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# Perception, Action, and Sense Making: The Three Realms of the Aesthetic

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## Abstract

It is argued that Kull’s approach to aesthetics complements a cognitive semiotic approach to culture. The concept of ‘ecological, semiotic fitting’ allows us to connect the three main concepts of beauty we encounter in discussions about the aesthetic, where the term beauty is, firstly, used to refer a positive experience in relation to what is perceived, or, secondly, to a positive experience in relation to an intentional action or, thirdly, to a positive experience in relation to a sense making process. Kull makes a strong case for the ‘ecological, semiotic fitting’ being the common underlying structure of all three manifestations of the aesthetic.

**Keywords** Beauty · Aesthetics · Culture · Art · Sense making · Aboutness

The approach to aesthetics taken by Kalevi Kull in this rich and insightful paper is complementary to a cognitive semiotic perspective on culture. In that perspective, human culture is conceived as a dynamic sense making process that emerges out of, and builds upon layers of innate and learning behavior. The human sense making comes in four, cumulatively related dimensions: perceptual, imaginative, conceptual, and analytical. The perceptual and the analytical are basically sensory and accommodating, whereas the imaginative and the conceptual tend to be motoric and assimilative. Whereas the perceptual and the imaginative operate on concrete memories (of events, artefacts), the conceptual and the analytical work with abstract memories (of language, models) (van Heusden, 2009).

In the context of human culture the term ‘beauty’ has at least three different meanings. It can, firstly, refer to a positive experience in relation to what is perceived (e.g. a beautiful landscape, face, or artefact). The second concept of beauty is the expres-

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sion of a positive experience in relation to an intentional action – something is well-done, skillfully executed, it shows craftsmanship (e.g. a beautifully crafted nest, or instrument). A third use of the term serves the expression of a positive experience in relation to a sense making process (e.g. a beautiful film, dance, or scientific paper).

In all three cases, the concept comes with a positive value which, from an evolutionary perspective, can be taken as an indication that the perception, the action, and/or the sense making process contribute to the homeostasis, or equilibrium of the experiencing individual – beauty being an expression of (hormonal) well-being, of feeling safe and being in control (Eibl-Eibesfeldt, 1988; Dutton, 2009). This connects to what Kull refers to as “life’s intrinsic value”, an organism’s ecological fitting, and the idea that the aesthetic is in a way self-rewarding, and based on recognition.

Going by the three concepts of beauty one by one, we can notice that perceptual beauty applies to anything that is perceptual: objects, situations (environments) living beings, actions and artefacts. The beauty that comes with performing an intentional action applies to actions and to artefacts, but to the latter only insofar as they show the work that went into them. The third and last concept of beauty, which relates to the sense making process, is applicable only to artefacts, and only insofar as these are ‘texts’, that is, the material instantiation of a sense making process. These cultural artefacts, it should be noted, also encompass behavior that has a sense making function, as in dance. The difference between an action without and an action with a sense making function is that the latter displays aboutness, whereas the former does not.

I consider aboutness to be the hallmark of sense making in the strict sense, or human cultural semiosis. A landscape can be beautiful, but we would not consider it skillful or artistic. The bower’s nest or a racing car can be beautiful and artfully crafted, nearing perfection, but they are not works of art. A novel, however, can be beautiful, well-written and, moreover, a convincing representation of human experience.

In theorizing about aesthetics, the human concept of beauty is our point of departure, and from there we can investigate whether we find or can assume the same, or similar phenomena in other animals and organisms, or whether the interaction is typically and specifically human. Thus we can investigate, for each of the three concepts of beauty distinguished above whether we share them with other living beings. We suppose that something like the first experience of beauty is shared between all organisms, assuming that perceptions that contribute to homeostasis, survival and reproduction feel good. The second experience of beauty, which is related to intentional action, is shared with all animals that have the capacity to learn. Learning allows for an increasing ‘fit’, and the more the learned action meets the criteria that contribute to the animal’s homeostasis, the better it will feel. This experience is of course ‘situational’, depending on the organism and environment. The third experience of beauty, which is related to aboutness, lastly, is shared between species that have a capacity for sense making – that are able, beyond thinking the world (interpreting signals), to also think about it. Our judgement of the beauty of aboutness is an expression of the quality – again in terms of homeostasis, or equilibrium – of the sense making process. The better a work captures the reality of a (human) experience, the higher it is valued.

Thus the three concepts of beauty reflect different layers of the human organism, conceived as a system interacting with, and in an environment: the innate (percep-

tual beauty), the learned (craftsmanship, the ‘artful’, perfection), and the cultural or *sense making* (art, the artistic). The sensory-motor interaction between organism and environment constitutes a dynamic system in which an environment and an organism connect through patterns of sensory (accommodating) and motor (assimilating) behavior. The neuronal patterns underlying the interaction constitute the memory of the organism, guaranteeing the interaction to be meaningful – that is: successful in terms of homeostasis (equilibrium, stable state), survival, and reproduction. In humans these memory patterns come in three cumulative layers of complexity, where the latter build upon the former: innate (shared with the organic world), learned (shared with the animal world) and cultural (shared with all humans). Human sense making requires a sensory-motor basis, and learning abilities – these being necessary, but not sufficient conditions for the process to appear. In addition, it requires the decoupling, or doubling of (part of) the memory patterns (Cosmides and Tooby 2000; Corballis 2011). Only when decoupled from direct perception, memories turn into *signs* that are necessarily *about* the perceived reality. Humans not only think reality, they also think about it. Their cognition is, in the philosophical sense, *intentional* (Brentano 1874).

It would seem that what we are used to refer to as an aesthetic feeling emerges with the recognition, with the reestablishing of a fitting pattern – in the innate perception of objects and situations, in the learned perception and execution of behavior, and in sense making. The cognitive system becomes increasingly complex, as the three qualitatively different layers build upon each other: sense making presupposes learning, and learning builds upon perception. This explains why, in humans, perceptual beauty criteria tend to be more universal than criteria underlying judgements of skillfulness, whereas the latter are more easily shared than judgements about art (Dutton, 2009). Perceptual preferences seem to be species-specific, whereas the behavioral ones depend more on the geographic and socio-historical context (think about crafts, for instance, and sports), and the artistic judgment, as it relates to individual experiences, will become more individual depending on differentiation within cultures.

Humans expect art to be mimetic, not in the banal sense of copying perceived reality, but in the sense of capturing lived experience in a tangible form (from dance and music via sculpture, drama and literature to visual and media arts), allowing us to ponder, share and store it (Donald, 2006). I find Kull’s suggestion that what connects the artistic to the perceptual and behavioral aesthetic is the ecological ‘fitting’ highly convincing. Cultural sense making builds upon the behavioral, which in turn builds upon the perceptual. Art is always also judged as more or less beautiful, and more or less skillfully crafted. But that is not its final cause. Art is not the same thing as perceptual or behavioral beauty – an often encountered assumption brought about by a confusing terminology, related to the focus on perceptual and crafting qualities of art objects. Humans in general prefer beautiful and well-made things and behavior (objects, situations and artefacts, among which art objects) over what is ugly and badly made. Most things we consider beautiful and/or well-made are not art, and art is not necessarily beautiful and/or well-made. But the fact that we use the same term for art seems to point in the direction of an underlying common ground – the dimension of ‘ecological fitting’.

As might be expected from a biologist, Kull focuses on behavioral aesthetics, the beauty or ‘perfection’ of actions or, in Uexküll’s words, “the correct and complete use of all available means” (1928: 137). He thus positions his aesthetics in between the traditional realms of the perceptual (beauty) and the cultural (art), connecting more to what we are used to refer to as the artfully executed action, the skillfully crafted artefact. This directly connects to his defining semiosis as “interpretation with choice” (Kull, 2018), the stressing of the importance of learning and achieving perfection, the importance of behavioral norms, and the highlighting of our preference for simple geometrical forms – which are so typical of handcrafted artefacts. From this behavior-centered perspective, art indeed becomes a ‘willful aesthetic’.

Yet on the other hand Kull points toward the overarching concept of ‘(ecological, semiotic) fitting’, referring to a dynamic structure, or process, which is supposed to underlie all three manifestations of the aesthetic: in perception, in behavior, and in (human) sense making. Behavior ‘fits’ when an experience of actuality (re)activates memory patterns that contribute to the individual’s homeostasis, reproduction and survival. A beautiful landscape or face, a well-performed nest or catch, a gripping work of art – what connects them all is that they make one feel safe, and provide a sense of control. As Kull writes: “It is reasonable to suppose that life’s intrinsic value is of an aesthetic nature – however, not of human-perspective aesthetics; this would also mean that deep ecology has bioaesthetic roots”. It could also be argued that what we refer to as the aesthetic is actually an expression of ‘life’s intrinsic value’. In Sebeok’s words, as quoted by Kull himself: “The ‘artistic animal’ is not defined by a heightened sensitivity to movement, sound, color, shape, but by its innate and/or learned capacity to elicit a stable dynamic structure from the fluid environment [...]. The sign systems thus created, which serve an underlying semantic function, take in time an aesthetic turn” (Sebeok, 1979: 58– 59). The aesthetic is indeed far more general than art.

## Declarations

**Conflict of Interest** I herewith declare that I am not aware of any conflict of interests.

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## References

- Brentano, F. (1874). *Psychology from an Empirical Standpoint* [Psychologie vom empirischen Standpunkte]. Translated by A. Rancurello, D. B. Terrell and L. McAlister. London & New York, Routledge, 1973

- Corballis, M. C. (2011). *The Recursive Mind: The Origins of Human Language, Thought, and Civilization*. Princeton: Princeton UP
- Cosmides, L., & John Tooby. (2000). 'Consider the source: The evolution of adaptations for decoupling and metarepresentation'. In: D. Sperber (ed.), *Metarepresentations: A Multidisciplinary Perspective*. Oxford: Oxford UP, 2000: 53–115
- Donald, M. (2006). 'Art and Cognitive Evolution'. In M. Turner (Ed.), *The Artful Mind. Cognitive Science and the Riddle of Human Creativity* (pp. 3–20). Oxford: Oxford UP
- Dutton, D. (2009). *The Art Instinct. Beauty, Pleasure, and Human Evolution*. Oxford: Oxford UP
- Eibl-Eibesfeldt, I. (1988). 'The biological foundation of aesthetics'. In I. Rentschler, B. Herzberger, & D. Epstein (Eds.), *Beauty and the Brain: Biological Aspects of Aesthetics* (pp. 29–68). Basel: Springer
- van Heusden, B. (2009). 'Semiotic cognition and the logic of culture'. *Pragmatics & Cognition*, 17(3), 611–628
- Kull, K. (2018). Choosing and learning: Semiosis means choice. *Sign Systems Studies*, 46(4), 452–466
- von Uexküll, J. (1928). *Theoretische Biologie*. 2te Aufl. Berlin: Springer

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