

Keywords: Regenerative, Biophilia, Pattern

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Regenerative, biophilia and pattern are the three key words explored within this piece of writing. Each word will be dissected and analysed using examples of each word within a particular area of practice, as well as its history and origin. The writing will also discuss the ideas of artists and thinkers such as John Tillman Lyle, Daniel Christian Wahl and Christopher Alexander among others to support the topics raised within the writing. However, the underlining focus is the relationship these key words have with each other and more critically how the interlinking connections can be explored to formate an essay question that try to establish how already existing practices related to the three keywords can address the ever growing issue of climate change and more importantly how they can be used in an environmentally positive way.

Our ecological understanding developed over the last few decades makes it clear that we can only meet the needs of humans in an environment where the needs of other species-countless other species-are also meet

(Lyle, 1994, p. 3)

John Tillman Lyle was a great believer that the benefits of regenerative design far outweighed those of sustainability. It was his belief, detailed in his book 'Regenerative Design for Sustainable Development' that although sustainability is a good starting point for designers, they should all strive to incorporate regenerative design principles as often as possible. As designers it is important to note the key difference between these two principles as it can be confusing to differentiate one from the other especially, as sustainability is far to overused and mostly inaccurately described term within a design context. In its most basic evaluation regenerative design is something that has a net-

positive impact on the environment rather than simply seeking to use the most minimal resources needed to make a product which is what happens when designing a product to be sustainable (Mang, 2020).

Looking in greater depth at the term; Regenerative means *“To make an area, institution etc, develop and grow strong again”* (Oxford Learner’s Dictionaries, 2020.) The word was developed from ‘regenerate’ which derives from the latin word ‘regenerāre’ which means *‘bring forth again’* (Word Reference, 2020). As a result ‘regenerative’ is used in many different fields often describing something that is brought back to its original state or at least similar to it. For example in medicine doctors use it to describe a type of therapy that is used to motivate the regeneration of tissues after disease or injury (PNAS, 2020). As well as regenerative agriculture which describes a method of farming that uses a system of principles and practices that improves its resources rather than destroying and depleting them (The Climate Reality Project, 2020). This brings us on to ‘regenerative’ being used within a design context. Once again the word can be dissected into many disciplines within the world of design and making, it is most often associated with architecture and fashion, two sectors of industry that are huge emitters of fossil fuels. It therefore comes as no surprise that these two sectors seem to be the most willing to jump from sustainable practices to regenerative ones (The RIBA Journal, 2020).

An example of regenerative practices in use can be found when looking at the fashion house Stella McCartney. They refer to these practices as Circularity however, this is simply a more imaginative way of saying ‘regenerative’. Their practice relies on them sourcing renewable materials, technical materials and biological materials. The importance of these materials to the brand is that although all the materials are different, whether that be because of the way they are sourced, created or found these three

materials have one important core similarity, they can all be reused multiple times without losing their quality, enhancing their ability to be remade into various items time and time again without having to take any further resources away from environment (Stella McCartney, 2020).

Even today, most cutting edge environmental approaches are still based on the idea that human beings are inevitably destructive towards nature and must be curbed and contained.

(Braungart and McDonough, 2009)

At the moment this is a true statement, as we continue to use sustainable ideas to combat climate change, we are simply prolonging the damage we are causing. As the world moves forward it is important that we aim to create a regenerate culture. One that understands that our original capital asset is the Eco-system (Wahl, 2020). The aim when creating a regenerative culture is to create something that is *'healthy, resilient and adaptable'* (Wahl, 2020). However this will only work if people are willing to change certain habits and adopt a forward thinking mindset that will prioritise a co-dependant respectful relationship with the environment and a willingness to live using regenerate principle.

The term 'biophilia' was first popularised by psychoanalyst Enrich Fromm in the 1960s. Fromm used the term within his work to describe the relationships humans have with nature as *"an innate and genetically determined affinity of human beings with the natural world"* (Lexico, 2020). To create this new term he brought together the Greek words 'bio' which means *'life'* and 'philia' meaning *'friendly feeling towards'*. Later during the 1970s

American biologist Edward O. Wilson extended the term to mean *‘the rich and natural pleasure that comes from being surrounded by living organisms’* (Merriam-Webster, 2020).

Plants heal without having to be processed into teas, creams, essences, extract oils, perfumes, or drops and tablets. They heal us through biological communication that our immune system and unconscious understand

(Arvay, 2018 p.12)

The innate link humans have to nature has provided many benefits to a persons mental health and wellbeing. It is believed that 90% of people would image themselves within natural surroundings such as, forests or meadows, when asked where they would feel most relaxed (Planteria, 2020). These benefits are discussed at great length by Clemens Arvay in the book ‘The Biophilia Effect’. In the book Arvay writes that biophilia is a *‘product of human evolution’* this is more true today than ever as more and more people live in cities and towns where there are fewer opportunities to incorporate green spaces that can fulfil our increasing need to be with nature. Arvay explains that by incorporating nature within our lives through biophilia design solutions, we as humans are then able to use our powerful imaginations to trick our minds and bodies into thinking that we are being surrounded by natural world. Therefore enhancing our mental health, relieve stress and boost our productivity.

The relationship between humankind and nature can be one of respect and love rather than domination... the outcome... can be rich, satisfying, and lastingly successful, but only if both partners are modified by their association so as to become better adapted to each other

(Dubos, 1980, p. 68)



Figure 1 (Malone, 2017)



Figure 2 (Karl, 2019)

The concept of biophilia or biophilic design can be characterised in two ways according to two specialist leaders in the subject of biophilia, Stephen Kellert and Elizabeth Calabrese. The way Kellert and Calabrese broke down biophilic design was by establishing the way our senses interacted with each other. As a result they ended up with two focus areas of into 'direct experiences of nature' and 'indirect experience of nature' (Building design + construction, 2020). The first category 'direct' is quite literally defined by the direct interaction a human has with nature such as plants, water, fire and natural views. The benefits of this are very clear for a person, as it is a much more immersive experience for them as they are able to go up close surround themselves and feel and smell the plants or touch and hear the water. Because of how engaged a person can become the health benefits of designing, in the 'direct' way, can be felt much faster. The second category 'indirect' is used within design when a direct approach cannot be achieved. It involves the use of sound and smell to create the feeling of being among nature. Although not as affective as direct it still has the ability to create tranquility which will inevitably improve a person's wellbeing (Kellert, Calabrese. 2015).

It is clear that as humans we have a substantial amount to gain by incorporating biophilia concepts into our lives, however, as well as having benefits to our own health and wellbeing it can also be used to help improve our relationship with the environment because if

we are able to gain so many health benefits from incorporating the natural world into our own spaces, we should therefore gain a deeper respect for it and by doing so we should develop a more sympathetic understanding of the steps that need to be taken to protect it (Britannica, 2020).

The word 'Pattern' describes something that is *"the regular way in which something happens"* (Oxford Learner's Dictionaries, 2020). 'Pattern' derives from the old English word 'patron' which means *"something serving as a model"*, the old English word itself derives from the French word of the same spelling which means *"giving an example to be copied"* (Lexico, 2020).

The significance pattern has in our lives cannot be underestimated. Patterns are vital to the existence of life as we know it and are crucial to the running of our day to day lives. Patterns can be distinguished in two very clear ways either they are naturally occurring like lightning, waves or on the wings of butterflies, or they are man-made these patterns can be found within mathematics, science and language. Patterns can also be used to describe behaviours are exhibited by all of us, but are more commonly referred to as habits, but patterns is essentially what they are. However, whether these patterns are described as, natural or man-made will depend on the opinion of each individual person (Fresh Perception, 2016). Another more clearly defined pattern is one that is made for decorative reasons, wallpaper and fabrics for the fashion industry for example, these patterns are man-made but differ from the other man-made examples because they are created for visual affect rather than serving a function. It is important to understand how patterns work because it enables us to create a template within situation that can be used

as a good predictor of what is going to happen next, and with the understanding of how a pattern works we can change the predicted outcome if necessary (Art + Marketing, 2020).

No Pattern is an isolated entity. Each pattern can exist in the world, only to the extent that it is supported by other patterns

(Alexander ,1977, p. 13)

In the book 'A pattern language', Christopher Alexander was referring to the intertwining patterns that can be found within architecture. Alexander explained that cities, towns or simply just neighbourhoods are formatted into a set of particular patterns. Each pattern regardless of size is important to the overall outcome of the project, if one doesn't work or isn't there, the overall project fails, which demonstrates that each pattern is vital to the other. Although this a reference to architecture, the underlaying point that no pattern is an isolated incident. This can be true for all aspects of life, for example if you take the morning routine of most adults it will demonstrate a number of inter-whining behavioural patterns that a person has established overtime. Each task has a set role that forms a pattern that creates normalcy in the day to day running of their life. However, if one of these tasks are incomplete or missing the normal morning pattern of that person is broken and the rest of their day is interrupted as a consequence.



(Chin, 2012)

This image is a much simpler visualisation of what is meant by interlinking patterns, although in this example the mistake is intentional, if you imagine that it wasn't and imagine each component of this pattern was its own individual pattern, you are able to see the importance of the relationships that patterns have to each other. This is perfectly demonstrated by the pink exercisers although they are all different, which is true for every pattern we will encounter in day to day life, they all work together as a selection of small interlinking patterns which make up one large pattern. However, in this case the synchronicity is broken because of the inclusion of the isolated yellow exerciser which would have a detrimental effect on any pattern found in the real world whether it is naturally occurring or man-made because "no pattern is an isolated entity" and when it happens it fractures the integrity of the bigger picture.

Although these three key words seem very separate and unrelated, together they can form interesting parallels with each other especially regarding their potential to have a positive impact on the environment. Most obviously when you look at the word regenerative, along with the examples given, the link to the environment becomes clear. However, the question is how do you get people to care enough about the environment to change, what for some are life long habits, and adapt a regenerative lifestyle. One way is to introduce biophilic design into their lives. This will show a new and positive way to look at nature and the benefits they stand to gain from it. The benefits to their life will inevitably create a much greater respect for the natural world and in doing so may encourage a person to consider integrating a regenerative lifestyle as a suitable way to live. Finally how does someone who has taken on board both the regenerative and biophilic concepts continue to make positive environmental decisions, making sure they do not fall back on old habits. One way is to establish patterns within their day to day life that ensures they continue to feel the benefits to not only them but also to the environment.

In conclusion it is clear that although these words seem separate, together they create a vital link to each others that can potentially help peoples understanding and respect for the environment as well as helping them understand the role that every person plays in the outcome of the environments greatest threat, Climate Change.

Moving forward I will continue to analyse and evaluate these themes, as I attempt to establish meaningful links between them, I will ask the question **‘Can the inclusion of regenerative, biophilic and pattern concepts increase the probability of someone maintaining an environmentally positive lifestyle?’**

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