

***Ways of Exploring 'Creativity': How can definitions better help designers understand the tools of practice.***

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Course: BA(Hons) Surface Pattern Design (Maker)

Module: Independent Inquiry ADAD6001

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Word Count: 6015

*Submitted in partial fulfilment of the requirements for the degree of BA Hons  
Surface Pattern Design , University of Wales Trinity Saint David, Swansea College  
of Art (Submitted on 18th December, 2019)*

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## Introduction

'Creativity', 'Making' and 'Connection', these words are significant to the designer, maker and theorist alike as they are the fundamentals towards the thinking mechanisms. Through my own research and experience I have found that everyone's definition of creativity may be different, and people approach creativity in their own ways. Research has found there is many interpretations for the word 'creativity' (Munari and Creagh, 2008. p.25). For example, creativity can be seen as both 'useful' and 'novel' (Ingold, 2013. P.23). The significance of the term 'useful' can be expressed through many practices, an example being in Richard Sennett's book *The Craftsman* it is envisioned as a "useful tool" (2009, p.40). Stating that it is a tool for the designer to manipulate for instance when the term 'useful' is used to define creative, it is normally related to craft--a "design permits in many other forms of analysis" (Sennett, 2009, p.40). This suggests that when analysing a design, designers must look at what is around them: a building, object, or material; they, as the maker, must look past the difficulty and persevere to get the result.

Through the use of their hands the maker/craftsman are able to use their fine-tuned tacit and visual senses to find a "multitude of visual stimuli" (Munari and Creagh, 2008. p. 12). Indeed, Munari and Creagh suggest that these visual stimuli are "kinetic" (2008. p.12) meaning, that the kinetic is based on wanting the audience to interact. This link with the visual implies that the viewer can feel the energy projecting from the visual stimuli.

Additionally, the visual stimuli links in with semiotics. For instance "semiotics shows how the relationship between the sign and the 'something else' results from what our society has taught us" (Curtin, 2009. p.52). Meaning that through the relationship of the semiotics and the visual contrast, to create something that what society deems visually acceptable for a designer to show. Nonetheless, through a semiotic theory it is seen as "movement of hands and arms, and specifically such forms which are called gesticulation: symbolic (descriptive) and deictic (pointing) gestures" (McNeil, 1992, cited in Givry and Pantidos, 2015). This links with the kinetic. With the change of culture and life, art must focus on the imaginative: much like a creative. This explains that the creative which is seen as useful, makes us visualise the result of an outcome which has not happened yet, making kinetics as the movements with which the 'craftsman' uses to help define a small segment of the practice

theory related to “creativity” (Sennett, 2009). Even so, Nijstad et al. (2010) developed a ‘dual-pathway theory of creativity’ (Withagen and van der Kamp, 2018. p.2). The pathway theory for the creative tool is through the flexibility of the designer/ craftsman. Which is defined through the different approaches that creative minds are able to gather. This being through the perspective of making and logical reasoning.

However, the designer also gathers the theories through the novel (Ingold, 2013. P.23) where the creativity is-

*Cognitive theories of creativity can be rather diverse, they share, arguably by definition, the assumption that creativity resides in the mental realm—the formation of novel ideas occurs in the head (Withagen and van der Kamp, 2018. p.2.).*

Defining that, the creative problem solving, having the flexibility relies on the individual psychological and cognitive working mind and traits. Further to this, the term ‘novel’ within relation to creativity means that there is the “new and original; not like anything seen before” (University Press, 2019). Having this newness with technology and even the early adopters, additionally it can be used for new technological advances. For example, psychologists are more likely to use the term ‘novel’ creative since there is a “special form of creativity” (Kounios and Beeman, 2015). Meaning that the cognitive psychological side towards the term creative is different to the hands-on craftsmanship with which makers are more likely to see the “tacit habits” (Sennett, 2009, p.21). Whereas the ‘novel’ uses more cognitive and less physically engaged activity to get their creativity out, such as writing. Thus, the psychologists do not focus on the material but more so seeing the moral side towards the term creative in the ‘novel’ sense. These two terminologies of ‘creativity’ have led to a research question which will further expand the variations of creativity in practice theory: ***How can designers use definitions of ‘creativity’ in order to better understand the tools of practice theory.***

The field of study I am looking at is the practice theory behind the term creative and how within various fields of art it can have a different definition. The reason for this topic

research is because there is a vast variety of evidence and practical theory that has yet to be discussed from a designer's point of view. The contribution and beneficial side are, it will show the different aspects of the artistic and designer's world, how the word 'creativity' is used and theorised.

Each chapter of the dissertation will look at different aspects of what the term 'creativity' is, how it is used within practice theory and how it is perceived within three sections. The first section touches upon the term creativity in general and what it means to designers and theorists. The second section focuses on the makers and thinkers, along with how it is defined through their tacit knowledge and skilled hands and craft. The third and final section looks at the similarities and contrasts between the first two sections. Additionally, how creativity has inspired new ideas and the technological advances towards the practice theory through the term 'creativity.'

## Chapter 1 – What is creativity?

This chapter will look at exploring the different terms of creativity. It will also look at theorists and how they use the term creativity. Artists will be mentioned to compare and contrast between the difference of their use of creativity and looking at the theorists' ideas towards this idea of creativity.

The term visual creativity but also the generic term of creativity has been used for many years in the art community. For instance, in the book '*creative industries*' it says there are older terms for creativity such as the 'creative arts' and the 'cultural industries' (Hartley, 2005). Even though they both mean the same thing the "cultural industries" (Hartley, 2005), looks more at the methods of a community and how some may import goods and other such necessities; whereas "creative arts" (Hartley, 2005) is the community of the variations of art, another word to signify creativity is the termination artisan (Lexico Dictionaries, English, 2019). This is understood as skilled trade in an aspect or even a task that involves making using one's own craft (Gauntlett, 2011). The variation of the term creative shows there are a variety of explanations and theorisations for this term, having said this in *Design as Art by Bruno Munari* there is a suggestion that the visual aspect of creativity was left for literacy to tell the flowing stories (Munari and Creagh, 2008). Having the different aspects of the term creative shows how the 'useful' and 'novel' versions of the word creative are implied but with a different structure.

According to *Mihaly Csikszentmihalyi* (2009) artists have at times been seen as lesser contributors to society as they do not reflect their work as, for example, a psychologist would, but instead rely on instinct to drive their practice. It is seen in a cognitive, or a literary way sort of speak, if one was to let their instinct take over much like what an artist or designer would do rather than reflect on their actions, then in a psychological view one was not to be accepted or acknowledged as a member of the community (Csikszentmihalyi, 2009). Not everyone's point of view is the same for example, Kandinsky theorises that not all artists follow the same lines, but they all follow different lines (Duchting, 2017). This suggests that artists often have their own theory of what creativity is and how it will take them forward in their practice and their own craft or artwork. It has been said it used to be

hard to change the world with an idea alone (Anderson and Hauster, 2012). This is true as many artists and designers can struggle to find their speciality. By this it means that not everyone is able to find the revolution of the craft, which will take them forward in their creative experimental stage. A maker that does this is Alison Britain as her narrative leads to the disappearance of forms much like Kandinsky's (Duchting, 2017). The idea of a narrative being reimagined is almost like a craft in itself, as you are recreating a creative version of a literary narrative, although combining it with the skills of the creative industries and not just a cultural industry.

In all creativity has been the foundations of artists throughout the years as you can make something, or design anything, unless you have the imagination and cognitive ability to see beyond what is in front of you, then to see it in an inventive and unique way, as a "wake of reproduction" (Beechey and Stephens, 2012). For example, the artist Pablo Picasso with his Cubism technique this took creativity to a whole new level. As not many artists or designers had pushed the boundaries of lines into something incomprehensible which is now one of the key drawing techniques for any abstract artist, who are interested in the variation of marks and shapes.

Picasso is not the only Artist who uses his creativity in an inventive way. Bridget Riley is another artist who chooses to use optical illusions to broadcast and make those looking at her work to emerge themselves into a world of wonder. In the book *The Eye's Mind: Bridget Riley* states that "I have been fortunate enough to discover what 'looking' can be - sometimes in a mere glance one can see more than in the close scrutiny of a thousand details" (Riley and Kudielka, 2009, p.16). It is interesting as she uses the word scrutiny as one would use it indicating a careful examination or enquiry into what is known, not only to the artist but also the psychologist. By saying this it indicates that she crosses the line of both artist and psychologist by looking into the mind's eye and imagining what both is and is not there, though it may be hidden to those who do not have the cognitive and creative ability to see what is not there.

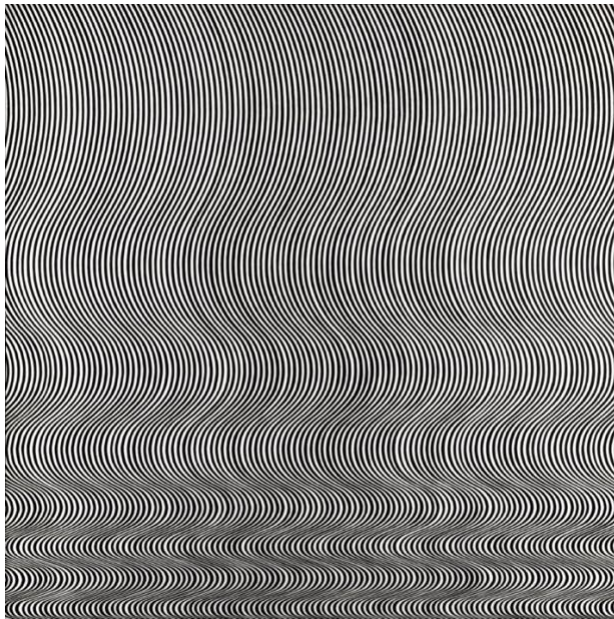


Figure 1 - Fall, 1963

Above is an example of how Riley manipulates line and movement to form an optical illusion, the two halves of the image differ in weight and variation of line. The upper is more relaxed whilst the bottom half is compressed in a fluid motion. In the picture the formation she uses is perpendicular curve repeated, to create a field of different frequencies (Tate, 2019). The field of energy which can be sensed once in the presence of the work shows a form of tension, as experienced when I visited the Hayward Gallery to see her exhibition (Bridget Riley Exhibition, 2019).

Both Picasso and Riley share a similarity. For instance, the use of line and movement links subtly to the art movement *Memphis* which uses abstract marks, spaces and colours to reinvent a space into a happy environment be it large scale or small. These spaces are known to manipulate our senses and change the perspective. For example, the “things we see, feel, think, and desire – are information that we can manipulate and use”(Csikszentmihalyi, 2009,p.26). That every person who experiences these phenomena within a creative space, come out with different senses and visualisations of what they saw within the imagery; not every perspective is the same as all artists view marks, lines, colour and shape differently.

Many artists today and in the past look into creating a collective, a collective being 'united by shared ideologies, aesthetics' (Tate, 2017). A movement that does this is called *Memphis*, this movement was founded in Milan by Ettore Sottsass. Sottsass, wanted to form a collaborative group of designers that would create new language, colour palette's and the new use of line and pattern within the designs (Design Museum, 2019). For instance, when looking back at the term collective within an artist or designer's work it is seen as postmodern or modern design. These terms come with brand-new possibilities for creativity, for example when the term 'pop culture' was defined it implied that the artwork designed by the artist was able to reflect and project their own views and opinions within their work, subtly hinting their concerns with the world (Collins and Papadakis, 1990). Another theory is the "distinctive and the vivid to the eye is seen as colour solid" (Armstrong, 1991,p.9) which could link to Sottsass, as he reimagines and reforms everyday objects into astounding pieces of furniture for the modernisation of the world.

Below is an example of what the group Memphis has designed that pushes these boundaries:

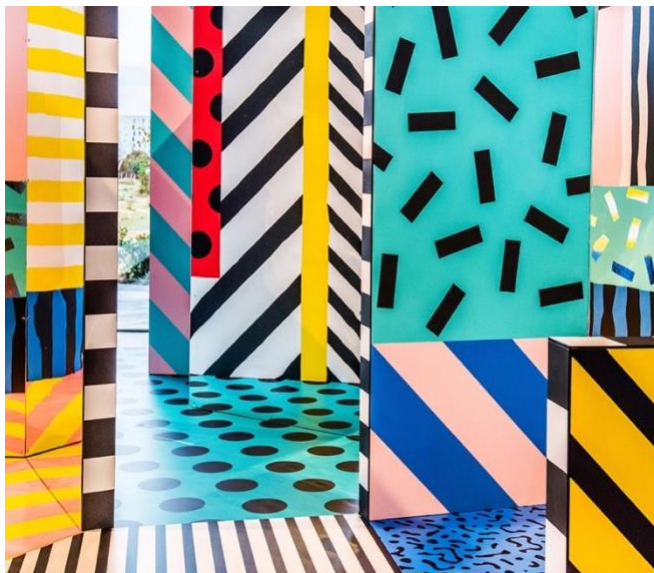


Figure 2 – NOW Gallery in Greenwhich

This image was designed by Camille Walala, the work was inspired by the Memphis movement, as it shows wilful energy aimed at patterns which are more playful, and graphic compared to Kandinsky and Picasso (Studio Walala, 2019). All four artists/designer that have been touched upon have a different version and view of what creativity means and how they go about it. The artists discussed have all inspired me as a designer to push my boundaries and the limits of what creativity can be and the materiality of it.

By doing this, I have developed skills in visualisation plus harder materials such as: wood, slate and glass. In the book *MORE IS MORE* by Claire Bingham it says, “design should be sensual and exciting” (Bringham, 2019.p.35). This is true, as designers we should constantly be experimenting with exciting materials, as this expands our creative minds much like how Walala extracts her love for pattern and colour to bring value to her work. Walala states “it was great to see the effect it had on people” (Bringham, 2019,p.175). By seeing the effect this links back to the saying of “creative arts” (Hartley, 2005.p.6). It does this by having a psychological effect on the mind, thus meaning when you experience a brightly filled room or outside space it can rekindle memories or make the mind see past the creative arts.

Although, the Memphis founder Ettore Sottsass and George Sowden both drew inspiration from architecture, a past time that reminds me of his work is the art school called the Bauhaus. The Bauhaus was where creative individuals in Germany could expand and explore the straight, abstract formations of basic objects and turning them into something exciting and never before seen. For instance, the introduction for any device within crafts, that did more than benefit “the muscular action of the human hand”(Wahitford, 1991). Found that the craftsman and the consumer lost the passion and soul within that said craft, since it was more robotic and less connected to the emotions of the designer and craftsman alike. Peter Shire an associated Memphis designer has challenged the rigidity of modernist vocabulary by an unexpected optical dialogue through forms and surfaces within technology and aesthetics (Peter Shire, 2018). This form of unique creativity really shows the relativity behind the “dynamics and attention towards the memory”(Csikszentmihalyi, 2009,p.26). Below is an example of Peter Shire’s work, you can see the alterations he has made to the everyday object, making it dynamic and reimagining the memory of what we as humans see everyday objects.

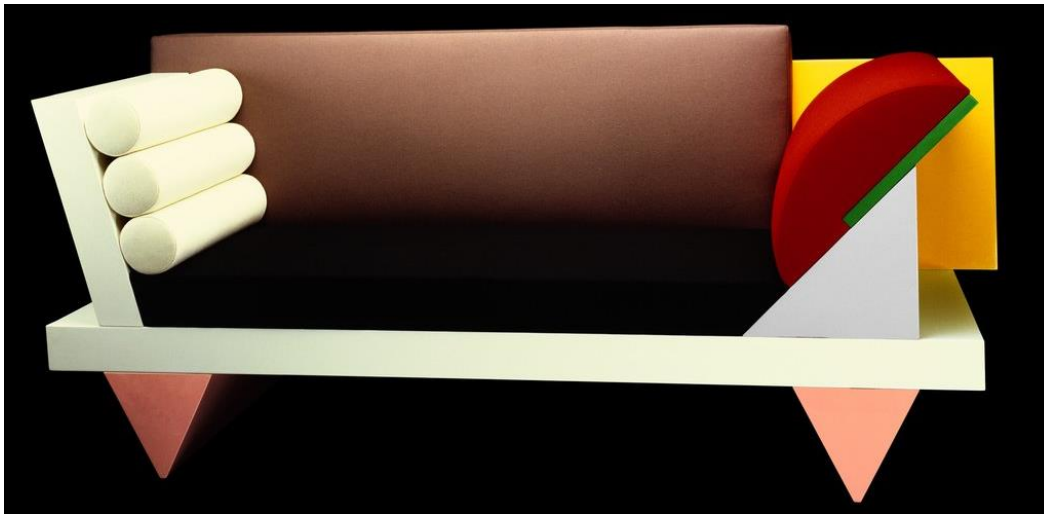


Figure 3- The Big Sur.

The alterations towards the exterior of the basic object shows the connection to *thinking hand* (Pallasmaa, 2010) as well as the craftsman and the creativity behind the theory of their practice, although the maker has a strong link to the creativity of the formations and development of objects.

By comparing artist and theorists together there is a clear definition between how the psychological terms of creativity differ between the useful creative. In addition, another point is the discovery of the movement called '*Memphis*', the finding further outlined how different areas of design express their creativity through altered mediums, techniques and personality.

## Chapter 2- How do makers apply creativity?

Chapter two will be examining the two different terms of tacit, this being the tacit knowledge and the tacit skill. Additionally, it will look at how craftsman and makers apply their creativity into their works to define themselves. Theorists will also be used to help with my argument between the different views between tacit knowledge and skill.

Nevertheless, tacit skill is different to the term tacit knowledge, for instance it is “perceived to be the fundamental source of innovation” (Von Krogh, Ichijo, and Nonaka, 2011).

Indicating, someone must experience instead of gaining knowledge in the traditional way of methods such as reading or writing, there must be a form of connection in order to animate through the term of tacit knowledge. Additionally, tacit knowledge is to be recognised that natural skill and knowledge are immensely significant fact to the maker compared to an artist or designer. Indeed, Michael Polanyi refers to craft as “the ways of knowing and doing that grow through the experience and practice of a craft, but which adhere so closely to the person of the practitioner as to remain out of reach of explication or analysis” (Ingold, 2013. P.109). This suggests, when makers use materials, they experience the craft through touch and visualisation. Each craft is individual and personal to each maker as there are parts of processes that cannot be described through words.

Looking at figure 3 in the previous chapter there is a clear perception stated by Csikszentmihalyi (2009), that there is an unexpected view of the dialogue: Theorising that even though an everyday object or functional tool can be turned into an unfunctional but practical sculpture for the home. Another designer who does this is Alison Brittan. She uses the natural skill of craftsmanship into a “craft quality of higher stage” (Sennett, 2009, p.50). Conveying that, much like Peter Shire and Camille Walala, they use a tacit skill within their creativity in their craft. The tacit skills behind their work is, they are aware of the conscious decisions to make their designs irrational and unfunctional for the purpose of viewing.

Tacit skill is noted in *The craftsman* as Richard Sennet says “craft quality emerges from this higher stage, in judgements made on tacit habits and suppositions” (Sennett, 2009, p.50).

When physically making work, makers have an immediate feedback, they are aware of the mistakes because the design is visualised beforehand. Tacit skill is seen as “created or directly expressed” (Collins, 2019). This is a key aspect of a makers psychological thinking of creativity as a practice tool. For example, maker Beate Gegenwart uses enamel to futurise and envision her ‘distinct personality’. For instance, according to Pallasamaa (2010) the hand is seen to drive us to a futuristic product, since the surface of our skin, especially the fingertips is seen as “singular patterns” (p. 10). This implies that, those with the tacit skill and creativity knowledge are able to envision beyond the now and into the potential that is to come from the patterns we see within the makers intricate work.

Below is an image of Gegenwart’s work, showing how the lines and patterns formed from the enamel give the distinct personality required to visualise the time and skill, rather than shown through the medium of paper and pen.



Figure 4 – Beate Gegenwart, Mission Gallery, 2018.

While figure 4 shows the tacit skill delivered by Gegenwart, this is displayed through the intricate movements of the lines. It shows the complexity of the mind reforming the current and making something new. Additionally, to this 'craft' which is defined with many makers

is vastly spread between the craft community. Equally so, it is said to be complicated with “its relationship with art”(Gauntlett, 2011. p.22). Signifying that, when we look at the term craft and art, they are two different things where one looks at the media, paint and sketches of one's body, even technological versions of art.

The hands are seen as an essential part of a craftsman's composition, as seen in the book *The tacit dimension* where it states that “we can know more than we can tell” (Polanyi, 1996. p.4). This means the fabricator of the work can tell a thousand words more through an image or sculpture rather than a piece of writing, this is because you can immerse yourself into the land visualised in front of you. The ‘useful’ creative also uses the transcendent image of how the formation and beginnings are left visible. Creative minds are a tune to the workings of tacit knowledge, this is relatable when Michael Polanyi talks about ‘mano's paradox’ (Polyani, 2014, p.10). The paradox stems from one producing no new knowledge but repeats what is known from their speciality in a new envisioned way.

A school/institution which looked at the ‘paradox’ was called the Bauhaus. The bauhaus looked at the reinvention and modernisation of traditional objects, making them more functional and they reduced the patterning which they saw as useless. For example, in Flusser's book *‘THE SHAPE OF THINGS: A philosophy of Design’* it states “Design, like religion, codifies beliefs which can prevent one from inquiring any deeper into the realities of a given phenomena” (Flusser, 1999, p.3.). Indicating the Bauhaus challenged those in the institution to experiment and further define their own craft, even their own worth, to challenge the aura of themselves to define their creativity. Within the institution, there was a “increasing market fragmentation all conspire to make developing and managing a strong design scheme essential” (Vaid, 2003, p.5). Essentially, this could indicate the start of the reconstruction of the way making and craft is seen within the natural world of traditional making. The ‘design scheme’ (Vaid, 2003, p.5) can be varied through a multitude of ways and processes.

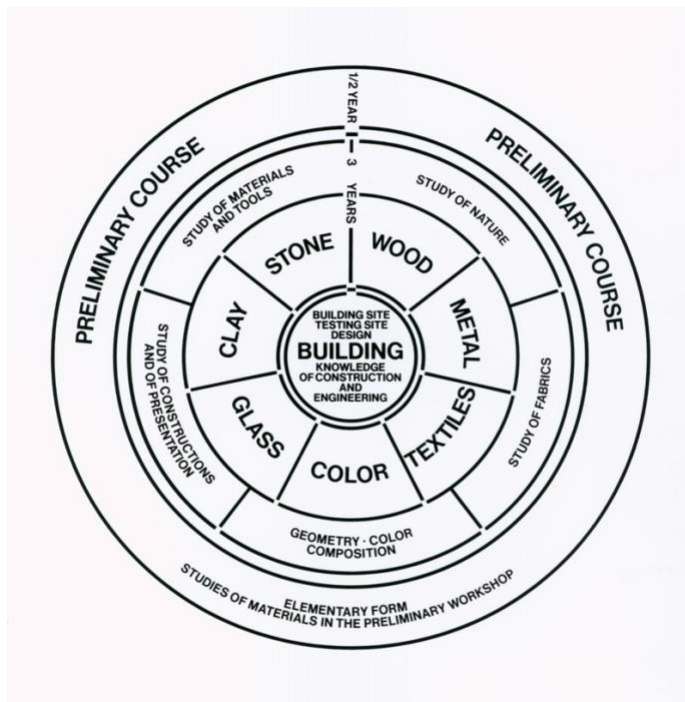


Figure 5- The Bauhuas cirriculum.

The diagram illustrates how the Bauhuas would function. Each section of the Bauhuas curriculum defines what area a craftsman looks at when studying at the school. For instance, the centre shows the generalisation how the designs would function. The next layer shows the basic equipment and materials that the designer would use within their practice. With this structure the students were given support towards using the basic materials needed for the experimentations within their practice theory. Additionally -

*Students entered the preliminary course, covering “elementary form” and basic “studies of materials”. Over the next three years, students were encouraged to experiment in many media, and only after this formation in the fundamentals were the best students allowed to enter the core architecture course (which wasn’t established until 1927). (Venkatesan, 2012).*

Nonetheless, during the early stages of the Bauhaus it fundamentally helped towards the foundation of postmodernism. This being that there is an “aesthetic of the strange” (Grabes, 2008. p.125), conveying that the immediate sense of pleasure that one would feel when experiencing the works produced by the Bauhaus and, later on, the Memphis movement. Also, the ‘aesthetic’ can be linked to the makers ergonomics (Dormer, 1994.p.13). The

ergonomic aspect in a crafts perspective is the curiosity to the intricate systems of both people and difficult technology.

The practical way which “one makes through thinking and the other thinks through making” (Ingold, 2013. p.6). This is true for instance, when looking at the Memphis movement makers and designers look past the foundations of normality. Designer Flora leung outlines her Inspirations and process in an interview in *More is More* (Bringham, 2019). leung is “inspired by the art deco era, Bauhuas and 80’s inspired Memphis designs” (p. 156). She says that post modernism was introduced to her and changed the way in which she viewed things. For example, “it’s key principles on complexity, contradiction, and subjectivity are always interesting and fun” (p.158). This is true as designers have an intuition for the challenges of reworking products into their established colours textures and shapes.



Figure 6- Nervscape IV

Another area of creativity that makers and craftsmen alike visualise as stated previously the subjectivity is interesting and fun (Bringham, 2019. p.158). Figure 6 explodes with colour and vibrancy turning the sense of a dark and dim area into a happy and joyful moment. When looking at the vibrancy of the colours it shows how the colours show “constant production that will always satisfy the needs of the market” (Munari and Creagh, 2008. p.80). The market in figure 6 is the generalised public, how to turn an area of the urban into

a “fantasy meant to provide a means of escape”(My Modern Met, 2019). Hrafnhildur Arnardóttir the installation designer shows the circulated energy with which the hair, both synthetic and real provide. Having the idea of circulated energy relates back to the idea of tacit knowledge and skill.

The tacit skill within figure 6 discusses through visual presentation how, Ingold argued that there are only soft boundaries between artifacts and patterns in nature. (Withagen and van der Kamp, 2018. p.2.). This is true as stated near the beginning of the chapter “created or directly expressed” (Collins, 2019). Developing this piece through different media and expressing the individuality of the materials shows the skill and knowledge that Arnardóttir demonstrates within her installations.

In summary by using the artists and theorists discussed there is a clear difference between how makers grasp the term of creativity within their tacit skill and knowledge. Also, discovering textures and colours that inspire the design craft within works to make them joyful and sensual for people to experience it.

## Chapter 3- What is the connection between creativity and making?

The third and final chapter will be discussing the differences and comparisons between creativity and making. It will also look at the development within modernisation of creativity and how it is applied through computers. Additionally, it will discuss three terms of computerised art briefly and how it is compared to an illustrator with the idea of an 'aura' coming into play. Theorists and artist will be used to help my argument within the third chapter.

When looking at the idea of space and place within the craft and industrialised world, Gaston Bachelard discusses how the "fabricated image, without deep, true genuine roots." (Bachelard, p.75) is unrelated to the real world. Therefore, through technological advances one must look through an image without roots in order to visualise what the creative outlook would be without traditional craftsmanship. For example "Illustrator artwork is vector-based design software" (Narayan, Belsky and Chen, 2019). This industrialised version of the craft idealisation supports the theory of the newness mentioned in the introduction. This 'newness' express the need for advanced technological thinking and having the "design software" (Narayan, Belsky and Chen, 2019), in contrast there is an idea that If designers are able to design without fabrication, the question might be, as Ingold argues, "what then is the relation between thinking and making?" (2013. p.6). In other words, does thinking and making within the new age of design, being traditional or tech-forward, mean an individual must question whether there is a connection between the new industrialised context of design and the tradition of craft.

Although, a paper called 'Essay on Typography' by Eric Gill, it mentions how there is a "loss of craftsmanship that he felt had resulted from industrialism" (Venkatesan, 2012). Gill wanted to form a gathering of artists with their true craft to get back to the roots of the traditional craft. Also, there is an idea that there is an aura when talking about craft and how it "witheres in the age of mechanical reproduction is the aura of the work of art" (Benjamin, 2008, p.4.). This meaning that, with mechanical production related to the aura it alters the way others view an object, such as a mimicked object (Benjamin, 2008, p.4.) that may not be able to be used functionally as stated before in chapter 2: how makers apply creativity.

In the terms of technological advances the way the 'cultural industries' have perceived the way things are viewed. An example being "making and connecting is not an option-it is experienced as a necessity" (Gauntlett, 2011,p.25.) Implying, through the use of connections within the industries be it creative or cultural one must realise it is the necessity of the collective culture with modernisation of technology and traditional craft must understand and comply to. When looking at the idea of the advances within creativity and how it has encouraged designers, Ingold says-

*"files in the face of the common belief among non-practitioners, not least historians and anthropologists of art, the essence of drawing lies in the projection onto the page of interior mental images"*(Ingold, 2013. p.127).

Suggesting, having the idea of having an 'essence' when drawing a simple line can project into our inner mind which holds the creative ability within craftsman and artists alike. In addition to this, in the book *JOYFUL The surprising power of ordinary things to create extraordinary happiness* By Ingrid Fetell Lee it states that "joy is a feeling, ephemeral and elusive. It wasn't something we could touch" (Fetell Lee, 2018,p.3). Meaning, when we see joyfulness through what we create this feeling passes by, even so this 'feeling' as Ingold says could be the 'essence' which the craftsman and the non-creative alike potentially meaning everyone projects their own version of "interior mental images" (Ingold, 2013. p.127). This can be seen within a technological artistic view, for instance the newness within a cognitive sense when applied to the idea that "today we are spoiled by easy pickings of the web" (Anderson and Hauser, 2012,p.7.). This is true as designers and modern craftsman alike can manipulate their design ideas through photoshop and illustrator alike to further enhance and quicken their design process. An artist that does this is Elean Xausa she says "love to give life to my drawings through animation" (Elena Xausa, 2019).



Figure 7- untitled.

Figure 7 above is a clear example of how Xausa uses her illustrative skills through the use of adobe animator, to create inventive and bold advertisement for many magazine and newspaper articles.

Furthermore, it shows the new creative term called “net art” (Tate, 2018), this would be seen as a cultural creative since it is influenced through the industrialisation and demand for modern art and techniques. In addition, there are three different subterms for net art these are browser art, software art and telematic art.

#### Browser Art-

It is a different version of net art, the browser art is a defector art collaborated with URL, this uses the computers raw material function using the coding and structures from websites to support links with the saving system and servers to then turn it into visual material.

#### Software Art-

During the 1960s, new software was seen as the new digital tool from which artists could manipulate their art and recreate it on the computer. Then on, the programs have modernised and developed to now the creative side of the art is released to its further potential.

#### Telematic Art-

Telematic art was developed by artist/theorist Roy Ascott in the 1900s to define playful and interactive art, which the internet and many other digital infrastructures such as: e-mail and

mobile phones. Telematic art uses aspects from human medium like the want to communicate in the virtual sense much like how it is central to the invention of medium. (Tate, 2018).

Having discovered these terminologies it broadens the different types of creative in practice theory today. As Walter Benjamin says there is a “mechanical reproduction” (Benjamin, 2008,p.4.) when considering this the idea of ‘reproduction’ can link to the idea of an objectivde towards discovering an aura within work, be it technological, sketching and craftsmanship. Looking back at the idea of an ‘aura’ in a modern technique it shows how for example Xausa uses her skill with computers to define and reimage an object to become deconstructive, in order to develop her own creative aura within the creative and cultural industries.

To summarise having the ideas of theorists and artists used within the third chapter it shows the comparisons between creativity and making, by discussing the varing ideas from the craftsman and artist. Additionally, discussing the different terminologies of art within the computerised world and how it has helped develop the workings of artists and makers alike in the new industrealised world.

## Conclusion

Throughout the discussion of the essay three main sub questions were touched upon that being: *What is creativity?*. The first chapter used theorists and artists in union to develop a clear definition between the psychological terms in creativity between the useful creative, this being the craftsman. Through the chapter when talking about creativity the term 'memphis' was talked about and how it defined multiple areas within design and how it expresses creativity. From these points considered through the first chapter it then lead onto a second sub-question this being *How do makers apply creativity?*. Through detailed analysis and resources used by theorists and some craftsman there was a clear variance with creativity with makers. This was found through the use of defining their tacit skill and knowledge, comparing them to cognitive psychologists or this idea of a newness within the industries. The final discovery within the second sub question was the idea of joyfulness and how textures and, colours influence the choices within design craft. The final sub-question is *What is the connection between creativity and making?*. The idea of the connection between the two was theorised through the ideas in the second sub-question. Having the comparisons found in creativity and making shows the varying developments between ideas of craftsmanship and art. Further to this, three terminologies were found through concentrated research they being: Browser art, software art and telematic art. By finding these terminologies for the modernisation of digital craft provides evidence of how creativity can differ through multiple practice theories when considering the findings from the three sub-questions combined.

The theorists used were similar in their ideas in the topics they discuss. The main ideologies used by theorists that helped the most through this essay was Tim Ingold, Richard Sennett, Walter Benjamin and Bruno Munari. These theorists used the idea of creativity and craft to idealise the psychology behind the mechanics of the cognitive brain be it the designer or psychologist. Using these comparisons to show the ideas and theories within the essay has helped define '*creativity*' in order to better understand the tools of practice theory. By using the title question as a basis to discuss the argument and discoveries made in the essay it has defined creativity within a multitude of ideologies.

The ideas found during the entirety of the essay has shown the development and modernisation of craftsmanship and how the traditional craft is used less but still being preserved with the combination of both technological advances with the traditional methods used during the process. In addition, the maker and craftsman alike must adapt to the new cultural demands and restrictions now present within the industry today, this being the use of sustainable products and materials with the help of carefully thought through planning and considerate ideas for the target audience. The artists discussed use these tactics when designing, by using their tacit knowledge and skill an aura is seen, people who do this are Alston Britton, Camielle Walala and Hrafnhildur Arnardóttir to name some.

THIS IS A CALL FOR ACTION! It would be beneficial for designers and theorists alike to further define the term creativity as the subject matter is so broad. Also, using the idea of sustainability and the idea of an aura can help further discuss and define the different terms of creativity within practice theory. Moreover, artists and makers should consider the ideas discussed within the essay and see if it can be applied within their own work and ideologies. What does all this mean for creativity and makers/ craftsman? There is a new horizon coming within the creative industries! New technology and the revival of traditional crafts, even the idea of combination between the technological advances and traditional.

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## **IMAGES-**

Figure 1 - Riley, B. (2019), Haywood Gallery Fall -[Haywood Gallery London] 23rd October.

Figure 2 - Studio Walala. (2019). *Now Gallery Walala x Play — Studio Walala*. [online] Available at: <https://www.camillewalala.com/latest-work/2019/1/15/now-gallery-walala-x-play> [Accessed 29 Oct. 2019].

Figure 3- Memphis Milano. (2019). *Big Sur*. [online] Available at: <https://www.memphis-milano.com/collections/peter-shire/products/big-sur> [Accessed 8 Sep. 2019].

Figure 4- Gegenwart, B. (2018) Mission Gallery [Mission Gallery Swansea] 30th November.

Figure 5- By Venkatesan, (2012). Bauhaus founder Walter Gropius' original diagram of the Bauhaus curriculum. Available at: <https://trydesignlab.com/blog/bauhaus-school-five-lessons-for-todays-designers/> . [Accessed 29th Nov.2019].

Figure 6- By Hrafnhildur Arnardóttir, (2015). Nervscape IV, Nordic biennial. Available at: <https://mymodernmet.com/hrafnhildur-arnardottir-shoplifter-installation-art/>. [Accessed 4th Dec.2019].

Figure 7- **By**-Jorrot, M. and Sehatkar, A. (2014). untitled, *ELENA XAUSA - WE ART*. [online] WE ART. Available at: <https://weart.co/illustrators/elena-xausa/#> [Accessed 17 Dec. 2019].