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# Reasons to Opt for Selective Realism[†]

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Seungbae Park's *Embracing Scientific Realism* (2022) is an impressive and ambitious defense of full-blown scientific realism. In the process of defending scientific realism and arguing against anti-realist positions, Park surprisingly deems selective realism – the most popular strategy for defending realism about science in the literature – unworthy of the label 'realism' and attempts to undermine it. In this paper, I argue that selective realism is so far the most plausible realist position to hold as the 'best of both worlds' of the no-miracles argument on one hand, and the pessimistic meta-induction from the history of science on the other. I do this by first showing that selective realism is a realist enough position and can answer anti-realist challenges. I then present epistemic reasons to selectively apply the realist commitment. By doing so, I hope to demonstrate that Park's criticisms of selective realism can be met and that selective realism has epistemological advantages over full-blown scientific realism.

Keywords: selective realism, scientific realism, the no-miracles argument, pessimistic induction

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# 1. Introduction

Seungbae Park's *Embracing Scientific Realism* (2022) is an impressive and ambitious defense of full-blown scientific realism which deals with a wide range of positions and arguments, realist and anti-realist alike. Park argues that various anti-realist positions are untenable or reduced to self-contradictions and comprehensively presents many creative and original arguments that he has accumulated over the last ten years or so, which I welcome wholeheartedly as a realist myself. The book also explores many important issues surrounding the scientific realism debate, beginning from making detailed distinctions between various positions and key arguments such as the no-miracles argument (NMA) and the pessimistic induction (PI), to scientific understanding, scientific progress, comparison with mathematical realism, scientific practice and the prospect of relevant future debates.

What has particularly caught my attention is that in the process of defending scientific realism, Park surprisingly deems those positions such as entity realism and selective realism unworthy of the label 'realism' and attempts to undermine them - positions that have been devised in response to the pessimistic induction and possibly the most popular strategy for defending scientific realism in the face of the pessimistic induction. While it is almost impossible to do justice to the book's wide-ranging scope, I would like to take this opportunity to respond to Park on the topic of selective realism and suggest that selective realism is so far the most plausible realist position to hold as the 'best of both worlds' (to borrow the expression from Worrall (1989)) between NMA and PI.

This is a daunting task because to do so requires a war on two fronts; on one hand, selective realism needs to be shown as realist and robust enough in the face of anti-realist challenges, and on the other, reasons should be given to rein back full-blown scientific realism a little. I will first examine the fundamental questions of the scientific realism debate: what is realism,

and is selective realism worthy of the label 'realism' despite Park's assessment? I will then try to answer Park's criticisms of selective realism and show the epistemological advantages of selective realism over full-blown scientific realism.

## 2. Is Selective Realism Realist Enough?

Before discussing scientific realism and selective realism, some general comments on realism is due. What is realism? Devitt highlights "the two dimensions of realism: a claim about what entities exist and a claim about their [mind-]independent nature."[1] If you are a realist about trees, you believe that trees exist and that they do so independently of any being's mind. Alexander Miller presents a formulation of "Generic Realism" about a subject matter as follows: "*a, b,* and *c* and so on exist, and the fact that they exist and have properties such as *F-ness, G-ness,* and *H-ness* is (apart from mundane empirical dependencies of the sort sometimes encountered in everyday life) independent of anyone's beliefs, linguistic practices, conceptual schemes, and so on."[2] Whether such a position is true and/or epistemically warranted is debated across diverse topics in philosophy, such as colors, numbers, possible worlds, moral values, beauty, fictional characters, and science.

In the literature on realism about science, the characterization just given is usually called metaphysical realism. Two further aspects of realism should be added to give what may be deemed standard scientific realism. The first is semantic realism: theoretical discourse should be interpreted literally rather than as being elliptical about something else. When a

1) Devitt (1997), p. 14.
2) Miller (2021).

claim such as "the mass of a stationary electron is $9.109\times10^{-31}$ kilograms" is made, it should be understood in the same manner as in ordinary discourse discussing the mass of a person. Such claims are truth-valued, and not reducible to claims about non-theoretical existences. The second is epistemic realism, which is the view that we are warranted in believing the claims of science to be (approximately) true. Psillos[3] and Chakravartty[4] thus characterize scientific realism as constituted by the metaphysical, semantic, and epistemic theses/stances/commitments.

Park starts the book *Embracing Scientific Realism* with explicit formulations of the semantic and epistemic realisms: "The semantic [realism] holds that most successful theories are (nearly) true or (approximately) so. The epistemic [realism] holds that successful theories are warranted."[5] There is a slight variance between Park's formulation of semantic realism and that in the previous paragraph because Park goes further than characterizing the nature of scientific discourse and makes an affirmative commitment to the truth of scientific theories - and presumably, successful reference of theoretical terms.

Having laid down what realism in general and scientific realism in particular consist of, it is necessary to explain the no-miracles argument and the pessimistic induction to complete the background for the emergence of selective realism. The no-miracles argument, often called the 'ultimate argument for scientific realism', takes the approximate truth of scientific theories to be the best or the only explanation of the success of science and abductively concludes that scientific theories are true.[6] The pessimistic induction is a family of arguments that take the rejected scientific theories in the past to infer that scientific theories are not true

3) Psillos (1999), p. xix.
4) Chakravartty (2007, 2017).
5) Park (2022), p. 1.
6) See Putnam (1975), p. 73 and Musgrave (1988) for representative discussions.

and/or that we do not have epistemic warrant to believe their truth.

PI can come in various forms. The enumerative induction version is a simple inductive inference that as past scientific theories were rejected, current theories will follow suit as the latter are qualitatively similar to past theories despite being more successful.[7] This advocates strong anti-realism in the sense that it claims there is positive reason to believe that our current scientific theories (and future ones) will be rejected and shown to be false (and hence semantic realism in Park's sense is undermined.) PI in this sense is supposed to override NMA: however successful past theories were, they were in the end rejected and deemed false, hence it is reasonable to infer that current ones will follow suit, however more successful they may be. The pessimistic induction can also be made from referential failures of past theoretical terms to similar failures in current theoretical terms and then using the failures to argue for falsity of scientific theories by taking referential success to be a necessary condition for approximate truth.[8] Laudan's 1981 paper featured a long list of theories that were successful and whose central theoretical terms failed to refer from the perspectives of their successors, which was frequently cited as the inductive basis for PI.

The initial response from scientific realists was to limit realist commitment to mature scientific theories only, and those that exhibited novel predictive success.[9] But there were some theories on the list that could not be struck off that way - ether theory and phlogiston theory being two prime examples that provided novel predictive success but seem to have central theoretical terms that fail to refer. (The phlogiston theory is often seen as not successful enough to worry scientific realists; but see

7) See Poincaré (1905/1952), p. 160 for an early version of the argument.
8) Putnam (1978), p. 25; Laudan (1981), pp. 32-4.
9) Hardin and Rosenberg (1982); Boyd (1983), p. 54.

Ladyman (2011) for the view that it enjoyed genuine success that could be explained in a realist manner in terms of structural realism.) It was these recalcitrant cases against the initial response of realists based on the maturity condition that led to the emergence of selective realism. Here were, however small the number might be after ruling out 'immature' scientific theories from Laudan's list, successful theories that had central theoretical terms with referential failure, and hence seemed to be false. This fact opens up a different form of pessimistic induction, an argument by counterexamples to NMA. If there was even one single case in the history of science where a theory was genuinely successful and yet false, NMA could not apply to that case. Then, its explanation would have to be an anti-realist one, whatever it might be. And there is a possibility that the anti-realist explanation could explain most or all other successful scientific theories. This would undermine NMA and leave scientific realism unwarranted.[10] Putnam's claim that coined NMA was that "Realism is the only philosophy that doesn't make the success of science a miracle".[11] This would no longer be the case if there were an actual anti-realist explanation of the success of science available. Once there is a better anti-realist explanation than the realist one (better because it would explain the recalcitrant case of a scientific theory that is successful yet not true), and given that there is no reason why it could not be equally applicable by induction to explaining the successes of other scientific theories, it might even be concluded that anti-realism is better warranted than scientific realism.

This is why selective realists have sought a finer-grained examination of past theories and delineated true constituents that have been preserved

10) This kind of reasoning is discussed in Ladyman (2002), p. 244 and Vickers (2017), p. 3223.

11) Putnam (1975), p. 73.

through theory change. Radical discontinuity across theory change is what fuels PI; the selectivist strategy eliminates discontinuity, which in turn nullifies PI. At the same time, truth of some theoretical parts is still available to fuel NMA for establishing realism - living up to the slogan 'the best of both worlds'. Examples of selective realist positions are structural realism (Worrall 1989; Ladyman 1998), which circumscribes realist commitment to the structural content of theories; Kitcher's claim that working posits of a theory that are involved in generating its success can be trusted to be approximately true, but not presuppositional posits (Kitcher 1993); semirealism that views theoretical descriptions of causal detection properties to be (approximately) true and stays reserved for auxiliary properties (Chakravartty 2007), to mention just a few.

Having situated selective realism in the dialectic development of NMA and PI, we are finally ready to answer the question of whether selective realism is realist enough. And I argue that it is realist enough to deserve the label 'realism'. Selective realism is a realist position because it displays strong agreement with semantic realism and epistemic realism as formulated by Park, at least with regards to the parts for realist commitment. Even if different selective realists may draw the line differently, they all agree that parts of scientific theories are true (i.e. latch onto the objective, mind-independent reality) and that we have sufficient epistemic warrant to believe so. They also believe that those parts that deserve realist commitment will survive future theory change, as they have done so in the past. Selective realism and Park's full-blown scientific realism agree to a great extent in these respects, in contrast to constructive empiricism, instrumentalism or social constructivism.

It is time to turn to Park's assessment that it is in fact closer to an anti-realist position. Park places selective realism closer to pessimism (an anti-realist position based on PI) than scientific realism. The reason given is that pessimism and selective realism are similar in predicting

the current theory to be overthrown, while scientific realism makes an optimistic induction instead. Park takes it to be an insignificant difference that selective realism is committed to the view that some constituents of current theories will survive and display continuity across theory change, contrary to pessimism. He interprets this to be a mere linguistic difference that "selective realists take it to be palatable, while pessimists take it to be unpalatable, to attribute the realist predicate to current theories, and there is no rational basis for preferring one linguistic practice over the other".[12] In contrast, there is a significant difference between scientific realism on one hand and selective realism and pessimism on the other, as Park's realism predicts that most of our current theories will stay unrefuted.

In response to this claim, I would first like to point out that selective realists need not be committed to the view that current theories will succumb to radical theory change. That requires a strong pessimistic induction on the aspect of semantic realism. Selective realists can stop at recognizing the possibility of such a scenario and not positively believe that it will occur. Moreover, selective realism allows optimistic induction in that even when there are revisions of scientific theories in future, there will be continuity in theoretical contents - as long as the successes of the current theories are preserved to their future successors (presumably, the future successors will have augmented the successfulness.) I take this to be a significant similarity among selective realism and the full-blown scientific realism that sets them apart from pessimism.

## 3. Is Selective Realism Tenable?

I have argued that selective realism qualifies as realism even if more

12) Park (2022), p. 102.

modest than Park's full-blown realism. But qualifying as a realist position is one thing, and justifying it is another. Park presents several critical arguments to undermine selective realism. In this section, I will do my best to answer them and show that selective realism is not only realist enough but also a tenable philosophical position.

Here is Park's summary of problems with selective realism:

- It is controversial whether past theories were approximately true.
- Selective realism commits the fallacy of biased statistics.
- Selective realism overlooks the superiority of current theories over their predecessors.

[...]

- There should be a tenable distinction between working and idle posits.
- No theoretical assumption was preserved in some series of successive theories.
- Selective realism would be harmful to the progress of science. (*ibid.,* p. 107)

The first problem is supposed to highlight that selective realists would be bound to identify approximately true parts of past theories when those theories were in fact simply not approximately true. However, this problem can be easily answered. Selective realists agree with Park that past theories that proponents of PI use, such as the crystalline spheres theory or the humoral theory, were not approximately true and hence irrelevant to the scientific realism debate because they were immature and did not display epistemically relevant property of novel predictive success. The main driving motivation for selective realism is made most prominent when, considering some recalcitrant cases where scientific theories exhibited genuine success - successful enough to merit NMA - and yet are radically different from their more modern successors. These cases, however small

in number, need to be explained in a realist manner; otherwise, an anti-realist explanation will have to be given that can be applied to other scientific theories as well.

The above answer naturally leads to a reply for the next problem. The criticism is that PI is a fallacious induction because of its bias for theories of the distant past, especially when "at least 95% of all scientific work ever done has been done since 1915"[13] and "the body of scientific knowledge exploded in the 20th century"[14]. However, given that NMA is the ultimate argument for scientific realism, there being potential counterexamples to the link between the success and the truth of scientific theories and a better anti-realist explanation for the success is a matter that must be addressed for supporting realism. This form of PI is not affected by the statistical consideration. And it has been shown in the previous section that the matter is addressed well by taking the selectivist strategy on the recalcitrant cases.

The third criticism is that selective realism overlooks the superiority of current theories over their predecessors and makes a fallacious induction that current theories will be overthrown.[15] But I think this is somewhat uncharitable to selective realism. Selective realists can confidently agree with full-blown realists that the current theories are superior - after all, they display more impressive successes - and even make an optimistic induction that the theoretical constituents that have survived radical theory change will continue to do so, as they are probably approximately true (a belief warranted by means of NMA). It is just that selective realists recognize the reasonableness of varied confidence in different parts of a theory - something that good scientists will also do - and the possibility

13) Fahrbach (2011), p. 149.
14) Park (2011), p. 79.
15) Park (2022), p. 25.

that those parts in which we have less secure epistemic grasp is discarded or radically revised in future development of science.

But the ensuing challenge that there is no prospective criterion for delineating the working posits from idle posits is more difficult to answer. Selective realists try to nullify PI by limiting realist commitment to the parts of scientific theories that 'fuel the success' as worthy of the epistemic warrant NMA provides. Stanford claims that without prospective criteria for identifying those parts, selective realists' partial confirmation will be ad hoc with one eye on what has been preserved through theory change.[16] Stanford has expressed his skepticism regarding the prospect.[17] However, I would like to point out it is still an open question whether such criteria will emerge. Different selective realist positions effectively propose candidate criteria. These candidates can be checked empirically by applying them to current theories and waiting for the future scientific theories to see if which of the predictions for retention is correct. This would be an attempt at temporally novel predictions.

Another way to answer the challenge is that selective realists do not commit *ad hocery* without such prospective criteria, which will be made clear by carefully examining the dialectic situation. Selective realism has independent support from NMA. Enumerative PI may be understood to provide independent support for anti-realism, but reducing the inductive basis can undermine it. The argument by counterexamples can still stay intact with just one or a few recalcitrant cases of successful yet false theories. However, it needs to be remembered that this argument by counterexample is different from the enumerative PI in that it targets NMA; it aims to undermine the independent support provided by NMA, rather than propose independent support for establishing pessimism. And it

16) Stanford (2006), p. 166.

17) Saatsi *et al*. (2009), pp. 385-7.

is noteworthy that identifying the theoretical continuity between successive theories is in itself sufficient to nullify the threat of the argument by counterexamples because radical theoretical discontinuity is necessary to sever the tie between success and truth; once continuity is shown and NMA is protected, realism can get the independent support NMA provides.

Regarding the criticisms that no theoretical assumption was preserved in some series of successive theories and the alleged hindrance selective realism would bring to the progress of science, I will just comment that if no theoretical assumption was preserved from a genuinely successful predecessor to its successive theory, it would be a critical blow for NMA, because of the argument by counterexamples explained above. Fortunately, that has not come yet and we should wait selective realists' case studies to decide one way or the other. And regarding the potential hindering of scientific progress, detailed historical case studies should be done to substantiate it because we have had scientists who made immense contributions and yet were selective realists or even instrumentalists. Henri Poincaré could be understood as an epistemic structural realist based on passages in his *Science and Hypothesis* - which are all the more poignant as those passage follow immediately after the famous paragraph on the bankruptcy of science foreshadowing the enumerative PI.[18] Ernst Mach, Pierre Duhem and Niels Bohr can also be such examples where hindrance by their philosophical positions is not obvious at all.

## 4. Why Not Be a Full-blown Realist?

So far, I have argued that selective realism is robust enough a realist position, and that it is tenable. But being tenable in itself is not sufficient

18) Poincaré (1905/1952), pp. 160-1.

defense of selective realism because there is still the possibility that Park's full-blown realism is tenable and more plausible, in which case one should be a full-blown realist. So, in this section, I will try to show why one should opt for selective realism rather than full-blown scientific realism that Park defends.

The first point to be made is that selective realism is more defensible than the full-blown realism. Park takes realism to make the "statistical claim that successful theories are typically true, i.e., that most successful theories are true" and "not make the universal claim that they are true without exception, i.e., that all of them are true"[19]. But this characterization of realism is vulnerable to PI in the form of the argument by counterexamples, as explained above when advocating the motivation for selective realism. If there is a genuinely successful yet false theory - false enough for selective realists to fail to salvage a realist explanation of its success - then the success must have an anti-realist explanation. And that explanation could be applied to all the other successful scientific theories. Selective realists will do their best to leave no crack that could affect and bring the whole building down, while agreeing with full-blown realism on a large proportion of approximate truth accumulating more and more.

The previous point also highlights a shortcoming of the full-blown realism, namely that it does not directly provide explanation for the successes of past theories. How could the ether theory be so successful and predict new phenomena such as Poisson's spot? How could the phlogiston theory predict new redox relations between metals based on phlogiston affinity without direct experiments (Ladyman 2011)? These successes need an explanation, which selective realism provides and full-blown realism is silent on.

What is more, if the full-blown realist does embark on seeking an explanation, he will presumably have to get into the business of identifying

19) Park (2022), p. 4.

the approximately true parts of those past theories in order to explain the successes - after all, the present theories have extensive differences from those theories of the same domains. And once this happens, the full-blown scientific realist can and should do the same with the current theories for the sake of consistency, and is welcome to make an optimistic induction on those parts to survive future theory changes. Selective realists are fine with the accumulation of the approximately true parts, as long as they are not blanketed with other theoretical parts in which we may have reasons to withhold confidence for the time being.

Having pointed out the reasons why one might opt for selective realism rather than the full-blown realism, I now discuss two moves by Park for supporting the superiority of the full-blown realism over selective realism. The first is the PIs against selective realism. Park points out that the numerous problems in Section 3 were unconceived at the time of the development of selective realism. These problems can serve as an inductive basis to infer that there are many more such problems, which will be conceived by future philosophers of science even if we do not yet have the cognitive capacity to do so.[20] My reply to this challenge is that just as selective realist replies have been given to those problems in the previous section, we have an inductive basis to infer that those future problems will be sufficiently answered by selective realists as well. And even if the philosophers at the time of conception of those new problems do not have the cognitive capacity to answer immediately, there is still an inductive basis to infer that sooner or later there will be those who have a sufficient cognitive capacity.

The other move by Park is to gather the six new arguments given in Chapter 4 of *Embracing Scientific Realism* and use them both as grounds

20) Park (2022), p. 107.

for scientific realism and as challenges against selective realism.[21] The six arguments can be summarized as follows:

> (1) The optimistic induction over realists: realists from the recent past were right to believe the scientific theories of the time since the 20th century as most of the accumulated scientific work was done in the last 100 years and radical scientific revolutions did not occur in most branches of science.
> (2) The argument from undiscovered evidence: recent theories have enjoyed novel support from previously unconceived disparate sources evidence (*e.g.* fast-flying jets and atomic clocks, the global positioning system (GPS), and particle accelerators supporting the special relativity theory), such increase in evidence will justify belief in the theories.
> (3) The argument from neighboring theories: as a theory has received support from its previously unconceived neighboring theories, it will continue to receive support which will justify belief in the approximate truth of the theory.
> (4) The counterinduction for realism: Multiple failures of scientific theories in the past can in fact increase the probability of the truth of the successive theories and reduce the probability of current and future theories being overthrown.
> (5) The English argument for realism: if van Fraassen's English notion of rationality is granted, then although anti-realism becomes irrefutable by realist arguments, realism can also enjoy immunity from anti-realist criticisms and avoid burdens to rationally convince anti-realists.
> (6) The grand optimistic induction: as the five previously unconceived arguments for realism emerged, there will be more in the future supporting realism evermore.

21) *Ibid.*, pp. 108-9.

The first five are first-order arguments and the sixth is a second-order argument, an argument about philosophical arguments. I will briefly evaluate these from a selective realist perspective.

Regarding (1), I would like to draw attention once again to the point made in Section 2 that PI in the form of argument by counterexamples can threaten NMA. Even if scientific theories from the 20th century demonstrated an impressive immunity to radical theory change, and hence the recent scientists' confidence positively confirmed, such impressive successes do not make past theories such as the ether theory and the phlogiston theory suddenly lose their genuine successes. If a theory that is not even approximately true can have genuine successes, the anti-realist explanation for those successes could in principle be applied to other successful theories by induction. Therefore, there is still reason to heed to the selective realist strategy to explain those successes in realist terms.

Secondly, (2) to (5) can be embraced by selective realism without too much difficulty. These arguments could be used to increase the epistemic warrant for the approximate truth of theoretical parts that selective realists are committed to, or even be used as further information to delineate such parts.

Lastly, the grand optimistic induction in turn can be made to serve selective realism in the same manner. As these arguments are primarily aimed at anti-realist pessimism about science, many of them are amenable to the selective realist positions as well. As Section 2 of this paper has shown selective realism to be distant from pessimism and bear a significant similarity with the full-blown realism, Park's challenge is less daunting to meet.

## 5. Conclusion

Park correctly claims that the only advantage of anti-realism is that "it

runs less epistemic risk than realism"[22]. Park makes a similar assessment of selective realism: "the selective realists needlessly distinguished between the stable and unstable constituents and that they were excessively cautious about their best theories"[23] and it "recommends less when we deserve more"[24]. I have done my best to argue that selective realism is realist enough, is tenable, and has justified epistemic reasons to be slightly more guarded than the full-blown realism. But I think it is epistemically warranted to infer that there will certainly be more of insightful rejoinders and novel arguments from Prof. Seungbae Park in the future, which selective realists will have to heed and keep trying to answer.

22) *Ibid*., p. 45.
23) *Ibid*., p. 108.
24) Park (2019), p. 101.

# References

Asay, J. (2019), 'Going local: A defense of methodological localism about scientific realism', *Synthese* 196: pp. 587-609.

Boyd, R.N. (1983), 'On the current status of the issue of scientific realism', *Erkenntnis* 19(1/3): pp. 45-90.

Brock, S. and Mares, E. (2007), *Realism and Anti-realism*. Acumen.

Chakravartty, A. (2007), *A Metaphysics for Scientific Realism: Knowing the Unobservable*. Cambridge: Cambridge University Press.

_____ (2017), 'Scientific Realism', in E.N. Zalta (ed.) *The Stanford Encyclopedia of Philosophy*. Summer 2017. Metaphysics Research Lab, Stanford University. Available at: https://plato.stanford.edu/archives/sum2017/entries/scientific-realism/ (Accessed: 20 June 2023).

Devitt, M. (1997), *Realism and Truth*. Princeton University Press.

Kitcher, P. (1993), *The Advancement of Science: Science without Legend, Objectivity without Illusions*. Oxford University Press.

Ladyman, J. (1998), 'What is structural realism?', *Studies in History and Philosophy of Science* 29(3): pp. 409-24.

_____ (2002), *Understanding Philosophy of Science*. Routledge.

_____ (2011), 'Structural realism versus standard scientific realism: the Case of phlogiston and dephlogisticated air', *Synthese* 180(2): pp. 87-101.

Laudan, L. (1981), 'A confutation of convergent realism', *Philosophy of Science* 48(1): pp. 19-49.

Miller, A. (2021), 'Realism', in E.N. Zalta (ed.) The Stanford Encyclopedia of Philosophy. Winter 2021. Metaphysics Research Lab, Stanford University. Available at: https://plato.stanford.edu/archives/win2021/entries/realism/ (Accessed: 20 June 2023).

Musgrave, A. (1988), 'The ultimate argument for scientific realism', in R.

Nola (ed.) *Relativism and Realism in Science*. Springer Netherlands (Australasian Studies in History and Philosophy of Science, 6), pp. 229-52.

Park, S. (2011), 'A confutation of the pessimistic induction', *Journal for General Philosophy of Science* 42: pp. 75-84.

_____ (2019), 'Optimistic realism over selectivism', *Kriterion* 33(1): pp. 89–106.

_____ (2022), *Embracing Scientific Realism*. Springer.

Poincaré, H. (1905/1952), *Science and Hypothesis*. Dover Publications.

Psillos, S. (1999), *Scientific Realism: How Science Tracks Truth*. London; New York: Routledge.

Putnam, H. (1975), *Philosophical Papers, Vol. 1: Mathematics, Matter and Method*. Cambridge: Cambridge University Press.

_____ (1978), *Meaning and the Moral Sciences*. Routledge and Kegan Paul.

Saatsi, J., Psillos, S., Winther, R.G., and Stanford, P.K. (2009), 'Grasping at realist straws', *Metascience* 18(3): pp. 355-90.

Stanford, P.K. (2006), *Exceeding Our Grasp: Science, History, and the Problem of Unconceived Alternatives*. Oxford: Oxford University Press.

Vickers, P. (2017), 'Understanding the selective realist defence against the PMI', *Synthese* 194: pp. 3221-32.

Worrall, J. (1989), 'Structural realism: The best of both worlds?*', *Dialectica* 43(1-2): pp. 99-124.

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# 선택적 실재론을 선택할 이유

구 본 혁

박승배의 『Embracing Scientific Realism』(2022)은 과학적 실재론에 대해 인상적이고 야심찬 변론을 제시한다. 박승배는 과학적 실재론을 옹호하고 반실재론적 입장에 반박하는 과정에서, 과학에 대한 실재론적 입장 중 가장 인기가 있는 선택적 실재론이 사실 '실재론'이라는 명칭을 받을 자격이 없다고 주장하며 반론을 제기한다. 이 논문에서 나는 선택적 실재론이 기적불가논증과 비관적 메타귀납 사이를 중재하는, 지금까지 가장 설득력 있는 실재론적 입장이라고 주장한다. 이를 위해 먼저 선택적 실재론이 충분히 실재론적인 입장이며 반실재주의적 도전에도 충분히 대응할 수 있다는 것을 보여줄 것이다. 그런 다음 과학적 실재론을 선택적으로 적용해야 할 인식적 이유를 제시한다. 이를 통해 선택적 실재론에 대한 박승배의 비판에 대응하며, 선택적 실재론이 과학적 실재론에 비해 인식론적 이점이 있다는 것을 보이고자 한다.

주요어: 선택적 실재론, 과학적 실재론, 기적불가논증, 비관적 귀납