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## Science-Art: Neuronaturalism Beyond the Decentred Spectator

### Abstract

Science-art collaborations are a growth area. An example is the Wellcome Collection exhibition “States of Mind”. I focus on one work *yellowbluepink* by Ann Veronica Janssens. As framed within the exhibition this piece is understood to present a model of spectatorship in which the art-encounter prompts an awareness of the possibility of neuroscientific self-understanding. I take it that science-art projects want to spread this celebration of “objective thought”; this is their realist agenda. The scientific framing of *yellowbluepink* fails in this regard because of a striking contradiction at its heart. The dominant art historical interpretation of this piece includes a spectator who is “decentred”, unable to know him or herself. This contradiction creates a methodological problem for the project, one that negatively impacts its ability to ambitiously promote its agenda. On the basis of this analysis I sketch out the conditions for an ambitious project. It would need to acknowledge the “artworld” and it would require the invention of a new model of spectatorship, one that promoted (self)-awareness of humankind’s impressive epistemic capacity. This anti-phenomenological figure is formulated with reference to the nemocentric subject.

### Key words:

Art; Ann Veronica Janssens; Neuroscience; The Nemocentric Subject; Ray Brassier; Realism; The Decentred Spectator; Rosalind E Krauss; Maurice Merleau-Ponty; Phenomenology

## Introduction

Science-art collaborations, hybrid projects combining scientific ideas and contemporary art, are increasingly visible: they have a burgeoning cultural currency.<sup>1</sup> In the UK, the popularity and profile of the Wellcome Collection's exhibition programme exemplifies this trend. These shows are one component of the extensive public engagement strategy employed by the Wellcome Trust, a London based biomedical research charity.<sup>2</sup> This article focuses on one Wellcome Collection exhibition, more specifically, one particular artwork, *yellowbluepink* by Ann Veronica Janssens, a dramatic experiential installation incorporating dense mist and coloured light, as it was framed within the exhibition 'States of Mind: Tracing the Edges of Consciousness'.<sup>3</sup> Wellcome Collection described the show as bringing together "perspectives from artists, psychologists, philosophers and neuroscientists to interrogate our understanding of the conscious experience".<sup>4</sup> In this context Janssen's installation was framed by, or aligned with, scientific ideas; not exclusively scientific notions, it is true, but these were very much to the fore. This is evinced by those writings that contextualised *yellowbluepink*, especially a piece by neuroscientist Anil Seth, which I shall quote from and interpret anon. My article reads this contextualisation, or framing, as attempting to – in part – engender spectators of *yellowbluepink* to interpret their conscious experience of the work in a manner that is sympathetic to science. What I mean by this is that scientific knowledge is taken by the spectator to provide legitimate explanatory material, i.e. looked upon sympathetically. This material is thereby incorporated by the spectator into her interpretation of the experiential encounter with the work. In this reading, speculative explanations of the encounter are sought in, or aligned with, scientific knowledge.

This type of interpretation, I will argue, is premised upon a spectatorial recognition that objective knowledge is possible. More specifically, I shall claim that *yellowbluepink* vis-à-vis "States of Mind" aims to prompt an awareness in its spectator of the *possibility* of neuroscientific self-understanding. (This statement shall be further explained in the next section of the article.) I do not see this "framing" or "engendering" as problematic, some suspicious attempt to direct or determine the art encounter, one that some might desire to be entirely open-ended. Rather, I view this contextualisation of *yellowbluepink*, and the production of interpretations in sympathy with scientific knowledge, as part of a laudable effort by Wellcome to engage the public, to spread enthusiasm for, and literacy in, scientific knowledge.

That most science-art projects are involved in this engagement agenda, or soft-promotion is – I think – not a controversial claim. For instance, the Wellcome Trust publishes reports online about its ambitions on this front. One states that the organisation aims to create a situation in which 'the public can engage in informed debate with scientists' and that it intends for "[t]he public [to] value science."<sup>5</sup> It is clear that the Trust desires

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1) Several recent publications cover the subject. For instance, see, Stephen Wilson, *Art + Science Now: How Scientific Research and Technological Innovation are Becoming Key to 21st-Century Aesthetics*, (London: Thames & Hudson, 2010); and, Arthur Miller, *Colliding Worlds: How Cutting-edge Science is Redefining Contemporary Art* (New York: W. W. Norton & Company, 2014). That Central Saint Martins now offers a postgraduate qualification titled 'MA Art and Science' further evidences this topicality. See: "MA Art and Science," Central Saint Martins, Course Summary, accessed 20 July 2017, <http://www.arts.ac.uk/csm/courses/postgraduate/ma-art-and-science/>.

2) See: "Public Engagement Team," Wellcome Trust, accessed 20 July 2017, <https://wellcome.ac.uk/what-we-do/teams/public-engagement-team>.

3) Janssens' installation ran from 15 October 2015 - 3 January 2016. The "States of Mind" exhibition, of which *yellowbluepink* was one component, concluded in October 2016.

4) "States of Mind: Tracing the edges of consciousness," Exhibitions, Wellcome Collection, accessed 8 November 2017, <https://wellcomecollection.org/exhibitions/states-mind-tracing-edges-consciousness>.

5) Alison Dunn and Robin Vincent, *Engaging Science: Evaluating Public Engagement in the Wellcome Trust's UK Centres*, Wellcome Trust, accessed 20 July 2017, [https://wellcome.ac.uk/sites/default/files/wtp059889\\_0.pdf](https://wellcome.ac.uk/sites/default/files/wtp059889_0.pdf), 6.

to promote scientific understanding, that which can facilitate “informed debate”, and to do so via exhibitions (as well as the many other means of engagement at its disposal). Whilst there isn’t the space here to offer a full survey of science-art projects and their ambitions, I can draw attention to a recent article for the online photography magazine Photo District News titled *The Rise of Science-focused Artist Residencies – and How to Take Part*. This piece is full of enthusiastic statements by figures such as Valentine Kass, the program director of the Berkshire Museum. Speaking of the National Science Foundation’s Antarctic Artists and Writers program, she states that it is “a way to increase the public understanding and appreciation of the Antarctic and the importance of the scientific work going on there”.<sup>6</sup> Again, artistic endeavour is the mechanism for a soft-promotion of scientific ideas.

In addition, as is implicit in some of my statements above, I understand this engagement agenda to be based on an understanding of science as realist; I shall, therefore, name science-art’s ambition on this front its “realist agenda”. To view science as realist; is to understand it to be able to make tractable yet revisable claims about the world as it is. This perspective is the one held by most practitioners of science, either explicitly or tacitly, and indeed, I would argue, by the general public.<sup>7</sup> This realism differs from the constructivist understanding of science, which is entirely sceptical about the possibility of conceptualising the “in itself”.<sup>8</sup> When I say that science-art projects are involved in a soft-promotion of scientific literacy, I understand this knowledge to be realist, ergo science-art has realist agenda.

Another characteristic of the realist account of science is that it is understood as providing insight into aspects of reality, microphysical, or otherwise inaccessible that cannot be encountered via unaided experience. Conceptual rationality is taken here to be the mechanism by which the limitations of our ‘manifest image’ of the world are transcended, thereby enabling fuller accounts of the real. Later, I draw on Peter Wolfendale to fully flesh out this sketch of rational realism. When I discuss scientific endeavour, activity, or thought in this paper it is rational realism that I have in mind.

It is my contention that science-art’s agenda marries-up well with a new realist mood within the humanities. As is evident in the following quotation, this topic is undergoing a renewal in philosophy (as well as those disciplines such as contemporary art that keep an eye on philosophy), “Realism and materialism have become important watchwords in intellectual cultural discourse today”.<sup>9</sup> In the same text the editors present this renewal as a matter of urgency, a question of philosophy’s relevance to, and purchase upon, the biggest questions of our age.<sup>10</sup> I think that this new realist shift, particularly as represented by the philosophy of Ray Brassier and Peter Wolfendale, is significant, and I agree that it has much to offer contemporary intellectual and political life. My article is an attempt to contribute to this milieu. In fact, an allegiance to the philosophical renewal of realism

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6) Conor Risch, *The Rise of Science-focused Artist Residencies – and How to Take Part*, Photo District News, accessed 8 November 2017, <https://www.pdnonline.com/features/industry-updates/rise-science-focused-artist-residencies-take-part/>.

7) As Quentin Meillassoux has said: “One [scientist] does not validate a measure just to demonstrate that this measure is valid for all scientists; one validates it in order to determine what is measured.” Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier (London: Continuum, 2008), 17. To parse his point here, scientists do not think their findings are only of “relativist” interest to humans, true only for us, rather they understand them to have the ability to “track” what is measured, i.e. to provide traction upon the real. In relation to my point about “the general public” I agree with Philip Kitcher when he states that: “[f]ew are born antirealists, and those who achieve antirealism typically do so because it is thrust upon them by arguments they feel unable to answer.” Philip Kitcher, *The Advancement of Science: Science without Legend, Objectivity without Illusions* (New York: OUP, 1993), 131.

8) For an account of, and argument against, several different constructivist theories of science, see: *ibid*, 127–178.

9) Levi Bryant, Nick Srnicek, Graham Harman, eds. *The Speculative Turn: Continental Materialism and Realism* (Melbourne: repress, 2011), 15.

10) *Ibid.*, 3

lies behind my support of science-art, it is, if you like, the normative dimension of my reading of these projects. As per the evidence above I think that these projects do aim to increase scientific literacy, and, as per my commitment to new realist philosophy, I think they ought to do so.

However, whilst I whole-heartedly support the realist agenda of science-art projects it is my sense that not enough serious attention is given by these projects to the choice of artworks that, it is hoped, will carry this agenda. Specifically, these projects often ignore the art historical/theoretical discourses that surround and shape particular genres of art. This inattention causes, or so it seems to me, these projects to “drop the ball” in this regard. Whilst not able to pursue this general criticism here, I will try to prove a more specific point; Janssen’s piece is not an appropriate carrier for a truly ambitious increase in public enthusiasm for, and literacy in, scientific knowledge. What constitutes an “ambitious increase”, in the terms of my argument, is a growth in those numbers of people that are “enthusiastic and literate” that is greater in number than the visitor count for any particular science-art project. This ambitious increase can only be achieved, I argue, by the shaping of values at the level of social discourse.

In the next section I will outline my critique of *yellowbluepink* vis-à-vis “States of Mind” more fully, but, suffice to say, I think the exhibition’s realist agenda would have been better served by a different kind of artwork.

### Framing, Spectating & Contradiction

*Yellowbluepink* was the first in a series of changing installations, one component of the broader show. It comprised a room containing dense mist, accessed via an airlock of sorts. Hidden lights coloured this atmosphere and, as one tentatively navigated the fogged space, these shades shifted in intensity and blended together, creating an all-encompassing and mildly disorienting experience. Visual perception was first frustrated; initially difficult to see two feet ahead, it took a little while to appreciate the scale of the room, to understand its parameters. But this sensory delimitation was often reversed as the white fog suddenly blushed yellow, blue or pink producing sensory overload. Also, other visitors played an important role in the experience as they loomed into and then disappeared from one’s limited visual field.

I have already claimed that “States of Mind” framed the experience of *yellowbluepink* in a particular way. This is not a casual statement, but one of central importance to my argument, in that, I understand the meaning of artworks to be inherently bound-up with interpretational frameworks. In other words, I follow a nuanced “institutional” art theoretical approach, rather than a more essentialist model.<sup>11</sup> The former perspective recognises the human spectator of, for instance, *yellowbluepink* as hard-wired to be experientially disoriented by the installation, but, it supposes that the manner in which this experience cashes out, or is understood by the spectator differs according to the way in which it is discursively framed by socially sanctioned interpretations. The meaning of the art starts with the “material condition” of the work, but it is fully realised in and through these collective interpretations. It follows from this that artworks can accommodate or resist certain interpretations, their particularity yielding or proving unwieldy to one or other discourse. I understand these frames to also often be in competition with one another, and for there to be relations of hierarchy amongst them, so that the more dominant frameworks hegemonise the space of interpretation.<sup>12</sup>

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11) This institutional theory of art is constructed from several sources. Insights taken from George Dickie and Arthur C. Danto are supplemented by resources found in ‘discourse theory’, as described in: David Howarth, Aletta J. Norval, Yannis Stavrakaki, eds., *Discourse Theory and Political Analysis: Identities, Hegemonies and Social Change* (Manchester: Manchester University Press, 2000).

12) *Ibid.*, 14–16

Another important point is that these frameworks include a “subject position” or role for the spectator, and these carry prescriptions about what the spectator is and can do.<sup>13</sup> For instance, the spectator of minimal art under its hegemonic, phenomenologically inflected framing, is supposed, in her encounter with, say, Robert Morris’ mirrored cubes, to gain a heightened awareness of herself as embodied being, one able to bring about (via her movement) and track the changing appearance of the piece.<sup>14</sup> In sum, then, the approach I adopt here stipulates that an understanding of an artwork, its operation, including the role it provides for a spectator needs to proceed via reference to interpretational frames. When I claim, therefore, that the “States of Mind” exhibition frames *yellowbluepink* it is this theoretical infrastructure that is being invoked

The frame provided by “States of Mind” presents *yellowbluepink* as, I think, prompting an insight into human conscious experience as understood primarily, albeit tentatively, by neuroscience. This – ultimately – is the meaning of the work as “desired” by the exhibition. A short text that accompanied “States of Mind”, written by Anil Seth, Professor of Cognitive and Computational Neuroscience at the University of Sussex, exemplifies the show’s realist framing of *yellowbluepink*. It is worth quoting at length.

Though largely sidelined during the 20th century, the challenge of revealing the biological basis of consciousness is now firmly re-established for our times. Janssens’s piece reminds us of the important distinction in science between being conscious at all (conscious level: the difference between being awake and being in a dreamless sleep or under anaesthesia) and what we are conscious of (conscious content: the perceptions, thoughts and emotions that populate our conscious mind). There is also conscious selfhood – the specific experience of being me (or you). Each of these aspects of consciousness can be traced to specific mechanisms in the brain that neuroscientists, in cahoots with researchers from many other disciplines, are now starting to unravel.<sup>15</sup>

Here, then, Seth presents what I take to be a scientific realist perspective. Conscious content, or experience, including the experience of selfhood are presented as the subject of a scientific research project, they have a “biological basis” and are to be “traced to specific mechanisms in the brain”, and as such “unravelling”. Janssens’ piece is framed as aiding in this task, its affects serving to remind us, its spectators, of the distinctions that neuroscience takes to exist within consciousness, i.e. “distinctions within science”. In other words, the meanings that are assumed to flow from *yellowbluepink* are ones that sympathetically align the experience of the installation with neuroscientific knowledge. And this did happen. I overheard conversations between visitors, who, upon exiting the airlock attempted to link their encounter with the piece to “brain activity, or neurological mechanisms”; even if these exchanges were vague in terms of detail, they were efforts to marry private experience with scientific categories. These conversations in many respects evidence the success of the curatorial/institutional framing of *yellowbluepink*.

As per all discursive framings of artworks, at least in relation to the art theoretical armature I employ here, *yellowbluepink* vis-à-vis “States of Mind” constructed a subject position for its spectator. It is my claim

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13) I take it that any discourse provides subject positions, or roles, to be occupied. Therefore, according to Howarth et al, “[e]ach... discourse... is a social and political construction that establishes a system of relations between different objects and practices, while providing (subject) positions with which social agents can identify.” Ibid., 3

14) Robert Morris *Untitled* 1965, “Arts & Artists,” Tate, accessed 8 November 2017, <http://www.tate.org.uk/art/artworks/morris-untitled-t01532> .

15) Anil Seth, *What in the world is consciousness?*, “What’s On,” Wellcome Collection, accessed 20th July 2017, <https://wellcomecollection.org/whats/what-world-consciousness> .

that this role can be characterised by a capacity for scientific realist thinking, or at least the recognition that such thinking is possible. How so? Let's return to Seth's text. I have claimed that Seth frames *Yellowbluepink* as helping the spectator to understand themselves neuroscientifically, to align phenomenal experience with scientific categories. (This is the desired meaning for the piece within the context of the "States of Mind" show.) This neuroscientific knowledge is necessarily premised upon the deeper, foundational understanding that scientific objectivity is possible. (Seth is confident that consciousness can be unravelled, that neural correlates have been found for this phenomenon, and will continue to be discovered.) In other words, what is being presented in Seth's framing of *yellowbluepink* – fundamentally – is a model of spectatorship in which the art-encounter prompts an awareness of the possibility of neuroscientific self-understanding. This spectatorial understanding underpins those overheard conversations mentioned above. For, it seems to me, that these interlocutors would not be attempting their science-style explanations if they did not believe such explanations potentially reaped rewards, i.e. if they believed objectivity to be impossible.

In sum, then, I claim that *yellowbluepink* as framed by "States of Mind" elicits interpretations that are sympathetic to science, the spectator's experience is gathered up with neuroscientific explanation, taken to be legitimate and revealing. These meanings are, in turn, premised upon the underlying assumption, or recognition by the spectator that realism is possible. Furthermore, I have also argued that these sympathetic interpretations are the basis of science-art's public engagement ambition, one that can be characterised as the soft-promotion of realism. And, as my accounts of those conversations provoked by *yellowbluepink* attest, in many ways, the exhibition does its job very well. But, as an advocate of scientific realism and contemporary art, I think it might have been done better, indeed ought to have been done better.

I am critical of *yellowbluepink* vis-à-vis "States of Mind" because the project, according to my reading fails to promote its realist agenda with sufficient ambition. The failure relates to a striking contradiction at the heart of the project. The dominant art historical phenomenological interpretation of the genre-type to which *yellowbluepink* belongs directly contradicts the project's neuronaturalist framing. On entering Janssens' installation – and for those "in the know" – it is impossible not to be reminded of West Coast minimalism, famous for "engulfing" spectators in light.<sup>16</sup> There is an intimate historical connection between the two, sufficient to warrant the use of Rosalind E. Krauss' term "minimal-based" work to characterise *yellowbluepink*.<sup>17</sup> And, this artworld reading includes an assertion of the human as unknowable to itself; a minimal-based piece such as *yellowbluepink* is understood to provoke a spectator into the realisation that they are not epistemically capable, that realism is *not* possible. I refer here to the trope of "decentred spectating", influentially articulated by Krauss and inspired by the philosophy of Maurice Merleau-Ponty.<sup>18</sup> Janssens belongs to a generation of European artists (including Olafur Eliasson and Carsten Höller) who deliberately resuscitated "classic" minimalist forms and themes, including phenomenological ideas. As Claire Bishop has put it, "in the 1990s, the 'phenomenological' type of installation art returned as an explicit point of reference for contemporary practi-

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16) I refer here to the branch of minimal art that developed in California during the 1960's, including the artists Larry Bell, Robert Irwin and James Turrell. These men were sometimes described as Light and Space practitioners, their work focussing on the phenomenal experience of illumination, reflection and transparency.

17) Rosalind E Krauss, *Passages in Modern Sculpture* (London: Thames & Hudson, 1977), 279.

18) This spectator model, although formulated by Krauss some forty years ago, lives on. Claire Bishop's primer on installation art proves useful, providing clear evidence of this. One of the "basic assumptions" of her book is that the "rise of installation art is simultaneous with the emergence of theories of the subject as decentred." *Installation Art* (London: Tate Publishing, 2010), 13. Installation is ubiquitous, perhaps even the dominant form within contemporary art, and therefore its spectator model – the decentred spectator – is similarly dominant.

tioners...”<sup>19</sup> In other words, the tie between the discourse of decentering and *yellowbluepink* is extremely tight, and this “material-theoretical knot” precedes and haunts that framing attempted by “States of Mind”.

So, *yellowbluepink* vis-à-vis ‘States of Mind’ would seem to draw-out directly contradictory readings. It is my assertion that these opposing interpretations create a methodological problem for the project, one concerning content and its communication. The realist ideas supplied by Seth, for instance, are being communicated in a “language” (a minimal-type sculptural vocabulary) firmly tied to an anti-realist position. Put bluntly, then, I think this contradiction is an issue for the exhibition’s promotion of its realist, or neuronaturalist agenda, which is always liable to be hobbled by it (made confusing, watered-down, or even blocked).

I recognise, however, that there is a way to deflect this criticism. One can highlight that the contradiction is only evident to art-specialists, those conversant with a certain rarefied disciplinary knowledge. (For instance, those interlocutors previously referenced as discussing *yellowbluepink* in a neuronaturalist manner, were not, in any obvious way, concerned with this contradiction.) And, if the aim for *yellowbluepink* vis-à-vis “States of Mind” is to communicate its neuronaturalism far and wide, then confusing a few artworld insiders is of no real consequence.

But, I think, the dismissal of such specialist art knowledge as narrowly niche underestimates its power, which I discuss here, as the ability to exert a profound influence, or “shape a world.”<sup>20</sup> I assert, therefore, that an ambitious science-art project *should* engage with art-theoretical framings, and, to engage in this way requires – as I hope to explain – acknowledging the contradiction identified above.

The best way to resolve this inconsistency, I believe, is by the invention of a new realist spectator model, one that replaces and negates the logic of decentering. This is the speculative task pursued in the latter stages of this article. My account is indebted to the “neo-rationalism” of Ray Brassier and Peter Wolfendale. In relation to the former I borrow from his writing on spectating, which itself draws upon neuro-philosopher Thomas Metzinger’s theorisation of an attentional mode, or brain state, called *nemocentrism*.<sup>21</sup> The *nemocentric* spectator is forged in an encounter with noise music, prompted to recognise “itself” as capable of objective thought beyond phenomenal limitation.<sup>22</sup>

In order to unpack the interlocking claims made so far, I first need to show that the logic of decentering is fundamentally anti-realist.

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19) *Ibid.*, 76.

20) I am alluding here to Arthur C. Danto’s useful compound term, the “artworld”. See Arthur C. Danto, “The Artworld”, *The Journal of Philosophy* 61, 19 (1964), 571-84.

21) “A *nemocentric* reality model is one that satisfies a sufficiently rich set of constraints for conscious experience, while at the same time not exemplifying phenomenal selfhood... It would, while still being a functionally centred representational structure, not be accompanied by the phenomenal experience of *being someone*.” Thomas Metzinger, *Being No One: The Self-Model Theory of Subjectivity* (Cambridge, Massachusetts: MIT Press, 2004), 336.

22) Ray Brassier, *Genre is Obsolete*, The Auricle Sonic Arts Gallery, accessed 20th July 2017, <http://auricle.org.nz/wp-content/uploads/2015/10/Ray-Brassier-Genre-is-Obsolete.pdf>.

In attempting to flesh out Brassier’s account of spectating, and to explicitly position it in relation to contemporary art, I am, to a certain extent, following in the footsteps of David Burrows. He has spoken convincingly about *nemocentrism* in regards to his own practice with *Plastique Fantastique*. I saw him present on this topic at the ‘Plague of Diagrams’ symposium, at the ICA in August of 2015. For more information on the event see: “Plague of Diagrams,” Exhibitions, Previously at the ICA, The Institute of Contemporary Arts, accessed 8.12.2017, <https://www.ica.org.uk/whats-on/plague-diagrams>.

## The Decentred Spectator

Krauss dramatically illustrates the decentred spectator by way of an account of Michael Heizer's monumental earthwork *Double Negative*, of 1969.<sup>23</sup> The piece consists of two massive trenches one hundred feet long and forty deep, these slots face-off against one another across a ravine. As Krauss notes, the enormous scale of the work requires a spectator to enter it. She compares the feeling of occupying one of these trenches to our common-sense understanding of self-hood, with one important exception:

Because of its enormous size, and its location, the only means of experiencing this work is to be in it – to inhabit it the way we think of ourselves as inhabiting the space of our bodies. Yet the image we have of our own relation to our bodies is that we are centred inside them; we have knowledge of ourselves that places us, so to speak, at our own absolute core; we are wholly transparent to our own consciousness... In this sense the *Double Negative* does not resemble the picture that we have of the way we inhabit ourselves. For, although it is symmetrical and has a centre (the mid-point of the ravine separating the two slots), the centre is one we cannot occupy.<sup>24</sup>

The model of self-experience provided by *Double Negative* is unlike our habitual one, in that we tend to picture ourselves as centred within the body space. This is disqualified in Heizer's piece because, Krauss claims, it is impossible for a spectator to occupy the centre-point.

Of course, we could counter the "letter" of Krauss' argument, here, by asserting that it is, in fact, possible for a spectator to be positioned between the ravines, they might hover there in a helicopter, perhaps. But, the impossibility of "occupation" that Krauss asserts should be understood as a metaphor for the impossibility of escaping (in experience) an embodied point-of-view – an insight with which I concur: we do always experience from a particular place, a somewhere, we are, experientially speaking, finite beings.

However, as is obvious throughout the account, Krauss links this experiential situation to the question of knowledge, specifically self-knowledge, and this is where her position diverges from my own. The strong inference of her argument is that the gulf separating knowledge from its self-source, i.e. self-knowledge, is the same as that preventing a spectator from experientially encountering the centre-point of *Double Negative*. The gulf, which shows us the limits of embodied experience, is the same one that prevents us (decentres us) from knowing ourselves. Knowledge is finite in the way that experience is finite.

This is the lesson she draws from Merleau-Ponty.<sup>25</sup> For him, experience has a transcendental status i.e. it is the horizon of possibility for the objectivity of our natural and scientific attitudes. To be clear, this transcendental horizon is to be understood as a foundational experiential relation between subject and object-in-appearance.<sup>26</sup> Humans are not able to remove themselves from experience, so as to 'see' beyond it. In this way experience suffers limitation; it is finite. And, this has epistemic consequences. Objective thought is secondary to – parasitic upon – experience. Thought, therefore, can never overcome finitude; never breach the transcendental

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23) Krauss, *Passages in Modern Sculpture*, op. cit., 280-81, emphasis added.

24) Ibid., 280.

25) Krauss and the minimalist sculptors themselves were particularly influenced by Maurice Merleau-Ponty's *Phenomenology of Perception*, originally published in 1945, the version I refer to was first translated into English in 1962 by Paul Kegan, for Routledge.

26) For a convincing and recent description of Merleau-Ponty's transcendental presuppositions see Sebastian Gardner, "Merleau-Ponty's Transcendental Theory of Perception" in Sebastian Gardner and Mathew Grist, eds., *The Transcendental Turn*, (Oxford: OUP, 2015).



horizon. We cannot know things beyond our finite experiential relation to them.<sup>27</sup> Science believes it does but this is hubristic. It should be clear then that Krauss' argument closely follows the Merleau-Pontian line.

To return to my case study we can now see why the minimalist "style" of *yellowbluepink* is in sympathy with the logic of decentring. We can show this by describing Krauss' argument as operating in two steps. First, a work is recognised by the spectator to be about the limits of his or her own perception, second, the conclusion drawn is that epistemic capacity is equally limited, or decentred. *Yellowbluepink* conforms neatly to "stage one" of the interpretation. As in Heizer's *Double Negative*, although on a much more "domestic" scale, "experience-as-finite" is the subject matter. The installation calls attention to this by interrupting experiences' usual smooth functioning, gently destabilising it by way of the unfamiliar, fogged situation. The decentring interpretation can then latch onto this aspect drawing its conclusion concerning a consequent epistemic finitude.

I should acknowledge, here, that Krauss' explicit target is knowledge, or rationality understood as absolute understanding achieved via introspection. Her focus is therefore more circumscribed than Merleau-Ponty's. I agree with Krauss that this rational intuition is impossible. For a properly objective knowledge to be generated, scientific rationality is necessary, a disciplined and collective thinking together.

My point is, however, that this "good" version of knowledge, or rationality is not available in her argument. In Krauss' phenomenological reading of rationality she effectively bundles together objectivity and introspection, taking objectivity to be the absolute truth gained through intuition. Her decentring of rationality obscures the possibility of formulating it differently, that is, as the producer of scientific objectivity. What is occluded in the strategy of decentring is the possibility that not all objective thought is irremediably finite. Decentring is a case of throwing the baby of rationality out with the bath water of introspective self-understanding.<sup>28</sup>

So, to sum up this section, Krauss' theorisation posits a spectator who recognises their epistemic limitation in the encounter with minimal type art, works such as *yellowbluepink*. This follows from the way that rationality is treated in her account, introspective knowledge stands in for rational knowledge per-se, therefore – by implication – any notion of realist, objective thought is treated with suspicion, subject to a phenomenological critique.

## The Artworld

It is the desire of those neuroscientists working on 'States of Mind' that the possibility of objective self-understanding is to be prompted by the experience of *yellowbluepink*. I hope it is now clear how the dominant artworld reading of the piece contradicts this desire. But, I still need to justify why I think this matters. This is because I can well imagine an argument that agrees there is, indeed, a contradiction, but claims that it is beside the point. Such an argument would declare that it does not matter for the implicit aim of the "States of Mind" show, i.e. for the promotion of a neuronaturalist agenda.<sup>29</sup> I think, however, as already mentioned in my introduction, this argument relies on certain unsophisticated assumptions about art.

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27) For Merleau-Ponty this is because "the horizon [is] latent in all experience and itself ever-present and *anterior to every determining thought*". Merleau-Ponty, *Phenomenology of Perception*, trans. Paul Kegan (Bury St Edmunds, Suffolk: Routledge, 1992), 92, emphasis added.

28) I should also acknowledge that within Krauss' account of decentring "sociality" plays a central role. Self-knowledge is decentred, not only by "experience", but also by an awareness that meaning is inter-subjective rather than personal. Although I can agree with this sentiment, its general thrust is problematic because this 'social knowing' is won, within the phenomenological frame of her argument, at the expense of objective knowledge.

29) This might well be the position of those responsible for the Wellcome Trust's public engagement strategy. They could defend against my criticism by drawing attention to the success of Janssens' piece, a highly visible and popular exhibit. They could state that a spectator does not need to be interested in the history of minimalism to appreciate this work. Indeed, without this knowledge they are

### *Artworld Influence*

The artworld is a broad socio-cultural structure within which individual art encounters take place. It is a discourse, one that extends spatially, but also persists through time; it has a history. As a “world” its influence is much wider than any particular exhibition. This is because it is reproduced by a broad range of practices (education-practices, making-practices, writing-practices, networking/socialising-practices, etc) and institutions (schools and universities, studio/technological infrastructure, apparatuses of publishing, (social) media platforms, etc).

This influence is first and foremost exerted upon the population of “card carrying” members. Indeed, to be a member of the artworld is to situate oneself within its beliefs and values.<sup>30</sup> But the artworld also has influence above and beyond this immediate group. Even the most rarefied of its meanings (and values) can shape the broader social imagination, albeit most often in circuitous and indirect ways.<sup>31</sup> Therefore, to influence one person, five hundred, or ten thousand people with an exhibition is one thing, but to influence the value system of a world – which can persist for generations – is to operate on an entirely different scale.

### *Shaping the Artworld*

The current strategy of most science-art projects ignores the artworld. These projects understand the art encounter as dyadic, one between an artefact (with realist meaning) and a “pristine” spectator, someone not sullied by artworld “values”, thereby able to drink in its message. I am not saying this form of communication is impossible, but that it seeks to influence only those pristine spectators, who come to the exhibition, read about the exhibition, etc. It aims to communicate with individuals.<sup>32</sup>

On the other hand, an ambitious science-art project would attempt to communicate with, so as to shape, a world. It must aspire not only to speak with individuals, but with the institutions of art, or, in other words, it must aim to communicate with the artworld as a collection of institutions. Art practice and/or philosophy that is directed towards this “structural dimension” will be theorised in a manner that articulates its particularity in relation to the broad art-discourse.<sup>33</sup>

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in a much better position to accept *yellowbluepink* as exemplifying neuroscientific theories. From the perspective I am articulating, then, the contradiction would not seem to be important because it doesn't matter for many individuals who compose the audience. The Wellcome Trust, so the argument concludes, is a populist institution that caters for a broad clientele beyond the specialist denizens of the artworld, and this is a strength in terms of its promotional message, which is thereby able to reach lots of people, and of different constituencies.

30) As already mentioned I understand any discourse to provide subject positions with which agents identify; this is what I mean by “membership”. George Dickie, here, adds more detail, naming specific artworld roles, “[i]n almost every actual society which has an institution of art-making, in addition to the roles of artist and public, there will be a number of supplementary artworld roles such as those of critic, art teacher, director, curator, conductor, and many more”, George Dickie, “The New Institutional Theory of Art”, *Proceedings of the 8<sup>th</sup> Wittgenstein Symposium*, 10, 1983, 57–64.

31) We can hold to this “transmission” idea without going the whole hog, wherein art is given a central and privileged role in a dramatic “distribution of the sensible”. (I refer here to Jacques Rancière's influential notion of art-agency: See Jacques Rancière, *The Politics of Aesthetics*, trans. Gabriel Rockhill, (London: Continuum, 2004). But, none the less, to teach in a British art school is to encounter the way that artworld notions, say, in relation to the necessary expressive function of painting, are deeply imbedded within European culture. Artworld notions spread into “broader culture”, and each new cohort arrives with a similar spectrum of ideas and ambitions.

32) Those pristine spectators don't need to be ignored, obviously, but the work should address them and operate at the level of the artworld too.

33) “[A]rticulation [is] ‘any practice establishing a relation among elements such that their identity is modified as a result of the articulatory practice’. Discourse is ‘the structured totality resulting from this articulatory practice.’” Howarth, Norval, Stavrakaki, eds., *Discourse Theory and Political Analysis*, op. cit., 7, emphasis in the original.

But, to engage in a successful articulation is to overcome an obstruction; the artworld is already “fixed” by an existing set of meanings and values.<sup>34</sup> For instance, the ambitious science-art project would have to acknowledge that its aim to communicate a realist message via spectator experience could not straightforwardly utilise minimal-based work as a “carrier”, because this genre-type is fixed or “quilted” by its relation to the anti-realist logic of decentring.

Therefore, what is needed is an understanding that – at this level – communication is a form of *combative intervention*, one aiming to achieve two goals. First, it must attempt to contribute a new “positive content”, that is, a realist spectating model tied to a specific genre-type of art. Secondly, the new figure must have a critical function; this form of spectating needs to negate the old anti-realist one, usher it off-stage, so as make room for its own neuronaturalist meaning.<sup>35</sup> To do so, the art-encounter thus theorised, must be understood to have a “quality” that is directly antagonistic to the discourse of decentring, i.e. it must not be accommodated by phenomenological explanation. It is this resistant quality that allows the new model to negate the old.

### Rationality: Objective Knowledge from No-where

The rest of this article is dedicated to building this new model of spectatorship. In order to do so I first need to theorise the realist-rationality upon which this figure stands. This requires providing a non-phenomenological account of the relationship between experience and epistemic capacity. In a recent paper Peter Wolfendale elegantly laid out the neo-rationalist position, on which I rely.<sup>36</sup> Let us begin with his neuroscientific description of experience including self-experience. This is understood, following Metzinger, as a complex biological simulation; selfhood is a kind-of feedback loop within it.<sup>37</sup> Wolfendale asserts that this system evolved to aid the organism to solve certain physical tasks. He gives the example of our ability to simulate the weight of objects, a useful knack when presented with a rock that – if of an appropriate heft – might be moved to get at nourishing grubs. He describes this intuition of weight as a parochial form of know-how; parochial because it is an innate bio-capacity, governed by a particular “local” frame, “our evolutionary confinement to the earth’s gravitational field.”<sup>38</sup> Weight is a “problem” that can be formulated and solved within the realm of experience. And, as Krauss is also aware, this body-knowledge is finite, limited by the particular capacities of a body and the context for which those capacities were intended.

Wolfendale’s characterisation of rationality, on the other hand, breaks decisively with Krauss in crediting it with an *independence* from experience. Reason is understood as a technology that supervenes upon biology, “an abstract protocol that has been functionally implemented by the techno-linguistic infrastructure of human culture.”<sup>39</sup> (It is important to stress, however, that such relative autonomy from physical “wetware” does not position rationality as something that cannot be accounted for by science. For instance, Wilfred Sellars – on

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34) *Ibid.*, 8.

35) To believe that artists’ and theorists’ “intentional articulations” are the *only* agent of change within art discourse would be to vastly underestimate other factors, but, we should not therefore ignore this register. Also, it needs saying that the only hope of achieving a re-shaping of art discourse is by collective and persistent intervention.

36) Peter Wolfendale, *The Reformatting of Homo Sapiens*, paper delivered at the ‘05 Inhuman Symposium’, YouTube, accessed 20th July 2017, <https://www.youtube.com/watch?v=1IpDTUHQ5U>.

37) From this perspective experience is entirely empirical i.e. the simulation can be identified with neurological ‘correlates’, which provide “a true neurobiological description”. Thomas Metzinger, *Being No One*, 303.

38) Peter Wolfendale, *The Reformatting of Homo Sapiens*, no page number.

39) Peter Wolfendale, *Rationalist Inhumanism (Dictionary Entry)*, Academia.edu, accessed 1 July 2016, [http://www.academia.edu/26697819/Rationalist\\_Inhumanism\\_Dictionary\\_Entry](http://www.academia.edu/26697819/Rationalist_Inhumanism_Dictionary_Entry), 3.

whom the neo-rationalists draw – has sketched out a philosophical picture in which the ‘technology of reason’ emerges from physical, causal relationships, and can be explained without contravening scientific principles.<sup>40</sup> As Brassier says, Sellars and his followers provide a defence of “the autonomy of rationality without violating the constraints of naturalism.”<sup>41</sup>

To return to my central point, the relative autonomy of rational cognition renders it capable of positing and solving problems beyond any parochial conditions. Wolfendale gives the example of mass, which can only be defined rationally via “precise inferential norms governing its relation to the concepts of force and acceleration”.<sup>42</sup> The conceptualisation of mass, therefore, has “enabled us to un-frame our understanding of weight and apply it to other gravitational contexts”.<sup>43</sup> Therefore, rationality in its grasping of the property mass, is able to give an account of the real that exists beyond our finite phenomenal experience.

Another register in which “un-framing” is a useful term to think through rationality is with regard to its inherent sociality; it cannot be framed as an activity performed by one entity. We are collectively caught up in, and contribute to, that system of linguistic norms and inferential relations mentioned above. In other words, rationality’s “place of enunciation” is anonymous, a point between individual entities, i.e. a no-where.<sup>44</sup> To think “from” this anonymous nowhere is the condition of possibility for rational thought.

### The Nemocentric Spectator

Brassier’s speculation on nemocentric experience holds the key to a spectator model that would act in consort with this account of rationality. Nemocentrism names a specific mental state, which might be induced. Brassier describes it thus: “the objectification of experience would generate self-less subjects that understand themselves to be no-one and no-where”.<sup>45</sup> An “objectification”, then, results in the loss of self-hood and contextual positionality, which is to say, a loss of phenomenal experience per-se. I understand objectification here to mean, loosely, a “switching off” of phenomenal experience.

According to Brassier this can occur in relation to certain forms of art that generate and manipulate “difficult” sensory material. His preferred example is “noise”. In *Genre is Obsolete* he focuses on two disciplined and stringent groups associated with this aggressively non-generic genre: To Live and Shave in L.A. and Runzelstirn and Gurgelstock, the former led by Tom Smith, the latter by Rodulf Eb.er.<sup>46</sup> These groups are formally inventive enough to remain on the anomalous side of generic categorisation. Their “sound” constantly breaks new ground and its “quality” stretches (beyond) the bounds of normal phenomenal experience. Brassier hones in on how these groups, unlike “conventional” noise that obliterates detail, maintain, just, the integrity of an array of sounds, a sonic complexity or “negentropic overload”, which assaults the spectator with an inas-

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40) Wilfrid Sellars, *Empiricism and the Philosophy of Mind* (Cambridge, Massachusetts: Harvard University Press, 1997).

41) Ray Brassier, “Reason is Inconsolable and Non-Conciliatory” a conversation with Suhail Malik in *Realism Materialism Art*, Christopher Cox, Jenny Jaskey, Suhail Malik eds. (Berlin/New York: Sternberg Press & Bard College), 215.

42) Peter Wolfendale, *The Reformatting of Homo Sapiens*, no page number.

43) Ibid., no page number.

44) “I am quite convinced that almost all forms of thinking are things that are distributed processes that we do together. We’re thinking together, right now.” Thomas Metzinger, *Ray Brassier in Conversation with Thomas Metzinger*, Senselogic, accessed 20th July 2017, <https://cengizerdem.wordpress.com/2015/07/20/ray-brassier-in-conversation-with-thomas-metzinger/>, no page number, emphasis in the original.

45) Ray Brassier, *Against an Aesthetics of Noise*, interview with Bram Ieven for Transitzone, “Transitzone”, nY web, accessed 20th July 2017, <http://ny-web.be/transitzone/against-aesthetics-noise.html>, no page number.

46) Ray Brassier, *Genre is Obsolete*, op. cit.

similable myriad.<sup>47</sup> His ultimate claim is that this excessive detail or “incompressibility of...signal’ scrambles a spectator’s ability to experience... And the resulting phenomenal destitution can be known by that entity which undergoes it.”<sup>48</sup>

In Metzinger’s terms, outlined above by Wolfendale, it is the bio-simulation-system, the realm of parochial knowledge, which is shutdown. This system maps the body –provides an intuition of its physical limits – positioning it within a location. To lose this is to lose phenomenal awareness of oneself as a located embodied being. This generates knowledge that you are – in fact – no-where. The nemocentric subject inhabits space – undoubtedly – but does not feel a natural and necessary connection to that space, and as such understands her or himself – qua rational being – to be irreducible to, not bound by, that material position. At one and the same time, the notion of being someone is also obliterated; to turn the bio-system off is to lose oneself – to know oneself to be no-one in particular, rather, a socially distributed thinker.

What happens here, then, is a fragmentation of the subject into experiential self, and rational self, i.e. an “it-self”. The former is momentarily decommissioned, and the latter keeps track of this. (As we have seen this is possible, because, as asserted by Wolfendale, conceptual thought has a relative autonomy from biological experience.)

## Conclusion

The nemocentric spectator-state is, therefore, a forceful encounter with that part of oneself, the “it-self”, responsible for objective rational thought. To be (prompted) beyond phenomenal experience is to fully encounter the anonymity of rational being, to recognise oneself as such a being. As we have seen thinking from this (non) position is the condition of possibility for objective knowledge. In other words, to think in this way, and to recognise oneself – or rather the “itself” – to be doing so, is to be set within, and primed to make use of, that web of concepts and inferential relations that enable humankind to gain traction on the real.<sup>49</sup>

We can say, then, that recognition of oneself as “itself” is to understand humankind’s capacity for objective thought, including the capacity to construct an objective account of that which humankind is. Nemocentrism is none other than the radical encounter with, recognition of, the ability to think objectively, that is, from a position that is no-where. In other words, the nemocentric spectator is a realist alternative to decentring. And, as such, it is the perfect candidate to produce those interpretations desired by “States of Mind”, and other science-art projects. This is because a spectatorial recognition of the possibility of objective thought is foundational for further speculative interpretations that are in sympathy with particular scientific-realist knowledge.

But, as I have tried to argue, in order for science-art theory and practice to have a significant effect, to play a role in the ambitious promotion of a realist agenda it must be prepared to engage with artworld meanings and values. To do so is to take advantage of the artworld’s reach in space and time, via its institutions, platforms and “historical persistence”. To gain these advantages artworks and theories need to be combative, to contest existing and contrary meanings and values. This is the challenge that *yellowbluepink* vis-à-vis “States of Mind” did not accept, and the contradiction I have diagnosed is a symptom of the project’s reticence on this front.

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47) Ibid., 64.

48) Ray Brassier, *Against an Aesthetics of Noise*, no page number.

49) For this nemocentric subject to recognise itself as an anonymous, socially distributed thinker is one such (reflexive) tractable insight, an understanding of the nature of rational thought itself. This insight is not gained through introspection, but rather by, what we might call, a neo-rationalist exospection.

Nemocentric art and theory is a better fit with science-art projects, possessing the resources for a combative intervention into the artworld, one that might reshape this “culture”. Specifically, nemocentric practice and principle would have been the ideal carrier for the scientific-realist agenda of “States of Mind”. This is because nemocentrism breaks the discourse of decentring. For, to be nemocentric is to occupy a no-where that surpasses its discursive resources. In other words, the nemocentric state, which conjoins phenomenal destitution with the survival of reason is antithetic to the phenomenological argument employed by Krauss. The nemocentric spectator, therefore, also actively confronts and negates the logic of decentring, providing the potential for an ambitious neuronaturalist transformation of the artworld.

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