

# 4E Cognition and the Spectrum of Aesthetic Experience

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**Abstract** We review 4E (embodied, embedded, extended and enactive) approaches to the analysis of art and aesthetic experience. We argue that extended mind analyses that focus on tool use miss important aspects, and that it requires 4 or more E's to address the broad spectrum of aesthetic experiences that correlate to the broad variety of artistic genres. We develop an enactive, affordance-based approach to understanding art and aesthetic experience. Considering both the potential and the limitations of any particular approach, we argue that there is no one unified set of principles that will make sense of all art everywhere.

**Keywords** Art. Aesthetic Experience. Affordance. Enactivism. Extended Mind.

**Summary** 1 Introduction. – 2 E Cognition. An Overemphasis on Extension. – 3 Noë's Tools that Are not Tools. – 4 The Aesthetic Spectrum. – 5 A Case Study. – 6 Conclusion.



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## 1 Introduction

Theories of 4E cognition include a variety of approaches - typically listed as embodied, embedded, extended and enactive, but sometimes including ecological - and do not form a unified theory. They often vary in the types of criticism they levy against more mainstream cognitivist models of the mind, and in terms of what they prioritize in their positive accounts. For example, enactivist approaches (e.g. Gallagher 2017; Hutto, Myin 2013; Thompson, Stapleton 2009), which themselves may be diverse, sometimes question aspects of the extended mind approach, such as strong notions of parity and weak notions of representation, as found in Clark and Chalmers (1998; see also Clark 2008). Extended approaches may also, by focusing on examples that emphasize functional integration with tools or instruments, oversimplify the links between mind and world that 4E researchers attempt to explore (see Slors 2019). In this respect the oversimplification concerns the reduction of the claim that perception is intrinsically pragmatic or action-oriented to the claim that in the relevant cases artifacts like tools or pieces of technology are used to scaffold or offload cognition. Such an extended approach would suggest that we should understand Gibsonian affordances (Gibson 1979) to be primarily about tool usage, eliminating other non-pragmatic types of mind-world coupling.

A number of theorists have employed an extended mind paradigm in their analysis of art and aesthetic experience. For example, Joel Krueger (2014) suggests that

we perceive [music] as a resource we can *use* to do different things, much the same way we perceive tools and technologies as resources that help us accomplish different tasks. Music, I suggest, is experienced as having *instrumental* value. And what I suggest further is that musical affordances are what specify the different sorts of things we can do with music. (See also Cochrane 2008; Kersten 2017; Kersten, Wilson 2016; emphasis in the original)

In this paper we will review some of these accounts as we attempt to understand what 4E approaches more generally, and enactivist accounts more specifically, can contribute to aesthetics, presenting double attunement as a way to characterize the continuity that can exist between the everyday experience and the aesthetic experience. It may be that 4 or more E's are required to address the broad spectrum of aesthetic experiences that correlate to the broad variety of artistic genres. It's not clear that there is any one unified set of principles that will make sense of all art everywhere. In that respect it's important to understand both the potential and the limitations of any particular approach. Our aim is not to carry out that full anal-

ysis here, but to focus on some limitations of an extended mind approach, and some potential in a more enactive approach.

## 2 E Cognition. An Overemphasis on Extension

A distinction between tool-based affordances and what we might call non-instrumental affordances is somewhat difficult to appreciate if we confine ourselves to human artifacts that are clearly used precisely as tools, such as the perennial Heideggerian example of a hammer. The distinction is somewhat more pronounced when we consider other artifacts that may not have a clearly instrumental purpose, such as works of art, or non-artifacts such as events, the natural world, or other people. The latter categories offer clearer room for a distinction between tool and affordance. Our immediate affordance-relative experience of the apple tree might be shaped by our ability to eat from the tree, climb it, sit beneath it, and so on, but that does not mean that the apple tree itself has been reduced to a tool that allows for such actions. Interaction with other people likewise cannot be reduced to tool usage, even if the affordances that others offer us are crucial in shaping our initial social perceptions. Social interaction is also a special case in that in addition to what one person affords another, we have the possibility of the reversibility of this affordance, and the possibilities of group agency mediated by various cultural practices. Such experiences are complex and involve embodied and environmental, including social, cultural and normative factors. Extended models of cognition, however, are characterized by 1) a prioritization of extended explanations of cognition that often do not include or that de-prioritize embodied and enactive modes of explanation (see, e.g. Clark 2003), and 2) a strong 'active externalism' (Clark, Chalmers 1998) focused on the practical use of artifacts, equipment, or tools, rather than an 'explanatory externalism' that may be more common in other types of 4E accounts (Myin, Veldeman 2011). An active externalism alone, however strong, is theoretically insufficient for the other E's of 4E cognition.

Myin and Veldeman (2011) follow Clark and Chalmers in defining active externalism as the claim that features of the environment constitute cognition, based on their functional parity with internal processes. By focusing on the parity principle, Clark and Chalmers explain cognition as constituted by processes that unfold via external means (such as notebooks, sketchpads, pen and paper) but are functionally equivalent to internal processes. This may allow the environment to be something more than a set of mere tools, but when the environment enters into their account, it tends to take on the status of a tool, an aspect of an extended cognitive apparatus. In contrast to active externalism, Myin and Veldeman define a second type of ex-

ternalism that is common in 4E cognition accounts, which they label “explanatory externalism” (following Hurley 2010). Explanatory externalism allows for more nuanced explanations of the ways in which cognition is constituted or scaffolded by one’s environment, whereas active externalism is more easily reduced to an instrumentalist approach focusing on artifact or tool use, given its emphasis on how the environment is taken into account as a cognitive apparatus. Explanatory externalism broadens and diversifies the ways in which cognition can be constituted by the environment by not limiting said environment to an extension of a cognitive apparatus per se. For this reason Myin and Veldeman find that explanatory externalism can offer a more complete account for the perception and creation of art, since art likewise is not fully explained in pragmatic terms that focus on useful artifacts or tool usage.

Broadly, the core idea here is that a current cognitive or mental phenomenon is partly constituted by environmental factors, if these environmental or external (rather than internal) factors, through their role in the past or the present are necessary to explain why the cognitive or mental phenomenon is what it is. (Myin, Veldeman 2011, 62)

Explanatory externalism thus allows explanations that take seriously a diversity of affordance relationships in accounting for cognition, while not limiting the scope of what constitutes cognition to online functional integration processes that are patterned on tool use. This expansive account allows a wider range of possibilities that can include the embodied, embedded and enactive nature of particular cognitive processes, such as aesthetic experience or the appreciation of art. Myin and Veldeman emphasize the situatedness of art and art appreciation, noting that a more amplified externalism, such as explanatory externalism, assists in accounting for “the fact that art creation essentially involves both material things as well as a tradition, the interaction of which it owes its identity to” (Myin, Veldeman 2011, 67). A shift towards explanatory externalism does not reject active externalism, but broadens what can be included in explanations of cognition. Myin and Veldeman thus suggest that “active externalism seems to be particularly well placed to do justice to the concrete material circumstances of perceiving [as well as to producing] art” (2011, 76), and they give a number of examples. But art involves more than artifacts and material circumstances. Accordingly, explanatory externalism includes the idea that tool usage is just one aspect, to be supplemented by other external factors that explain how it is that the phenomenon is what it is more broadly, especially in light of cultural practices.

Ted Nannicelli, in his article “Aesthetics and the Limits of the Extended Mind” (2019), helps to push forward the discussion be-

tween 4E theory and aesthetics. He also points out the limitations of an extended model of the mind when it comes to how such a model, in his view, ultimately fails to explain art. Nannicelli makes an important point in noting that many externalist models of the mind fail to adequately assess aesthetic experience. We note this, however, with two caveats. First, what Nannicelli is in fact responding to is what Myin and Veldeman call active externalism. For example, he focuses critically on active externalist accounts, and references Tom Cochrane's discussion of jazz improvisation as extended cognition, where Cochrane makes a central claim focused on the use of musical instruments:

At every level of creative decisions the musician and his instrument form a single tightly coupled system [...]. Thus when completing the cognitive task of choosing what exact notes to play, the instrument is part of an extended loop between the musician's brain, the muscles in his hands or lips, and the keys of the instrument. (Cochrane 2008, 333; cited in Nannicelli 2019, 83)

Second, Nannicelli's analysis of extended cognition is framed as a criticism of 4E models of artistic experience more generally. He raises doubts about even "the more modest of 4E theses" (2019, 93), albeit with some endorsement of specifically embodied approaches.<sup>1</sup> If, however, as we are suggesting, his emphasis on tool-based extension in active externalist accounts is at the expense of more complex kinds of embodied and enactive coupling, then Nannicelli's criticism may be overstated. Specifically, we note, he makes no mention of the potential for an enactivist contribution to the musically extended mind.<sup>2</sup>

### 3 Noë's Tools that Are not Tools

Although Alva Noë's work may be characterized as a version of enactivism that emphasizes sensory-motor contingency, he leans heavily on the externalism component of the research programme. One can

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**1** Nannicelli writes: "4E theorists have yet to offer a convincing case for how their approaches improve upon the understandings of artistic creation and appreciation developed in the traditional humanistic disciplines like philosophical aesthetics" (2019, 93-4). Yet in the same article he briefly notes the value of some embodied aesthetics approaches, for example, Richard Shusterman's concept of "somaesthetics".

**2** Although Nannicelli does cite Myin and Veldeman (2011), he focuses on their *active* externalist account but ignores their discussion of explanatory externalism with respect to art. We also note that Nannicelli mentions Joel Kreuger's work on musical experience only in passing. Although Kreuger (2014) offers what he calls an account of the "musically extended mind", his analysis is closer to an enactivist account focused on affordances and embodied affectivity rather than pragmatic tool use.

read Noë as attempting to establish an account of an extended, active externalism focused on tool use that can appropriately account for art and aesthetic experience in his recent book *Strange Tools. Art and Human Nature* (2015). To do this, Noë establishes a variation of active externalism in which certain tools and practices resist our perpetual tendency to offload cognition onto them, and this resistance re-organizes and reveals the world and our more basic practices to us. On the one hand, one might read Noë's insistence on art's impractical "subversion of function" (2015, 98) in opposition to an active externalism that might frame art in terms of tool-based practicality. On the other hand, as Matthen (2016) suggests, Noë indicates that the function of some tools is to resist being useful as tools, and that this resistance itself fulfils the purpose of the tool. This ambiguity is left unresolved in Noë's work. Furthermore, there is good reason to question the rigidity of beginning with a tool-oriented framework when we can avoid this aporetic appraisal of art as a tool-that-is-not-a-tool by moving from a potentially more generalizable, more enactive notion of affordance. Rather than making the purpose of art the central question, the question, we suggest, should be about the possibilities that are afforded to a beholder by a work of art.

The change from a tool-oriented framework to a wider affordance-oriented one has downstream effects when it comes to Noë's division between organizational activities and re-organizational practices. Noë, in an explanation of human behaviour that is fundamentally centred around tool use, divides human behaviour into two categories: organizational activities and re-organizational practices. Noë explains that organizational activities are basic activities that are done due to basic biological motivations, which establish or maintain a certain type of relationship between the organism and its environment. Noë's default example, presumably for its clear biological relevancy, is breast-feeding. This activity, and other basically biological activities are lumped together with unreflective activities that we do out of habit, including, oddly, activities such as driving (Noë 2015, 7-8).

There are six features that such organizational activities have in common according to Noë: their primitivity, their skill structure, their temporality, their dyadic nature, their functionality, and their hedonic possibilities, i.e. the possibility that they can result in pleasure. These features allow Noë to link organizational activities to tool use. "Roughly, a tool (such as a computer or a hammer) is the hub of organized activity" (2015, 19). This connection leads him to what might seem to be a strange suggestion, that "breast-feeding, really, is a kind of primitive technology" (19).<sup>3</sup> Even some activities that other philosophers would want to label 'higher-order', such as conversation,

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<sup>3</sup> For Noë, "strange" is good; philosophy, like art, is understood as a strange tool.

get included in this unreflective category. While conversation may be natural (6), it is not biological in the same way that Noë considers breast-feeding biological; still, conversation is an instance of basic and habitual interaction that we are motivated to do, and through which we establish a certain relationship with our world and others.

In contrast to these basic or organizational activities, Noë frames certain human practices, notably art and philosophy, as re-organizational practices, through which we can reassess or gain a new understanding of some previously unnoticed feature of our activities, or of the self that is engaged in these activities. The precise nature of the features revealed by these re-organization practices, and what these features are features of, is unclear. To parallel the discussion of breast-feeding, Noë at times references artistic depictions of breast-feeding in Western art, such as depictions of the Virgin Mary and Christ. These artistic depictions constitute, for Noë, a re-organizational practice that allows for revelations about this more basic activity.

Organisational activities are built around tools and technologies, despite the fact that many ways that we engage with the world and with others are not reducible to tool use. Re-organizational practices are built around *strange* tools, which is to say, tools that resist an easy adoption into our cognitive systems, and in this resistance they question precisely the role that functionality plays in these more typical organizational activities.

Technology serves ends. Art questions these very ends. Art affords revelation, transformation, reorganization: art puts into question those values, rules, conventions, and assumptions that make the use of technology possible in the first place. (Noë 2015, 64)

Noë's strict division between activities and practices, as has been noted by commentators on *Strange Tools*, perhaps inadvertently perpetuates a standard of art that conveniently includes much of modern Western art, while excluding some premodern, and non-European art, or the aesthetic contributions of women (e.g. Eaton 2017; see also Noë 2015, 103-4). Art that is functional in nature (either through its religious function (such as the communication of a story to an illiterate populace) or through its ability to be also used as a tool (e.g. a decorated pot) is no longer a strange tool in that it no longer appropriately questions or causes reflection about functionality. A clay pot that has been decorated, while it might be aesthetically pleasing, does not resist integration into our cognitive functioning the way a painting does. Rather, we might be appreciative of the aesthetic qualities and then proceed to use the pot as it was made to be used.

Given Noë's strict dividing line between the basic necessities of organizational activities and the luxurious re-organizational practices,

it is no surprise that the contributions that women have traditionally been able to make to their culture, such as tending to children and preparing food, are reduced to practices that are merely biological, thus denying that these practices can permit a re-organizational reflection of utility, or that the aesthetic value that they offer is sufficient for them to appropriately be considered art. Noë's account inadvertently starts from a place that is not inclusive of some forms of art - precisely those forms of art that have been historically excluded from Western philosophical frameworks. Indeed, tools and strange tools have been divided along lines that mark a division between biology and culture. Although this is somewhat common in philosophical discussions, it is not always a pure or presuppositionless starting point of investigation, and one can see how this division could be used to marginalize the contributions of women and non-Europeans in the area of aesthetics.<sup>4</sup>

Furthermore, Noë's focus on the division between biology and culture is paralleled by a similar 'lower' and 'higher' process division that encourages bottom-up or top-down descriptions of cognitive processes rather than more nuanced accounts that reject this hierarchical ordering to begin with. Noë, to some extent, sees himself as critiquing precisely this ordering in his response to evolutionary theory and neuroaesthetics which reduce artistic practices to explanations that only have to do with their evolutionary grounding or neurological causes and effects. Despite the fact that he would most likely characterize his approach as rejecting a strict bottom-up or top-down approach, his emphasis on a division between activities (which use tools) and practices (which use strange tools), and in which practices are artistic by virtue of their lack of biological utility, further perpetuates the problem of a strict division between 'higher' and 'lower' cognition. Enactivism proposes to rethink these divisions between 'higher' and 'lower' cognition, and between culture and biology. Enactivism in this regard contrasts with approaches that attempt to explain how 'higher-order' cognition supervenes upon and reuses the mechanisms that make possible more basic practices. Relevant for discussions of aesthetics, one might think of how empathy in response to artwork is sometimes explained as based on the activation of mirror neurons (e.g. Freedberg, Gallese 2007). In contrast, enactivists think of cultural factors as highly integrated with embodied practices. This idea is supported by empirical studies by Soliman and Glenberg (2014) that show how cultural factors shape body-schematic processes in joint action. As they propose:

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<sup>4</sup> We agree, however, with Eaton (2017, 228) that Noë would "eschew any explicit devaluation of women's and indigenous people's artifactual production, and that he does not mean his conception of art to run afoul of the problems just mentioned". Eaton also raises an important question about the relation of Noë's view to John Dewey's rejection of the art versus craft distinction.

[C]ulture enters the scene not as a self-contained layer on top of behavior, but as the sum of sensorimotor knowledge brought about by a bodily agent interacting in a social and physical context. As such, culture diffuses the web of sensorimotor knowledge, and can only be arbitrarily circumscribed from other knowledge. (Soliman, Glenberg 2014, 209)

If we consider cultural practices and embodied sensory-motor processes, not as higher and lower, but as more fundamentally integrated to begin with, we can shift to a framework where these processes are not modular or distinct, but instead influence and permeate one another (see, e.g. Hutto et al. forthcoming).

We note that Noë's own paradigm example of the natural and biological in *Strange Tools*, namely, breast-feeding, is a practice that varies according to culture in terms of significance, duration and cultural norms. Contrary to Noë's assertion that behaviour during breast-feeding is "not [something] mothers learn or are taught" (2015, 4), there is clear anthropological evidence to suggest that this practice is frequently explicitly taught to young mothers. Indeed, it is a practice that is most successful when it is taught to the mother in question (see Locke 2012), and is situated within a broader world of practices for child-rearing and the care of families (see Wright et al 1993 for a discussion of breast-feeding practices in Diné culture).

A rethinking of Noë's distinction between organizational activities and re-organizational practices, then, would not only resolve or eliminate some of these issues, it should allow for an appreciation of the wider variety of roles that art can play. An orientation around affordances rather than tools, we suggest, is the first principle of a positive account of art in a 4E cognition framework.

#### 4 The Aesthetic Spectrum

How can a reorientation around the notion of affordance help us to understand a continuous gradient between biological and cultural practices? What does this reorientation entail for how we explain art and aesthetic experience in the context of 4E cognition? While keeping in mind that art and aesthetic experiences do not constitute a monolith, we can explore a variety of different types of affordances that are offered through engagement with art. Specifically, we want to argue that given the diversity of the arts, ranging across plastic, performing and literary arts, as well as the design features and expressive practices anchored in everyday life, aesthetic experiences have to be understood as involving a spectrum of different affordances, which is to say that aesthetic experiences can be of a great and diverse variety.

In outlining an enactive view of aesthetic experience, one can argue that there are affective and affordance-related differences between the perception of a tool which we can pick up and use, and the perception of an artwork depicting a tool; and between an encounter with a real person and an encounter with an artwork that represents a real person. What Husserl (1989) called the “I can”, or what Gibson (1979) called “affordances” are different in the case of a perception of artwork. For example, a hammer may offer an affordance for hammering while the photograph of a hammer does not. A person offers the affordance of social interaction, whereas a portrait of a person does not. Likewise, a garden may offer the possibility of taking a walk; a landscape painting does not. Clearly, artworks offer different sets of affordances. If we take this affordance-based starting point we can develop an enactivist account that is different from either the plain tool view of extended mind or the strange tool view of Noë.

An affordance is not an objective property of something in the environment; nor is it a subjective something in the perceiver, rather, it is relational, depending on both world and agent-perceiver (see Chemero 2003). If we perceive the world in terms of how we might act upon it, that’s because the world offers some possibilities to us, but specifically just those possibilities related to our embodied form and sensory-motor skills. In the typical example, a chair affords sitting, but only for someone who has a body of a certain size with the right kind of bendable joints – a human, but not an elephant or an ant, can properly sit in a chair. For the elephant or the ant, the chair may offer different affordances (throwing or climbing) but not the affordance of sitting. In the case of perceiving a tool the affordance structure involves just this relationality; I perceive the tool in instrumental terms of what I can do with it (which may depend on my skill level).

There is much to say about the way affordances work in the everyday case of pragmatic, action-oriented perception, but we can also think that other non-pragmatic kinds of affordances are possible. These include, for example, attunements to what is affectively afforded, what reflective understandings are afforded, and what interactions with others are afforded. Cultural knowledge, values, and practices are integrated into perceptual and behavioural affordances (Ramstead, Veissière, Kirmayer 2016). Such affordance structures work in our perception of art in a way that problematizes an overemphasis on the tool or simple artifact model. In the case of art perception, affordances may still depend on a kind of skill. John Carvalho (2019, 25), for example, in his enactive approach to aesthetic experience, emphasizes the idea that the aesthetic appreciation of observed art – specifically painting – involves skill acquired in the practiced experience of observing art and thinking about it.

Kesner and Horáček (2017) also offer an affordance-based approach. They propose that there are primarily two types of affor-

dance permitted by art. There are aesthetic affordances, which involve the perceptual appreciation of and attention paid to the aesthetic aspects of the work without attention to context, and then there are the socio-affective/cognitive affordances which have to do with the content referenced or represented, for example, the individuals represented in a painting. In allowing for these two types of processing, aesthetic and cognitive, however, Kesner and Horáček endorse a distinction between top-down cognitive processes and bottom-up unmediated aesthetic processes. On their account, upon viewing a painting we engage top-down cognitive processes that allow us to understand the content involved, often in socio-affective ways when other human beings are depicted, and bottom-up (more sensory-based) processes that allow us to appreciate the ways in which the content is communicated (involving composition and/or the vibrancy of the contrasts in the painting etc.).

Here we can make reference to the notion of “twofoldness” that Richard Wollheim (1987) uses to characterize a double aspect of depiction in art. For Wollheim, our experience of a work of art has a twofold intentionality, or what we’ll call a *double attunement*: it is a co-consciousness of what is represented in the artwork, and of the work of art as a thing involving or expressing a technique of representation. The latter would involve attention to the artwork’s expressive or design and aesthetic properties. Wollheim thus emphasizes a structured kind of intentionality in which we know that we are not face-to-face with the figure represented in the painting, yet we encounter or “see-in” the painting the character portrayed. Importantly, he emphasizes, these are “two aspects of a single experience that I have [...], two aspects [that are] distinguishable but also inseparable, [...] [T]hey are not two experiences” (Wollheim 1987, 46).

If we follow Wollheim’s idea that these are not two different experiences, but in some way are aspects of one experience, then we need a model that accounts for a more integrated perspective that, at the same time, accommodates a variety of possible aesthetic experiences.<sup>5</sup> Kesner and Horáček’s hierarchical (top-down/bottom-up) arrangement, which divides aesthetic affordances from socio-affective affordances, risks dividing the twofold or double attunement into two separate experiences. Instead of a two-tiered model, we can expand on enactivist insights that consider embodiment and culture to be integrated, and view these double attunements as being unified in experience. Our double attunement model follows Wollheim in

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**5** One possible model that integrates cognitive, affective, sensory-motor and broadly considered extended factors that include cultural practices and intersubjective relations, is based on an enhanced version of what Christensen, Sutton and McIlwain (2016) call a “meshed architecture” in performance studies (see Gallagher forthcoming; Gallagher, Varga 2020).

that we find the work of art itself and an understanding of the context as it is routed in cultural practices to be unified in experience.

If the immediate aesthetic aspects of experience can be characterized as a response to the formal aspects of the work of art, involving, for example, the pleasure that the colours and layout of the piece provide the beholder, or, perhaps, the shock and uncanniness that could come about through a deliberate subversion of an artistic tradition's typical aesthetic norms, such aspects are clearly affective and not easily nor meaningfully abstracted from the content or context that is related through that work of art. This complex experiential response to the artwork can be characterized by an integrated immediacy that is akin to the experience of awe, and like awe it can motivate a more reflective experience of wonder (Gallagher et al. 2015). That is, the immediate experience of art can also make possible a more reflective (re-organizational) evaluation that can transition into a long-term response to a particular piece of art, but can also fold back into our everyday experience. In this way, it is not necessary to propose a strict separation between the types of experience, as Noë does, in order to characterize both modes of interaction with art. Like embodiment and cultural practices, there is an inseparability here that nonetheless does not reduce the aesthetic experience to the pragmatic experience.

In this respect, we should not think of the re-organizational as carrying us away from the everyday (biological, practical) organizational and into a separate realm of strange relations suggested by Noë's analysis.<sup>6</sup> The challenge is to see the re-organizational as re-organizational, that is, as looping back into our everyday organizational activities, rather than going off to define a separate practice. This is not to deny the strangeness of the aesthetic effect. Indeed, enactivists often point to Merleau-Ponty who, on this point, prefigures Noë's concept of art as involving a strange reflexivity.

We live in the midst of man-made objects, among tools, in houses, streets, cities, and most of the time we see them only through the

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<sup>6</sup> Similar views of aesthetic experience have been explained in various ways by enactivist thinkers. For example, Maria Brincker's (2015) idea of the "aesthetic stance". As she puts it, an image (painting or sculpture) not only has "different affordances, but affords a sort of a 'halt' to our own ongoing environmental interactions, [...] [P]erception of action as image content does not afford the perceiver an overt complimentary response beyond simply watching what is being presented" (Brincker 2015, 122-3). This is still an engagement of perceiver with the art, but an engagement of a different sort. As Brincker puts it, this is an engagement that is halted at "the edge of action" (123). This is a similar view to conceiving of aesthetic experience as involving a short-circuiting of affordances, and in some cases a re-routing of affective affordances, motivating a "response to a non-realizable (non-practical, non-interactionable) affordance, [...] an opportunity for experience of the purely possible or maybe even the impossible" (Gallagher 2011, 106). The danger is that these views fail to emphasize how aesthetic practices originate in and are reintegrated into everyday activities.

human actions which put them to use. We become used to thinking that all of this exists necessarily and unshakably. Cezanne's painting *suspends these habits of thought* and reveals the base of inhuman nature upon which man has installed himself. This is why Cezanne's people are *strange*, as if viewed by a creature of another species. (Merleau-Ponty 1964, 15-16; emphasis added)

To the extent that art can suspend our habits of thought, however, it does not do so by differentiating itself from our everyday encounters. It can reveal something different, in a way that shakes and challenges our everyday attitudes, only by maintaining a continuity with the latter. We do not claim that every aesthetic experience takes this form, but it is clearly one type of aesthetic experience that is possible. Moreover, it can be the case with the aesthetic aspects of any object, even of an object that we can otherwise put to some good use, such as a decorated pot or a lullaby. Rather than being an instance where a tool has failed to properly perform in its capacity as a tool, these opportunities for re-organizational reflection, as afforded via a work of art, differ from, yet in some cases may be continuous with our assessment of instrumental opportunities offered by the same or by other artifacts. By avoiding the two-tiered system that Noë is advocating (activities versus practices), we are also avoiding the strict, hierarchical divisions that pit the functional, biological and necessary against the artistic, cultural and luxurious, which, as we have previously noted, is a division that frequently is enforced in ways that are often influenced by social and political issues. In our proposed model, a given artifact (whether it has a status as a tool or not is irrelevant) may, in addition to, or independent of its possible original purpose, offer an opportunity for immediate affection through its aesthetic qualities and in addition offer an opportunity for further reflection. A familiar lullaby, despite its functional role as an organizational activity, can draw our attention to the harmony it provides us and the emotional memories it encourages us to remember, and at the same time motivate thoughts about the practices and the world that make this lullaby possible. There is no strict division between these two aspects of experience.

Contrary to a strict hierarchical approach to art appreciation, we can allow for the possibility that the immediate affective experience may be changed by, for instance, increased background knowledge about this particular piece of art's place in a larger artistic tradition, or its place within a particular sociopolitical landscape. This possibility does not mean that there is indiscriminate top-down causation when it comes to aesthetic experience. Instead, sensory-motor and affective experiences are already permeated by cultural influences that establish the world of meaningful practices within which the piece of art and the beholder are understood. In addition to allow-

ing for a variation of aesthetic experiences across a spectrum that correlates with different artistic genres and practices, this world of meaning then allows for how people with different degrees of familiarity with a particular tradition or practice can have varying perceptions and understandings of what makes a particular piece meaningful. This flexibility regarding informed opinion also permits greater exploration of the nuances in cross-cultural art appreciation. Some immediate affective experience may come about regardless of background understanding due to the generalizability of certain stimuli across many cultures; some others may require greater familiarity with the situatedness of the given work of art.

## 5 A Case Study

To specify the contributions of this positive account to an understanding of aesthetic experience, it would be best to use a specific example that allows us to highlight both the immediate experience we can have with a given work of art, and the reflective experience that allows for the reevaluation of the implicated practices. This example could also help highlight the differing dimensions of experience that would be accessible to individuals based on their ability to assess the work of art as existing in dialogue with artistic tradition and a world of non-artistic meaningful practices. To this end, we will look at one piece of art that helps us analyse a concrete instance of how multiple types of affordance are unified in experience. Sandy Rodriguez's "You Will not Be Forgotten, *Mapa* for the Children Killed in Custody of US Customs and Border Protection" (hereafter, *Mapa*) is one such instance. *Mapa*, which isn't literally a map, uses traditional paper crafting techniques to represent the Southwestern United States and Mexico, highlighting the states in question with vivid colours. It is marked with animals and plants native to the region, and the waterways of the region as well. Various unnatural symbols such as a white van and a helicopter also convey the immigration enforcement presence that is present in the region alongside the natural world. The plants together form an indigenous recipe for trauma (*susto*). Several figures painted in the style of the codices that have survived colonization are huddled together crying just south of Texas. Several white circles represent the locations at which migrant children died in the custody of Customs and Border Patrol. The recipe for trauma conveyed in the piece is a response to the pain and trauma that has been exemplified by child detention policies along the border, and serves to humanize the currently incarcerated children (Rodriguez 2020). For reference, we are reproducing one part of *Mapa* which communicates a number of natural and unnatural place markers that establish a naturalistic and political



**Figure 1** Sandy Rodriguez. *You Will Not Be Forgotten. Mapa for the Children Killed in Custody of US Customs and Border Protection*. 2019. Hand-processed watercolour and 23k gold on amate paper. 94.5 × 47 inches. Image courtesy of the artist. Photo b

sense of place via a system of cultural references that are entrenched in a regional history [fig. 1].

Here we see several concrete features such as waterways represented alongside human figures, plants and animal, man-made objects such as helicopters and finally, more abstract features such as the night sky to the northeast. How can we understand this aesthetic experience via an extended, embedded, ecological and enactive perspective? The typical pragmatic orientation that is often prioritized in extended accounts will not quite work here, as this is clearly not a map that we would use to literally navigate us to a given location. However, Noë's model, which insists on viewing the non-pragmatic affordance as an instance of the strange pragmatic affordance is likewise unlikely to fully account for how this piece operates. Establishing that the piece works aesthetically in how it resists its role as a map, or serves as a strange map, misses the dimensions of the piece that depend precisely on how it offers other kinds of affordances, even as it re-routes our affective response (affording, for example, some type of empathetic response to the weeping figures), or motivates other possibilities (inspiring, for example, a longer-term reflection on the social and political context).

In contrast, we can use the double attunement model to underscore the ways in which the various affordances are in fact unified in experience. That is, finding that the piece affords some type of empathetic response to the weeping figures, or that the piece affords

the inspiration for a longer-term reflection on the social and political context that the piece explores, is continuous with the everyday activities that the artwork plays upon in order to communicate these points. To presuppose that there is something more basic about the underlying pragmatic components of the experience, and something more distinctly cultural about the reflective components of the experience (as Noë does), is to ignore the ways in which different affordances are integrated in one experience. This piece is especially exemplary, assisting us in the reevaluation of this distinction, in how it is an organizational activity (that maps some events and a medicinal recipe)<sup>7</sup> alongside a re-organizational practice (a reflective remembrance of children who have died in Customs and Border Patrol custody). What *Mapa* is offering us is precisely a depiction that is situated in a world of meaning such that its aesthetic qualities can be immediately affective, and continuous with an understanding of what these qualities in turn represent.

Again, however, the spectrum of revelations made possible through reflection and inquiry about the piece are not entirely separable from the immediate affective experience brought about by the perception of the formal components that comprise the piece. These aspects of experience co-permeate each other. These modes of seeing-in to what is represented by the piece and in what ways this representation is happening are situated in a larger artistic and social context that informs the experiences of a beholder in a variety of ways.

The features of this particular artwork, different from all other paintings, different from all other art forms (e.g. music, dance, theatre, literature), draw our attention to them in varieties of action-oriented and affective experiences that are best captured in a doubly attuned, relational affordance structure that depends on that precise work and who is experiencing it. Our ability to apprehend, for example, the emotion of the figures in the piece, draws on our own experience of the world in which our bodily emotional responses to stimuli are part of how we experience meaning in the world, and at the same time is constrained by how the work of art and its artist are centred in a broader network of significant artifacts and traditions.

Such experiences of significance happen through the situated, embodied, enactive experience of a particular beholder. A cognitivist account that attempts to overintellectualize this process at the expense of the significant embodied affectivity of this process misses

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<sup>7</sup> Included in the work is “a visual recipe for healing ‘susto’ or trauma, as written in the colonial medicinal manuscript Codex de la Cruz-Badiano... The map provides the ingredients for a potion and poultice that includes orchid, two types of plumeria, swallow’s nest, river water, sea foam, and other elements” (Rodriguez 2020). The plants represented in *Mapa* reflect a medicinal recipe, and so communicate an organizational activity. It is not necessary to subvert this activity for the aesthetic experience to emerge.

the central starting point of this investigation. But what is it about this appraisal that is especially significant to 4E cognition? A typical extended model is challenged when it tries to explain the world in terms of tools that constitute cognition since art appears to be a clear example of an artifact that resists categorization in this way. On an explanatory extended view, an account of cognition must involve an adequate explanation of how interaction with artifacts in the world partially constitute cognition without these artifacts themselves becoming simplistic extensions of the mind. Body, brain and environment form one system in which aesthetic experience can be simultaneously and variously characterized as sensory-motor, affective, cultural and cognitive.

## 6 Conclusion

We've argued that the active externalism of the extended mind approach on its own can end up focusing on examples that emphasize functional integration with tools or instruments, and thereby oversimplify the links between mind and world that 4E researchers attempt to explore. We have suggested that conceiving of art and aesthetic experience in terms of tools or technologies is a good example of this type of oversimplification. In order to reject this oversimplification, we propose a double attunement in aesthetic experiences in which multiple dimensions of what a piece offers are present within the same experience in ways that co-permeate one another and inform a unified aesthetic experience. After reviewing some of these accounts in the context of 4E approaches more generally, we proposed an enactivist account that does not claim to explain art and aesthetic experience in all cases and everywhere. This enactivist account based in double attunement emphasizes the continuity of possibilities in aesthetic experience such that we appreciate the co-permeation of these possible experiences, as opposed to strict top-down or bottom-up explanations. We think that it may take 4 or more E's to address the broad spectrum of aesthetic experiences that correlate to the broad variety of artistic genres.

## Bibliography

- Brincker, M. (2015). "The Aesthetic Stance. On the Conditions and Consequences of Becoming a Beholder". Scarinzi, A. (ed.), *Aesthetics and the Embodied Mind. Beyond Art Theory and the Cartesian Mind-Body Dichotomy*. Dordrecht: Springer, 117-38.
- Carvalho, J.M. (2019). *Thinking with Images. An Enactivist Aesthetics*. New York: Routledge.
- Chemero, A. (2003). "An Outline of a Theory of Affordances". *Ecological Psychology*, 15, 181-95. [https://doi.org/10.1207/S15326969EC01502\\_5](https://doi.org/10.1207/S15326969EC01502_5).
- Christensen, W.; Sutton, J.; Mcllwain, D.J. (2016). "Cognition in Skilled Action. Meshed Control and the Varieties of Skill Experience". *Mind & Language*, 31(1), 37-66.
- Clark, A. (2003). *Natural-Born Cyborgs. Minds, Technologies, and the Future of Human Intelligence*. New York: Oxford University Press.
- Clark, A. (2008). *Supersizing the Mind. Embodiment, Action, and Cognitive Extension*. New York: Oxford University Press.
- Clark, A.; Chalmers, D. (1998). "The Extended Mind". *Analysis*, 58(1), 7-19.
- Cochrane, T. (2008). "Expression and Extended Cognition". *The Journal of Aesthetics and Art Criticism*, 66, 329-40.
- Eaton, A.W. (2017). "Strange Tools or Plain Tools? Comments on Alva Noë". *Philosophy and Phenomenological Research*, 94(1), 222-9.
- Freedberg, D.; Gallese, V. (2007). "Motion, Emotion and Empathy in Aesthetic Experience". *Trends in Cognitive Sciences*, 11(5), 197-203.
- Gallagher, S. (2011). "Aesthetics and Kinaesthetics". Bredekamp, H.; Krois, J. (eds), *Sehen und Handeln*. Berlin: Oldenbourg Verlag, 99-113.
- Gallagher, S. (2017). *Enactivist Interventions*. Oxford: Oxford University Press.
- Gallagher, S. (forthcoming). *Performance/Art. The Venetian Lectures*. Milan: Mimesis.
- Gallagher, S. et al. (2015). *A Neurophenomenology of Awe and Wonder. Towards a Non-Reductionist Cognitive Science*. London: Palgrave-Macmillan.
- Gallagher, S.; Varga, S. (2020). "The Meshed Architecture of Performance as a Model of Situated Cognition". *Frontiers in Psychology*, 11, 2140. <https://doi.org/10.3389/fpsyg.2020.02140>.
- Gibson, J. (1979). *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin Harcourt.
- Hurley, S. (2010). "The Varieties of Externalism". Menary, R. (ed.), *The Extended Mind*. Cambridge (MA): The MIT Press, 101-54.
- Husserl, E. (1989). *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy. Second Book Studies in the Phenomenology of Constitution*, vol. 3. Dordrecht: Springer.
- Hutto, D.; Myin, E. (2013). *Radicalizing Enactivism. Basic Minds without Content*. Cambridge (MA): The MIT Press.
- Hutto, D. et al. (forthcoming). "Culture in Mind. An Enactivist Account. Not Cognitive Penetration but Cultural Permeation". Kirmayer, L. et al. (eds), *Culture, Mind, and Brain. Emerging Concepts, Models, Applications*. New York: Cambridge University Press.
- Kersten, L. (2017). "Extended Music Cognition". *Philosophical Psychology*, 30(8), 1078-103. <https://doi.org/10.1080/09515089.2017.1350946>.
- Kersten, L.; Wilson, R.A. (2016). "The Sound of Music, Externalist Style". *American Philosophical Quarterly*, 53(2), 139-54.

- Kesner, L.; Horáček, J. (2017). "Empathy-Related Responses to Depicted People in Art Works". *Frontiers in Psychology*, 8(228), 1-16. <https://doi.org/10.3389/fpsyg.2017.00228>.
- Krueger, J. (2014). "Affordances and the Musically Extended Mind". *Frontiers in Psychology*, 4, 1003, 1-13. <https://doi.org/10.3389/fpsyg.2013.01003>.
- Locke, A. (2012). "Preparing Women to Breastfeed. Teaching Breastfeeding in Prenatal Classes in the United Kingdom". Smith, P.H. (ed.), *Beyond Health, Beyond Choice. Breastfeeding Constraints and Realities*. New Brunswick, NJ: Rutgers University Press, 110-20.
- Matthen, M. (2016). "Review of *Strange Tools* by Noë, A." *Notre Dame Philosophical Reviews*. 2016-02-15. <https://ndpr.nd.edu/news/strange-tools-art-and-human-nature>.
- Merleau-Ponty, M. (1964). *Sense and Non-Sense*. Evanston, IL: Northwestern University Press.
- Myin, E.; Veldeman, J. (2011). "Externalism, Mind and Art". Manzotti, R. (ed.), *Situated Aesthetics. Art Beyond the Skin*. Exeter: Imprint Academic, 51-85.
- Nannicelli, T. (2019). "Aesthetics and the Limits of the Extended Mind." *British Journal of Aesthetics*, 59(1), 81-94. <https://doi.org/10.1093/aesthj/ayy048>.
- Noë, A. (2015). *Strange Tools. Art and Human Nature*. New York: Hill and Wang.
- Ramstead, J.D.M.; Veissière, S.P.L.; Kirmayer, J.L. (2016). "Cultural Affordances. Scaffolding Local Worlds through Shared Intentionality and Regimes of Attention". *Frontiers in Psychology*, 7, 1090. <https://doi.org/10.3389/fpsyg.2016.01090>.
- Rodriguez, S. (2020). "Artist's Statement". *Sandy Rodriguez. Codex Rodriguez Mondragón. You Will Not Be Forgotten. Mapa for the Children Killed in Custody of US Customs and Border Protection*. Charlie James Gallery. <https://www.cjamesgallery.com/show-detail/you-will-not-be-forgotten>.
- Slors, M. (2019). "Symbiotic Cognition as an Alternative for Socially Extended Cognition". *Philosophical Psychology*, 32(8), 1179-203. <https://doi.org/10.1080/09515089.2019.1679591>.
- Soliman, T.; Glenberg, A. (2014). "The Embodiment of Culture". Shapiro, L. (ed.), *The Routledge Handbook of Embodied Cognition*. London: Routledge, 207-20.
- Soto, D. (2020). "A Remarkable Project Remembers Child Migrants Who Died in Custody". *Hyperallergic*, March 3, 2020. <https://hyperallergic.com/545720/sandy-rodriguez-you-will-not-be-forgotten-at-charlie-james-gallery>.
- Thompson, E.; Stapleton, M. (2009). "Making Sense of Sense-Making. Reflections on Enactive and Extended Mind Theories". *Topoi*, 28(1), 23-30.
- Wright, A.L. et al. (1993). "Cultural Interpretations and Intracultural Variability in Navajo Beliefs about Breastfeeding". *American Ethnologist*, 20(4), 781-96.
- Wollheim, R. (1987). *Painting as an Art*. London: Thames & Hudson.

