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The Aesthetic Stance

On the conditions & consequences of becoming a beholder

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What does it mean to be an aesthetic beholder? Is it different than simply being a perceiver? Most theories of aesthetic perception focus on 1) features of the perceived object and its presentation or 2) on psychological evaluative or emotional responses and intentions of perceiver and artist. In this chapter I propose that we need to look at the process of engaged perception itself, and further that this temporal process of becoming a beholder must be understood in its embodied, contextual and dynamic specificity. Through both phenomenological and neuroscientific explorations I analyze what is characteristic about a more “aesthetic stance” and argue that there is a certain asymmetry between beholder and beheld, which has to do with a disengagement of goal-directed action, and which allows for other kinds of perceptual involvement than in a more “practical stance”. It is a multi-disciplinary project integrating a sensorimotor notion of aesthetic affordances, 18th century philosophy, and large-scale brain network findings. What ensues is a new dynamic framework for future empirical and theoretical research on aesthetic perception.

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The need for a more dynamic & contextual neuro-aesthetics

Can science help us understand our engagements with art and aesthetic experiences in general? In recent years the field of “neuro-aesthetics” has exploded - articles and popular books on the topic seemingly popping up everywhere. Some humanists remain skeptical of these empirical endeavors and wonder what the many colorful brain scans can actually tell us about our deeply cultural aesthetic practices. I am sympathetic to some such criticisms.² However, this chapter attempts to show that neuroscience can be an incredible resource for aesthetics – if indeed scientists take the dynamic, social and environmental complexities of both aesthetic experience and brain function more seriously. I shall introduce the notion of the “aesthetic stance” to explore the conditions and consequences of becoming a beholder and then introduce a new dynamic approach to empirical aesthetics. However, to see why such a framework could advance the field first a look at some high-profile work in neuro-aesthetics:

- **Beauty & reward centers:** Semir Zeki’s lab has found that activity in frontal reward centers correlate with reported experiences of beauty, and consequently published an article entitled “Towards a Brain based Theory of Beauty”.³ The imaging findings appear solid, but one might ask whether the relation to reward centers alone does much to explain: 1) Why beauty is pleasurable to perceive? 2) What beauty is, or 3) how beauty relates to art & aesthetics (as we likewise can appreciate the ugly, grotesque or horrific).
- **Visual gestalts & attractors:** Ramachandran has proposed a series of “universal principles of art”⁴ mostly linked to gestalt principles and visual-reward connections. His theory thus begins to answer why certain perceptual features are

² Given certain trends in neuroaesthetics some skepticism is understandable, e.g. Noë points out in his NYtimes piece “Art & the limits of neuroscience” that many simply apply what is known about perception to the experience of art. This seems confirmed in the examples below.

³ Ishizu & Zeki (2011)

⁴ Ramachandran & Hirstein (1999), chap. 7 & 8 in Ramachandran (2011).

more pleasing and attention grabbing than others. However, is it a problem that hedonic perception of say junk food and porn seems to be core examples?⁵

- **Movement perception & mirror neurons:** Findings of mirror neurons has been applied to aesthetics by Freedberg & Gallese, suggesting an intimate relation between the motor system of the perceiver and the perceived, represented or implied movements in various art forms. Thus, the question of how art moves us is posed empirically. But this research has focused on the *overlap* between regular and aesthetic perceptions and so far not investigated potential dissimilarities.⁶ Further, motor responses have not been explored as dynamically influenced by contextual affordances.⁷

As exemplified here current neuroaesthetics often target perception and emotional responses generally, and hasn't so far provided an empirical story of what makes aesthetic experiences special.⁸ This has lead some to propose that aesthetics ought to ignore neuroscience.⁹ I shall try to show that the impediments of empirical approaches

⁵ Pornography, with its easily digestible emotional and perceptual exaggerations, is almost the optimal artwork given Ramachandron's "peak shift principle". However, in a recent book Deidre Barrett argues that such supernormal stimuli drive our junk-food addictions and our contemporary culture's fast and easy imagery. Thus, whether 'peak shift', 'grouping' etc. are universal principles of art is questionable. For counter-examples see Tyler's "Is art lawful?" (1999).

⁶ Freedberg & Gallese (2007).

⁷ Mirror neurons and their broader sensorimotor and affordance context is discussed further down.

⁸ Similar issues pertain to work by e.g. vision scientists like Margaret Livingstone (2002), and memory specialists like Eric Kandel (2012). Each contribute insights but there is a vacuum of theory of what the aesthetic realm actually is.

⁹ Noë e.g. concludes: "...neuroscience, which looks at events in the brains of individual people and can do no more than describe and analyze them, may just be the wrong kind of empirical science for understanding art." Noë unfairly relegates neuroscience to matters 'under the skull' to contrast to his own 'externalist' approach. Cognitive neuroscience of course involves external and social stimuli, which admittedly often due to individualistic and modular assumptions are poorly chosen - but that is another issue.

might not be the physiology itself as much as the theories and paradigms typically used to study it.

What is special about aesthetic experiences?

Baumgarten is seen as the father of the modern term ‘aesthetic’ as he imported this ancient Greek word for ‘sentient’ or ‘pertaining to the senses’ to its modern use.¹⁰ He and many other theoreticians have attempted to define this more narrow use, some via beauty and appraisal thereof, some via broader hedonic/emotional responses in the viewer, some via communication of intentions, some via aesthetic institutions or features of objects defined as aesthetic etc.¹¹ Though much can be learned from these definitions, they each seems to fall short of capturing the open-endedness of what can constitute an aesthetic experience.¹²

Hence, rather than predefining inherently aesthetic parameters of object and/or perceiver, I will start with the more relational and embodied question of what it means to be an aesthetic beholder, and - perhaps more importantly - what conditions are conducive to becoming an aesthetic beholder. A core empirical issue here is whether aesthetic experiences are constituted differently procedurally than regular perceptual experiences. Thus, the possibility is explored that aesthetic experiences are not individuated as a subgroup of perceptual experiences simply by their special *content* or emotional *consequences*, but rather by their very *process* of perceptual engagement. I introduce a theoretical construct labeled “the aesthetic stance” to capture the temporally extended and complex processes that seem to characterize the broad embodied conditions of aesthetic experiences and responses. To fill in this basic framework, first a discussion of some relevant phenomenological and empirical observations.

¹⁰ Baumgarten (1750)

¹¹ See e.g. Bell (1914), Langer (1953), Collingwood (1958), Gombrich (1960).

¹² Adorno famously said: “It is self-evident that nothing concerning art is self-evident” (2001).

a. The non-goal-directed aspect of aesthetic experience

The question of what it means to be an aesthetic beholder as opposed to an ordinary perceiver is not new. Already in the 18th & 19th century many thinkers from Shaftesbury to Kant and Schopenhauer noted that one of the main characteristics of the aesthetic beholder was that of a certain “disinterestedness” and “psychological distance”.¹³ The core idea being that to have genuine aesthetic experiences one had to somehow be disinterested in the ‘object as an object’, and thus give up one’s ordinary practical and goal-directed attitude to the perceived scene. It is this lack of goal-orientation that gives room for a “free play of the imagination” as Kant calls it.¹⁴ Though my account is rather different from that of Kant, these two connected insights of his will figure centrally in the aesthetic stance hypothesis proposed in the following:

- The idea that a mutually opposing dynamic exists between a practical goal-directed attitude and a more aesthetic attitude.
- The link between the non-goal-directedness of the aesthetic stance and the possibility for “freedom of imagination” and deeper subjective involvement and contemplation.

b. The emotional and bodily involvement

It must be stressed that the aesthetic “distance” advocated here strictly pertains to in goal-directed actions and not to emotional or bodily involvement. Many have rightly criticized Kant’s idea of disinterestedness as he much like Plato shunned the emotions, and saw individual desires as a hindrance for aesthetic judgments. All the way back to

¹³ See Cupchik (2002) for a great overview.

¹⁴ See Kant (1790/2000)

Aristotle and Hume, thinkers have to the contrary highlighted the importance and intimate connection between emotions and aesthetic experiences.¹⁵ Our metaphoric language about aesthetic experiences attests to this undeniable importance of emotional, visceral and bodily factors. I.e. artworks can be ‘touching’, ‘moving’, ‘chilling’, ‘nauseating’ etc. Several empirical studies have now explored how aesthetic responses relate to changes in mood and emotional arousal. Kendall Eskine and colleagues have for example recently looked at the effect of induced autonomic and emotional states on aesthetic responses and found that the induced bodily states of fear can be reinterpreted as awe and sublimity in the new aesthetic context.¹⁶ Further it appears, from a recent study by the same group, that perceived size and wall position of an artwork is influenced by prior knowledge about the social status of the artist.¹⁷

Another line of research investigates how the perception of artworks literally can move our bodies and minds by modulating our sensorimotor circuits. I mentioned the Freedberg and Gallese study on motor facilitation above. They found that perceivers’ cortically “mirror” not only the actions of the bodies seen in representational art, but also the implied actions seen in the style and execution of abstract artworks.¹⁸ It is now becoming increasingly clear that motor responses to perceptual stimuli are highly dynamic and vary greatly depending on the broader practical scenario and the social and physical affordances that the perceiver is presented with.¹⁹ We must therefore study

¹⁵ Jesse Prinz has several great papers on the issue see e.g. Prinz (2007). See also Freedberg (1991)

¹⁶ See Eskine et al (2012). Interesting study showing how fear induced by watching horror movies can yield a feeling of the sublime in the context of visual art, and more so than other emotions such as happiness or general arousal.

¹⁷ Jesse Prinz, Presentation at CUNY GC and personal communication.

¹⁸ Freedberg & Gallese (2007).

¹⁹ Newman-Norlund et al. 2007, Fuljii, Hihara & Iriki (2007) & Sartori et al (2011). See also Brincker (2010, 2012) for an analysis of the problems with the classic mirror neuron interpretations and arguments for the alternative “social affordance” hypothesis. See also Gallagher (2011) of a compatible criticism of mirror neurons and how they have been used in the neuroscientific theories of aesthetics. Due to his interest in intersubjectivity he focuses on the difference between affordances of ‘live’ versus representational art forms. I argue to the contrary that

embodied responses not only to the content or style of an artwork, but to its mode of presentation, i.e. the very fact that it is representational, on stage, and that you can walk around it etc. The motor and emotional responses must be understood within these larger contextual dynamics. My hypothesis is that there are “aesthetic affordances”, i.e. structural action invitations, which are instrumental in inducing an aesthetic rather than say a practical stance.²⁰

c. Aesthetic affordances and motor responses

Whether we are at a play, inspecting a museum artwork or taking in a scenic view, aesthetic experiences generally show an asymmetric relation between beholder (perceiver) and beheld (perceived). I suggest that this asymmetry is a hallmark of classic aesthetic experiences,²¹ which is procedurally induced and maintained and dynamically linked to a non-goal-directed attitude.

In terms of aesthetic affordances, a concrete question is whether overall scenarios, which do not invite us to act, can induce this asymmetry. I.e. in many aesthetic settings the social and material context does not call for targeted action but rather halts us (affords a disengagement of goal directed action), and as a result the aesthetic content seems to afford perception tout court.²² We can contrast such aesthetic “beholding” affordances to perceptual scenarios in which the very structure of the environment calls

theater and performance art also presents an ‘edge of action’ asymmetry and thus affords a “non interactive” response.

²⁰ James and Eleanor Gibson were the first to coin the term ‘affordances’ (Gibson, 1979), but the concept has roots further back. The affordance concept became central to the experimental area of ecological psychology and classic exp. such as E. Gibson & Walk’s (1960) “visual cliff” paradigm and Warren’s (1984) stair-climbing experiments.

²¹ Interestingly many contemporary artists experiments with breaking down the “fourth wall” thus complicates the classic beholder-beheld relation. I am interested in exploring how such artistic experiments changes the aesthetic experience as well as the neurological processes involved, however in this paper I focus on the classic asymmetric beholder-beheld relation.

²² One might say that the original meaning of aesthetic as “pertaining to the senses” thus in terms of an exclusive affordance can be given new weight.

for active participation and where tools and people around us not only afford interaction, but often demand it (e.g. when hanging a painting).

The way our perceptual environment affords various action engagements has been experimentally assessed not only at the level of overt action response but also at the level of regional and cellular modulation in our cortical sensorimotor systems.²³ Cortical modulations have thus been shown to track the affordances or teleological opportunities around us. I have argued elsewhere that the so embattled function of mirror neurons should be understood as a part of this function. Classically described mirror neurons are notably modulated not by afforded actions but actual ongoing actions of either self or others.²⁴ The problem with popular interpretations is that these neurons have been idealized and lifted out of their broader neurological context, and have thus been misconstrued as forming an insular ‘mirror mechanism’ by which observed or implied actions automatically get ‘covertly simulated’.²⁵ Evidence however suggests that our sensorimotor circuits integrate our own ongoing temporal and hierarchical action plans and reward evaluations with the perceived actions and affordances around us.²⁶ The resulting dynamic process, involving large fronto-parietal and sub-cortical areas, is pivotal for the ability to coordinate and choose our actions, and it is as an integrated part of this process that mirror neurons are likely to help us predict and track the actions of others.

Now why are these debates over sensorimotor circuits important to the aesthetic stance hypothesis? Note that if responses to affordances and action perception are dynamically integrated with our action planning, then we should not expect our motor response to depend simply on perceptual features within an artwork but more broadly

²³ For neurological findings of “affordance modulation” in fronto-parietal areas see e.g. Grezes & Decety 2002, Grèzes et al. 2003; Ferrari et al. 2005 & Newman-Norlund et al. 2007.

²⁴ Gallese et al. 1996.

²⁵ See Brincker (2010 & 2012) for an extensive discussion of this “caricature view” and see Gallagher (2007) and Zahavi (2008) for critiques of the simulation part.

²⁶ For a dissection of both monkey and human data see also Brincker (2010).

take the perceptual context into account. Further, this lends tentative support to the hypothesis that modes of presentation like images not only has different affordances, but affords a sort of a ‘halt’ to our own ongoing environmental interactions. Most mirror neuron research has ignored the dynamics of such affordances, which is obvious as fMRI and behavioral paradigms typically use perception of images as experimental stimuli and yet generalize their conclusions as being about perception in general. However, from an affordance standpoint perception of action as image content does not afford the perceiver an overt complimentary response beyond simply watching what is being presented.²⁷ I propose 1) that sensorimotor circuits normally dynamically integrate own action plans with the overall perceived action affordances, and 2) that they in the case of image perception, where own action plans are halted due to the asymmetry of presentation, show a tendency to ‘mirror’, i.e. channel the implied and actual actions perceived rather than engaging with them. This hypothesis has now been indirectly supported by several studies exploring more interactive and competitive experimental paradigms, which clearly shows a much more complex response²⁸ than the more mirror-ing response found using more imitative affordances.

d. “Edge of action” helps induce beholding-beheld asymmetry

Thus, these neuroscientific considerations indicate that our motor responses vary according not only to perceived content but to broader practical contextual features. This is important, as my hypothesis is that there are aesthetic affordances, which invite a disengagement of action response or “non-goal-directed attitude”. Notably, most artistic media (images, sculptures, stages, writings, recordings etc.) seems to invite asymmetric, non-interactive modes of perception, in that the beholder perceives the beheld

²⁷ Brincker (2010, 2012), note that if images afford ‘non-engagement’ then the paradigm of using images to look for mirror responses has a rather problematic inherent ‘imitation bias’.

²⁸ Newman-Norlund et al. (2007), Fuljii, Hihara & Iriki (2007) & Sartori et al (2011).

but not the other way around. The further suggestion is that this asymmetry and lack of reciprocity in the aesthetic affordances precisely invites a different kind of engagement. Artworks thus typically brings us to an “edge of action”, an affordance of perceptual engagement but yet non-action, which opens up possibilities for using our minds – and brains – in ways we do not in our regular practically engaged modes of perception.²⁹

This ‘edge of action’ can also be seen in aesthetic engagements with non-artworks. The typical contexts of aesthetic moments in nature are remarkable. How often is it when we reach the top of the mountain, the edge of the cliff, the border of the water that we see the beauty of the landscape – which arguably also was in front of our eyes moments before? Similarly, environments, which have been rendered “un-actable”, such industrial decay, or micro-/macroscopic images of the unreachable all seem to invite aesthetic attention. This might also play into artistic choices in installation and performance art for example. Danto talked about the “transfiguration of the common place”,³⁰ and the fact that Duchamp – consciously or not - decided to turn his urinal upside down can be seen as an important aesthetic affordance.

Thus, aesthetic affordances of non-interaction are key to the establishment of an embodied aesthetic stance in the observer. However, it is crucial to note that such affordances are neither necessary nor sufficient for aesthetic engagement: e.g. we daily look at images with goal-directed eyes, and often take an aesthetic stance towards practical objects. Take looking at an apple. We see it in the fruit bowl, want to eat it, and go

²⁹ Interestingly in this context, much contemporary theater and performance art purposefully “break the 4th wall” and precisely demand audience participation. Marina Abramowich’s “the artist is present” is a good example, where members of the audience were invited to sit silently face to face with the artist – thus invited *into* the artwork. However, other layers of traditional asymmetric framing properties were kept in place; larger audiences were classic beholders “outside” the artwork, and the inaction of “sitting silently” can be seen as an instructional “edge of action”. However, breaking the 4th wall means that the beholder to some degree simultaneously becomes beheld and the artwork therefore includes psychological reactions as a part of its content – but maybe many traditional works does as well.

³⁰ Danto (1974). With the idea of aesthetic affordance to halt habitual and goal-directed action his famous dictum can be seen in a new light.

a head with a ‘grab-to-eat’ motion. Then the motion is arrested as e.g. inner distraction allows a sight of how the light catches the colors of its skin. We pull back in an aesthetic glance at the apple – before proceeding to eat it. The ‘edge of action’ here seems to be reached not so much by the contextual frames as by the interaction between salient visual properties and inner occupations such as a daydreaming mind.

In brief, I have focused on the role of ‘edges of action’ as a set of contextual affordances for establishing an aesthetic stance. Such concrete aesthetic affordances have been generally ignored. However, there are other external and internal key aspects of becoming a beholder.

e. The role of “the other” & the relation to vulnerability & appraisal

Introducing the idea of aesthetic experiences as typically happening on “the edge action”, I drew attention to “non-art” aesthetic experiences of e.g. a sunset or an apple. What is interesting about both artworks and other artifacts (the abandoned building, a painting by an elephant, or a bench with a view) is that there is a concrete or abstract other that often is physically absent yet present in the experience. Many aesthetic theorists have sought to use the role of the artist, designer, aesthetic community, institution etc. and their actions, intentions and emotions for understanding what art is.³¹ Again, I shall not pre-define but rather allow a heterogeneous role of the other in aesthetic experiences. However, in specific cases this need not be an unstructured nor empirically impenetrable heterogeneity. I hypothesize a dynamic interplay between the beholder’s specific consideration of the virtual other(s) for the concrete psychological processes of appraisal and also the feeling of vulnerability in letting the artist as other in. Further, the other is not only present ‘behind’ the aesthetic object, but also as ‘co-

³¹ Collingwood (1958), Dickie (1974), Danto (1981). For a recent empirically minded intentional theory see Pignocchi (2012).

beholder', and I propose that the dynamics of this social influence again depends on the concrete affordances of the specific social relation, the actual or virtual presence etc.

In ordinary face-to-face interactions there is a constant demand to plan and execute reactions as we are seen by the other. But if beholding involves an asymmetry of interaction, a halting of goal-oriented navigation, then this might allow us to open ourselves to an otherwise difficult intimacy with the perceptual experience and virtual other. In other words, the aesthetic stance predicts a potential for vulnerability and depth of subjective involvement in aesthetic experience. In the aesthetic stance we can allow ourselves to be moved and - as we have seen above - this influence of the beheld on the beholder can to a large extent be sensorimotor, emotional and happen outside of voluntary control.

I propose that the psychological process of appraisal might play a role as a defense mechanism and gatekeeper of how far we will let ourselves be invaded by the aesthetic object or experience. When the other is out of sight - say at a desolate waterfall - we might still engage in appraisal processes of just how beautiful or meditation inducing this water is (possibly intensified by a guidebook or an Instagram). But my claim is that the way the other is present dynamically modulates appraisal. It would thus be odd to judge a painting by a toddler or by said elephant with the same critical fervor as applied at the MoMa. We need not strictly demarcate 'art' or 'the Art world' to make sense of these differences - to the contrary that would erase the details of social influence and of borderline cases. When the elephant painting doesn't pretend to be anything but just that, how could it harm us? In a museum or a concert hall there is an underlying sense that one might be in front of a pinnacle of human civilization. Along with the ticket price this urges the question: is this truly good? Am I enjoying it? Am I impressed? Should I be? etc. In brief, artworks that claim to be something affords their beholder to appraise that exact claim.

The role of the other is a big issue. My point is merely to draw attention to how - given the dynamic aesthetic stance framework - one can discuss the issue in new ways.

f. The question of beauty – and other perceptual attractors

In art theory the once so central question of beauty has become increasingly marginalized due in part to the acknowledgement that lots of important artworks do not aim at beauty. However, the neuroscience of art is still preoccupied with the experience and appraisal of beauty. So much so that neuro-aesthetics in a recent review simply is defined as a field “concerned with the neural underpinnings of aesthetic experience of beauty, particularly in visual art”.³² This narrow definition is not universally shared, but issues of beauty along with other questions of preference and emotional impact etc. has indeed guided much research. This discrepancy between the practice of neuroscience and that of artists and theorists does seem to highlight a lack of productive interdisciplinary communication. Under a dynamic approach, beauty can be hypothesized as a powerful aspect of how we are brought into and maintain the aesthetic stance. But beauty is not the only factor for emotional perceptual judgment, nor the only route to the aesthetic stance. Accordingly, the aesthetic powers of beauty - and ugliness – can be acknowledged without narrowing the scope of the aesthetic.

Zeki and other neuroscientists often seem to treat judgments of beauty or the broader appreciation responses (like/don't like) as the endpoint of an aesthetic experience. On the aesthetic stance frame beauty and appraisal are seen primarily as part of the processes bringing us into, trusting and maintaining certain aesthetic experiences. We can thus also have non-beautiful aesthetic experiences though these might rely other emotional attractors and/or top-down processes of maintaining the experience. The process of sitting through a Lars von Trier movie, and other cases where artists deliberately make their audience uncomfortable, can exemplify this. The beholder's decision to stay

³² Di Dio & Gallese. (2009).

does not here hinge on beauty but on e.g. whether trust is abused in a non-abusive way, i.e. whether the experience gives us something worth keeping – worth beholding.

g. The ethical and political force of aesthetics.

The issues of the other, vulnerability, trust and abuse thereof, all alert us to another aspect of aesthetics that is rarely dealt with in neuroscience: namely, the ethical and political relevance, power and responsibilities of this area of human social interaction.³³ From the perspective of the aesthetic stance some of the main questions to be explored is the relationship between the ethical responsibility of the artist and institutions given the psychological impact of aesthetic experiences. The dangers, powers and consequences of propaganda, political art and also of manhandling popular art would be valuable to explore with the tools of neuroscience. In respect to the later, a recent study showed that typical Hollywood movies determines both gaze and broader brain response to a much larger degree than for example art movies or unedited clips of natural scenes.³⁴ Hence, the systematically different affordances of the movie styles yielded rather different patterns of neurological response - and presumably experiences. Strong visual attractors seem to micro-manage brain involvement whereas more open aesthetic affordances offers room for personal involvement. Such empirical findings might inform “high-art/entertainment” discussions and possible responsibilities of funding and promoting junk-imagery in public spaces.³⁵

³³ There are some studies showing shared neural correlates of judgments of beauty and moral goodness (Tsukiura & Cabeza (2010). This neuro-aristotelean finding deserves further exploration, along with the correlation found between reward, motivation and beauty, love and OCD. (Aron et al. 2005).

³⁴ Hasson et al. (2008).

³⁵ This also challenges the idea of universality in Ramachandron’s visual attractor based principles.

Why a new framework?

I have now discussed a series of dynamically interconnected inner and outer contextual aspects of aesthetic experience, which I see as pivotal for understanding how we become aesthetic beholders. Some outlined dynamics of aesthetic experience have likely gone unnoticed due to the kind of modular and non-contextual assumptions of many researchers in neuroaesthetics and cognitive neuroscience in general. A model of aesthetic appreciation and judgment presented by Helmut Leder and colleagues can illustrate this issue (fig 1)³⁶ They should be lauded firstly for taking on the daunting task of actually visualizing the process, and secondly for including a wealth of interesting observations and plausible aspects relevant to the overall aesthetic experience in their model.

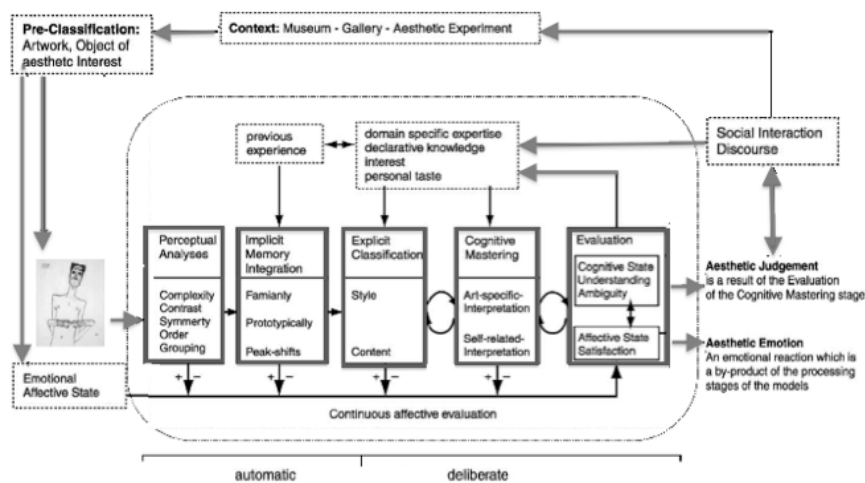


Fig. 1. Model of aesthetic experience (Leder et al. 2004, based on model by Helmut Leder).

³⁶ Leder et al. (2004). Many warm thanks to Helmut Leder for his generosity in providing a figure structurally similar to the model of the original 2004 publication.

Their proposed model shows five separate stages of cognitive processing supporting aesthetic experience, from basic implicit low-level perceptual analysis (automatic) to more explicit and top-down problem solving and evaluative processes informed by prior knowledge (deliberate). Parallel emotional influences are shown to influence these stages and external contextual and social influences are shown to modulate the aesthetic input and output. I agree that these factors are important for aesthetic experience.

However, implicit in the model is an assumption of information processing, i.e. that the mind is a modular machinery, which goes from perceptual “inputs” (artwork + contextual factors) through a pre-set series of independent stages towards a set of “outputs” (“aesthetic judgment” & “aesthetic emotion”). This is clearly a simplified and non-literal model, but the question is whether the inherent cognitive structure is misleading.

The core question is whether the model’s ‘one-size fits all’ structure of pre-set serial input-output stages limits the possibilities of dynamic interaction in concrete contexts, which I have suggested is crucial for understanding how we become beholders in the first place. Such dynamics would indicate that the very idea of itemized ‘inputs’ and ‘outputs’ is inherently problematic. In terms of ‘inputs’, the distinction between the aesthetic and non-aesthetic hinges in this model on a pre-classification-box, which is influenced by context, but unrelated to the perceivers embodied engagement.

In terms of ‘outputs’ the proposal is here 1) an emotion and 2) an explicit and sharable judgment. But this itemization seems to obscure the notion that aesthetic experiences matter because they literally move and transform our embodied engagement and minds. The verb ‘to behold’ also means ‘to keep’ (German ‘behalten’). The metaphor of beholding is thus not just about perceptual consideration but additionally involves a temporal holding – that somehow make it possible to “take in” what is perceived. If we literally let aesthetically considered objects in, then that informs the seeming vulnerability that is part of becoming a beholder. I proposed that appraisal in aesthetic experience might be tightly connected to vulnerability and function as a defense mechanism.

However, these dynamics of change and embodied moves to explore, approach and avoid certain artworks are difficult to express in this sort of schematic.³⁷

My proposal is that we need a new model structure – one that allows us to study the inner and outer contextual and embodied dynamics of becoming a beholder. Thus, in the apple eating-beholding example above, one might ask whether there are two different kinds of perceptual processes going on and how these dynamically relate to contextual factors and embodied responses and attitudes. If so then we need to include such dynamic influences in our models already at the level of perception of object features.

An example: Joshua Bell & the morning commuters

The problem of isolating aesthetic stimuli in the lab can be elucidated by a not very scientific but nonetheless ingenious experiment by Gene Weingarten of the Washington Post. He enrolled famous violinist Joshua Bell, who normally plays at sold-out grand concerts, to play Bach incognito at a DC subway station in the morning rush hour. Bell played for 45 min for about 1000 passing morning commuters. How did people react to these “pearls before breakfast” as Weingarten entitled the ensuing article? Leaving out the interesting details, the short answer is that most hardly reacted at all!³⁸ Passer-bys must arguably have perceived some chunks of the music in that it was physically audible, and yet it seems many failed to listen in an aesthetically involved sense. Many might have sensed an appeal of the music but yet in their morning mindset failed to get engaged by the unknown street musician on their busy path. One might suggest that various passer-bys who listened were beholders for divergent reasons and to different

³⁷ On the Leder model change is indicated by arrows leading to the boxes in the top row of knowledge & prior experience, which then can inform other aesthetic experiences, but the perceptual process seem insulated from such interactions.

³⁸ Weingarten, G. (2007)

degrees, and that their experiences – and the neural correlates thereof – differentiated accordingly.

The point of this example is that these sorts of dynamic differences cannot be studied by flashing 4s images to passive perceivers in scanners. In other words, by relying on pre-classifications and highly stereotyped perceptual scenarios many typical experimental paradigms of neuro-aesthetics ignore questions of when, how, under what circumstances and with what effect we become beholders. My claim is that without a more dynamic and temporal framework questions about aesthetic experiences such as why they matter, and why can we feel vulnerable, touched or violated by such – cannot be explored experimentally.

The aesthetic stance hypothesis

The aesthetic stance can now be sketched as a theoretical framework.³⁹ The main purpose of the framework and the “aesthetic stance” notion is to theorize the temporal and dynamic process of becoming - and ceasing to be - an aesthetic beholder.⁴⁰ Further, it is the ambition to do so in an empirically applicable way. Some of the core ideas of the aesthetic stance are firstly that being a beholder means that we temporarily let go of our regular practical and goal-directed stance. Secondly beholding is thought of as an em-

³⁹ Jesse Prinz has recently and independently developed an “aesthetic stance” notion (Prinz, 2011), in relation to a discussion of when films count as art. His ideas have some similarities but are importantly differentiated from the present view in that the stance is thought of as a psychological state. He writes; “I use the phrase “aesthetic stance” to refer to a psychological state in which aesthetic principles are recruited in the evaluation of a work. Elsewhere I argue that aesthetic principles are basically triggered from aesthetic emotions: some features elicit these emotions in us.” In contrast my use of the notion hinges on actual embodiment and is used to stress the contextual & temporal dynamics of aesthetic experiences.

⁴⁰ To my knowledge there are no other theories of how an aesthetic experience begins/ends, nor of the dynamics of how & when they are engaged/disengaged.

bodied equilibrium and as a contextually sensitive process of varying characteristics, degree and intensity. Overall I hypothesize that aesthetic experiences are indeed a special subset of perceptual experiences, but distinguished through these relative dynamic relations rather than object features and attitudes alone. Based on the core aspects of the dynamics of the aesthetic stance covered in previous sections, we can put together a preliminary model and rough list of hypothesized influential elements and candidates for further empirical exploration.

Key aspects in the dynamics of the aesthetic stance (see fig. 2):

- A. A dynamic opposition between a practical and an aesthetic stance and accordingly opposed modes of brain function.
- B. Aesthetic affordances
 - 1. “Edge of action” affordances invites a pause & executive action halt
 - 2. Salient stimuli properties & perceptual attractors (universal, personal and situated) as effective in grasping attention as well as maintaining it.
- C. Vulnerability and openness of the perceiver – linked to lack of goal-directed attitude in regards to action planning.
- D. The role of appraisal and taste as a gatekeeper and defense mechanism – needed as ballast to counter openness.
- E. The role of “the other” – and its relation to appraisal, vulnerability & engagement.
- F. The specificity of encounters; the aesthetic stance, incl. low-level physiological & emotional responses vary with context, experience & style of presentation.

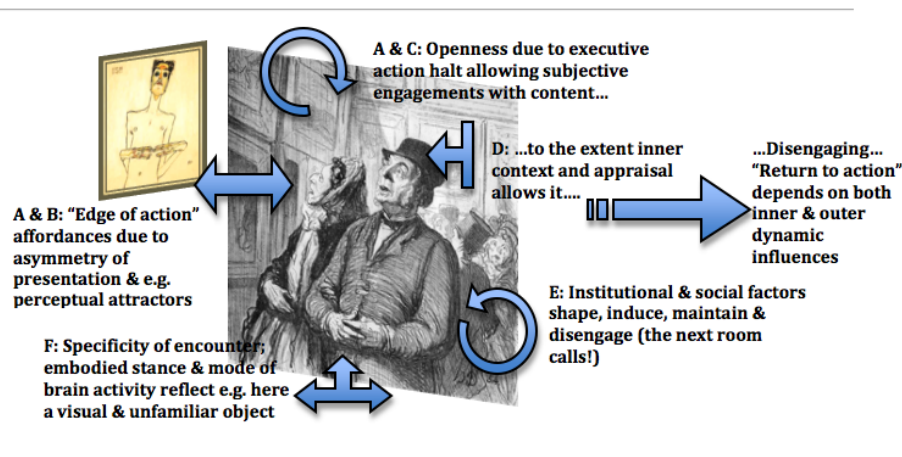


Fig. 2. Time slice of an 'aesthetic stance' equilibrium – Daumier meets Schiele⁴¹

To further understand this model I will try to clarify some points about the dynamics that it attempt to capture and how it compares to previous theoretical models and proposals.

Firstly, as mentioned when discussing the Leder model it is helpful to see this aesthetic hypothesis as a part of a larger dynamic conception of the mind, compatible with various versions of the embodied mind hypothesis.⁴² The key dynamic features to be stressed here are the following:

1. *External affordances* of the perceptual event as well as the embedded cultural framings can change the experiential process and the 'inner context' of the perceiver.
2. The *inner* psychological & neurobiological context i.e. current moods, practical tasks and embodied rhythms, motions and emotions of the perceiver shape not

⁴¹ Artworks in Figure 2: Honoré Daumier, *Dimanche au Musée* and Egon Schiele, *Mime van Osen mit aneinandergelegten Fingerspitzen*

⁴² Without general consensus on a positive theory of the embodied – and dynamic, contextual and social - mind, this article should be seen as contributing to a new model rather than as simply agreeing with one of the formulations already out there. See e.g. Varela et al (1992), Johnson (2008) or Di Paolo et al. (2010).

only the perceptual experience but also the very process of the perceptual engagement.

3. These multidimensional aspects dynamically *interact over time*, in a concrete bodily space. Meaning e.g. that the mere absence of an influence can enhance the influences of other causally relevant features.

Secondly, my take on ‘disinterestedness’ is not one of emotional detachment, but simply a letting go of a goal-directed attitude. It is a negative parameter that allows for a cascade of consequences. When we navigate and perceive the world through active action, there seems to be little room for aesthetic involvement. I propose that the aesthetic stance precisely represents a momentary denial of the practical attitude, a pause in the flow of hierarchical action planning, which is crucial in allowing aesthetic absorption and depth of experience. The “detachment” from action thus is not meant to preclude emotional involvement but rather promotes a receptiveness, where the pause of in action allows the experience to play with our emotions, sensorimotor resonance and potentially with our memories and imagination.⁴³

Thirdly, the label “aesthetic stance” is purposively embodied and causally multidirectional – it is meant as a stance in the sense of being an active and physical bodily positioning and psychological attitude, and yet responding to and embedded in environment affordances. One way of getting at this Merleau-Pontian chiasm is to say purported ‘top-down’ and ‘bottom-up’ processes intersect already in the body and in the extended meeting of perceiver and context.

Fourthly, as I see aesthetic experiences as shaped contextually, and many emotional and embodied responses are hypothesized to take place involuntarily and below awareness, I accordingly oppose an exclusive focus on top-down voluntary control of the aesthetic attitude. This is important given e.g. Schopenhauer’s idea of ‘willful aesthetic de-

⁴³ I have referred to findings of sensorimotor responses, and to how there might be ‘more room’ for the perceived event to ‘fill’ our sensorimotor circuits when no reaction is afforded. Such “space for involvement” might however also be found in relation to other brain circuits, e.g. supporting memory process, as discussed below.

tachment'⁴⁴ and similar current proposals. An interesting comparative example here is the approach of Gerald Cupchik. Cupchik has contributed abundant and incredibly historically informed theoretical and empirical work, and he even empirically explores the aesthetic attitude as hinging on “psychological distance”. He suggests, like me, that there is an opposition between the aesthetic attitude and more pragmatic relations to perceived objects. However, his conception of how we assume the aesthetic attitude seems to follow the view of Schopenhauer, i.e. he sees it as a rather explicit and voluntary process seemingly on the side of ‘top-down’ cognitive influences. He thus contrasts the aesthetic attitude to a “strong and automatic”⁴⁵ inclination to assume a practical object oriented attitude, and thus seems to preclude that aesthetic involvement can be contextual or automatic.⁴⁶ As opposed to Cupchik my aesthetic stance hypothesis is not assuming a mental attitude, but applies to the temporally extended physiological processes by which aesthetic experiences are established and also dismantled again. Note, that this is not to say that voluntary mental attitudes do not play into the dynamics of aesthetic experience. Rather, I claim such explicit attitudes are insufficient to understanding the manifold of aesthetic experiences and their complex temporal and embodied evolution through ‘inner’ and ‘outer’, ‘top-down’ and ‘bottom-up’ influences.

Lastly, it cannot be stressed enough that under a process-oriented framework aesthetic experiences need not be ‘all-or-none’. Rather, an analysis of the aspects contributing to specific experiences could be used to elucidate rather than eradicate borderline cases and their respective temporal and contextual structure.⁴⁷

⁴⁴ Schopenhauer, *The World as Will and Representation*.

⁴⁵ Cupchik 2009, p. 84. See also 2002 article on psychological distance, which gives a great historical introduction.

⁴⁶ Cupchik picks a paradigm where “object recognition” is contrasted with a focus on color & style. These instructions yield a contrast of content exploration but ignore the larger embodied contextual dynamics and don’t seem to get at the core differential of the aesthetic and the action-oriented.

⁴⁷ I am actually not opposed to the idea that all perceptual experiences are aesthetic to some minimal degree. However that broader story must be told elsewhere.

Future directions of the aesthetic stance

Very well you might say, but how do we apply this to neuroscience? The effort to make these aspects explicit is as mentioned intended to facilitate the use of the framework in empirical studies, which then further can test, correct and develop the ‘Aesthetic Stance 1.0’. An area that could serve as a first meeting ground for the aesthetic stance approach and neuroscience is the study of the brain’s ‘large-scale networks’. I shall conclude by looking at some of these findings of broad network interactions. First because they seem to support the general idea of dynamic and contextual brain functions, and more specifically my ideas about the implications and conditions for becoming a beholder, and how it contrasts with the goal-oriented action mode. But also because these findings help us pose new fascinating – and yet empirically tractable – questions.

a. The dynamics of large-scale brain networks

Although Hans Berger found activity in the resting brain already in the 1920’s, the discovery had little impact⁴⁸ though until about a decade ago due to findings by e.g. Marcus Raichle and colleagues.⁴⁹ They confirmed the high baseline activity during awake rest, and further that this far from random activity relies on an extensive and

⁴⁸ Ideas of large-scale activity were advanced by several scientists already in the 70’s such as Freeman, Edelman and Mountcastle for example, and for precursors in the 90’s see Bressler et al. (1995).

⁴⁹ Raichle et al. (2001) A default mode of brain function. *Proc. Natl. Acad. Sci. U. S. A.* 98, 676–682.

highly coordinated network of areas. The network – due to its correlation with rest - became known as the brains ‘default mode network’.⁵⁰ Interestingly the network was thus defined negatively; as pertaining to the brain function when not engaged in any explicit task or action. It has since been found that this network of areas is involved in various memory and social tasks as well as in self-referential thought and reward evaluations over time.⁵¹ Due to these later findings an overall ‘mental time travel’ function has been proposed, i.e. projection of oneself into non-current or imagined contexts.⁵² This hypothesis fits well with the networks lone activity in the absence of a task or present ‘affordances’ to navigate.⁵³

Two additional core large-scale networks have been discovered through analyzing the brains intrinsic connectivity.⁵⁴ The ‘executive network’ pertains to top-down control of action and cognitive tasks involving working memory, and its activity has been found to consistently impose a deactivation of the default network and vice versa.⁵⁵ The so-called ‘salience network’ is thought to play a critical role in the detection of salient and valuable stimuli, and has recently been shown to play a crucial role in this opposing switching between the default and the executive networks as a response not only to external stimuli but also internal homeostatic needs.⁵⁶

⁵⁰ See Buckner (2008) and Bressler & Menon (2010) for an overview of the basic findings.

⁵¹ See for example Hassabis & Maguire (2007) and Bar (2007)

⁵² Buckner & Carroll (2007)

⁵³ For intrinsic/extrinsic distinction see Gollard et al (2007). Brincker (2010) argues that fronto-parietal areas track the current affordance space and integrates this with prefrontal action planning. The default system by contrast might represent thoughts not under current practical navigational control - be it with actual limbs or e.g. mathematical moves in abstract space. There could thus be many scenarios where the default system contributes to ongoing perceptual tasks – namely when non-present affordances can inform the navigation. For tentative support this hypothetical idea see e.g. Gerlach et al. (2011).

⁵⁴ These are unlikely to be the only large-scale networks, but more complexity here is beyond my present scope.

⁵⁵ Raichle et al. (2001) Buckner (2008) & Kelly et al. (2007).

⁵⁶ Particularly the right fronto-insula region seems to be crucial in the switching process. See Seeley et al. (2007), Sridharan et al. (2008), Corbetta & Shulman (2002) & Callejas et al (2005).

b. Brain dynamics meet aesthetics

The seemingly mutual counter actions of the executive and the default network and the role of inner and outer salience for their dynamic switching are extremely noteworthy given the hypothesis of aesthetic beholding that I have proposed. It looks like preliminary neuroscientific support of the Kantian idea that a non-practical mode (switching off the executive system) is necessary for aesthetic involvement in the form of “free play of the imagination”(default system). How does this work? One might jump to the idea that aesthetically salient stimuli features (salience network) might switch off the executive network and switch on the imagination, aka the default network, and voila aesthetic experience! However, the great thing about biology is that findings always prove more complicated than theories. Recent studies in this young field of research suggest that, even though these networks are anatomically distinct and consistently show mutually exclusive spontaneous action during rest, some sub-areas – or ‘nodes’ – seem to be functionally connected during various complex real life tasks.⁵⁷

A recent study by Nava Rubin’s lab explored the relationship between the intensity of subjective experiences of visual artworks and regional brain modulation.⁵⁸ Interestingly, they found that the artworks, which were rated as moving subjects most intensely, irrespective of perceptual features,⁵⁹ activated several areas within the default system, whereas less emotionally intense experiences failed to produce any default system activity. Similar step-like activations for only intensely rated experiences were found in certain sub-cortical areas within the salience network. These findings are fas-

⁵⁷ Leech et al. (2011), Christoff et al. (2009) & Harrison et al. (2008). See also footnote 43.

⁵⁸ Vessel, Starr & Rubin (2012)

⁵⁹ There was such a great variability in the ratings that each image that by some was given the highest rating was also by others given the lowest, which when one compares results by way of ratings then controls for the effect of the perceptual qualities of individual images used. See Vessel et al. (2012)

cinating from the perspective of the dynamics sketched above, and invite new questions about appraisal and the role of the subjective relevance of artwork not only for intense emotional aesthetic experiences but also for salience and emotional engagement in low-level perception. I earlier contrasted a dynamic framework to more modular models of aesthetic experience. Here we see evidence that subjective variability interacts not only with the appraisal as an “output”, but with which brain network gets involved in the aesthetic experience in the first place. Further, the study raises questions, e.g. about the ‘not so intense’ artwork experiences, which were found to not modulate the default system at all, and about the general role of appraisal in dynamically shaping the experience and its neural underpinnings.

Given the aesthetic stance we can understand these dynamic findings as enriching the basic framework and the new questions they raise seem to be empirically tractable. To test the core aesthetic stance hypothesis we need for example a better understanding of the interaction within and between large-scale networks in response to different viewing contexts, prior knowledge etc. Further, it is crucial to understand the role not simply of the executive system as a whole, but whether the top-down control of action – i.e. the executive influence specifically on the parietal areas of perceptual and spatial navigation – is inhibited during aesthetic experiences. It is compatible with my hypothesis that parts of the ‘executive system’ play a role in appraisal and top-down attention modulation. Findings in this area could also help us understand the precarious relation between intimacy, vulnerability and the idea of appraisal as a possible gatekeeper. Similarly, one could ask whether beauty – as often assumed – is tied to the hedonic *outcome* of aesthetic appreciation, or as I have speculated above also could play a ‘salience network’ role in *engaging* and *maintaining* an aesthetic stance along with other emotional “perceptual attractors”⁶⁰. Another hypothesis to be explored empirically is whether the affordance structure of the environment plays a role in inhibiting or

⁶⁰ See here the contrast to the discussed ideas of Zeki, Ramachandran & Leder.

promoting a goal-directed attitude and thus the likelihood of aesthetic involvement. Overall, the frame of large-scale networks along with the aesthetic stance hypothesis could help us reinterpret many past neuroaesthetic findings that have been produced under more modular paradigms.⁶¹

In conclusion, I have outlined an “aesthetic stance” model, which is a dynamic and embodied framework for an empirically minded study of aesthetics. I have pointed to various empirical and phenomenological observations that support each of its aspects. However, I have also purposively opened up more cans of worms than I can close again, and the aim of this piece is to call for interdisciplinary engagement. I pointed to theoretical limitations in current neuroaesthetics, but also to tools for overcoming these. More specifically I call for more attention to dynamic, contextual, social and temporal aspects of both aesthetics and brain functioning.

⁶¹ As long as one studies the fine print of the method sections and uncovers the implicit assumptions of the paradigms used it is a true that the data does not lie.

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