Imagination and Experience
Philosophical Explorations

Edited by Íngrid Vendrell Ferran and Christiana Werner

First published 2025

ISBN: 978-1-032-43348-6 (hbk)
ISBN: 978-1-032-43349-3 (pbk)
ISBN: 978-1-003-36689-8 (ebk)

8 Acquaintance Principle, imagination, and mental imagery

Bence Nanay

DOI: 10.4324/9781003366898-11

The Open Access version of this chapter is funded by University of Antwerp.

Routledge
Taylor & Francis Group
NEW YORK AND LONDON

8 Acquaintance Principle, imagination, and mental imagery

Bence Nanay

8.1 Acquaintance Principle and second-hand experiences

Most of what we know, we know from someone else. I believe that Moroni is the capital of the Comoros Islands because a friend of mine just told me this five minutes ago, and I have no reason to think she is trying to trick me. But she hasn't been there, either – she also knows this only because she read it somewhere.

We acquire most of our knowledge this way – by testimony. Testimony is a good thing. If you could only rely on your own senses, your knowledge would be very limited. When you watch the news, listen to the weather forecast, or pick up gossip about a colleague at the water cooler, you are relying on other people's testimony. This healthy distribution of tasks expands our cognitive horizon.

Most of our beliefs are based on other people's beliefs (Goldberg 2007; Lackey 2006). But do they all? How about aesthetic judgements? Can they be based on other people's aesthetic judgements? More importantly, should they be based on other people's aesthetic judgements?

When *Squid Game* came out in Fall 2021, my daughter told me all about it. On the basis of her long and detailed description, I formed some kind of aesthetic judgement about it. This aesthetic judgement then helped me decide whether I wanted to watch it myself, for example. But was this aesthetic judgement legitimate or justified? Was I in the position to actually form a genuine aesthetic judgement without having seen *Squid Game* at all?

This is an extremely important question not just in aesthetics or epistemology, but in our everyday life as well. Why should we read film critics, for example, if my aesthetic judgement about the reviewed film cannot be justified by anything the critic says? And this is also a question that has been at the forefront of analytic aesthetics, especially since the formulation of what is taken to be the default position, often labelled as the

DOI: 10.4324/9781003366898-11

Acquaintance Principle, "judgements of aesthetic value . . . must be based on first-hand experience of their objects" (Wollheim 1980: 233). In short:

(AP) Aesthetic judgement about X implies perceptually experiencing X

If the Acquaintance Principle is correct, we cannot base our aesthetic judgements on testimony. What we get then is the following picture. If my neighbour tells me that her new car is red, and on the basis of this testimony, I form a belief that her car is red, this belief is legitimate. But if she tells me that her new car is beautiful, and on the basis of this testimony, I form a belief that her car is beautiful, this belief is not legitimate. Aesthetic judgements are special inasmuch as they can't be based on testimony (see Meskin 2004; Hopkins 2011; Robson 2018; Ransom 2019; McKinnon 2017; Lord 2018; Konigsberg 2012 on aesthetic testimony and the Acquaintance Principle).

A very simple form of aesthetic testimony would be this: you tell me that X is beautiful, and I take your word for it and start believing that X is indeed beautiful. This is clearly inconsistent with the Acquaintance Principle. But this is not the only way aesthetic testimony might work. In fact, it was not the way I formed my aesthetic judgement about *Squid Game* in the opening example. My daughter didn't tell me that Squid Game is riveting. She gave me a detailed description of what happens in which episode and even what kind of visual compositions and colour palette the show uses.

Here is a much simpler example. Let me describe a painting to you. It is an abstract piece, painted by Kasimir Malevich in 1913. It is a monochrome black square canvas without frame, 105 cm times 105 cm, the exact shade of black is hex code #0f0f0f. You have all the information there is. On the basis of this description, you could have some kind of experience, and on the basis of this experience, you could form an aesthetic judgement.

This form of making aesthetic judgements could help us to clarify a key concept in Wollheim's way of framing the Acquaintance Principle, namely, the concept of "first-hand experience" (Wollheim 1980: 233). For Wollheim, aesthetic judgement needs to be based on "first-hand experience." But then this less simple form of aesthetic testimony on the basis of the description of the artwork is still incompatible with the Acquaintance Principle as your experience that is based on my description and that serves as the basis of your aesthetic judgement is not a "first-hand experience." Maybe we can say that it is based on your "second-hand experience."

In the simple aesthetic testimony case, my aesthetic judgement is not based on any experience of mine. In the less simple case, it is based on my experience – not on my first-hand experience but on my "second-hand" experience. I had an experience of sorts on the basis of your description, but not the experience of seeing the painting itself (which I have not seen).

We very often come to make aesthetic judgements on the basis of our second-order experiences – you just did, for example. Nonetheless, this would be ruled out by the Acquaintance Principle (as your judgement is not based on first-hand experience). If at least some of these ways of making aesthetic judgements are legitimate, then cases of this kind would constitute counterexamples to the Acquaintance Principle.

The plan of this chapter is the following. In Section 8.2, I outline a recently popular way of loosening the Acquaintance Principle, in a way that aesthetic judgements that are based on imagination would also count as legitimate and also show that how this view has been criticised. Then in Section 8.3, I make a distinction between imagination, a mental action, and mental imagery, a form of perceptual representation. In Section 8.4, I argue that while the view according to which imagination can ground aesthetic judgement may in fact be problematic, a less problematic version of the Acquaintance Principle would be that aesthetic judgement about X implies perceptually experiencing or having mental imagery of X.

Before we get started, some clarifications about the key concept in this debate, namely, that of aesthetic judgement. The Acquaintance Principle is explicitly about aesthetic judgements and about what they are, or should be, based on. And the very concept of aesthetic testimony is also about judgements: I make a judgement on the basis of something you say. But it could be, and has been, argued that aesthetic judgement is not as central concept in aesthetics as it has been assumed and that it is secondary to the concept of aesthetic experience (Nanay 2018b, 2019). I will come back to the issue of whether our aesthetic experiences can be based on mental imagery in Section 8.5.

8.2 Acquaintance Principle and imagination

A straightforward way of describing how we form these second-hand experiences is by appealing to the concept of imagination: we imagine seeing a black square (Budd 1995: 12; Lord 2016: 11; Hopkins 2006: 93; Robson 2013: 242; Schellekens 2018). And if we think of the experience the aesthetic judgement is based on as an imaginative experience, then it is no longer clear that it should count as a second-hand experience. It could be argued that it is very much a first-hand experience: it is my experience, after all – my imaginative experience.

This would be a way of saving the Acquaintance Principle: aesthetic judgements of the kind I alluded to with the Malevich example are based on first-hand imaginative experiences. It is a case of aesthetic testimony, and it would nonetheless be consistent with a somewhat weak interpretation of the Acquaintance Principle. This weak interpretation of the Acquaintance Principle may be too weak for Wollheim, whose primary aim

in introducing the Acquaintance Principle was to rule out the possibility of aesthetic testimony, but if we put Wollheim's exegesis aside, it would give rise to a more plausible version of the Acquaintance Principle:

(AP*) Aesthetic judgement about X implies perceptually experiencing or perceptually imagining X.

But (AP*) is also problematic. The experience of perceiving X is different, in many important respects, from the experience of perceptually imagining X. Seeing a spider crawling up your arm is a different experience from imagining seeing a spider crawling up your arm. And it could be, and has been, argued that the aesthetic judgement that is based on an imaginative experience is different from the aesthetic judgement that is based on a perceptual experience.

More specifically, the affective dimensions of imagined and perceptual experiences are very different. In the case of perceptually experiencing X, our affective response is indeed a response to perceiving X. But in the case of perceptually imagining X, our affective response is not a response to imagining X. It is something the imaginative episode itself puts in. As Robert Hopkins put the point (note that he himself does not endorse its implications for the question of aesthetic testimony), "affect, rather than being a response to what is imagined, is at least often also part of what we imagine" (Hopkins 2006: 93, see also Langland-Hassan 2020; Tooming ms).

This point can be generalised. Perceiving X confronts us with properties of X we have not expected. But imagining X does not confront us with properties of X we have not expected (I will consider a possible push-back). All properties of this imagined X are imagined by us, so whatever we get out of perceptually imagining X, we must have put in ourselves (see Langland-Hassan 2016 for discussion).[1]

This is a familiar claim that has been very influential in philosophy in the first half of the twentieth century. Jean-Paul Sartre, for example, claims, "nothing can be learned from an image that is not already known" (1948: 12). Since in his view "it is impossible to find in the image anything more than what was put into it," we can conclude that "the image teaches nothing" (1948: 146–147). Ludwig Wittgenstein makes a similar point when he notes that we are not surprised by the content of our imaginings (Zettel §632).

A simple way of putting this line of argument is that perceiving X can surprise us, but imagining X can't. And, as a result, if our aesthetic judgement is based on the imagined experience of X, this judgement will miss out on many crucial features of perceptually experiencing X.

8.3 Imagination versus mental imagery

Because of these considerations, (AP*) is to be revised. And I aim to revise it by drawing a distinction between imagination and mental imagery.

Imagination is a mental action. It is something we do. And it is a voluntary mental action. You give me a description of an object and I am trying to imagine it. If we think of imagination this way, then the worries about (AP*) are justified: the content of the imagined experience is determined by our intention to imagine. Nothing in this imagined experience can strike you as new or surprising because it is all deliberately and voluntarily imagined by you.

Mental imagery is different. It is not something we do. It is a form of perceptual representation. One simple and widespread way of characterising mental imagery is that it is offline perception: a perception-like (or quasi-perceptual) experience that is not triggered directly by sensory input. This way of thinking about mental imagery is also consistent with the way psychologists and neuroscientists define this concept as perceptual processing that is not triggered directly by sensory input (see Pearson et al. 2015; Nanay 2018a).

Voluntary imagining is one way of exercising mental imagery. The experience we have when closing our eyes and visualising an apple is a representation of sensory information without direct external stimulus. But mental imagery is a much wider category than just the experience of visualising (Nanay 2022, 2023).

First, mental imagery, like perception, can happen in all sense modalities. Mental imagery can be visual, but it can also be auditory, olfactory, gustatory, and tactile. Second, while visualising an apple amounts to a voluntary use of mental imagery, there is also involuntary mental imagery, like flashbacks or earworms – annoying tunes that go through our head in spite of the fact that we really don't want them to. Third, while in the case of visualising, mental imagery is not accompanied by the feeling of presence – you're not actually taking the apple to be in front of you – some other forms of mental imagery may be accompanied by the feeling of presence, for example, in the case of lucid dreaming and in some forms of hallucinations (which are widely taken to be forms of mental imagery in psychiatry, see Nanay 2016b).

The definition I have been using is a negative definition. It defines mental imagery as (to rephrase a bit) sensory representation not triggered directly by sensory input. But it leaves open the question about what this sensory representation is triggered by (directly). In some cases, it is triggered by top-down processes, as in the case of closing your eyes and visualising an apple. But in other cases, it is triggered laterally, by, for example, input in

another sense modality. When you watch the TV muted, for example, your auditory representation (and often your salient auditory experience) is not directly triggered by the auditory input – there is no auditory input as the TV is muted. It is directly triggered by the visual input of the images on TV (Nanay 2018a; Spence and Deroy 2013).

It should be clear that this concept of mental imagery has nothing to do with the kind of tiny images in our mind that Gilbert Ryle was making fun of (Ryle 1949). Mental imagery is not something we see, it is a certain kind of perceptual representation. So it is in no way more mysterious than other kinds of perceptual representation (like the one involved in perception proper). Nor do we need to postulate any ontologically extravagant entities (like tiny pictures in our head) to talk about mental imagery any more than we need to postulate these entities in order to talk about perception.

Imagination is one way of exercising mental imagery. But it is not the only way, and imagination is itself a different mental process from mental imagery. So when you deliberately imagine something, this can conjure up a mental imagery that is unexpected and surprising. The imaginative episode itself is a voluntary action, but the mental imagery that it triggers can be unpredictable, surprising, and unexpected.

8.4 Acquaintance principle and mental imagery

Mental imagery, unlike imagination, can be unexpected and surprising. It is not the case that whatever the mental imagery represents is fully determined by your direct and deliberate intention to form this mental imagery. And we can have genuine affective response to mental imagery (as opposed to the affect being part of our forming the mental imagery). For example, we have genuine affective responses to flashbacks to unpleasant scenes.

In short, mental imagery is a better bet for those who want to expand the scope of the Acquaintance Principle. Instead of imagination, we should use mental imagery to expand (AP). This would lead us to (AP**):

(AP**) Aesthetic judgement about X implies perceptually experiencing or having mental imagery of X.

Let's start with a non-aesthetic example. You want to wrap a chocolate box in gift wrap. You estimate how big the piece of paper needs to be in order to cover the whole box and cut a piece of that size from the roll. When you try to use it to wrap the box, you may discover that it is not big enough. Or you may discover that the piece you've torn off is too long, so you will waste some of it. Or you may discover that it's just right.

This task requires mental imagery – visual imagery of the size of paper covering the chocolate box. Your judgement about the size of the paper

needed to wrap the chocolate box is based on your mental imagery. Importantly, it does not require the voluntary use of imagination. I might count to three and then set out to voluntarily imagine how the piece of paper I am tearing off would cover the chocolate box, but this is not necessary. More often, you look at the box, look at the wrapping paper and the visual imagery is triggered without you voluntarily imagining anything.

Here, this use of mental imagery gives you new information that you didn't have before. When you look at the chocolate box and form (often involuntarily) visual imagery of the wrapping paper needed, you may find your estimation of the size of the paper unexpected or surprising. Maybe it's larger than you had assumed. Or smaller. Your estimation of the size of the paper needed can be very different before and after forming the mental imagery of the paper covering the chocolate box (and this can, of course, be still different from the size of the paper actually needed).

In this example, you formed mental imagery on the basis of visual cues. But you could do the same thing if I ask you what size of wrapping paper you would need to cover a 20x20x3 centimetre chocolate box. In this case, you form the mental imagery on the basis of verbal information – just like in the aesthetic testimony case. And, as before, the mental imagery you form can give you an unexpected and surprising answer.

We can now return to the aesthetic case. When I describe an artwork to you, you spontaneously form mental imagery of this artwork and if your aesthetic judgement is rooted in this spontaneously formed mental imagery, it is a legitimate way of forming an aesthetic judgement. Suppose I describe to you a reproduction of the Mona Lisa with a moustache drawn on her face – this is a fairly accurate description of Marcel Duchamp's work *L. H. O. O. Q.* (1919). When I say this to you, you form some visual imagery, on the basis of which you can make an aesthetic judgement. And given that the forming of visual imagery is spontaneous and involuntary, the objection about imagination not being able to deliver anything does not apply as it is mental imagery and not imagination that the aesthetic judgement is based on.

There is a potential worry here that needs to be discussed. When you describe *L. H. O. O. Q.* (1919) to me, can we be sure that I am not using my imagination? I could try to count to three and form an image of a reproduction of the Mona Lisa with a moustache drawn on her face, in which case, this would be an instance of voluntary imagination.

More generally, there are significant interpersonal variations between what kinds of mental processes people go through when hearing a description of an aesthetic object. For some people, it is involuntary mental imagery that pops into their heads. But some others may voluntarily try to imagine whatever they hear. Does the legitimacy of our aesthetic judgement then depend on whether we use voluntary imagination or not?

I don't think so. First, remember that the problem with voluntary imagination from the point of view grounding aesthetic judgements was that you can only get out of it whatever voluntary imagination puts in. So it will never be able to genuinely surprise you. But, to return to the role of mental imagery in voluntary imagination, it is important to emphasise that when we voluntarily imagine, say, that Paris is the capital of Italy, the mental imagery that gets triggered is neither necessary nor sufficient for fixing the content of the voluntary imagination itself.

This is a point that is familiar from the literature on the relation between imagination and mental imagery (see esp. Kind 2001). What you are voluntarily imagining is that Paris is the capital of Italy. But the mental imagery that this imaginative episode brings up may be related but there is no guarantee that it will have (or, in some cases that it even can have) the same content. It may bring up mental imagery of the Eiffel Tower next to the Colosseum, which is clearly related to voluntarily imagining that Paris is the capital of Italy, but it does not have the same content, nor does it fix the content of this voluntary imaginative episode. Crucially, from our point of view, a voluntary imaginative episode can and often does trigger involuntary mental imagery, which can be genuinely novel and surprising.

Second, and more importantly, both generating linguistic utterances and hearing/reading them utilise mental imagery. Some of the empirical findings supporting these claims come from neuroimaging. Describing a scene relies on our ability to generate mental imagery – early cortical representations not directly triggered by sensory input (Mar 2004; Zadbood et al. 2017). What is even more relevant for the purposes of this chapter, hearing a description invariably triggers mental imagery – not necessarily conscious mental imagery, but early cortical representations not directly triggered by sensory input and it is this mental imagery that is remembered, not the words we heard (Zwaan 2016; Zwaan and Radvansky 1998; Zacks et al. 2018; McClelland et al. 2019). In other words, whether or not we voluntarily imagine whatever we hear, our brain spontaneously forms mental imagery of whatever it hears.

I have been focusing on visual examples, but the most convincing cases of using mental imagery (and not voluntary imagination) as the basis of aesthetic judgements come from other sense modalities. Suppose I tell you that yesterday I tried portobello mushroom ice cream. When I say this, you involuntarily form gustatory (and maybe olfactory) mental imagery about what portobello mushroom ice cream may taste (and maybe smell) like. And this allows you to make a legitimate judgement about the aesthetic merits of this particular snack.

8.5 Conclusion

I argued that while appealing to imagination in order to save the Acquaintance Principle may be jeopardised by the objection that imagination can't

give you any new information, this objection does not apply if we appeal to mental imagery instead of imagination. As long as aesthetic judgement is based on mental imagery, it can be perfectly legitimate. The most plausible version of the Acquaintance Principle is (AP**): aesthetic judgement about X implies perceptually experiencing *or having mental imagery of* X. Mental imagery plays a crucial role in our appreciation and experience of artworks (see Nanay 2023: Ch. 31, Nanay forthcoming for summaries). So in a way it is hardly surprising that it also plays a crucial role in grounding our aesthetic judgements.

To conclude, it may be helpful to compare forming aesthetic judgement on the basis of mental imagery with forming aesthetic judgement on the basis of actual physical images, like photographic reproductions. Few would deny that one can form aesthetic judgements of a painting on the basis of the photographic reproduction of this painting (Lord 2016, 2018; Robson 2013). We do this all the time: we see the catalogue of an exhibition and form aesthetic judgements about the works of art in this exhibition.

Aesthetic judgements of this kind can sometimes go wrong, for example, given that the photographic reproduction does leave out some aesthetically relevant features, for example, the texture of the painting or its size (see Nanay 2016a on the concept of aesthetically relevant features). But it does reproduce enough aesthetically relevant features for us to be able to form a legitimate aesthetic judgement about the reproduced artwork.

In some ways, my claim could be taken to be an extension of this completely non-controversial form of making a legitimate aesthetic judgement. Just as we are justified to make aesthetic judgements on the basis of a physical image of an artwork, we are also justified to make aesthetic judgements on the basis of the mental imagery of the artwork.[2]

Notes

1 See also the rich literature on various epistemic constraints on imagination: Langland-Hassan (2016); Weisberg (2020); Kung (2010).

2 The work on this piece was supported by the ERC Consolidator grant [726251], the FWF-FWO grant [G0E0218N], the FNS-FWO grant [G025222N], and the FWO research grant [G0C7416N].

References

Budd, M. 1995. *Values of Art: Pictures, Poetry and Music*. London: Allen Lane.

Goldberg, S. 2007. *Anti-Individualism: Mind and Language, Knowledge and Justification*. Cambridge: Cambridge University Press.

Hopkins, R. 2006. How to Form Aesthetic Belief: Interpreting the Acquaintance Principle. *Postgraduate Journal of Aesthetics* 3:85–99.

Hopkins, R. 2011. How to Be a Pessimist About Aesthetic Testimony. *Journal of Philosophy* 108:138–157.

Kind, A. 2001. Putting the Image Back to Imagination. *Philosophy and Phenomenological Research* 62:85–109.
Konigsberg, A. 2012. The Acquaintance Principle, Aesthetic Autonomy, and Aesthetic Appreciation. *British Journal of Aesthetics* 52:153–168.
Kung, P. 2010. Imagining as a Guide to Possibility. *Philosophy and Phenomenological Research* 81 (3):620–663.
Lackey, J. 2006. Knowing From Testimony. *Philosophy Compass* 1:432–448.
Langland-Hassan, P. 2016. On Choosing What to Imagine. In *Knowledge through Imagination*, ed. A. Kind and P. Kung, 61–84. Oxford: Oxford University Press.
Langland-Hassan, P. 2020. *Explaining Imagination*. New York: Oxford University Press.
Lord, E. 2016. On the Rational Power of Aesthetic Testimony. *British Journal of Aesthetics* 56 (1):1–13.
Lord, E. 2018. How to Learn About Aesthetics and Morality Through Acquaintance and Deference, ed. R. Shafer-Landau. *Oxford Studies in Metaethics* 1 (3):71–97.
Mar, R. A. 2004. The Neuropsychology of Narrative: Story Comprehension, Story Production and Their Interrelation. *Neuropsychologia* 42 (10):1414–1434.
McClelland, J. L., Hill, F., Rudolph, M., Baldridge, J., and Schütze, H. 2019. Extending Machine Language Models Toward Human-Level Language Understanding. *arXiv:1912.05877*.
McKinnon, R. 2017. How to be an Optimist About Aesthetic Testimony. *Episteme* 14 (2):177–196.
Meskin, A. 2004. Aesthetic Testimony: What Can We Learn From Others About Beauty and Art? *Philosophy and Phenomenological Research* 69 (1):65–91.
Nanay, B. 2016a. *Aesthetics as Philosophy of Perception*. Oxford: Oxford University Press.
Nanay, B. 2016b. Hallucination as Mental Imagery. *Journal of Consciousness Studies* 23 (7–8):65–81.
Nanay, B. 2018a. Multimodal Mental Imagery. *Cortex* 105:125–134.
Nanay, B. 2018b. Against Aesthetic Judgment. In *Social Aesthetics and Moral Judgment*, ed. J. McMahon, 52–65. London: Routledge.
Nanay, B. 2019. *Aesthetics: A Very Short Introduction*. Oxford: Oxford University Press.
Nanay, B. 2022. Against Imagination. In *Contemporary Debates in the Philosophy of Mind*, 2nd edn., ed. J. Cohen and B. McLaughlin. London: Blackwell.
Nanay, B. 2023. *Mental Imagery: Philosophy, Psychology, Neuroscience*. Oxford: Oxford University Press.
Nanay, B. forthcoming. Perception and Mental Imagery in Our Engagement with Art. In *Art and Philosophy*, ed. A. King. Oxford: Oxford University Press.
Pearson, J., Naselaris, T., Holmes, E. A., and Kosslyn, S. M. 2015. Mental Imagery: Functional Mechanisms and Clinical Applications. *Trends in Cognitive Sciences* 19:590–602.
Ransom, M. 2019. Frauds, Posers and Sheep: A Virtue Theoretic Solution to the Acquaintance Debate. *Philosophy and Phenomenological Research* 98 (2):417–434.
Robson, J. 2013. Appreciating the Acquaintance Principle. *British Journal of Aesthetics* 53 (2):237–245.
Robson, J. 2018. Aesthetic Testimony and the Test of Time. *Philosophy and Phenomenological Research* 96 (3):729–748.
Ryle, G. 1949. *The Concept of Mind*. London: Huchinson.

Sartre, J.-P. 1940. *L'Imaginaire*. Paris: Gallimard (Page Numbers above are to the 1948 English Translation).

Schellekens, E. 2018. Seeing the Light: Aesthetic Experience and Understanding Pictures. In *The Pleasure of Pictures*, ed. J. Pelletier and A. Voltolini, 21–35. London: Routledge.

Spence, C. and Deroy, O. 2013. Crossmodal Imagery. In *Multisensory Imagery*, ed. S. Lacey and R. Lawson, 157–183. New York: Springer.

Tooming, U. ms. Imagination as a Surrogate for Aesthetic Acquaintance. Manuscript.

Weisberg, D. S. 2020. Is Imagination Constrained Enough for Science? In *The Scientific Imagination: Philosophical and Psychological Perspectives*, ed. A. Levy and P. Godfrey-Smith, 250–261. New York, NY: Oxford University Press.

Wollheim, R. 1980. *Art and Its Objects*, 2nd edn. Cambridge: Cambridge University Press.

Zacks, J. M., Mar, R. A., and Calarco, N. 2018. The Cognitive Neuroscience of Discourse: Covered Ground and New Directions. In *The Routledge Handbook of Discourse Processes*, ed. M. F. Schober, D. N. Rapp, and A. M. Britt, 269–294. New York: Routledge.

Zadbood, A., Chen, J., Chang Leong, Y., Norman, K. A., and Hasson, U. 2017. How we Transmit Memories to Other Brains: Constructing Shared Neural Representations Via Communication. *Cerebral Cortex* 27 (10):4988–5000.

Zwaan, R. A. 2016. Situation Models, Mental Simulations, and Abstract Concepts in Discourse Comprehension. *Psychonomic Bulletin & Review* 23 (4):1028–1034.

Zwaan, R. A. and Radvansky, G. A. 1998. Situation Models in Language Comprehension and Memory. *Psychological Bulletin* 123 (2):162.