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To cite this article: Jon Pike (2021) Sport, games, and the fluidity of agency, Journal of the Philosophy of Sport, 48:3, 392-402, DOI: [10.1080/00948705.2021.1997348](https://doi.org/10.1080/00948705.2021.1997348)

To link to this article: <https://doi.org/10.1080/00948705.2021.1997348>



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Published online: 10 Nov 2021.



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Sport, games, and the fluidity of agency

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KEYWORDS Sport; agency; art; embodiment; difficulty

Thi Nguyen has given us a cracker of a book in *Games: Agency as Art* (Nguyen 2020), one that sports philosophers amongst others will learn from for many years. One fascinating (but I will argue, problematic) aspect of the work is that his theory of the fluidity of agency and his analysis of games as ‘the art of agency’ appears to cover both sport (embodied games) games and board games, computer games and so on (that is, non-embodied games), and gives broadly the same account of different types of games:

We can find the aesthetics of agency in virtually any game. It is not confined to narrative, cinematic videogames, or politically serious game design, it is a kind of aesthetic experience common to sports, video games, board games, role playing games, card games and more (Nguyen 2020, 104).

This is a grand claim. It follows in (at least one path of) the Suitsian tradition, in that, at least sometimes, Bernard Suits thought that sports were games (Suits 2005) but see (Suits 1988) and (Berman 2019). I think, though, that there are problems in the generality of this approach that I will outline with particular reference to his discussion in the section ‘towards an aesthetics of agency’ in Chapter 5. I draw also on less formal remarks online made by Nguyen in discussion of his work on Pea Soup which deflate the distinction between embodied and non-embodied action.¹ Nguyen outlines an account of the aesthetic value of agency in which he makes points that apply both to embodied and non-embodied games. He also seeks to substitute an ‘aesthetics of agency’ account for an account of games as ‘fictions’. My case is that something gets lost in translation about the value of different sorts of games. Rather, what I will call the *modality of agency*: what is necessary, what is possible, varies, in normatively significant ways, across these boundaries.

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I

Nguyen moves from embodied to non-embodied games seamlessly. This is clear on a number of occasions, but obvious when he moves in chapter five from the 'harmony of solution' to the 'harmony of action':

in a beautiful Chess move, there is a harmony between the move and the situation it addresses here is a trap, there is an elegant resolution. Call this the *harmony of solution*. The harmony of solution is strictly a harmony between the solution and the obstacle. It makes no explicit reference to the actor or their capacities. The harmony of the solution is available to both spectator and player (Nguyen 2020, 108).

In contrast:

... there is another form of harmony which includes the player's agency. Let's call this the *harmony of action*. When you time a jump just so in *Super Mario Brothers*; or when you figure out, during a rock climb that you need to slide your hips over just enough to balance on that tiny nubbin of rock, you're experiencing more than the harmony of solution. You're experiencing your agency and action in fitting the demands of the environment. You experienced not only the fit between the obstacle and the solution but the fit between the obstacle and yourself as the originator of those solutions (Nguyen 2020, 108).

However (as I understand things) to jump in *Super Mario Brothers* is not to jump in our ordinary understanding of the words: it is to flick a plastic hand held device up a couple of centimetres at exactly the right time. Equally, the game could be reconfigured so that timing a jump was a matter of hitting a button at exactly the right time. The action of a well timed jump in *Super Mario Brothers* could be multiply realised. Contrast, the way in which Nguyen slides his hips over, just enough to balance on that tiny nubbin of rock.

Why does this difference matter? I think it matters because of the particularity of the capacity that is at play in rock climbing. As Nguyen later puts 'I choose and decide just the right movements for the task'. But when flicking up his handset Nguyen is *not* choosing or deciding which is the right movement for the task in quite the same way, because the decision whether the right movement is to flick the handset or hit a button has already been made by the game designer, not by the gamer. Perhaps there is a simple sense in which it's possible to stop the game, reconfigure the handset, and change the jump function from a flick to a button press. But this highlights rather than effaces the distinction I want to make. First, reconfiguring handsets takes place outside of the game. Second, there is no analogue of this reconfiguration for rock climbing because the actions required: shifting one's hips, tensing one's arm muscles, and so on, are not multiply realisable if one is to get up this particular climb. Of course, there are different ways up a particular route, but the ways are finite, the moves are finite, and these either fit with our finite capacities and our embodied nature, or they don't. And note too, that if we reconfigure *Super Mario*

Brothers so that we hit a button, rather than flick a handset, we are still recognisably and essentially playing Super Mario Brothers, but if we are hauled up the cliff by a winch, then we are no longer rock climbing.

This brings us to Nguyen's account of the harmony of capacity. Here, the sense that something is lost in the over-general approach to embodied and non-embodied games is perhaps strongest. Nguyen identifies a sense that 'one's total capacities fit precisely with the demands of the world' and calls this the 'harmony of capacity' (109): the contrast with the harmony of action is that the former unlike the latter makes 'no reference to how difficult that action is compared with the actor's total capacities', and this seems important. If, as Gwen Bradford (Bradford 2015) argues, difficulty is an essential part of achievement then the harmony of capacity looks like a component of both the aesthetic value and the achievement value of embodied games: difficulty is a big deal. But all I need to show is that there is an aesthetic and/or morally relevant distinction between *embodied* difficulty and *non-embodied* difficulty to show that Nguyen's claim is over-general, occluding the differences between different modes of agency.

In the process, Nguyen makes an empirical claim that fails to match up to competitive sport. He says:

the harmony of capacity is far rarer than the harmony of action. The harmony of action occurs frequently in my everyday life... But the experience of that most delicious of harmonies - the harmony of capacity - is particularly rare in the wild (Nguyen 2020, 111).

He goes on to say:

but in games the obstacles can be engineered to fit us. Some of this is the work of the game designer. Some of it is the players finding the right level, or the appropriate opponents, or even just fiddling with the difficulty level. But in our life with games, we design fiddle and pick until the struggle is tailored just right (Nguyen 2020, 111-112).

But this seems to put the emphasis in the wrong place. There are mechanisms within competitive sport and beyond the scope of the game designer that secure the right level of difficulty to make *highly likely* the harmony of capacity – knockout competitions, for example, tend to ensure that the struggle is just right. That's to say Nguyen underestimates the way in which competition itself generates the appropriate level of difficulty such that our capacities and the tasks come into harmony. So it's critical to recognise the nature of the *real* and *physical* constraints that determine what counts as excellent action and determine and *funnel* the actions of the active competitive athlete towards the harmony of capacity.

Something of the contrast I have in mind here emerges in Nguyen's discussion of QWOP, a computer game that takes the form of a sprinting simulator where the controls direct the left and right thigh and the left and

right calf of the avatar. As he puts it ‘when one finally manages to make the thing run, it is, for a while at least, a constant fight against one’s intuitions and instincts. (It is a fairly significant victory to make the ragdoll run for over 2 seconds)’ (Nguyen 2020, 112). At this point in the argument it is worth readers taking two minutes away from my paper to try to play QWOP.

Now, it might be expected that an old school response to this would be ‘why make the action *running* more difficult than it need be, when what is valuable about the action of running is the ability and practise required to run faster given all our embodied capacities?’ What is the point of this game? Perhaps this looks like a stupid game. But I don’t want to make that criticism. I can see why *if we limit ourselves to non-embodied actions*, cognitive abilities and multiply realisable moves, there is no real point in objecting to an artificially difficult puzzle. So I have no problem with QWOP, as an entertaining and frustrating exercise.

But what would be the embodied equivalent of QWOP? It would be something like a three-legged race where participant runners are tied together by one leg and required to get down the course as fast as possible. Such an action requires coordination, synchronisation, counter-intuitive adjustment in a similar way to QWOP, in particular, it requires the disaggregation and reconstitution of basic actions. But there are reasons – good reasons – why the three-legged race is not part of the Olympic programme and the 100 metres Sprint is. These reasons apply only to embodied sport. In what follows I will spell out those reasons and thereby hope to shed some light on my critique of Nguyen’s attempt to locate the value of embodied games in this overly general way.

II

When thinking about the biophysical side of sport, it is sometimes necessary to stop and stare. A common thought is that non-physical, complex and difficult games such as chess and Go show us the human mind at work at a very high level. But Deep Blue, a computer programme developed by IBM cracked chess in 1997 when it beat Gary Kasparov in New York City (Hsu 2002). This left the field open to Go, but in 2015, Lee Sedol, an 18-time world champion was defeated by AlphaGo, a programme developed by Google in Seoul, South Korea. We should stop and stare though, not at these cases but at the Robocup, widely available on YouTube:

This annual soccer tournament matches teams consisting of the most technologically advance robots on Earth. The robots shuffle around the field, slowly. The occasionally bump into each other, causing one or both to fall down. Whereas a human soccer player moves smoothly towards a ball never breaking stride as she controls it with her foot until lofting a pass to a player downfield.

The robots encounter with the ball is anything but fluid ... the kick when it finally comes, sends the ball rolling a few feet, typically in a random direction ... (Cappuccio et al. 2018, 3).

The fact that physical abilities are much harder to replicate than chess-playing abilities follows from the fact that they are *different kinds of abilities*. The incompetence of the robots playing football suggest that this is not a good game *for them*. It is doubtful whether the existence of a ball affords kicking to a robot, because the robot is unable to kick in a directional manner. In the absence of these *affordances*, the existences of football *rules* do not conjure up the ability to play football, for robots.

I have, elsewhere, endorsed Chemero's formula Affords- ϕ (feature, ability). It is a necessary condition for Affords- ϕ that the agent has the ability to do something – the ability to ϕ . Abilities are closely tied to affordances – the agent/world relation presents us with affordances in accordance with our abilities, which is to say that, if we are *unable* to ϕ in situation *S* then the affordance ϕ -ing *does not exist* in *S*, or, *S* does not afford ϕ .

One reason that abilities are important is that they might seem to be a source of value. There are several candidate accounts of the normative role of abilities. For Nguyen, part of this value lies in the *harmony of capacity* in which the outer edge of our abilities matches up to the affordance. Bradford argues, similarly, that the value of achievements rests on them being competently caused. In both cases, difficulty is an essential component, and for both, competence in doing something difficult will be essential.

But note how Bradford cashes this out. For her, 'competent causation is a matter of having a certain amount of justified true beliefs about the nature of one's activities. The requisite amount of JTBs is a percentage of the possible relevant beliefs' (Bradford 2015, 143).

From this argument Bradford gets the conclusion that 'doing philosophy is typically more valuable than doing sports' (Bradford 2015, 151). This is primarily because 'the **number** and **quality** of the JTBs that we entertain in philosophy are both very high, meaning that the structure of the kinds of things that we aim to figure out in philosophy have a very high level of explanatory power, and so it is very valuable to think about them' (Bradford 2015, 151; emphasis my own). In this account she draws on Hurka (1996, 112). Competent causation, for Bradford, is cashed out in terms of JTBs. Nguyen doesn't make this claim, but the generality of his claim about embodied and non-embodied games suggests that they share the same characteristic sort of value.

I want to resist this conclusion, not by arguing that doing sports is typically *more* valuable than doing philosophy, but by showing that the source of value in the two cases is *different*. The JTB approach is mistaken, because the actions involved in sports standardly do not involve

propositional knowledge-that, but embodied, non-propositional, cognition: know-how. If the sort of cognition involved in sport is non-propositional, then an approach to comparative valuation of sport and philosophy that involves counting up propositions (and JTBs are propositions) will turn out to be misleading. We need to be able to explain the difference between Deep Blue and AlphaGo on the one hand and Robocup on the other, or, to put it another way, between the 100m sprint at the Olympics, and QWOP. Both are difficult, but in different ways. One way to understand this is to look at embodied abilities.

It is customary in the literature to distinguish different kinds of ability, and I will follow this practice. So, we can distinguish first General Ability: having the motor skills, competency, and know how to ride a bike. But I can have these without having access to a bike. Following Vihvelin (2013) we can distinguish Narrow (or Specific) Ability. In order to have this, we need also the psychological and physical capacity – having consumed a bottle of vodka would mean I can't ride a bike, even though I have the general ability. I will not have the specific ability to ride a bike now: I don't have what it takes. Sport will tend to measure narrow abilities as a surrogate for general abilities. But there seems to be an embedded deference to general abilities in our approach to sport. At least, when we think that an athlete has a general ability but lacks the narrow ability, for reasons that are not their fault, then we tend to look for new ways in which we can test for the general ability. Perhaps we are interested in general abilities, and ought to measure them by means of narrow abilities – on the basis that everyone who has what it takes ought to be able to compete.

This seems to be the basis for the Makwala case. The Botswanan sprinter Isaac Makwala was not allowed to compete in the heats for the 200 m at the world championship in 2017, because he was in 48-hour quarantine because of suspected norovirus infection. However, he was allowed to run an individual time trial, at which he was able to qualify for the final. One way of explaining the thought behind this is that sports test narrow abilities as a way of getting at general abilities, and that when they prove to be a bad way at getting at general abilities, it is fair to try to remedy that situation.

Thirdly, wide ability is narrow ability plus access and opportunity. So, wide ability includes i) the skill, competence, (having the general ability) ii) having the access (i.e. having the narrow ability – something that Makwala lacked since he was banned from competing in the heats.) iii) having the opportunity (or having the wide ability). The case for egalitarianism in the distribution of sporting resources rests on the claim that the gap between wide abilities and general abilities ought to be closed. That is, it rests on the idea that we ought to try to get at general abilities, rather than just testing the abilities of those who are adequately resourced.

Finally, for the sake of completion, an important category for our analysis is Simple Ability: the ability to do something by luck: a kind of specific ability that doesn't require the ability to do something intentionally. Having the *simple* ability to do something like hit the bullseye or throw a six is not so interesting to sport, insofar as sport is a matter of *excellent* abilities, but it is a part of the interest in sport as a spectacle – this is not more than saying that the same is true of luck.

III

It might seem that there must be some fairly straightforward relation between actions and abilities. Perhaps, more to the point, we need a relation between action kinds and general abilities. But things here are a little more complicated, especially in the case of embodied abilities. These are fallible: one can have the ability to do something but try to do it and fail.

What is the link between abilities and success, or failure in attempts to achieve what I have called the internal aim of the action? In a famous passage, J.L. Austin suggests that an agent may have the ability and opportunity to ϕ , and try to ϕ , and yet fail to ϕ .

Consider the case where I miss a very short putt and kick myself because I could have holed it. It is not that I should have holed it if I had tried: I did try, and missed. It is not that I should have holed it if conditions had been different: that might of course be so, but I am talking about conditions as they precisely were, and asserting that I could have holed it. There is the rub . . . a human ability or power or capacity is inherently liable not to produce success, on occasion, and that for no reason (or are bad luck and bad form sometimes reasons?) (Austin, Urmson, and Warnock 1979, 166 n.1).

This reveals something important about the differences between embodied and non-embodied actions, and their modalities. Return to the Chess example. Chess is, paradigmatically, non-embodied. It can be multiply realised – played online, played by snail mail, played face to face on a board. Nothing of any importance hangs on the physical ability to move a chess piece. So nothing like the difficulty that Austin highlights can exist in non-embodied games: the specifically 'human ability or power or capacity' to carry out, successfully, an embodied action. Hence, *pace* Nguyen, nothing like the *value of action* can occur in non-embodied games. Perhaps, at this point, my argument will look trivial: Nguyen occludes the difference between embodied and non-embodied games. So what? Of course there are differences, but they are not important for agency. But I think this dismissal would be too quick. It misses out on some philosophically interesting features of embodied actions, and their relationship to abilities.

Nguyen intends that his 'aesthetics of agency' account displaces an account in which certain sorts of games are thought of primarily as fiction. Nguyen wants to supersede this account with an account of Games as the Art of Agency, that applies more widely. But I want to take another look at that account and consider a different interpretation of the fiction/non-fiction divide, and a curious way in which that fresh approach might figure in the adjustment of our view of sport and games. This has implications for a practical-ethical question in contemporary sport. In doing so I draw on recent work by Derek Matravers and Kathleen Stock.

In *Fiction and Narrative*, Matravers continues his critical engagement with Kendall Walton's *Mimesis as Make Believe* (Walton 1990) and suggests restructuring the philosophy of fiction: 'to shift the focus from the divide between non-fiction and fiction to focus on the divide between situations in which action (of a sort) is possible and situations in which action is not possible' (Matravers 2014, 45).

Whether in line with Matravers' intentions or not, I want to make a similar move in my critique of Nguyen, trading heavily on the parenthesised 'of a sort'. Whilst it is obviously true that games permit actions – and this is what gets Nguyen's account off the ground – not all games permit all kinds of actions. The distinction between sport and non-sport games concerns, at the minimum, the possibility of embodied actions, and (at least on my account, because of the 'particular realisability' claim made above) *particular sorts* of embodied actions. So the possibilities of embodied action are in play in sport, but not in non-embodied games. Matravers goes on to explicate his distinction as one between confrontations and representations. Confrontations, he says, are 'situations in which action is possible and representations are situations in which action is not possible, because what is being represented to us is out of reach.' His example is of the continuum between an actual confrontation with a wolf and a story about a wolf. For Matravers, the non-fiction to fiction move is quite minor: 'having bored the family with the history of the time the wolf got into grandfather's cave, it strikes me that, as the point is to pass the long winter evenings, I need not be constrained by the truth'. (Matravers 2014, 47) Confrontations, as Matravers puts it, do not require the imagination: rather his account of the distinction between fiction might be thought of as a 'modality of action' account: the key distinction is between situations in which a certain sort of action is possible and situations in which it is not.

Much the same, I think, is true of the difficulty involved in embodied sport. When halfway up a cliff face, there is no imagination required. A particular sort of action is both possible and necessary. In all these cases, the sports person is confronted by a web of affordances which invites and sometimes mandates embodied action. So these meet the criteria of Matravers'

confrontation: action is possible: the agent is confronted by difficult doables in the world. (I argue elsewhere that these doables are what constitute sport.) That is not true of non-embodied games.

But, again, does this matter? I think it does help us fully to understand some questions about the nature of sport and games, and here I turn to a vexed question and a vexatious debate in contemporary sport: the question of the inclusion of trans women in female sport, and one particular aspect of that debate. There are, very roughly, two main arguments for trans inclusion into the female category. The first is empirical. This is the claim that treatment with cross-sex hormones, over time, removes male physiological advantages. I set this aside as an empirical claim, though it is increasingly undermined (Hilton and Lundberg 2020; Harper et al. 2021). The second approach, though, is non-empirical and rests on the assertion that 'Trans women are women and it is fair for them to compete in women's sport' – a claim that is importantly non-empirical, makes no reference to bodies, or testosterone levels, or muscle mass etc. (Ivy and Conrad 2018).

In her discussion of these matters in *Material Girls* (Stock 2021) describes such a non-empirical move as involving 'immersion in a fiction' – 'the fiction that they themselves, or others around them, have literally changed sex' (Stock 2021, 187). Of course, there is nothing essentially problematic about being immersed in a fiction, and as Nguyen would obviously point out, it offers opportunities to experience the aesthetics of agency. In a study cited by Stock, 'Games provide children with opportunities to experiment with different identities ... Children can choose whether to play as males or as females, and can take on alternative social roles, including leadership and teaching roles'. Here they are able to 'experience abilities and satisfactions that are difficult to access in everyday life' (Przybylski et al. 2012, 69–76). Difficult or – since we cannot change sex – impossible. So the actions of competing-as-female-bodied in sport are impossible for transwomen, whereas the non-embodied actions of competing in a role-playing game online as female – with a female avatar – are not. So rather than agency being fluid across the terrain outlined by Nguyen, agency is particularly constrained in sport. This is, of course, why trans inclusion in categories according to gender identification in sport is a huge and controversial debate in political life, in the philosophy of sport, and applied ethics, the subject of many research studies, and a charged question for regulation by the IOC. The point here is not to argue for one or the other view of this controversy in the understanding and regulation of sport. It is only to point out what almost all accept: that there is a tricky ethical issue here. The issue is simply not posed in online RPGs because the modality of agency is different in each case.

IV

So, to recap, I have tried to spell out some of the importance of the embodied actions that are constitutive of sport: the sort of knowledge that they evince, and the sort of value that they can give rise to. I have endorsed, in a limited way, Matravers' restructuring account of the fiction/nonfiction divide as a distinction between Confrontation and Representation cashed out in terms of the possibilities of action. I have qualified this by placing further emphasis on the *kinds* of action involved – that the action I'm interested in is embodied action, because I'm interested in sport. I have borrowed Stock's account of the immersion in fiction involved in trans identities and moved that into the Matravers account, concerning the possibility of particular sorts of actions. In this way, we return to the question of the modality of agency. This enables us to distinguish between embodied actions that are possible in confrontations with doables, and actions that can only be represented. This helps to show us that the sort of agency involved in embodied and non-embodied games is categorically different, that bodily constraints on agency are a *sine qua non* of sport, and that this fact has normative consequences for sport.

I set out to argue that Nguyen's account of embodied and non-embodied games as constituting the 'art of agency' is too general: it aims to cover too much and misses out morally relevant distinctions between embodied and non-embodied games. The differences are important, and internally important for his account. They involve the *type* of agency that is in play. For all its richness, Nguyen's account occludes some of the philosophically interesting and normatively relevant distinctions between different modes of agency.

Note

1. The original is at <https://peasoup.princeton.edu/2020/07/book-forum-c-thi-nguyen-games-agency-as-art/>

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

- Austin, J. L., J. O. Urmson, and G. J. Warnock. 1979. "Ifs and Cans 1." In *Philosophical Papers*. 205-232. Oxford: Oxford University Press.
- Berman, Mitchell N. 2019. "Sport as a Thick Cluster Concept." In *Games, Sports, and Play*. 99-121. Oxford: Oxford University Press.
- Bradford, Gwen. 2015. *Achievement*. Oxford: Oxford University Press.

- Cappuccio, Massimiliano L., Richard S. Adam Kiefer, W. Masters, Lawrence A. David Papineau, Shannon Spaulding Shapiro, Daniel D. Hutto, Michael D. Kirchoff, Ian Renshaw, and Paul Silva. 2018. *Handbook of Embodied Cognition and Sport Psychology*. Cambridge, USA: MIT Press.
- Harper, J., E. O'Donnell, B. Sorouri Khorashad, H. McDermott, and G. L. Witcomb. 2021. "How Does Hormone Transition in Transgender Women Change Body Composition, Muscle Strength and Haemoglobin? Systematic Review with a Focus on the Implications for Sport Participation." *Review of British Journal of Sports Medicine* 55: 865–872. doi:10.1136/bjsports-2020-103106.
- Hilton, Emma N., and Tommy R. Lundberg. 2020. "Transgender Women in the Female Category of Sport: Perspectives on Testosterone Suppression and Performance Advantage." *Review of Sports Medicine*. doi:10.1007/s40279-020-01389-3.
- Hsu, Feng-hsiung. 2002. *Behind Deep Blue: Building the Computer that Defeated the World Chess Champion*. Princeton NJ: Princeton University Press.
- Hurka, Thomas. 1996. *Perfectionism*. Oxford: Oxford University Press.
- Ivy, Veronica, and Aryn Conrad. 2018. "Including Trans Women Athletes in Competitive Sport: Analyzing the Science, Law, and Principles and Policies of Fairness in Competition." *Review of Philosophical Topics* 46: 103+. doi:10.5840/philtopics201846215.
- Matravers, Derek. 2014. *Fiction and Narrative*. Oxford: Oxford University Press.
- Nguyen, C. Thi. 2020. *Games: Agency As Art*. New York: Oxford University Press.
- Przybylski, Andrew K., Netta Weinstein, Kou Murayama, Martin F. Lynch, and Richard M. Ryan. 2012. "The Ideal Self at Play: The Appeal of Video Games that Let You Be All You Can Be." *Review of Psychological Science (0956-7976)* 23 (1): 69–76. doi:10.1177/0956797611418676.
- Stock, Kathleen. 2021. *Material Girls*. London: Fleet.
- Suits, B. 2005. *The Grasshopper: Games, Life and Utopia*. Ontario: Broadview Press.
- Suits, Bernard. 1988. "Tricky Triad: Games, Play, and Sport." *Review of Journal of the Philosophy of Sport* 15 (1): 1–9. doi:10.1080/00948705.1988.9714457.
- Vihvelin, K. 2013. *Causes, Laws, and FreeWill: Why Determinism Doesn't Matter*. Oxford: Oxford University Press.
- Walton, K. L. 1990. *Mimesis as Make-believe: On the Foundations of the Representational Arts*. Cambridge, MA: Harvard University Press.