# In Defense of Feasible Realism

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**Abstract**: Scientific realism makes the problematic claim that past theories were mostly (approximately) true. Selectivism makes the problematic distinction between working and presuppositional posits of current theories. Feasible realism neither makes the problematic claim nor makes the problematic distinction. Rather, it claims that working posits of most *past* theories were (approximately) true, and that most *current* theories are mostly (approximately) true, getting around the problems with scientific realism and selectivism.

**Keywords**: feasible realism, past theory, pessimistic induction, scientific realism, selectivism.

## 1. Introduction

Selectivism is defended by many writers (Worrall 1989; Kitcher 1993; Ladyman 1998; Psillos 1999, 2018; Vickers 2018). It is regarded in the literature as 'the most promising realist project today.' (Cordero 2017, 245) This philosophical movement is so salient that it is called the 'selectivist turn.' (Mizrahi 2020, 25) This term suggests that both scientific realism (Putnam 1975, 73) and pessimism (Laudan 1977, 126; Stanford 2006; Wray 2018) are obsolete philosophical positions, and that selectivism is in vogue today.

This paper aims to put a damper on the selectivist turn and to defend a new philosophical position that I call 'feasible realism,' according to which only working posits of successful[2] past theories were mostly (approximately) true, but current theories are mostly (approximately) true in toto. This position is so named because it can be adopted both by scientists and philosophers of science. It is intended to be better than both scientific realism and selectivism, to say nothing of pessimism. Readers will see in what respects feasible realism improves upon both scientific realism and selectivism.

I go through the following steps to achieve the aim of defending feasible realism. First, I introduce the definitions of scientific realism and selectivism, comparing them with the pessimistic induction (PI). Next, I expose the key disagreements between me (2022) and Bon-Hyuk Koo (2023) over selectivism, and critically evaluate his defense of selectivism. My critical evaluation of it naturally leads to the advantages of feasible realism over scientific realism and selectivism.

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[2] I drop 'successful' henceforth.

## 2. Scientific Realism

Many definitions of scientific realism can be found in the literature. In this section, I introduce the classic one and the classic argument for it.

Scientific realism asserts that scientific theories are 'typically approximately true.' (Putnam 1975, 73) Why should we accept scientific realism thus defined? According to the no-miracles argument (NMA), science is successful not because a miracle occurred, but because most theories are (approximate)[3] true. To state it differently, only scientific realism reasonably explains why science is successful.

Scientific realism in NMA is compatible with the existence of some false theories in the history of science. After all, it does not say that all theories are true; it rather says that most theories are true (Park 2022, 4). In consequence, it is immune to Laudan's (1981) argument that utilizes the list of past theories, which entails that some theories were false. Laudan exaggerates scientific realism as asserting that all theories are true, and then refutes it with his list of past theories (Park 2019a, 607).

Scientific realism in NMA is incompatible with PI according to which most "of the past theories of science are already suspected of being false; there is presumably every reason to anticipate that current theories of science will suffer a similar fate." (Laudan 1977, 126) If PI is cogent, most theories are false. This conclusion contradicts scientific realism according to which most theories are true (Park 2019a, 608).

## 3. Selectivism

In this section, I unfold the definition of selectivism and explore how it differs from scientific realism and pessimism.

According to selectivism, we should select some theoretical constituents of a theory over others, i.e., we can believe some of them, but not others. The former survive scientific revolutions while the latter do not. The former do the work of explaining and predicting phenomena, and thus they are called 'working posits.' The latter merely provide a metaphysical framework for research, and thus they are called 'presuppositional posits' or 'idle posits.'

Similarities and differences exist between selectivism and scientific realism (Park 2022, 101). A similarity between them is that they both assert that some theoretical claims of science are true. A difference between them is that selectivism affirms, while scientific realism denies, that most current theories will fall prey to scientific revolutions. As a consequence, selectivists believe working posits, but not presuppositional posits, of a current theory, while scientific realists believe the current theory in toto. Thus, scientific realists believe more of what theories say about the world than selectivists.

[3] I drop this predicate when the context makes it clear that it is there.

Similarities and differences also exist between selectivism and pessimism (Park 2022, 101-102). A similarity between them is that they both claim that since past theories were superseded by alternatives, current theories will also be superseded by alternatives, i.e., that "theory change has to be admitted." (Bertolaso and Sterpetti 2023, 393) A difference between them is that selectivism claims, while pessimism does not, that some theoretical constituents of past theories were retained in their alternatives, and thus some theoretical components of current theories will also be retained in their alternatives. Thus, selectivists believe more of what theories say about the world than pessimists.

P. Kyle Stanford (2009, 385) argues that selectivists have the burden of presenting a prospective criterion for distinguishing between presuppositional and working posits. The idea is that we can tell which theoretical statements of past theories are presuppositional and working posits. After all, presuppositional posits are the ones that cannot be found in current theories while working posits are the ones that can be found in current theories. But exactly which theoretical statements of current theories are presuppositional and working posits? Since current theories are not yet replaced by their alternatives, we do not know which of their theoretical statements will and will not fall victim to scientific revolutions. If the prospective criterion were provided, we could know, before scientific revolutions occur, which of their theoretical statements will perish and persist.

From Stanford's foregoing objection to selectivism, we can infer that selectivism is committed to the pessimistic prediction that most current theories will be replaced by their alternatives (Park 2022, 101). It is due to this commitment that selectivism is saddled with the burden of presenting the prospective criterion, the criterion that could tell us exactly which theoretical statements of current theories will and will not survive scientific revolutions. If selectivism were not committed to the pessimistic prediction, there would be no need for selectivists to be selective about the different components of current theories.

By contrast, scientific realism makes the optimistic prediction that most current theories will not be replaced by alternatives. It follows that scientific realists are free from the burden of providing the prospective criterion. Without being selective about the different constituents of current theories, scientific realists believe that they are mostly true in toto.

An interesting question about selectivism is whether it is a form of scientific realism or antirealism. I (2022, 101) claim that it is not a version of scientific realism but a version of what I call 'putative realism.' The idea is that selectivism is alleged to be a form of scientific realism, but it is so close to pessimism that it is questionable whether it is a form of scientific realism or antirealism.

Selectivists would protest that selectivism is a form of scientific realism, pointing out that they attribute 'approximately true' to theories, past or present. However, I (2022, 102) appeal to Stanford's (2015, 876) objection to selectivism that it is questionable whether it is legitimate for selectivists to attribute

'approximately true' to past and present theories, given that successive theories make radically different claims about unobservables. On Stanford's account, it is a matter of taste whether to attribute the predicate to past and present theories.

Selectivists would now protest that selectivism is a form of scientific realism, pointing out that it is committed to the truth of some theoretical claims of science, viz., working posits of theories. By contrast, scientific antirealism is only committed to the truth of some observational claims of science. Therefore, selectivism is distinct from scientific antirealism, and it is unreasonable to regard selectivism as a variant of scientific antirealism.

In my view, selectivism is a variant of scientific realism or antirealism, depending on how scientific realism is defined. If it is defined as the position that some theoretical claims of science are true, selectivism is a variant of scientific realism, given that it claims that working posits are true. However, if scientific realism is defined as the position that most current theories are true and will not succumb to scientific revolutions, selectivism contradicts scientific realism, and thus it is a variant of scientific antirealism. So the issue over selectivism comes down to how scientific realism should be defined. What is clear is that those who endorse the definition of scientific realism in NMA above should classify selectivism as a version of scientific antirealism, to the dismay of selectivists.

## 4. The Differences

Now that we are clear about scientific realism and selectivism, we are ready to move on to the differences between my (2022) evaluation and Koo's (2023) evaluation of them.

### 4.1. The Terminological Dispute

As noted in Section 3 above, selectivists attribute 'approximately true' to successive theories on the ground that their working posits are true, while pessimists refuse to do so on the ground that successive theories make radically different claims about unobservables. Stanford (2015, 876) and I (2022, 102) claim that it is a matter of taste whether to apply the predicate to successive theories.

Koo's response to this objection to selectivism is to say that "selective realists need not be committed to the view that current theories will succumb to radical scientific change." (Koo 2023, 102) This response is agreeable to me. An interesting issue is whether Koo thinks that selectivists should still distinguish between presuppositional and working posits of *current* theories. He would say that they should 'for the sake of consistency.' (Koo 2023, 108) The idea is that since selectivists distinguish between presuppositional and working posits of past theories, they should also distinguish between presuppositional and working posits of current theories. However, no selectivist has yet provided the

prospective criterion, and "it is still an open question whether such criteria will emerge." (Koo 2023, 105)

Koo might now suggest that selectivists do not need to distinguish between presuppositional and working posits of current theories, and that they can believe, as scientific realists do, that current theories are mostly true in toto. In my view, however, if selectivists follow scientific realists on this count, the name 'selectivism' becomes a misnomer. After all, 'selective' means that we should select some components over other components of theories and then believe that former are true, but not that the latter are true. If selectivists believe that current theories are mostly true in toto, their position should be called 'scientific realism' rather than 'selectivism.'

### 4.2. The Success of Past Theories

Koo raises the following intriguing objection to scientific realism. Scientific realism cannot explain the success of a particular past theory. For example, "How could the ether theory be so successful and predict new phenomena such as Poisson's spot?" (Koo 2023, 107) Moreover, scientific antirealists might provide an antirealist explanation of why it was successful, and then extend their explanatory scheme to current theories, thereby undercutting NMA according to which only scientific realism can adequately explain the success of theories.

Admittedly, there are antirealist explanations of why science is successful in the literature. However, I (2014) criticize nine such proposals, and then predict that the next antirealist explanation to be introduced into the literature in the future will also be problematic. In a nutshell, I construct PI against antirealist proposals. Consequently, an antirealist explanation of why a particular past theory was successful is less threatening to scientific realism than it initially appears to be.

What about Koo's challenge that scientific realism cannot explain the success of a particular past theory? Scientific realists can suggest, along with selectivists, that past theories were successful because some of their theoretical constituents were true. After all, it would be unreasonable for scientific realists to reject the historical fact that some of their theoretical constituents were used to explain and predict phenomena, and the historical fact that they were carried over to current theories.

Koo anticipates this move and then objects that "if the full-blown realist does embark on seeking an explanation, he will presumably have to get into the business of identifying the approximately true parts of those past theories in order to explain the successes." (Koo 2023, 107-108) In my view, it is debatable whether scientific realists have to identify the parts of a past theory that fueled the success of the past theory to explain why it was successful. They can just say that it was successful because some of its parts were true. This explanation is legitimate, even if it does not specify working posits of a past theory. To use an analogy, imagine that some members of a baseball team did well in a baseball game, and that as a

result their team defeated their rival team. It makes sense to say that the first team defeated the second team because some members of the first team did well. This explanation is legitimate, even if it does not specify the names of the team members who did well in the game.

I admit, though, that specifying the names of the team members would make the explanation richer and more informative. Similarly, specifying working posits of a particular past theory would yield a richer and more informative explanation of why it was successful. Accordingly, scientific realists might as well accept selectivists' aspiration to specify working posits of past theories.

### 4.3. PI against Selectivism

I (2022, 107-108) construct PI against selectivism after providing the following list of seven problems with selectivism:

> **The List of Problems with Selective Realism**
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> - It is controversial whether past theories were approximately true.
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> - Selective realism commits the fallacy of biased statistics.
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> - Selective realism overlooks the superiority of current theories over their predecessors.
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> - Selective realism violates the basic rule for assessing an argument.
>
> - 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. (Park 2022, 107)

These seven "problems were hidden when pioneering thinkers (Worrall 1989; Kitcher 1993; Psillos 1999) developed selective realism." (Park 2022, 107) As we think more and more about selectivism, more and more problems with it will be found. It follows that selectivism has infinitely many problems.

The idea behind this PI against selectivism is that selectivists think that scientists' past mistakes are the mother of their present mistakes rather than the mother of present success, and thus that they should also think that their own past mistakes are also the mother of their own present mistakes rather than the mother of their own present success. It is a double standard for selectivists to think that since scientists made mistakes, they make mistakes, but that although selectivists made mistakes, they make a success.

How does Koo respond to foregoing PI against selectivism? He critically responds one by one to the seven problems on the list of problems with selectivism except for the fourth one, and then predicts that unconceived problems with selectivism will be diffused. In what follows, I make comments on his critical responses to the six problems one by one with the aim to show that none of them succeeds, and then construct a new PI against the next selectivist's future attempt to refute PI against selectivism.

The first problem on the list of problems with selectivism above is that "It is controversial whether past theories were approximately true." (Park 2022, 107) Stathis Psillos (1999, 113) attributes 'approximately true' to past theories on the ground that their working posits were true (Park 2022, 49, 149). As noted in Section 3 above, however, Stanford (2015, 876) and I (2023, 102) object that selectivists have no rational basis for ascribing 'approximately true' to past theories. Koo replies that past theories "were not approximately true." (Koo 2023, 103) In my view, however, to reply so is to imply that Psillos, a pioneering selectivist, made a mistake. His mistake strengthens the inductive rationale for my PI against selectivism.

The second problem on the list is that "Selective realism commits the fallacy of biased statistics." (Park 2022, 107) Selectivists endorse the pessimistic inference that since past theories were superseded by their alternatives, current theories will also be superseded by their alternatives. They appeal to Laudan's list of past theories to justify the premise that past theories were superseded by their alternatives. I (2022, 103) object that the list is biased in favor of the theories that were thrown out before the 20th century, and hence that the premise is not justified. Koo replies that past theories are "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." (Koo 2023, 104) This point is granted. However, the fact remains that the premise is not justified, and that pioneering selectivists made a mistake. Their mistake is grist to the mill of my PI against selectivism.

The third problem on the list is that "Selective realism overlooks the superiority of current theories over their predecessors." (Park 2022, 107) Realists argue that the superiority of current theories over their forerunners undermines the pessimistic inference that pessimists and selectivists endorse. Koo replies that the superiority of current theories over their forerunners supports the selectivist prediction that "the theoretical constituents that have survived radical theory change will continue to do so." (Koo 2023, 104) I found this response to the third problem reasonable. Unfortunately, it creates the burden for Koo to explain why he uses the superiority of current theories over their forerunners to support the selectivist prediction rather than to undercut the pessimistic inference. Moreover, whether or not Koo succeeds in confronting this challenge, the fact remains that pioneering selectivists overlooked the superiority of current theories over their forerunners. Their mistake contributes to the inductive basis for PI against selectivism.

The fifth problem on the list is that "There should be a tenable distinction between working and idle posits." (Park 2022, 107) Koo admits that no selectivist has yet provided the prospective criterion, stating that "it is still an open question whether such criteria will emerge." (Koo 2023, 105) Koo's response to the problem indicates that for now, selectivism is not applicable to current theories, i.e., selectivism is reticent on which components of current theories are worthy of

our belief. Compare selectivism with scientific realism. Scientific realism is applicable to current theories. It says that most of them are worthy of our belief in toto.

The sixth problem on the list is that "No theoretical assumption was preserved in some series of successive theories." (Park 2022, 107) I present the case study of the theories of disease (2017a, 103-104; 2022, 105) and the case study of presocratic philosophers (2022, 205-206) to argue that no theoretical claim was preserved in the transition from the humoral theory to the miasma theory and in the transition from Thales's hypothesis to Democritus's hypothesis. Koo replies that "if no theoretical assumption was preserved from a genuinely successful predecessor to its successive theory, it would be a critical blow for NMA." (Koo 2023, 106) My response to this reply is to point out that just because my case studies are critical blows to scientific realism, it does not follow that the sixth problem on the list of problems with selectivism above should be taken out from the list, i.e., that the inductive rationale for my PI against selectivism becomes weaker. In other words, Koo's reply does not alleviate selectivists' trouble.

The seventh problem on the list is that "Selective realism would be harmful to the progress of science." (Park 2022, 107) I present the two case studies mentioned above to argue that if medical scientists had been selectivists in the mid-19th century, they would have been less motivated to develop the germ theory, and that if Democritus had been a selectivist, he would have been less motivated to develop atomism. Koo replies that "Henri Poincaré could be understood as an epistemic structural realist." (Koo 2023, 106) The idea here is that Poincaré was a selectivist but contributed to the progress of science, and thus that it is questionable whether selectivism is detrimental to the progress of science. My comment on this interesting response is that it is not clear whether Poincaré contributed to the progress of science thanks to selectivism, in spite of selectivism, or independently of selectivism. The mere fact that he was a selectivist does not show that selectivism helps the progress of science.

Imagine that Einstein was about to develop the special theory of relativity, and that selectivists and scientific realists were with him. Selectivists said to him, "Your theory will fall prey to a scientific revolution, just like its predecessor, but some of its components will survive." By contrast, scientific realists said to him, "Your theory will not fall prey to a scientific revolution, insofar as it improves upon its predecessor." Selectivists' statement would have made Einstein less motivated to develop the special theory of relativity. Pessimism or anything next to pessimism is harmful to the progress of science. It is for this reason that selectivism "would have been detrimental to the progress of science, if scientists had adopted it as their philosophical framework." (Park 2022, 105)

After critically responding to PI against selectivism, Koo claims 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." (Koo 2023, 108) To state it otherwise, just

as the six conceived problems with selectivism are dismissed, so unconceived problems with selectivism will also be dismissed.

In my view, none of Koo's critical responses to the six problems is successful. As a result, "the pessimistic specter was conjured up by the failure of the first attempt." (Park 2017b, 217) In other words, we can construct a new PI: since Koo's attempt to refute PI against selectivism failed, the next selectivist's future attempt to refute it will also fail. Selectivists are forced to accept this new PI against them. After all, they believe, as pessimists do, that past mistakes are an indication of future mistakes, and that as a result, scientific revolutions will occur as they did.

Selectivists would object that it is one thing that Koo failed to refute PI against selectivism; it is another that the next selectivist will also fail to refute PI against selectivism. The next selectivist's attempt will succeed or fail, not depending on how Koo did but rather depending on whether it involves an argument strong enough to defeat PI against selectivism. Therefore, we should evaluate the next selectivist's future attempt independently of Koo's attempt.

This objection is admirable. However, it is exactly what scientists would raise to selectivists and pessimists. It is one thing that past scientists failed to describe the world correctly; it is another that current scientists also fail to describe the world correctly. Current scientists' attempt succeeds or fails, not depending on how past scientists did but rather depending on whether it involves strong arguments for current theories. Therefore, we should evaluate current scientists' attempt independently of past scientists' attempt, pace selectivists and pessimists.

### 4.4. The Grand Optimistic Induction

I (2022, Chapter 4) construct five new arguments for scientific realism, arguments that were not conceived in the 20th century. They are summarized as follows:

**The List of New Arguments for Realism**

- The optimistic induction over realists
- The argument from undiscovered evidence
- The argument from neighboring theories
- The counter-induction for realism
- The English argument for realism (Park 2022, 83)

After providing this list, I advance what I call 'the grand optimistic induction.' (Park 2022, 84) It goes as follows. Since several unconceived arguments for scientific realism were formulated in the past, more unconceived arguments for scientific realism will be formulated in the future. The more such arguments are formulated, the more likely it will be that there are more such

arguments. It follows that there are infinitely many such arguments, and thus that the probabilities that most current theories are true are infinitely close to 100%.

Koo claims that the grand optimistic induction does not justify scientific realism that current theories are mostly true in toto, but rather selectivism that working posits of current theories are true. He writes that the grand optimistic induction "could be used to increase the epistemic warrant for the approximate truth of theoretical parts that selective realists are committed to." (Koo 2023, 110) In my view, this is exactly what selectivists would say regarding the grand optimistic induction. They would add that selectivism runs less epistemic risk than scientific realism, and hence that selectivism is better than scientific realism.

How would instrumentalists (Stanford 2006, 189) respond to Koo? They would say that the grand optimistic induction does not justify selectivism but rather instrumentalism according to which our best theories make true predictions. They would ask the following questions to selectivists. Why believe that working posits of current theories are true? Why not believe that they are merely useful? Instrumentalists would add that instrumentalism runs less epistemic risk than selectivism, and hence that instrumentalism is better than selectivism.

A problem with selectivism is that "selectivism recommends less when we deserve more." (Park 2019b, 101) The same criticism applies mutatis mutandis to instrumentalism. Instrumentalism recommends less when we deserve more. What would be the reason for thinking that we deserve more than selectivists and instrumentalists think? An answer to this question can be found in the grand optimistic induction. The grand optimistic induction suggests that the probabilities that most current theories are true are infinitely close to 100%, implying that feasible realism runs no more epistemic risk than selectivism and instrumentalism, and thus that selectivists and instrumentalists cannot say that their positions are better than feasible realism because their positions run less epistemic risk than feasible realism. It is not clear on what ground selectivists and instrumentalists would choose their positions over feasible realism.

I predict that despite these objections to selectivists and instrumentalists, they would stick to their respective positions. What can scientific realists do to such epistemic agents? Scientific realists can invoke epistemic reciprocalism, according to which we should treat other epistemic agents in the way they treat their target agents (Park 2017c, 56). Suppose that selectivists develop a positive theory, whatever it might be, construct strong arguments for it, and then claim that its probability is infinitely close to 100%. Scientific realists would not believe it in toto. Rather, they would only believe some of its components, the components that they think will be preserved in its successor. Scientific realists would also treat instrumentalists' positive theory in the way instrumentalists treat scientists' theories. Selectivists and instrumentalists are reminded of the epistemic imperative: "*Act only on an epistemic maxim through which you can at the same time will that it should become a universal one.*" (Park 2018, 441)

## 5. Feasible Realism

In this section, I develop a new position that is intended to be better than both scientific realism and selectivism in multiple respects.

As noted in Section 3 above, scientific realists can accept selectivists' division of a past theory into presuppositional and working posits. This observation motivates a new position that I call 'feasible realism.' Like selectivism, it divides a past theory into working and presuppositional posits, and then claims that working posits were mostly (approximately) true. Like scientific realism, it claims that current theories are mostly (approximately) true, without dividing a current theory into working and presuppositional posits.

What justifies feasible realism? Like scientific realists, feasible realists appeal to the grand optimistic induction. In addition, they appeal to NMA, claiming that feasible realism explains the success of past science and the success of current science. Specifically, they suggest that past science was successful because working posits of past theories were mostly (approximately) true, and that current science is successful because current theories are mostly (approximately) true.

Feasible realism has the following advantages over scientific realism. First, feasible realism does not say, while scientific realism does, that earlier theories were approximately true. Accordingly, feasible realism is immune, while scientific realism is not, to Stanford's aforementioned charge that it is questionable whether earlier theories were approximately true. Second, feasible realism claims that working posits of past theories were mostly (approximately) true. Consequently, feasible realism can explain why past science was successful. By contrast, scientific realism claims that past theories were mostly approximately true. Accordingly, scientific realism cannot explain why past science was successful. If scientific realists suggest that past science was successful because past theories were mostly approximately true, pessimists will retort that it is questionable whether past theories were mostly approximately true.

Feasible realism has the following advantages over selectivism. First, feasible realism claims, as scientific realism does, that current theories are mostly (approximately) true in toto. Consequently, it deserves the appellation 'realism.' Second, feasible realists do not divide a current theory into working and presuppositional posits. As a result, feasible realists are free from the burden of presenting the prospective criterion that Stanford attributes to selectivists.

Feasible realism has one more noteworthy advantage over selectivism. Feasible realism denies, while selectivism affirms, that most current theories will end up in the cemetery of dead theories. In consequence, there is a substantial difference between feasible realism and pessimism, but not between selectivism and pessimism. The difference indicates that feasible realism is better than selectivism as an alternative to pessimism.

Why is it that the wider the gap is between two rival positions, the better it is? In general, if two rival positions are far from each other, there can be

interesting debates between the advocates of the rival positions; if two rival positions are too close to each other, there can be no debate between them. For example, there is almost no gap between Bas van Fraassen's (2007; 2017) formulations of scientific realism and antirealism. On his formulations, both scientific realism and antirealism assert that it is reasonable to believe T, but also reasonable not to believe T, where T is one of our best theories. The only difference between scientific realism and antirealism is that the latter affirms, while the former denies, that it is 'supererogatory' to believe T (van Fraassen 2007, 343; 2017, 99). Under this framework, scientific realists and antirealists agree with each other so much that there can be no debate between them (Park 2019c, 483-485).

Feasible realists welcome their epistemic peers to embrace epistemic reciprocalism vis-à-vis feasible realism. Feasible realists do not have any problem with their epistemic peers treating feasible realists' positive theories as feasible realists treat scientific theories. Suppose that feasible realists advanced a positive theory, but that it turned out to be false. They advance a new theory, which is better than the old one. Some components of the old theory were retained in the new one while other components of it were discarded. Their epistemic peers are selective about the different components about the old theory, but not about the new theory. Specifically, they claim that the retained components of the old theory are true while the discarded components are false, and they claim that the new theory is true in toto. Feasible realists have no complaint against their epistemic peers' treatment of their successive theories. They understand why their epistemic peers do not believe that their old theory was true in toto.

## 6. Objections and Replies

### 6.1. Threshold

Opponents might admit that scientific theories get closer to the truth as time passes, but might object that past theories did not pass the threshold where theories become true, and thus that current theories did not pass the threshold, either. However, feasible realism holds that they passed the threshold. So feasible realists owe us answers to the following questions. When exactly did current theories pass the threshold? What is the reason for thinking that they did? Until these questions are convincingly answered, feasible realism is a nonstarter.

In my view, this possible objection applies no less to the antirealist position that current theories are empirically adequate. Past theories, such as the caloric theory, were empirically inadequate, given that there were empirical anomalies to them. Past theories did not pass the threshold where theories become empirically adequate, and thus current theories did not pass the threshold, either. However, the antirealist position holds that current passed the threshold. So antirealists owe us answers to the following questions. When exactly did current

theories pass the threshold? What is the reason for thinking that they did? Until these questions are convincingly answered, the antirealist position is a nonstarter.

Feasible realists can get around the possible objection to them by appealing to the grand optimistic induction in Subsection 4.4 above. According to it, the probabilities that most current theories are true are infinitely close to 100%. It implies that most current theories passed the threshold when they were formulated. Antirealists are welcome to make use of it to get around the possible objection to them above. Those who are not convinced of these replies to the possible objections are asked to engage in the details of it and to pinpoint a problem with it.

Selectivists and pessimists should keep in mind that if they fail to refute the grand optimistic induction, their offspring will also fail to refute it, as a matter of induction. They should accept this PI, given that they believe that to make a failed attempt is to conjure up 'the pessimistic specter.' (Park 2017b, 217) It is to throw in the towel for them to say that even if their attempt fails, their offsprings' attempt will succeed. After all, scientists would say the same thing to them, viz., even if past scientists' attempt failed, current scientists succeed in their truth-gathering enterprise.

### 6.2. Implausible Premise

Opponents might object that the five new arguments on the list in Subsection 4.4 above are so weak and unconvincing that they do not constitute a plausible premise of the grand optimistic induction, i.e., that they do not constitute a strong inductive rationale for inferring that unconceived arguments for feasible realism will be formulated in the future. In short, feasible realism, as introduced in this paper, is a product of a problematic inference.

How do I respond to this objection? It is merely an assumption that the five new arguments are weak and unconvincing. It needs to be argued rather than merely stated. Specifically, opponents are required to engage in the details of the five new arguments and to expose specific problems with them. For example, what is the evidence undermining the premise of the argument from undiscovered evidence? Why think that the conclusion does not follow from the premise? Until these questions are convincingly answered, the possible objection is merely an expression of emotion.

Moreover, the grand optimistic argument mirrors Stanford's pessimistic induction, and thus any objection to the former applies no less to the latter. According to the latter, "the history of scientific inquiry itself offers a straightforward rationale for thinking that there typically are alternatives to our best theories equally well-confirmed by the evidence," (Stanford 2006, 20) and the possibility space "appears to be indeterminate and unbounded." (Stanford 2006, 133) Keep in mind that any objection to the grand optimistic induction might backfire on the pessimist and selectivist projects.

## 7. Conclusion

Selectivism does justice to past theories, but not to current theories. Scientific realism does justice to current theories, but not to past theories. Feasible realism does justice to both past and current theories. Therefore, it is the best of both worlds. It recommends us to believe what we truly deserve to believe regarding what past and current theories say about the world. This paper has the following simple slogan against selectivists: "Why divide a current theory?"

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