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On

Epistemic Relativism

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Abstract

Boghossian (2006) reconstructs epistemic relativism, the thesis that "there are no absolute facts about what justifies what," and demonstrates its incoherence. In this paper, it will be argued that Boghossian's argumentation omits a special case in which epistemic relativism is plausible. After an analysis of epistemic relativism, the thesis of equal validity, which Boghossian understands to be central to epistemic relativism, will be discussed. This will set the foundation for a deeper analysis of epistemic pluralism, which is one of the theses whose compound forms epistemic relativism. It will be argued that in some scenarios epistemic pluralism is defensible. In turn, this leads to a partial defense of epistemic relativism.

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Introduction

Relativism harks back to Protagoras' dictum that "man is the measure of all things." In certain areas of inquiry the idea that no objective facts exist seems plausible. It is relatively uncontroversial that judgements of taste like the question whether chocolate or strawberry ice cream tastes better are impossible to decide. The answer to such a mundane question hinges on subjective opinions and personal preferences. In other areas, such as etiquette, similar observations can be made. What counts as good behavior is relative to a society's expectations.

Epistemic relativism, the idea that knowledge is a relative notion, does not seem to be similar to the previous examples. It entails that there could be more than one valid account of knowledge. As a consequence, there could be a number of equally valid so-called epistemic systems. Yet, the idea that there are no objective standards of knowledge seems to be counterintuitive. Relativist accounts of knowledge enjoy a certain popularity in some areas of the humanities. However, the thought that, for example, science is just one of many valid ways of arriving at a relative notion of truth, seems to be less palatable to philosophers in the mainstream of the analytic tradition. The idea that radically different accounts of a certain subject matter could be equally valid almost seems to be outright implausible.

The problem of selecting the most adequate theory is central to the progress of science. However, if epistemic relativism were true, then it would be impossible to distinguish between adequate and inadequate scientific theories because there would be no standard by which to judge them. One of the most striking historical examples in this respect is the conflict between Galileo and Cardinal Bellarmine about the status of Copernicanism. Either one of them is right, and the other wrong. A contemporary observer could also have mused that possibly both are

wrong, and that there might be another theory that could better account for the astronomical observations. However, the idea that both Galileo and Cardinal Bellarmine could be right does not seem to make much sense.

The reasoning that leads to an obvious conclusion in a historical episode is apparently being eschewed by some people in contemporary debates. For instance, Intelligent Design has been touted as an alternative to evolutionary theory. In this case, relativism is used to justify teaching a false theory in U.S. American classrooms. This is arguably the most clear-cut case of an alternative 'epistemic system' that is claimed by its proponents to both offer a valid interpretation of the world, and to rival an established scientific theory. It seems rather implausible that Intelligent Design and evolutionary theory could both be right and thus be equally valid. Intelligent Design is just one example in which relativist positions are prominent. More general philosophical support can be found, for instance, in Kuhn's (1962) incommensurability thesis and the related statement that scientists who adhere to different paradigms live in different worlds.

Boghossian (2006) presents a number of arguments against epistemic relativism. Most of these aim to show the incoherence of this position. One of these arguments, however, specifically targets epistemic pluralism, one of the three theses whose compound forms epistemic relativism. Epistemic pluralism says that "[t]here are many fundamentally different, genuinely alternative epistemic systems, but no facts by virtue of which one of these systems is more correct than any of the others" (2006: 85). Refuting epistemic pluralism is one way of refuting epistemic relativism, because the latter is built upon the former. The aim of this paper is not to argue against Boghossian (2006) *in toto*, but instead to develop a limited-case scenario in which epistemic pluralism holds. However, by arguing that epis-

temic pluralism is defensible in a limited case, a defense of epistemic relativism as a whole is not possible.

Boghossian (2006) has received some attention in the literature, but the angle of his commentators is fundamentally different from the position that is to be presented in this paper. The replies of Rosen (2007) and Neta (2007) have in common that they accept Boghossian's analysis of epistemic relativism. The former focusses on the problem of accepting an epistemic system, and presents a possible solution for the epistemic relativist. The latter tries to introduce a linguistic angle, so-called grammatical relativism, into the discussion. Neta's proposal garnered severe criticism by Boghossian (2007). Boghossian's discussion of epistemic pluralism in particular, however, has so far been neglected. This paper attempts to fill this lacuna.

First, an account of epistemic relativism will be given. Epistemic relativism has to be understood in the context of the classical and the constructivist picture of knowledge. In front of this backdrop, a broad definition of epistemic relativism based on Swoyer (2003) will be introduced. Boghossian's contribution to the discussion of epistemic relativism is that he analyzes this concept in greater depth. Apart from identifying the so-called equal validity thesis as the central thesis of epistemic relativism, Boghossian implicitly refers to the constructivist picture of knowledge. Consequently, he identifies three individual theses whose compound forms epistemic relativism: epistemic non-absolutism, epistemic relationalism, and epistemic pluralism.

Second, the juxtaposition of Boghossian's account with the position of the relativist philosopher Bloor (2007) will reveal mutual misunderstandings in the debate. In this context, the equal validity thesis, the alleged central idea behind epistemic relativism, will be discussed. While it might seem that the equal validity

thesis is at the core of epistemic relativism, it will become obvious that the relativist and the anti-relativist have conceptual differences in this respect. Boghossian explicitly refers to Barry Barnes and Bloor (1982) as evidence that epistemic relativists embrace the equal validity thesis. However, Bloor (2007) not only argues that Boghossian has misinterpreted his previous work, but also that the equal validity thesis is not central to epistemic relativism. On the other hand, Bloor's own defense suggests that he himself does not do Boghossian's anti-relativist position justice either. As a consequence, an alternative interpretation of the equal validity thesis, based on Eric Barnes (1998), will be proposed. This alternative conception will serve as the foundation of the subsequent discussion of epistemic pluralism.

Third, Boghossian's analysis of epistemic pluralism will be discussed in detail. Based on the previous results of the discussion of Eric Barnes (1998), and in connection with Van Fraassen's (1989) so-called 'bad lot argument' against the inference to the best explanation, it will be argued that epistemic pluralism is plausible in some restricted cases, i.e. in premature sciences, in which it is not yet clear which theory might eventually prevail. In such a scenario it could as well be that every currently available theory is insufficient. This will be illustrated with an episode taken from the history of chemistry, the fate of the phlogiston theories.

Epistemic Relativism

The Classical and the Constructivist Picture of Knowledge

Epistemic relativism is based on the constructivist picture of knowledge, which ought to be contrasted with the classical picture of knowledge to be understandable. Boghossian summarizes the classical picture of knowledge as being objective about three aspects: facts, justification, and rational explanation (cf. 2006: 22). First, facts are taken to be independent of observers and their beliefs about them. In this picture, beliefs have no bearing at all on facts. Second, regarding the problem of justification a claim such as "evidence E justifies belief B" is supposed to be valid regardless of the community the person uttering such a statement is part of. Societal norms and values are considered irrelevant for the question whether evidence E justifies belief B or not. In this context, Boghossian speaks of "contingent needs and interests of any community" (2006: 22) which have no bearing on the problem of justification. Third, objectivism regarding rational explanation is posited, which means that "evidence alone is capable of explaining why we believe what we believe" (2006: 22). The problem of rational explanation is also at the center of the subsequent debate regarding epistemic relativism because according to this position the same evidence could be used to justify contradicting beliefs.

In juxtaposition to the classical picture of knowledge, Boghossian also identifies three claims regarding constructivism about knowledge. In the constructivist picture facts, justification, and rational explanation are all understood to be "socially constructed in a way that reflects our contingent needs and social interests" (2006: 22). Depending on the particular kind of constructivism in question, at

least one is claimed, and sometimes all three (cf. 2006: 22-3). First, constructivism about facts presupposes that the world cannot be understood outside of a social context. Second, constructivism about justification states that a claim such as "evidence E justifies belief B" depends on the social context. This means that the same evidence E could justify belief B in one social context, but not in another. Third, according to constructivism about rational explanation "[i]t is never possible to explain why we believe what we believe solely on the basis of our exposure to the relevant evidence" (Boghossian, 2006: 23).

As Boghossian further points out, constructivism about justification is a consequence of constructivism about facts, because "if all facts are socially constructed, *a fortiori* so are facts about what justifies what" (2006: 23). This is uncontroversial. Conversely, it can be claimed that without taking constructivism about facts as a premise, constructivism about justification is difficult to make sense of. Constructivism about justification will play an important role for the remainder of this paper as it is central to epistemic relativism. The other element that is central to epistemic relativism is the equal validity thesis. Boghossian justifies the importance of the equal validity thesis in the context of the constructivist picture of knowledge with the observation that, according to epistemic relativism, differing views could be equally valid because they emerge from facts that were construed in different ways by the communities that hold them (cf. 2006: 24). The equal validity thesis will be discussed in great detail later on.

Global Relativism and Epistemic Relativism

An important distinction regarding relativism is between global and local relativism. Global relativism is inclusive of all subject matters, whereas local relativism only applies to specific domains like aesthetics, etiquette, or morality (cf. Boghossian, 2006: 48). Global relativism is generally dismissed as incongruent. It is beyond the scope of this paper to cover the objections against this position in detail, but a broad sketch of the most prominent counter-argument should suffice to demonstrate its main weakness. Global relativism states that there are no absolute truths in any subject matter. However, every relativist thesis has to refer to at least some absolute truths. Thus, a self-refutation argument emerges: if global relativism is absolutely true, then it is false. On the other hand, if global relativism is not absolutely true, then it cannot be global (cf. Boghossian, 2006: 53). Boghossian uses similar arguments to demonstrate the incoherence of epistemic relativism, which also belongs to the domain of global relativism as it concerns all epistemic standards.

Epistemic relativism is the opposite of epistemic absolutism. The latter is the view that "there is only one correct or authoritative fundamental standard [...] for assessing epistemic merit" (Luper, 2004: 271). Conversely, epistemic relativism entails that no such authoritative standard exists. Goldman (2007) defines epistemic relativism as the view that all epistemic norms are relative to a community, which he understands to mean that there are no objectively right epistemic norms. Even though this is a slightly more concise definition, it is still too vague a notion to work with. Thus, the more elaborate analysis of Swoyer (2003) will be used instead.

Swoyer distinguishes between descriptive and normative epistemic relativism. Descriptive epistemic relativism is concerned with empirical claims that various groups have different standards of reasoning. Boghossian (2006) is only concerned with normative epistemic relativism. Hence, descriptive epistemic relativism will not be taken into further consideration. Whenever Boghossian speaks of epistemic relativism he refers to normative epistemic relativism. In this section, Swoyer's description of normative epistemic relativism will be used to give an intuitive understanding of this concept. This position will subsequently be referred to as epistemic relativism. In the next section, Boghossian's analysis will illustrate how the notion of epistemic relativism can be formalized in greater detail.

In Swoyer's picture, epistemic relativism is the view that "modes of inference, norms of justification, standards of rationality or the like" (2003) are only right or wrong relative to a framework. Also, there are no framework-independent facts. Boghossian uses the term 'epistemic system' instead of 'framework'. According to epistemic relativism, "people or groups can disagree about what counts as good evidence or strong justification without being inconsistent, irrational, unintelligent, unjustified, or even just obtuse" (Swoyer, 2003). Consequently, for instance, a member of one group could claim that evolutionary theory offers the best account of the origin of life, whereas a member of another group would claim the same to be true for Intelligent Design. Were epistemic relativism to hold true, then it would be futile to argue that one party is right and the other wrong. According to this illustration, epistemic relativism seems to be intuitively implausible, but in the last chapter a partial defense will be proposed.

Swoyer further distinguishes between various kinds of epistemic relativism, ranging from strong versions, according to which any epistemic standard is admissible, "even those that are blatantly inconsistent by their own lights" (2003), to

more subtle versions. Boghossian (2006) is less concerned with extreme positions, but instead focusses on practical issues like the status of alternative theories to established scientific theories, e.g. the debate between Darwinism and creationism. As Swoyer further points out, the main problem of epistemic relativism are self-refutation arguments. As it will be seen later, Boghossian argues similarly against epistemic pluralism, one of the three theses whose compound constitutes epistemic relativism according to his analysis, which will be presented in the next section.

Boghossian's Analysis of Epistemic Relativism

An intuitively accessible notion of epistemic relativism was given by Swoyer (2003). However, it is more difficult to analyze this concept thoroughly. Boghossian's analysis follows a two-step approach. First, he identifies the thesis of equal validity, which he considers to be central to epistemic relativism. Then, he offers a precise definition of epistemic relativism that is based on his previous analysis of the constructivist picture of knowledge. He defines the equal validity thesis as follows (2006: 2):

> *Equal validity*: There are many radically different, yet "equally valid" ways of knowing the world, with science being just one of them.

This thesis seems to be in accordance with the account of epistemic relativism by Swoyer, which was presented above. It is due to the equal validity thesis that disagreement about the epistemic merits of different theories is a rather pointless ex-

ercise within the confinements of epistemic relativism. Because of its central importance for epistemic relativism, the equal validity thesis will be discussed in detail in the next chapter.

More specifically, and in relation to the previous brief analysis of knowledge, Boghossian analyzes how facts, justification, and rational explanation relate to epistemic relativism. He identifies three theses which "a constructivism about knowledge could most interestingly amount to" (2006: 9), and subsequently assesses their plausibility. Epistemic relativism is reconstructed as the compound of epistemic non-absolutism, epistemic relationalism, and epistemic pluralism. Just as an analysis of knowledge may be incomplete without answering questions regarding the status of facts, justification, and rational explanation, epistemic relativism also requires the acceptance of all three theses. In order to refute epistemic relativism, it would be sufficient to refute one of these three theses. Boghossian defines them as follows (cf. 2006: 84-5):

> *Epistemic non-absolutism*: There are no absolute facts about what belief a particular item of information justifies.

> *Epistemic relationalism*: If someone's epistemic judgments are to have any prospect of being true, we must not construe his utterances of the form "E justifies belief B" as expressing the claim *E justifies belief B* but rather as expressing the claim: *According to the epistemic system C, that I, S, accept, information E justifies belief B.*

> *Epistemic pluralism*: There are many fundamentally different, genuinely alternative epistemic systems, but no facts by virtue of which one of these systems is more correct than any of the others.

This analysis of epistemic relativism hinges on the thesis of equal validity (cf. Boghossian, 2006: 1-5). Without it, the three theses that constitute epistemic relativism are incomprehensible. Boghossian understands epistemic relativism to be dependent on communities of people who hold certain beliefs. According to his analysis, epistemic judgements regarding any given item of evidence can be different from community to community. Hence, "different people may rationally arrive at opposed conclusions, even as they acknowledge all the same data" (2006: 59). At first sight, this analysis of epistemic relativism seems to be adequate. Yet, as the discussion in the next chapter will show, there are some subtle issues to be addressed.

Boghossian offers a number of arguments against epistemic relativism (cf. 2006: 81-94). First, he questions that the standards of reasoning are equally sound for any member of the respective communities which hold contradicting beliefs. Second, he uses the traditional self-refutation argument against relativism, which was briefly mentioned before. Third, he argues that an epistemic relativist cannot develop standards for the acceptance of an epistemic system. Fourth, he offers an interpretation according to which epistemic systems contain only incomplete propositions. His sixth argument against epistemic relativism is supposed to show that epistemic systems cannot be imperative either. All of these five arguments aim at epistemic relativism in general and are supposed to demonstrate its incoherences. Boghossian's fifth argument, however, specifically targets epistemic pluralism, one of the three theses whose compound forms epistemic relativism. He at-

tempts to illustrate the contradictions that would result from accepting this thesis. A refutation of epistemic pluralism consequently leads to a refutation of epistemic relativism (cf. 2006: 89-91). This paper is only concerned with Boghossian's argument against epistemic pluralism. The following chapter on the equal validity thesis is a prerequisite for the discussion in the final chapter.

The Equal Validity Thesis

The Equal Validity Thesis and its Importance for Epistemic Relativism

The starting point of Boghossian's discussion of epistemic relativism is a front page story of the *New York Times*, entitled "Indian Tribes' Creationists Thwart Archeologist." In this article, it is stated that a number of archeologists "torn between their commitment to scientific method and their appreciation for native culture" (Johnson, 1996, cited in Boghossian, 2006: 2) subscribe to a view according to which science provides just one of many ways to gain knowledge of the world. A rival account to the body of scientific knowledge gathered by archeologists is seen in the creationist account given by elders of the Zuni tribe. This is certainly a peculiar view of science. However, a lively debate in the United States of America surrounding the status of Intelligent Design as an alternative to evolutionary theory follows similar lines.

Selectively citing proponents who hold peculiar opinions is probably not the best way to arrive at solid philosophical conclusions, which is one of the problems of Boghossian's monograph. This has been noted by some of his commentators as well. Fromm, for instance, points out that "Boghossian is not intimidated by the fact that an academic can always be found to embrace absurdities" (2006: 588). Furthermore, Fromm indicates that some of the extreme positions and people Boghossian cites are used to set up the foundation of his argument in a particular way. Nonetheless, the equal validity thesis, which Boghossian identified to be at the center of relativism, seems to be embraced by some of the people he cites.

The following definition of the equal validity thesis will be called the 'radical version' (cf. 2006: 2). Later on, a modified version will be introduced.

> *Equal Validity (radical version)*: There are many radically different, yet "equally valid" ways of knowing the world, with science being just one of them.

This is the thesis Boghossian distilled as the essence of epistemic relativism. However, relativist philosophers do not necessarily seem to agree with this claim. Bloor (2007), for instance, is in direct opposition to Boghossian. Bloor's position will be discussed in detail in the next section. Following along Boghossian's lines, the question arises how there can be more than one valid interpretation of truth, or more than one "way of knowing the world." Boghossian's position seems to be influenced by epistemic absolutism as he subscribes to a view according to which truth is an absolute quality, which entails that there is a clear understanding of what is right or wrong in relation to given facts. However, this is merely implied and not explicitly stated. Speaking in the terms of the distinction Barry Barnes and Bloor (1982) use when describing their related 'equivalence postulate,' Boghossian seems to promote a dualist picture of beliefs that are either completely true or completely false. However, such a rigid black and white picture does not seem to be held by a number of people he argues against. Below, an account of knowledge according to epistemic relativism will thus be described.

According to Boghossian's equal validity thesis, relativists claim that many radically different ways of interpreting the world are equally valid. Hence, science is just as good as is Zuni creationism, evolutionary theory is no better than Intelligent Design, and, to refer to a famous example taken from the history of science, Cardinal Bellarmine's and Galileo's positions should be understood as being equally convincing. Such juxtapositions of contradicting theories make epistemic

relativism appear to be indeed untenable if not outright implausible. In turn, it has to be considered how relativist philosophers respond to Boghossian's charges. The subsequent section is particularly interesting since Bloor (2007) is a direct reply to Boghossian (2006).

Bloor on the Equal Validity Thesis

Bloor takes issue with Boghossian's equal validity thesis as he disagrees with the claim that it is at the center of epistemic relativism. As a proponent in this debate he is noteworthy because Boghossian explicitly refers to him and also extensively quotes from one of his papers in order to set up the picture of the relativist position he subsequently attacks. However, Bloor (2007) discusses and rejects the equal validity thesis. The relevant passage Boghossian quotes is taken from Barry Barnes and Bloor (1982: 27-8):

> "For the relativist there is no sense attached to the idea that some standards or beliefs are really rational as distinct from merely locally accepted as such. Because he thinks that there are no context-free or super-cultural norms of rationality he does not see rationally and irrationally held beliefs as making up two distinct and qualitatively different classes of thing."

The formulation "no context-free or super-cultural norms of rationality" is understood by Boghossian to be at the center of the relativist position. However, it is not easy to see how this phrase could be interpreted to resemble the equal validity the-

sis. Bloor therefore rightly points out that the passage Boghossian quotes "neither asserts nor implies the equal validity thesis" (2007: 263). This is far from Boghossian's claim that the equal validity thesis is expressed in these lines. At this point, Boghossian can arguably be charged with misinterpreting his opponents. Bloor furthermore states that the aforementioned article contains a passage that "actually contains an explicit repudiation of the [equal validity] thesis" (2007: 263). The relevant passage is: "It is not that all beliefs are equally true or equally false, but that regardless of truth and falsity the fact of their credibility is to be seen as equally problematic" (1982: 23). It seems futile to argue against Bloor at this point.

On the other hand, Bloor (2007) is not immune to criticism either, because he seems to interpret the equal validity thesis in a way that is different from Boghossian's definition. The equal validity thesis does not state that *all* beliefs are "equally true or false," which is arguably what Bloor considered the "explicit repudiation" to consist of. Instead, the equal validity thesis merely speaks of *many* equally valid ways of interpreting the world. Validity, in turn, does not imply that different views are all equally true or equally false. Furthermore, Bloor adds unnecessary rhetoric to the discussion by circumscribing equal validity as "the idea that Aristotle's physics is as good as Einstein's physics and implies that there has been no progress in knowledge" (2007: 263-4). This statement seems to ridicule the idea of scientific progress. At this point, it has to be objected that, in defense of Boghossian, the thesis of equal validity does not say that all beliefs are considered to be equally true or equally false. The former is a logical impossibility, but the latter claim can be substantiated from a skeptical position. This is what the discussion of Boghossian's treatment of the thesis of epistemic pluralism in the next chapter will aim at.

However, at times, Bloor's (2007) own position is difficult to make sense of. A central quote of his article is the following, which leads to problematic territory:

> "The identification of the equal validity thesis as a necessary feature of relativism is, however, false. Relativists are not committed to denying scientific progress. What relativists deny, and must deny, is that any sense can be attached to the idea of absolute progress or of progress toward absolute truth. Nothing can stop the absolutist asserting the reality of absolute progress, but the relativist will point to the dogmatic character of the claim and its lack of real content. Progress, for the relativist, must be understood as a this-worldly phenomenon, as something to be measured on a real scale, not by reference to some other-worldly fantasy of an 'absolute' scale" (2007: 264).

Thus, it emerges that the impossibility of an absolute scale by which to measure knowledge is central to the relativist position held by philosophers such as Bloor. This is significantly different from the equal validity thesis Boghossian identified to be at the core of epistemic relativism. Yet, it is difficult to make sense of Bloor's position in practical terms. Therefore, the following section will discuss Bloor's conception of the progress of knowledge, which will give further insight into his idea why the equal validity thesis is not at the center of epistemic relativism. It will be suggested that there is a way around this problem. Subsequently, a modification of the equal validity thesis will be introduced that may be compatible with Bloor's evolutionary account of epistemology.

Epistemic Relativism and the Progress of Scientific Knowledge

In order to defend epistemic relativism, Bloor (2007) suggests a picture of the progress of knowledge that is supposed to be compatible with this position. The main thrust of his position is that relativists do not deny scientific progress. Instead, they deny the notion of "absolute progress or progress toward absolute truth" (2007: 264). It will emerge that this evolutionary account of epistemology is compatible with a weakened version of the equal validity thesis. This, in turn, will allow to develop a scenario in which Boghossian's criticism against epistemic pluralism does not hold up.

In Bloor's picture of the progress of knowledge (2007: 264-7), he first represents ignorance at point A and absolute truth at point B on a finite line ranging from A to B, with a point C somewhere in between point A and point B. Point C represents the status of our current knowledge. Over time, point C gradually moves toward point B. This increase of the distance between the two points A and C represents an increase in knowledge. Bloor later on argues that point B should, in order to exemplify its absolute status, be located infinitely far away (2007: 264).

At this step, any progress toward point B could be discarded because "[a]n infinite quantity minus a finite quantity is still infinite" (2007: 264). Mathematically speaking, this is correct, but as Bloor later on acknowledges, such an interpretation would be misguided because progress "represents a move *away* from past problems and frustrations, not a move *toward* an unknown terminus" (2007: 266; Bloor's emphases). However, at this point it might be objected, along the very same lines Bloor uses to argue for locating 'knowledge' in the infinite, that a state of complete ignorance should also be located in the infinite, in order to exemplify its equally absolute status.

It seems that Bloor accepts the idea that it is possible to accumulate knowledge over time, even though he seems to express a different view later on. As he points out in this context, there is an understanding according to which the progress of knowledge is represented only by an increase of the distance between point A and point C, and a sense in which, in a Darwinian sense, "knowledge is a form of collective 'adaption' to reality" (2007: 266). Bloor does not draw an explicit parallel to evolutionary epistemology, but the view he represents is reminiscent of such accounts of the progress of knowledge.

Finally, it is time to evaluate two of Bloor's claims (cf. 2007: 264). First, he claims that the relativist is not committed to denying scientific progress. This is seemingly adequately reflected in the picture of the progress towards knowledge he sketches. Conversely, his second claim is that the relativist denies that absolute progress or absolute truth are concepts without meaning. This is also reflected in his picture. One problem with his account, however, emerges: How does the relativist distinguish between progress toward knowledge and mere meandering? Bloor does not make this distinction, and in his picture there is neither a demarcation criterion which would allow to distinguish between these two cases, not is it obvious how such a distinction could be possible. Thus, there is the danger of confusing the accumulation of mere data with an accumulation of knowledge because his picture of the progress of knowledge lacks a clear reference point. Such a point of reference, after all, would be a feature of epistemic absolutism. The resulting problem is that an 'evolutionary adaption' of knowledge could simply be a blind 'mutation' and not constitute any progress at all. In turn, the epistemic relativist's account of the accumulation of knowledge is deficient. Arguably, Bloor's picture is too abstract to be of practical value. It seems that the stage of adaption of knowledge to reality begins once a science enters the stage of a mature science. In pre-

mature sciences, on the other hand, there is a sense according to which scientists mostly tap in the dark. In these cases, it is doubtful whether one could yet plausibly speak of 'adaption' or scientific progress.

As a consequence, the claim that a relativist account of knowledge only makes sense in a very artificial setting seems to suggest itself. Such an account would work best in conjunction with a skeptical position which denies the progress of science. In any other setting it might be a nonsensical position to hold, with the exception of sciences that have not yet matured and in which there is a great number of rivaling theories available. This idea will be fleshed out more fully in the next chapter, in the discussion of epistemic pluralism. Before the potential merits of epistemic pluralism can be discussed, however, a revision of the equal validity thesis seems to be in order, which will allow to better understand epistemic relativism. It will be argued that Boghossian's original formulation is too rigid, whereas a weaker version of the equal validity thesis could be used to partly defend epistemic pluralism.

A Modification of the Equal Validity Thesis

Boghossian's claim that the equal validity thesis is the central thesis of epistemic relativism has been considered from two different angles. First, it has been considered from Boghossian's point of view. Then, the position of Bloor, a relativist philosopher, has been discussed. Boghossian argues that the equal validity thesis is central to relativism, whereas Bloor refuses to accept this position. However, the analysis has also shown that the interpretation of epistemic relativism Bloor represents is not fully satisfactory. In the following, a reconciliation shall be undertaken.

It will be argued that a 'weak' interpretation of the equal validity thesis could reasonably be seen to be at the center of epistemic relativism. The advantage of this proposal will be illustrated with reference to an example introduced by Eric Barnes (1998). Eventually, it will be shown that the equal validity thesis can be used to defend epistemic pluralism, and in turn epistemic relativism. Admittedly, though, this line of argument will only hold in special circumstances. More on this will be said in the final chapter of this paper.

As a reminder, Boghossian defined the equal validity thesis as follows:

> *Equal Validity (radical version)*: There are many radically different, yet "equally valid" ways of knowing the world, with science being just one of them.

It has been seen that Bloor's discussion of the relativist position undermines the status of the radical version of the equal validity thesis. On the other hand, Bloor's formulation of epistemic relativism lacks a positive notion of this position. He merely argues against epistemic absolutism, while not giving a positive account of what epistemic relativism could amount to. His picture of the progress of knowledge, for instance, was shown to be insufficient. Yet, it does not seem that Bloor would, contrary to Boghossian, question the validity of epistemic relativism or, to be more specific, epistemic pluralism. To bridge the gap between Bloor and Boghossian, it seems reasonable to modify Boghossian's equal validity thesis and introduce a version that might be agreeable with Bloor. The proposed weaker version of the equal validity thesis is as follows:

Equal Validity (weak version): There are many different, yet "equally valid" ways of knowing the world.

The modifications are self-explanatory. The reference to science has been dropped in order to account for Bloor's problem of distinguishing between the mere accumulation of data and the accumulation of genuine knowledge, and the notion of 'radically different ways' has been dropped because, as Bloor states, no relativist would subscribe to such a view. Hence, after this modification of the equal validity thesis, epistemic relativism is restricted to merely different but still equally valid ways of knowing the world. The next step is to explore whether such different, yet equally valid ways of knowing the world are plausible. Boghossian claims that the radical equal validity thesis can be refuted because it leads to logical impossibilities such as that the same body of evidence could be used to support two contradicting beliefs. This will be discussed in greater detail in the final chapter of this paper.

A fitting example for this discussion has been introduced by Eric Barnes (1998) who showed that in certain contexts epistemic pluralism is a plausible position. He developed an account of a pluralistic scientific method and proposed a model that works with Bayesian probabilities. The Bayesian component of his model has been severely criticized by Meehl (1999), but the general idea of his example may nonetheless be useful for discussing the problems surrounding the equal validity thesis. In Eric Barnes' picture, a group of equally competent and equally hardworking mapmakers faces the task of producing a map of a foreign city. In his scenario, which is to be understood as an analogy to science, the mapmakers gather after a few days to compare their maps (cf. 1998: 34).

Given these circumstances, it is not difficult to imagine an outcome in which the number of equally valid maps, which could be interpreted as an analogy for

scientific theories and their usefulness, is equal to the number of mapmakers. For instance, it could be assumed that ten mapmakers each have to produce a map of a foreign city with ten districts. Every mapmaker requires one day to map one district. Also, the mapmakers are equally competent, but they all have one bad day. Eventually, the ten mapmakers each produce a map that correctly represents nine of the ten districts. Thus, each map misrepresents one district, but each could misrepresent a different one. This is obviously a simple example, but it might nonetheless help to illustrate that it could be possible, at least metaphorically speaking, to have a number of maps, or theories, that are different, yet equally valid. Depending on the interpretation of 'radical,' the resulting maps could even be called radically different. From a pragmatic perspective it can be argued that if every map represent only nine out of ten districts correctly, then they are equally useful. In turn, such a scenario seems to show that there is some plausibility to the equal validity thesis, and, in turn, to epistemic pluralism.

Boghossian's position is based on the radical version of the equal validity thesis, which he understands to mean that there are indeed radically different, but mutually exclusive, ways of interpreting the world which can all make claims of being 'equally valid.' Eric Barnes' mapmaker example seems to be such an instance of equally valid, yet radically different theories. Of course, one would have to define 'radical,' but Boghossian does not provide a definition either and seems to rely instead on a commonsensical interpretation of this adjective. It has been demonstrated with the previous mapmaker example that it is not implausible to have different, yet equally valid ways of interpreting the world. The less competent the mapmakers are, the more radical their 'equally valid' theories will be. For instance, if each map correctly represents only one out of the ten districts, and there is no overlap at all between the available maps, then, even in the strong Boghossian in-

terpretation of the equal validity thesis, the ten 'radically different theories' are nonetheless all equally valid. Pragmatically speaking, they are also equally useful. In this example, though, it would be more accurate to describe the maps as equally useless, but this is merely a matter of perspective. Thus, the radical version of the equal validity thesis can be seen as a special case of the weaker version introduced above.

In some cases the claim of the equal validity of competing theories may make more sense than striving for only one correct theory. This was the thrust of Eric Barnes' mapmaker example. As an analogy, in certain periods in the history of science there were numerous competing theories available, but it was not obvious *yet* which one would finally emerge as the superior one. In Kuhn's (1962) terms, these were stages of crisis, characterized by great uncertainty.

The question whether a relativist position of epistemic justification could be superior to an absolutist one shall not be pursued further. However, in the remainder of this paper, the discussion of epistemic pluralism will show that epistemic relativism can be plausible in certain cases. It will be argued that the reasoning behind Van Fraassen's so-called argument of the 'bad lot' against the inference to the best explanation can be used to defend epistemic pluralism, and thus epistemic relativism. Finally, an episode taken from the history of science will illustrate that in certain scenarios epistemic pluralism could be plausible.

A partial Defense of Epistemic Pluralism

Boghossian's Analysis of Epistemic Pluralism

In the following, Boghossian's argument against epistemic pluralism will be reconstructed. Subsequently, an interpretation of this position that could provide a defense for the relativist against Boghossian's argumentation will be given. Boghossian defines epistemic pluralism as follows (cf. 2006: 85):

> *Epistemic pluralism*: There are many fundamentally different, genuinely alternative epistemic systems, but no facts by virtue of which one of these systems is more correct than any of the others.

It will be shown how a devil's advocate could argue against Boghossian's position. The point to be made is not that epistemic relativism, or, more specifically, epistemic pluralism, is sustainable in general, but merely that a proponent of such a position could muster more resistance against Boghossian's attack on epistemic pluralism than he himself concedes his adversaries to be able to. Boghossian's argument may hold in most cases, but it will be argued that under specific circumstances epistemic pluralism can be a plausible position. The question whether the subsequent argument is strong enough to save epistemic pluralism against its critics *in toto* will not be discussed. However, it will be argued that a weak epistemic pluralist account is superior to Boghossian's position in certain cases.

Boghossian argues that epistemic pluralism as defined above is not sustainable for the following reason (cf. 2006: 90). One could be confronted with two competing epistemic systems, C_1 and C_2. The former, C_1, entails:

(1) If E, then belief B is justified.

On the other hand, the contradicting epistemic system C_2 entails:

(2) It is not the case that if E, then belief B is justified.

The contradiction is obvious. It is not possible that evidence E could justify belief B in one case, and not justify it in the other. Consequently, Boghossian refuses to accept epistemic pluralism. To formulate the problem differently: the issue is that evidence E cannot be used to support two contradicting beliefs B. Boghossian illustrates this view by referring to the dispute between Galileo and Bellarmine, which he perceives to be examples of two contradicting epistemic systems (2006: 90). Either the astronomical observations are evidence that the sun is at the center of our solar system, or they are not. It cannot be the case that the same astronomical observations support the belief that it is at the center, and also the belief that it is not. Thus, the same evidence cannot support both Galileo and Bellarmine. Either the former is right, or the latter. Theoretically, both could have been wrong, but both could not have been right simultaneously because their positions were contradictory. Other cases, however, are less clear cut. It will be argued that the claim "either E justifies belief B or it does not" can be undermined if the collection of epistemic systems in question exclusively consists of deficient epistemic systems.

The Inference to the Best Explanation and the Problem of the 'Bad Lot'

The first thing to notice is that there is a hidden premise in the aforementioned example, namely that belief B is absolutely true, whereas the contradicting belief is absolutely false. Apparently, Boghossian implied a 'binary notion' of complete truth or complete falsehood. However, in some cases it might be presumptuous to claim to be able to know that a certain belief is completely true or completely false. What if one is confronted with two epistemic systems that both make illicit claims of entailing justifying beliefs? A relevant illustration of this problem are Eric Barnes' mapmakers who produce partly incorrect maps of a city. The omission of such cases is arguably an oversight by Boghossian. As it will emerge, this issue is not necessarily nontrivial. Trivially speaking, two different maps could be false. On the other hand, however, both could be partly true, and true in different aspects.

An example of epistemic systems that entail a false belief B might be in order. Let us take a look at some myths surrounding the riddle where babies come from. Young Tom, adheres to epistemic system C_3, which leads him to believe that babies form magically in cradles. So, if mommy and daddy buy a cradle, a new born baby will appear some time in the future. On the other hand, young Dick adheres to epistemic system C_4 according to which storks drop babies down the chimney. Their grandfather Harry, on the other hand, might find both epistemic systems equally amusing as they are completely wrong. This example serves to illustrate that epistemic systems can be contradictory and both can be simply false. There would not even be a point in trying to figure out "how far from the truth they are" as it might be possible in the case of obsolete scientific theories. However, this case shows that epistemic pluralism can easily be illustrated with practical examples.

The previous line of argument might be skeptical in nature. However, it is not invalid. A similar argument against the inference to the best explanation has been proposed by Van Fraassen (1989). As its name suggests, and without going into further details, the inference to the best explanation aims to select the best of the available explanations by adductive reasoning. However, as Van Fraassen points out, "our selection may well be the best of a bad lot" (1989: 143). Of a number of rival hypotheses, all could provide only insufficient explanations. The inference to the best explanation itself might be a plausible method of reasoning, but it is a relatively useless one if all the available explanations in a given case are severely lacking. The 'bad lot' further suggests that the theories or belief systems under consideration are only true to certain extents. Again, referring to Eric Barnes' mapmaker example, the 'bad lot' could consist of competing theories that all only capture a fraction of the truth.

Boghossian depicted the epistemic relativist as making the claim that "all epistemic systems are on a par as far as their correctness is concerned" (2006: 90). Whether this is a claim epistemic relativists would make is doubtful, as the previous discussion of Bloor (2007) has shown. It could be argued that one would be hard-pressed to find an epistemic relativist who claims that all epistemic systems are equally correct. However, the 'bad lot argument' reveals an instance in which this counterintuitive claim can be met. The only step needed to partly sidestep Boghossian's argument is to point out that his example apparently entails that one of the epistemic systems, either (1) or (2), is set up in a way that evidence E leads to a justifiable belief B. Yet, this does not necessarily have to be the case. In a non-trivial case, it was shown that one can make sense of the epistemic relativist's claim. If the choice of epistemic systems is too restricted and only consists of false

systems, then they are indeed all “on par as far as their correctness is concerned” because they are all false.

On the other hand, even if two competing epistemic systems could be rejected as not completely true, it can be argued that they can nonetheless differ in their respective degree of truth or, conversely, in their degree of falsity. This seems to be a plausible objection. Yet, in the very specific case that the epistemic systems in question are completely inaccurate, there is no question of degrees of falsity because they are completely false. With reference to Van Fraassen’s terminology, this situation might be called a ‘really bad lot.’ In such an unfortunate case, epistemic pluralism may not be without merit. In turn, it may be doubted that this is any merit at all, but as an example taken from the history of science will show in the next section, it can be argued that such scenarios are not implausible. Furthermore, the objection regarding possible differing degrees of truth only holds if there is a difference between competing theories. If, like in the mapmaker example, there are ten maps that are all only to ten percent correct, then they nonetheless are still “on par as far as their correctness is concerned.”

An Example from the History of Science

History of science is full of examples of periods in which scientists tried to argue for the correctness of theories that were later shown to be either partially or completely insufficient, which reminds one of the aforementioned ‘problem of the bad lot.’ Such a case could also serve as a good example for the skeptical position in favor of the thesis of epistemic pluralism as presented above. Following Kuhn (1962), pre-scientific theories, of which each proponent considered himself justi-

fied in believing in, or periods of scientific crises in general, serve as good examples. For instance, before Lavoisier published his groundbreaking work in chemistry, a fierce debate surrounding the nature of the phlogiston was in place. Kuhn notes that "there were almost as many versions of the phlogiston theory as there were pneumatic chemists" (1962: 70). Yet, of these incompatible epistemic systems each one turned out to be false. For the sake of the argument, it shall be assumed that they turned out to be either completely false or equally false, which sidesteps the objection of the possibility of differing degrees of falsity.

Boghossian's omission seems to have been that he presupposed that in every case of competing epistemic systems one of the epistemic systems is correct if judged from the angle of epistemic absolutism. However, as the previous example from the history of chemistry shows, it is not inconceivable that all available belief systems are false. The scientists, however, thought their available evidence justified believing in them. Hence, Boghossian's remark that "presumably, either it is the case that E is sufficient for B to be justified, or it is not" (2006: 91) leaves out one important case: evidence E could only partly justify belief B. Thus, the argumentation presented in this paper sidesteps Boghossian's argumentation to some extent. Finally, this will allow to reevaluate the case of the epistemic pluralist, and, in turn, of the epistemic relativist.

The argumentation presented in this paper is skeptical. Yet, these skeptical doubts show that an epistemic relativist does not necessarily have to go completely wrong in every case, as Boghossian argues. Epistemic relativism has some advantages over epistemic absolutism. According to the latter, broadly speaking, there is only one absolute notion of truth. Boghossian seems to equate this with the claim that there is only one epistemic system C that can be true. However, it could be the case that no epistemic system of the available lot is even remotely close to the

truth. If they are all interpretable as either completely false or equally false, then epistemic relativism has been partly vindicated. The limitation is that this conclusion is only valid in a special case: the theories are all on a par with each other, and thus equally valid, because they are all completely false. A related case is that the theories in question all exhibit the same degree of falsity.

There are cases in which the 'bad lot' can be understood to consist of belief systems that only capture a fraction of the truth. Just as Eric Barnes' mapmakers could be right only to the same small degree each, it is conceivable that competing theories in premature sciences are also only partially correct. On the other hand, a strong relativist position that indiscriminately argues for equal validity for all epistemic systems is open to attack, which was the position Boghossian successfully exposed as incoherent.

A weak epistemic relativist position is attractive for a number of reasons, some of which can be inferred by considering certain episodes from the history of science, as seen above. The case Boghossian cites, a creationist belief system of a native Indian tribe, which was claimed to be on equal grounds with the views of archaeology (2006: 1-5), might be very well suited as a target for his criticism. Should this really be what a minority of relativists claim, then this view can arguably only be saved by reference to a skeptical position which claims that we can never find out about the truth of anything. In the same vein, hardly anybody would nowadays argue against the reliability of very well respected scientific theories like quantum electrodynamics, which gives predictions with a staggering degree of exactness. Nonetheless, a weak epistemic relativist position might have some appeal in less mature fields of scientific investigation with competing theories of which it could well be that none of the available ones is right. This is the case whenever no one is able to judge the relative merits of competing theories.

Epistemic pluralism might at first sight sound like a position that is easily refutable. As the analysis has shown, however, epistemic systems can be in contradiction with each other, without any of them being right or leading to justifiable beliefs. A comparison with the 'bad lot' argument against the inference to the best explanation has further backed this argument. Depending on individual circumstances, i.e. the epistemic systems in question, epistemic relativism could even be advantageous over epistemic absolutism. Therefore, epistemic pluralism has limited appeal. It is less appealing in cases of bizarre pseudoscientific theories that supposedly counter mature scientific theories, like in the case of the Zuni creationist account versus archaeology, but it is much more appealing in certain areas or periods of scientific research, as a view on the history of science in the account of Kuhn has shown.

Conclusion

Boghossian understands epistemic relativism as the compound of three theses: epistemic non-absolutism, epistemic relationalism, and epistemic relativism. He argues that epistemic relativism is an incoherent position. This paper only paid attention to his argumentation against epistemic pluralism. It was shown that Boghossian partly misrepresents his opponents, which has been made clear in the juxtaposition of his position with Bloor's. As it emerged, there is some disagreement about the nature of epistemic relativism. More specifically, it emerged that the thesis of equal validity, which Boghossian considers to be at the centre of epistemic relativism, is not uniformly held by relativists. Bloor's position, for instance, is that the notion of progress towards absolute truth is problematic, and not that every view is equally valid, which is different from the position that was imputed on him by Boghossian. Apart from this apparent case of disagreement about the status of the equal validity thesis, it was shown that this thesis can be saved, and very well be made sense of. The radical version proposed by Boghossian has been refuted because it was too restrictive. Alternatively, a weak version has been suggested and discussed in conjunction with Eric Barnes' mapmaker example.

However, Bloor's take on relativism is not without its problems. While it seems that he rightly accused Boghossian of misrepresenting his position, especially the position he advocated in Barry Barnes & Bloor (1982), Bloor himself apparently misrepresented Boghossian's position as well. Even though Bloor does not accept the equal validity thesis, it was seen that a weakened version of this thesis can be understood to be at the center of epistemic relativism. The epistemic absolutist position against which Bloor argues might be hard to defend, but the same is true for his own evolutionary model of the progress of knowledge. It was shown

that it is unclear to what exactly his position amounts to, apart from opposing epistemic absolutism.

Eventually, it was seen that epistemic relativism has its limitations. However, in the last chapter, it was shown that the plausibility of epistemic pluralism can be argued for in certain, albeit very limited, circumstances. One of Boghossian's arguments against epistemic relativism targets this very thesis. By showing the incoherence of epistemic pluralism, epistemic relativism consequently falters. However, Boghossian's argument against epistemic pluralism was shown to be not fully conclusive. In his picture, evidence E either justifies belief B or it does not. The discussion of Eric Barnes' mapmaker example led to a different result, according to which it is conceivable that of a number of competing theories all are only correct to a certain, but the same, degree. Hence, they can be interpreted to be equally valid. This is possible in two ways. The competing theories, or maps, could all be completely false, which makes them 'equally valid' but also equally useless. The alternative is to have a number of competing theories that all have the same degree of truth or falsity. In the latter case, these theories are certainly equally useful. Consequently, epistemic pluralism seems to be tenable in very special circumstances. This exposes an omission in Boghossian's argumentation against epistemic pluralism, which has been further illustrated by an excursus into the history of chemistry.

The aim of this paper was not to show that epistemic relativism is tenable *in toto*, but only that in special cases this position is not without appeal. The discussion of epistemic pluralism, in this respect, has shown that in a state of great uncertainty regarding the validity of scientific theories, as it was the case in the early stages of chemistry, epistemic pluralism could be more plausible than epistemic absolutism. However, in the case of more advanced scientific theories, it seems

questionable to argue for an empirically unsupported theory on the grounds of epistemic pluralism or epistemic relativism. It would merely seem bizarre to argue that any outlandish theory should be taken to be equivalent to a scientific one. This was the case in the example of the Zuni creationist account which has been advocated as an alternative to the results of archaeology. It seems that epistemic relativism of such a radical form is untenable. This was the main concern of Boghossian, and in this respect his argumentation holds. On the other hand, the same cannot be said in case of sciences that have not yet reached the stage of maturity. In such cases epistemic pluralism has limited appeal, which in turn partly vindicates epistemic relativism.

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