
Creativity series part 2: An evolving concept

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This must be the place (WC: 1411)

The directions of creativity

The big question posed in the previous article was: “Do ideas emerge from within the person, or do people recognise ideas already present in their environments?” Although this may seem trivial, to grasp the distinction can be of real value for understanding creativity more generally. Additionally, depending on the perspective we take, we are also necessarily either creating an elitist or a democratic view of creativity.

The common inside-out perspective states that we cognitively create ideas and then make them a reality. This implies that greater cognitive capacities correspond to greater creative outputs. However, we also know that we are always restricted by parameters of the environment. Furthermore, it is not only despite these parameters and the limitations that they impose, but rather because of them that we can create. This is otherwise known as the outside-in perspective of creativity. Inherent in this perspective is that certain environments present more barriers for some than for others. This means that creative output is not an accurate index for an individual’s cognitive capacity. Creativity depends on, first, the opportunities present in the environment and, secondly, the individual’s creative abilities. That environment is an essential component of evolution speaks volumes for the outside-in perspective. However, it is worth pointing out that the person (creator) is inherent to both perspectives. It seems, then, that a more complete way of viewing creativity in the world could be achieved through comparing the two processes.

The limits of the environment are the limits of creativity

All of our creative potentials are, to varying degrees, at the mercy of countless cultural, political, social or bureaucratic structures. These environmental factors dictate not only what is worthy or taboo to pursue, but also who can and cannot pursue these. However, psychological studies have tended to focus exclusively on the personal dimension of creativity. Take psychologist Hans Eysenck as an example, who, as recently as 1995, stated that, “creativity, particularly at the highest level, is closely related to gender; almost without exception, genius is found only in men (for whatever reason!).”¹ To arrive at this questionable conclusion, Eysenck combed lists of the notable composers, artists, scientists, poets and novelists and, apart from a few exceptions, found men to be disproportionately represented. Rather than engaging with the social and environmental factors that might have affected the distribution of this apparent genius—which would have ultimately provided a more accurate and compelling conclusion—Eysenck went on to postulate that the disproportional rates of psychoticism in men were the likely cause of this discrepancy.

New perspectives offer new understandings

A comprehensive ten-year review of the scientific literature investigating gender bias in science, technology, engineering and mathematics (STEM) fields² provides a different account of things to Eysenck: through analysing and aggregating data across multiple studies, it was concluded that factors such as social capital and a lack of awareness of career paths (due to job placements being advertised to men only) were the largest drivers of disproportionate gender representation. Moreover, even when they are in the know, women might not give serious consideration to options in STEM, for the reason that they may doubt their ability to achieve in that field. Women also report spending more time managing their role expectations, including building legitimacy (i.e. being taken seriously), than do men. One has to ask: exactly how much have the self-centred opinions of artists like Picasso and Pollock influenced research agendas like Eysenck’s; additionally, how much do researchers like Eysenck contribute to the elitist view of creativity? Probably a lot.

Creativity drives progress, recognition and survival

The above discussion illustrates that, as with everything, the perspective one takes of creativity is a choice: We choose, for whatever reasons, to perceive certain phenomena in particular ways. However, we must never lose sight of the consequences, particularly the costs, of these choices. Creativity is more than a way for us as a species to advance technologically and culturally through talented and privileged individuals: it is also an essential route to that much coveted human desire of recognition. In creating we are able to affirm to ourselves that we are unique, self-governed and autonomous individuals. In fact, Hegel believed that there was no more powerful way to recognise yourself and your place in the universe than through having your thoughts manifest in reality. His thinking was that through relating to and manipulating the physical world, any existential doubt immediately dissolves. The fact that one can imagine and then create something new and of value reveals one's existence. And then, more than this, it can simply be a means of basic survival.

How have we survived

Through recognising opportunities for creation in the environment (otherwise known as a niche) we are able to survive and thrive. Every living organism survives because it fills some or other niche. While most species exploit niches of speed and strength, human beings occupy what is known as the cognitive niche. In other words, we have found a gap in the environment in which our cognitive (thinking) abilities outperform other species at harnessing, gathering or even stealing the energy we require. We are quite literally in a league of our own.

Through exploiting this most exclusive of niches, we have been able to demonstrate something entirely unique: We have reached the point where it is on the fly, and not over millennia, that we can adapt not only to local contexts but also to vastly different situations as they arise. Does this mean that creativity is just evolution with a different name? Well, not quite. It is indeed true that we can regard our creative capacities as a product of natural selection, and one that essentially mimics its process (that is, the trial-and-error testing of solutions relative to some local context). However, the difference is that where the process of evolution affects genetic material, creativity affects products of the mind (ideas).

The collection of ideas that creativity generates and are successfully passed on can be classified as cultural knowledge. This process has resulted in a vast diversity of cultures, of which we could say are increasingly the root of our sophistication as a species. This again parallels evolution, which has produced a vast variety of living species, each tested and selected according to the same set of criteria: newness and usefulness. Each new generation of human beings can, therefore, add to these pools of knowledge and genetics.

Pre-existing formats

Musician David Byrne, an avid proponent of the outside-in process of creativity, describes interesting parallels between creativity and evolution. Fundamentally, Byrne argues that different contexts produce different musical ideas. Byrne succinctly summarises the position as follows: to create, he says, is to adapt to “pre-existing formats”.³ Byrne demonstrates his thesis through a brief history of musical adaptation to space, guiding the reader into the cramped quarters of underground clubs of North America and Britain, across the open expanses of the African savanna, and through the vaulted arches of continental Gothic cathedrals. Along the way, Byrne discusses how various musical instruments, the sounds they produce and their novel combinations only demonstrate usefulness when considered together with the contexts from which they have emerged.

African percussion instruments, for example, are perfectly suited to the open African landscapes from which they emerged, where they are able to transmit sound and meaning over vast distances to announce, for instance, festivals, funerals or weddings to neighbouring villages. To consolidate his thesis, Byrne parallels this observation to natural selection (or evolution). The quality of various bird calls, Byrne claims, are predictive of each bird's habitat. Specifically, birds that have

adapted to live in dense, sound-absorbing forests tend to rely on repetitive and abrupt calls. This ensures that those listening will catch subsequent calls if they missed the first. Conversely, water birds tend to have penetrating cries to better compete with the constant and noisy ambience surrounding them.

It is always in conversation with the local environment, then, that we assess creativity and evolution. The implication of this fact is that comparisons must be made between like and like. We cannot assess the creative outputs of different species, genders or cultures according to the same standards when they emerge from different contexts, where they are provided different opportunities, and face different challenges.

The next and final part of this series will explore how evolution has selected organisms that are able to make adjustments to the environment, and how no species has done this more successfully to their own advantage than have humans through employing their creativity.

¹ *Genius: The natural History of Creativity*. Eysenck, H. J., (1995)

² *The Status of Women in STEM in Higher Education: A Review of the Literature 2007–2017*. Blackburn, H. (2017)

³ *How Music Works*. Byrne, D. 2012