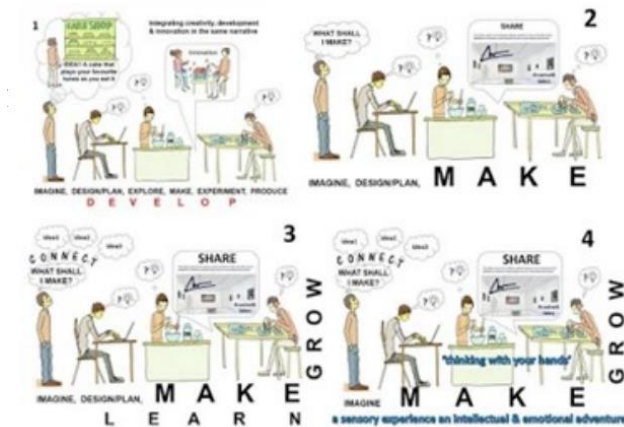


Fig 4: Jackson.N,WilliS.J (2018) Make/Grow

“I want to think of making as the process of growth... the maker from the outset as a participant in amongst a world of active materials ...even if the maker has a form in mind, it is not this form that creates the work. It is the engagement with materials. And it is therefore to this engagement that we must attend if we are to understand how things are made” (Ingold, 2013.p20-22)

This statement educates that to understand the thinking behind the making of a form you must be involved in the process; you must ‘join forces’ with the materials to understand the roles and the *thinking* behind the processes. Observing the making method doesn’t make you a part of the process, you cannot be a material thinker if you are not part of the material process; you do not learn how the materials behave or act when being assembled, thus you cannot grow from your experience. Humans are part of a making process every day, even if they are not thinking about it. Every time you make a meal you are part of a process that consist of multiple materials – the ingredients to a meal are the materials and the recipe is the journey you undertake to get to the final dish. During this process, you are thinking about how the materials combine and work together, if something did not work you improve and learn for next time- this is material thinking- even during simple everyday tasks you are applying this process. “It strikes me that life is a constant stream of activities that involve us in making and remaking” (Jackson,2018). We are all makers within society, with material thinking assisting in our growth and decision making. Certain tasks have a greater impact than others, for example a task such as making your bed, or making a cup of tea over time have the same routine and process as there is only so many times you can adapt- once you have reached a satisfying process that is the process you will employ every time. Therefore, being a creative maker challenges your thinking allowing you to constantly enhance your innovation and creativity. Just by undergoing research into material thinking it has already altered the way I am going to work during my making process, I always have thoughts but never write them down making it a lot harder for me to improve my creative mind. I have been inspired to keep some sort of journal just to know what my creative thoughts are during processes so that I am able to use them to the best of my advantage - fulfilling my true potential as a designer.

Conclusion

After considering all three key words it is evident that they all play key roles not just within my industry, but throughout our everyday lives. As a designer/ maker of physical products I am a maker, who employs sustainable design in my thinking – as I endeavour a process of making, I am constantly using material thinking to help me in growth and expand my creativity. It is inevitable that sustainable design is going to be a crucial part of my career and is something I am going to have to consider in every decision I make. As I am part of the next generation of designers, it will be a part of my mission to design and make products that are maintainable and support global warming standards.

During my research into the various theorists, I have gained an insight into how important material thinking is to the growth and development of a designer and maker, so this is a topic I want to investigate in more depth in my final dissertation. Material thinking is what is going to fuel the ideas behind sustainable design, as it's the materials that are needed to be adapted and changed to meet the standards of a sustainable material – the maker is going to be part of this transition making the connections and changes between these new materials. This is a crucial part of my learning as I will be applying these methods of learning throughout my whole career giving me the opportunities to make new connections and discoveries. During my last year of studies, to build research for my dissertation I am going to record my discoveries and thoughts during my making processes as this is the most effective way of utilising the process of material thinking according to Carter,P(2014). By recording my own thoughts, I will have primary research for the discussion that will take place within my writing, I can compare and relate my findings of the process with different theorists. My research into these three simple and separate words has combined them and opened a lot of curiosity which I will fuel into my dissertation writing, they all assist each other in one way or another which I will investigate in more depth through experimentation and thorough exploration.

Research Questions

To what extent can material thinking assist in the process of sustainable design, and continue to develop and aid new findings to support our and future generations?

Can material thinking change the way we design and make, and will it have a significant impact on the future of sustainable design?

This is the basis of what my dissertation will be about as it is such a crucial factor of my career, by acknowledging sustainable design now it will benefit me in the future as I will constantly be aware of the processes and materials I use.

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Fig 4. Jackson.N,WilliS.J (2018) *Creativity in the Making*. (Issue 12b) Creative Academic Magazine

