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WAYS OF PERCEIVING AND MAPPING HUMAN COGNITION THROUGH ART*

abstract

*This paper discusses the question of how art might reveal important aspects of human cognition by taking as a starting point Alva Noë's book *Strange Tools. Art and Human Nature* (2015). I argue that the enactive approach defended in this book has strong affinities with some recent art-historical approaches that take their cue from cognitive neuroscience, such as neuroarthistory (Onians, 2016). My main claim is that the extended mind thesis, which is implied in both approaches, fails to capture important aspects of the cognitive underpinnings of artistic practices. Finally, I bring into focus Noë's ambiguous position with respect to the role of perception in aesthetic appreciation. What good comes from distinguishing between various ways of seeing while at the same time holding that art appreciation is a matter of value and judgment rather than perception and response?*

keywords

enactivism, human cognition, aesthetic perception, neuroarthistory

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1. Introduction In his book *Strange Tools. Art and Human Nature*, Alva Noë (2015) makes two strong claims with respect to the human engagement with art: the first claim is methodological and refers to the idea that art practices should be regarded as tools of intelligibility of human nature, providing a meta-level understanding of ourselves (p. xii); the second claim, which is related to the first, refers to the nature of perception and to the possibility of there being a particular way of seeing artworks, namely, what Noë calls “aesthetic seeing” as opposed to “wild seeing” (pp. 51-52). In this paper, I will look into these two problems that touch upon human cognition and its relation to the arts. More specifically, I hold that Noë’s commitment to the view that art unveils aspects of human nature gains in intelligibility when situated “in the context of its embedding” (p. 29) – just like the strange tools he refers to – and this context is provided by some recent art-historical developments informed by empirical sciences. In the first part of the paper I focus on the methodological claim that presents art practices as second-order activities, mapping our cognitive life (p. 30). Furthermore, I argue that Noë may have more in common with the very approaches that he sets out to criticize, namely the approaches grounded in cognitive neuroscience. In the last part of the paper I compare John Onians’s neurobiological approach to aesthetic appreciation to Noë’s enactive approach and highlight some of their inconsistencies. Enactivism, no less than neural approaches to art appreciation in their radical reductionist versions, may neglect important aspects concerning the cognitive underpinnings of appreciative practices.

2. Art and cognitive mapping First of all, consider the hypothesis that art practices are epistemic, second-order activities mapping the *material* world by sampling carefully the representative parts of it, just as regularly maps do. This epistemic hypothesis is deep-rooted in the tradition of philosophical aesthetics at least since Baumgarten. In his latest book, Alva Noë makes a case for another epistemic virtue of artistic practices, namely the potential of art to map the *inner* world of the art perceiver and to provide a basic sense of self. In other words, art can serve to delineate not only the outer world but also human cognition,¹ operating in a similar manner to the geographer’s map; hence the idea of “art as mapmaking” (p. 30). As Noë states in the

1 This point is also made by Noël Carroll (2017, pp. 234-235), who rightfully observes that Noë, in stressing the art’s quality of putting on display certain activities, he focuses mostly on cognitive practices, at the expense of other practices, such as moral or political.

following passage: “art provides us an opportunity to catch ourselves in the act of achieving our conscious lives, of bringing the world into focus for perceptual (and other forms of) consciousness” (p. xii). Thus forms of art such as “poetry, choreography, painting and photography and so on” would bring to consciousness and give a sense of basic actions such as “acts of talking, dancing, making pictures etc” (pp. 29-30). The discussion is reframed in terms of a hierarchy of levels, where level 1 comprises these latter, first-order activities, while level 2 comprises the different arts, understood as second-order activities illuminating the first (p. 29). Strikingly, this view parallels Franz Brentano’s (1894-1911/2008, p. 101) understanding of the mental act as having two objects, in this case, the *object* of contemplation, say, a canvas or a piece of music, and the contemplation or awareness of the very *act of seeing or listening*. Art would thus trigger self-reflection, allowing us to attain knowledge of our cognitive life, more specifically, of the ways we perceptually engage with the world.

Initially limited to forms of “experientialist art”, which are intended to explicitly reveal aspects of the perceiver’s experience,² thus serving as a means of “first-person phenomenological investigation” (Noë, 2000, p. 133), Noë ultimately extends his argument to all forms of art. A further modification is that it is no longer clear whether the alleged artistic investigation of experience is situated at a personal level. In what sense are we supposed to attain knowledge of our cognitive life through art exposure? What kind of self-knowledge or self-awareness would be in play? Noël Carroll, for instance, takes this form of awareness elicited by art practices to be an act of reflection, occupying the foreground of consciousness (Carroll, 2017, p. 215), but Noë’s more general engagement with the embodied approach may contradict this view. Departing from the Brentanian tradition, Noë seems rather to hold that the artistic investigation that gives access to knowledge of the self takes place at the embodiment level; it would be carried out through an immediate bodily engagement with the artworks not through an introspective exercise generating internal representations. As Noë writes, the embodiment level is situated “between subpersonal and conscious level” (Noë, 2015, pp. 8-9, 218), hence any form of introspectionism that would rely on self-reflexive, transparent mental processes would be discarded. Therefore, the level at which activities like dancing, making pictures etc. would be put on display for us is neither the level of the subpersonal biological processes that causally underpin certain behaviors (e.g. sensorimotor abilities), nor the level of conscious awareness, of deliberate, controlled action, since we pay no particular attention to the processes that enable us to see or interact with an environment (Noë, 2004, p. 30). If my understanding of Noë’s overall argument is correct, then the appropriate level would be this intermediate, embodiment level, where there is no sharp line between personal and subpersonal processes, between the states of the organism and the conscious experience of the individual.

How could then art “unveil us to ourselves” (Noë, 2015, p. 101) and “reorganize us” (p. 29) while at the same time occupying this intermediate position so elusive to grasp? In order to illuminate this issue it would be helpful to compare the concept of “subpersonal level”, in Noë’s terms, with the concept of “pre-reflective self-consciousness”³ in phenomenological terms. On the one hand, the subpersonal level as understood by Noë is concerned with automatic processes such as sensorimotor activity, which do not reach explicit awareness (Noë, 2004, pp. 30-31, 218-219, 228). For instance, I can adjust the movement and the force of

² Such aspects of experience to which art may draw attention are the perceiver’s bodily movements, his or her environmental embedding, the temporal dynamics of perception etc. For instance, Brigitta Zics’s project *The Mind Cupola*, which feeds on the spectator’s cognitive and affective states, is an extreme example of “experientialist art” that puts literally on display human cognition. See Brigitta Zics (2011, pp. 30-37).

³ I am grateful to an anonymous referee for making this suggestion.

my hand grasp while trying to reach a glass bauble without paying attention to the process of grasping itself. Such process would not be necessarily reflected in the phenomenology of my experience. On the other hand, the notion of “pre-reflective self-consciousness”, which has been recently revived by Shaun Gallagher and Dan Zahavi (2008, p. 46), refers to a type of implicit awareness of the self that does not require higher-order, reflective processes such as introspection. This notion leaves open the possibility that some sensorimotor abilities such as one’s bodily movement or posture, motor or visual coordination etc. may be after all part of one’s conscious awareness, securing some minimal sense of a self (pp. 49-50). The phenomenological approach is consistent with Noë’s embodiment approach, which doesn’t rule out the possibility that sensorimotor abilities become features of experience; in Noë’s terms, a minimal awareness of these abilities would occur at the embodiment level. But surely art unveils aspects of the self other than purely sensorimotor contingencies. What alternative to this view could there be? In what follows I will try to answer this question by drawing on art historical theories inspired by psychology.

3. Embedded Tools and the “Forging of Master Keys...”

The enactive approach to which Noë adheres is based on the assumption that the organism’s transactions with the environment are crucial for human cognition. Yet these transactions are not usually transparent to us; “we are organized but are lost in the nesting, massively complicated patterns of organization” (p. 28), as Noë remarks. And this is where art comes in, “investigating the modes of our organization, or rather, the manner of our embedding in different modes of organization” (p. 28), by isolating our basic activities from their settings, by making them peculiar and thus manifest to us (pp. 29-30). As argued above, it not clear to exactly what extent these activities are considered to become manifest through art. Leaving this question open and moving forward, I would like to draw attention to the fact that artworks themselves, as products of skillful activity and modes of reorganization in their own right, are equally embedded within a setting, which we as well take for granted and most of the time disregard. If Noë acknowledges as background setting first-order activities (seeing, walking, talking etc.), out of which art practices arise (2017, pp. 239-240, 242), what I have in mind is the art historical context itself, in which artworks are generally located. To paraphrase Noë, we make art of out art not only out of basic activities (p. 242). In an interpretation of one of Gombrich’s most famous aphorism – “there is no such thing as art. There are only artists” – Noë (2015, p. 112) hints at the temporal embedding of artworks, observing that there can be no essential definition of the abstract category that we call “art” but only a “story”, a narrative that connects more or less arbitrarily particular art practices and individuals that take part in these practices: “art is always ... an engagement with other art, with artists, and audiences, and teachers and students” (p. 112). Now, it is my contention that if we laid more emphasis on this temporal and contextual embedding rather than on the strangeness or singularity of the individual works of art, we would start to have a good grip on the problem of unveiling us to ourselves through art. What I am suggesting is that we may have to appeal to an explicitly reflective research practice such as art history in order to bring to the foreground of consciousness the distinctive manner in which artworks elicit self-knowledge. Trying to “work this one out for ourselves” (Noë, 2017, p. 249) while rejecting any contribution from available science might not lead us very far (Carroll, 2017, p. 221).

The question how art might reveal important aspect of human cognition was for instance at stake in Gombrich’s writings but also in George Kubler’s seminal book *The Shape of Time. Remarks on the History of Things* (1962). Kubler had this intriguing idea of a manifold portrayal

of the art historical time, which would be divided according to series and formal sequences,⁴ treated as akin to solutions to problems that the artists seek to solve: “every man-made thing arises from a problem as a purposeful solution” (p. 7), he said. The artistic forms would be studied independently of their individual, symbolic meaning, and always in time, they would be appreciated by series, not taken in isolation:

A pleasure shared by artists, collectors, and historians alike is the discovery that an old and interesting work of art is not unique, but that its type exists in a variety of examples spread early and late in time. Much of our satisfaction in these circumstances arises from the contemplation of a formal sequence, from an intuitive sense of enlargement and completion in the presence of a shape in time (Kubler, 1962, pp. 40-41).

The problems disclosed by these formal sequences, the original quest which lies behind all this would have “enlarged the domain of the aesthetic discourse” (p. 40), a domain which, according to Kubler, “concerns affective states of being” (p. 40). The artistic styles of naturalistic depiction (pictographic, photographic etc.) and the depiction of ornament could be examples of such problems, as are illustrated in Gombrich’s writings. Thus, in a certain sense, art is shaping the understanding of various states of mind. By disclosing these problems art historians trace in fact the history of different facets of our cognitive life, different “affective states of being” which lead to the creation of specific art forms. Seen in this light, Gombrich’s (1973) famous definition of art history as “the forging of master keys for opening the mysterious locks of our senses to which only nature herself originally held the key” (pp. 201-202) becomes particularly relevant for Noë’s thesis regarding human nature as unveiled through art. The definition continues as follows: “Like the burglar who tries to break a safe, the artist has no direct access to the inner mechanism. He can only feel his way with sensitive fingers, probing and adjusting his hook or wire when something gives way” (pp. 201-202). The “keys” or “solutions” that happen to fit into such biological or psychological locks are forged through artistic strategies. In sum, the artist appears as a burglar that tickles our inner mechanisms by these funny keys that we call artistic techniques. For Gombrich, art is a matter of creation rather than imitation (1963, p. 3) or mere transcription of nature; more specifically, art is a matter of creation of “substitutes”: thus, a stick that we can ride on qualifies as a hobby horse⁵ just as a witty caricature qualifies as a portrait: “There are inventions in the history of art that have something of the character of such an open-sesame, [such as] the clues to expression discovered by humorous art. The question is not whether nature “really looks” like these pictorial devices but whether pictures with such features suggest a reading in terms of natural objects”. The reading to which Gombrich refers has nothing of an illusionistic character, in the sense of being fooled by a pictorial device such as perspective, as Noë claims (2015, p. 107-108). Gombrich’s psychological understanding of art amounts to saying that we respond in a certain manner when we are “keyed up” by exposure to particular artistic styles. The “keys” that fit into these psychological locks – or strange tools, if you like – are mere

⁴ “The closest definition of a formal sequence that we now can venture is to affirm it as a historical network of gradually altered repetitions of the same trait. The sequence might therefore be described as having an armature. In cross section let us say that it shows a network, a mesh, or a cluster of subordinate traits; and in long section that it has a fiber-like structure of temporal stages, all recognizably similar, yet altering in their mesh from beginning to end” (Kubler, 1962, p. 33).

⁵ Other examples: “the cat running after the ball as if it were a mouse, counterfeit coins which make the machine work when dropped into the slot” (Gombrich, 1973, p. 4).

substitutes, second-order representations of the world, becoming more and more refined through artistic strategies. Being keyed up by these techniques does not fall under the “trigger experience conception” of seeing (Noë, 2015, p. 97) deplored by Noë.

In order to illustrate this idea of art as creation of substitutes with a specific example, we can take an extreme case offered by John Onians (1996, p. 206), where culture plays no role, namely, “a story of emulation” set at a dolphinarium. It is a story that tells the natural emergence of a creative behavior that is not the product of the god within the artist, so to speak; moreover, this natural story stands in stark contrast to the canonical art history, as we know it today. We are thus provided with an alternative version of the artistic discourse, one that locates the processes of creativity within broader contexts. Here’s a full description of what happens at the dolphinarium: “When a human blew a cloud of cigarette smoke at the pool’s glass just as an infant dolphin (Dolly) looked in, “she immediately swam off to her mother (Lady Dimple), returned and released a mouthful of milk which engulfed her head, giving much the same effect as had the cigarette smoke. Dolly subsequently used this behaviour as a regular device to attract attention” (Tayler, Saayman, 1973, pp. 290-291). This story of emulation refers to the well-debated topic of the origin of art-making and its basis in inborn dispositions or in other words, to the question of knowing what caused the appearance of such behaviors and why they still stand the test of time. The engravings found some 30, 000 years ago imitating the form of animals and later on human figures also nourish this myth concerning the origins and the biological interest of art making. Here we have a case of mimesis presented as an exercise of visuomotor coordination, that is, synchronizing visual information (the puff of cigarette smoke) with physical movement (blowing milk in order to obtain the same effect). The dolphin attains this performance at once, by observational learning (Tayler, Saayman, p. 291).⁶ What is interesting is that ethologists rule out individual acquisition by trial-and-error learning whereas art historians, and Gombrich most famously, explain the development of art practices (the representational art more specifically) precisely by such trial-and-error learning also called a “making-and-matching” process.

This example could be a challenge to a theory of creativity that would rely on higher order processes; on the other hand, it would serve well the enactive approach since, after all, it does exemplify a transaction with a given environment. Noë would reject without doubt examples like these on account of the disregard for higher-order process such as “thought, communication, understanding or meaning” that he necessarily takes to play a role in art production (Noë, 2015, pp. 233-234), thus leaving it unclear as to whether he does subscribe after all to a form of representationalism.

4. Enactivism and neuroarthistory

In the introduction I have claimed that Alva Noë’s enactive approach might have more affinities with the theories he criticizes than he would like to admit. One of such theories is precisely Onians’s natural history of art or “neuroarthistory.

Here are some general characteristics of the natural history of art:

- it gives nature “not an incidental but central role in the shaping of culture and especially artistic culture” (Onians, 2011, p. 79).

The “nature” referred to is related to

⁶ Onians explains the same phenomenon as follows: “An unconscious feedback process could thus lead to the production of a highly naturalistic representation or artwork, without any teaching, guiding or other social stimulation. A naturalistic image might be produced completely spontaneously, due to nothing more than the normal operation of the human neural make-up” (Onians, 2007, p. 314).

- 1) human biology
- 2) physical geography

1. Firstly, the notion of “nature” refers to human biology and psychology and its role in the shaping of artistic practices (e.g. the physiology of the eye and our use of the sense of sight, reference to neural architecture and the particularities of brain’s formation etc.) What is problematic here is to know whether there is a historicity of such cognitive capacities, for instance whether there is a “history of seeing” (Onians, 1996, p. 207), of visual experience as such, or whether this logic of development applies only to perceptual displays that become more and more complex due to new techniques increasing manual and representational skills. Noë, for instance, argues that art productions based on such techniques literally “alter the way we see” (Noë, 2015, p. 233), following the lead of art historians who pleaded for the art’s potential to give rise to perceptual learning (p. 231). Most famous is Michael Baxandall’s concept of “period eye”, which relies on the assumption that the history of art changes in response to visual preference among viewers (Onians, 2005, p. 109), these changes and evolution of visual skills being the result of social formation: “The period eye is constituted by the skills of discrimination one acquires by living in a culture, including perceiving the art in that culture, but it is totally different from zeitgeist and has none of the theoretical substructure. [P]eople were very quick to think if one said that people in a culture derive visual skills from that culture that this is a zeitgeist claim. I never persuaded Gombrich” (Obrist, 2008, pp. 43-45). Gombrich accused Baxandall of reintroducing with this notion “a world spirit” through the back door. One may ask here whether it is really the optical reality that changes or whether we’re dealing with it just a shift of attention to different areas of interest.

2. On the other hand, the notion of “nature” can also refer to the relation to the lived environment and to the natural materials available in this environment; in this sense art is told to have a natural history when considered as a modification of “physical substances” (Onians, 1996, p. 207), of stuff that is already there. When Noë argues that artistic practices arise out of a “first-level” of organized, basic activities (Noë, 2015, p. 30) which are used as raw materials, he may be following the same line of thought.

- With respect to the objects taken into account, the natural history of art does not adopt a normative stance in the sense that it redefines and widens the notion of art so as to include products of material culture what were generally regarded as ethnographic material. The natural history of art no longer gives prominence to artworks or masterworks that enter the canon of Western art history (basically, the context of the fine arts) but considers a whole range of worldwide creative practices, ways of doings and man-made things that span a wide variety of places and times (at least 40 000 years). As Onians writes, “the complete range of visually interesting material culture has to be studied, from the Paleolithic to the present, from Portugal to the Ukraine, from folk crafts to palace decoration, and from artists’ sketchbooks to consumer videos”(Onians, 1996, p. 207). Note here the visual bias: not all artistic activities have to be absorbed by visual studies. There is no use in replacing a hegemonic model (the linguistic one) by another.
- A more down-to-earth characteristic of the natural history of art is that the ideal of studying art as a worldwide phenomenon is not, or not only, a fantasy of philosophers or of unorthodox art historians but is implemented at the institutional level: we can mention here the School of World Art Studies and Museology at the University of East Anglia in Norwich that opens its doors in 1992; since 2003 there is also a program of World Art Studies at Leiden University, Netherlands (Van Damme, 2012, pp. 219-220). That being said, the transformation of the art history department of the University of East Anglia into World Art Studies was triggered by a collection of objects (Onians, 1996, p. 206) belonging

to a broad spatiotemporal frame and not by some predetermined conceptual convictions or desiderata of the faculty members.

- Finally, another characteristic of the natural history of art is that it aspires to establish “disciplinary metalanguage” (Morphy, 2006, p. 12) by bringing together specialists in art history, anthropology, archaeology, cultural studies, evolutionary cognitive psychology etc.

The general methodology on which the natural history of art is based is described in Onians’s most recent book; it comprises the following phases:

- identifying an artistic behavior, whether this is a new form or subject in painting, a composition or expression in sculpture, a material or configuration in architecture, a bodily disposition in the working artist or an implicit response on the part of the viewer
- finding out about the material and social environment of the individual or individuals engaged in the behavior
- establishing which of those individuals’ visceral concerns might have been so over-riding that they could have had a salient impact on their neural formation
- relating those saliences of neural formation to the salient aspects of the art-related behavior under investigation
- exploring how a knowledge of the relationship we have inferred between neural formation and that particular behavior adds to, or changes, our understanding of it (Onians, 2016, pp. 16-17)

This lengthy passage shows that Onians lays heavy emphasis on inborn, universal adaptations while deliberately downplaying conscious mental phenomena. This would be the “subpersonal level”, in Noë’s terms (2015, p. 7). Yet, cognitive phenomena pertaining to cognitive psychology are all-pervasive in his writings despite his tendency to reduce psychology to neurophysiology: take, for instance, his understanding of passive exposure, meant to explain differences in art, which he describes as follows: “Looking at anything with particular *attention* causes the development of neural networks that will help us better deal with it in the future, and this results in the formation of visual preferences that will unconsciously influence us should we start to make or look at art. Thus the knowledge of what precisely people anywhere and at any time were looking at *intently* will reveal a great deal about their preferences”(Onians, 2004, p. 12, emphasis added). What Onians says here is that the more we are exposed to a particular object in our visual field, the better we will get at looking at it and dealing with it. Some explanations in terms of mere exposure are improbable or at least in need of empirical grounding, such as the claim that the spreading of ink in Chinese painting across a sheet of (rice) paper is causally linked to the irrigation of rice soils. In this example, according to Onians, passive exposure to the natural environment would be causally linked to a specific brushstroke (Onians, 2006, p. 534). But there is another difficulty with this extreme externalist view which holds that interaction with an environment blindly drives stylistic, representational and affective choices in art making and aesthetic appreciation. Namely, reference to attention may be problematic for explaining passive exposure, since passive exposure is considered to be an automatic process, operating below the threshold of consciousness while attention operates generally at a conscious level. We can see here not only an ambiguous position toward (cognitive) psychology but also a possible misreading of neuroscience principles.

Now, where does Noë’s enactive approach fit into all this? To the extent that it places such emphasis on the extended bounds of cognition and on the transactions with the environment, his approach could be regarded as a transformed version of neuroarthistory,

equally externalist,⁷ and true, operating at a less visceral level, but then we should need to learn what exactly that level might be. If it is the embodiment level, we still need an explanation of how this level is connected to experience and reflected in the phenomenology of the individual. Unlike Onians, who tries to limit his claims to the *causal* relation between environment and unconscious processes, Noë seems to hold that there is a *constitutive* relation between environment, bodily skills and perceptual experience (Block, 2005, pp. 264-265). This thesis is yet to receive thorough analysis especially in the context of *art* perception. In a reply to Carroll (Noë, 2017, p. 242; Carroll, 2017, p. 218), Noë argues for instance that art is “not confined to reflexive phenomenology”, so I would assume that whatever happens at the embodiment level is subject to being accounted for in pre-reflexive phenomenological terms. But then how could this be compatible with the hierarchy of levels that Noë establishes in order to distinguish ordinary, first-order activities from artistic, second-order activities, since ordinary perception (Noë, 2004, pp. 29-30) is also considered to take place at an embodiment level? What would the phenomenology of *art* perception look like at the embodiment level as compared to the phenomenology of perception tout court?

Furthermore, it seems that Noë presents an ambiguous position with respect to the role of perception in aesthetic appreciation. On the one hand, he claims that one of the limits of neuroscience, and in particular neuroaesthetics, is that it focuses on the ability to *perceive*, which may be irrelevant to the question of valuation of art (pp. 95-97), but on the other hand, he offers a taxonomy of ways of *seeing*, which is meant to illuminate the phenomenology of aesthetic appreciation. The details of this taxonomy could also be questioned: for instance, how could “aesthetic seeing” qualify at the same time as “detached” and self-conscious, pre-reflective and “thoughtful”, “contemplative” and “evaluative” (pp. 51-52, 55)? In order to avoid any inconsistency, an option would be to read his taxonomy between “wild seeing” and “aesthetic seeing” (pp. 51-52) metaphorically, as designing two types of attitude (engaging attention in different ways and to different degrees), rather than distinct visual processes. Further analysis should be made in this regard since, after all, it does no justice to art practices to assume that we are experiencing them through alien capacities.

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⁷ Noë’s main criticism of neuroscientific approaches as being “too individualist and too internalist” (Noë, 2017: 212) would not apply here, since Onians’s analysis does not stop at the boundaries of the individual organism but also takes into account the environmental embedding. For valuable comments on Noë discussion of the limits of neuroscience, see Ione (2016, pp. 282-283).

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