Penultimate Draft

EPISTEMIC RELATIVISM AND PLURALISM

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1. Introduction

In his influential anti-relativist treatise, *Fear of Knowledge*, Paul Boghossian suggests that epistemic relativism is committed to a principle he calls 'Epistemic Pluralism' (henceforth 'EP') and formulates as follows:

> '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.' (2006: 73)

Boghossian claims to find EP for example in Richard Rorty's *Philosophy and the Mirror of Nature* (2006: 61). In the relevant pages (322-332) Rorty discusses the controversy between Cardinal Bellarmine and Galileo Galilei (henceforth 'B/G controversy') over the "two chief world systems" as an instance of a clash between incommensurable Kuhnian paradigms. Rorty appeals to this case-study in order to convince his readers of two claims. First, Bellarmine and Galileo used different 'grids' for determining 'what sorts of evidence there *could be* for statements about the movements of planets' (1981: 330). And second, the conflict between the two grids was too deep for it to be decided by epistemic considerations acceptable at the time. For Rorty the dispute therefore did not 'differ in kind' from the *political* controversy around 1917 between the liberal-socialist Alexander Kerensky and the Bolshevik Vladimir Lenin over such issues as Russia's involvement in World War I, or the need for a radical land-reform (1981: 331). Boghossian takes it that Rorty is here defending epistemic relativism by drawing an epistemic-pluralist lesson from the B/G-disagreement.

Boghossian's talk of EP and epistemic systems consisting of epistemic principles is meant as a rational reconstruction of Rorty's position. And yet, ultimately Boghossian is not interested in defending Rorty but intent on criticizing both epistemic relativism in general and Rorty's case-study argument in favour of EP in particular. Boghossian seeks to show that the rationally-reconstructed version of Rorty's position is not supported by the B/G-

dispute. Bellarmine and Galileo did not use 'fundamentally different, genuine alternative epistemic systems'. In developing this criticism, Boghossian is not alone. Markus Seidel (2014) seeks to improve on Boghossian's argument.

In this paper I shall try to undermine Boghossian's and Seidel's criticism of Rorty's (alleged) use of the B/G-controversy. I write 'alleged use' since I do not think that Boghossian's rational reconstruction of Rorty's position is adequate. First, I shall suggest that *even if* we leave unchallenged Boghossian's reconstruction, it is far from clear that his and Seidel's criticism succeeds. Second, I shall argue that Boghossian's reconstruction makes the problematic – 'isolationist' – assumption that epistemic systems can be clearly separated from non-epistemic systems of beliefs, principles or values. Boghossian's assumption is questionable both in light of what we know about the B/G-controversy, and in light of how Rorty renders it. I shall propose replacing Boghossian's isolationism with a form of 'holism'. And third, and in a similar vein, I shall object to Boghossian's and Seidel's 'foundationalist' view of epistemic systems, according to which such systems have a permanent and fixed structure of principles, ending with fundamental principles that are epistemically independent of all other principles. I shall suggest that a 'coherentist' view fits much better both with Rorty's wording and with the historical evidence concerning the Galileo trials.

I shall conclude – in a 'Postcript' – by offering some fragmentary observations on the relationship between the epistemic pluralism at issue in the main bulk of this paper and the epistemic pluralism associated primarily with the work of William Alston (1993).

2. Boghossian on Epistemic Systems and the Galileo-Bellarmine Controversy

Boghossian spends a whole chapter of *Fear of Knowledge* on developing a reconstruction and prima-facie defence of epistemological relativism (2006: Ch. 5). The starting point is Rorty's idea of a multitude of Kuhnian 'paradigms' or Foucauldian 'grids' that are, in some sense, 'equally valid'. Rorty explains his view by reminding us of the B/G-dispute. Cardinal Roberto Bellarmine is often alleged to have believed that the Bible is a better source of evidence about the heavens than are telescopes. Rorty defends the cardinal against the charge of being 'illogical and unscientific'. According to *Philosophy and the Mirror of Nature*, Bellarmine had adopted a paradigm or grid of beliefs and principles that was fundamentally different from both Galileo's and our own. For instance, Bellarmine's grid

did not allow for our principled distinction between science and religion. Rorty goes on to suggest that there is no absolute vantage point from which our grid can be judged to be superior. That we believe our grid to be more 'objective' or more 'rational' is nothing but an accident of history. From within Galileo's or our system it is epistemically justified to believe in the Copernican theory; from within Bellarmine's epistemic system is it justified to stick to the Ptolemaic view (Rorty 1981: 328-329; Boghossian 2006: 63).

Boghossian seeks to make Rorty's thought more precise. In a first step, Boghossian reconstructs in more detail what he takes to be the *constituents* of epistemic systems, that is, epistemic principles. He distinguishes between 'generation' and 'transmission' principles on the one hand, and 'fundamental' and 'derived' principles on the other hand. Generation principles produce justified beliefs on the basis of something that is not itself a belief; transmission principles prescribe how to move from one justified belief to another. A fundamental principle is one 'whose correctness cannot be derived from the correctness of other epistemic principles' (2006: 67). This contrasts with derived principles. Here are examples of the four categories:

> '(*Observation*) [a fundamental generation principle] For any observational proposition p, if it visually seems to S that p and circumstantial conditions D obtain, then S is *prima facie* justified in believing p.' (2006: 64)

> '(*Deduction*) [a fundamental transmission principle] If S is justified in believing p and p fairly obviously entails q, then S is justified in believing q.' (2006: 66)

> '(*Observation-dog*) [a derived generation principle] If it visually appears to S that there is a dog in front of him, and circumstantial conditions D obtain, then S is *prima facie* justified in believing that there is a dog in front of him.' (2006: 64)

> '(*Modus Ponens-rain*) [a derived transmission principle] If S justifiably believes that it will rain tomorrow, and justifiably believes that if it rains tomorrow the streets will be wet tomorrow, S is justified in believing that the streets will be wet tomorrow.' (2006: 66)

Finally, Boghossian also proposes a formulation of Bellarmine's central principle:

'(*Revelation*) For certain propositions *p*, including propositions about the heavens, believing *p* is *prima facie* justified if *p* is the revealed word of God as claimed by the Bible.' (2006: 69)

Attributing this principle to Bellarmine might be supported the fact that he defended Ptolemy's system with passages from the *Bible* like 'The words "The sun rises and the sun sets, and hurries back to where it rises, etc." were those of Solomon, who not only spoke by divine inspiration but was a man wise above all others …' (Bellarmine, 1615)

Having introduced and clarified epistemic principles and systems, Boghossian proceeds to formulating more explicitly what he takes to be Rorty's argument in favour of epistemic relativism. This reconstruction is not of interest to us here. In this paper I am only concerned with Boghossian's claim that it is wrong to think that the B/G-conflict is a case to which EP applies.

For EP to apply to the B/G-controversy, the two men's epistemic systems would have to be "fundamentally different". (Or, since Boghossian assumes throughout that Galileo and 'we' have the same system, Bellarmine's system would have to be fundamentally different from our own.) In order for Bellarmine's system to qualify as fundamentally different from ours or Galileo's, Boghossian proposes that his system must contain *at least one fundamental* epistemic principle which we do not recognise. And here the obvious candidate is *Revelation*.

At this point in the dialectic Boghossian switches from exposition and reconstruction to criticism. He argues against a fundamental difference between Galileo's (or our) and Bellarmine's epistemic systems. He does so by denying that *Revelation* is a fundamental principle even for Bellarmine. Boghossian reasons as follows. If *Revelation* were fundamental then it would trump *Observation* with respect to *some* statements about the heavens (e.g. Jupiter has moons) but not with respect to others (e.g. there are clouds in the sky). Here Boghossian rightly takes for granted that the cardinal uses his eyes for determining the degree of cloudiness. This is bad news for the relativist, Boghossian announces: the proposed division of labour between *Revelation* and *Observation* – *Revelation* for the stars, *Observation* for the clouds – is epistemologically unmotivated and therefore arbitrary. And thus the epistemic relativist faces a dilemma. First horn: If she treats *Revelation* as fundamental for Bellarmine, and as occasionally trumping

Observation in an arbitrary fashion, then she is renders his epistemic system incoherent and in consequence open to criticism. In other words, she then has every reason to give up her relativistic take on his system. Second horn: If the relativist instead seeks to remove the incoherence by 'downgrading' *Revelation* to a mere derived principle – a principle governed in its range of application by fundamental principles – then she has lost the right to count Bellarmine's system as fundamentally different from Galileo's (or our own).

Boghossian himself opts for the second alternative by suggesting a way in which *Revelation* might have been derived from more fundamental principles:

> '… we had better regard his [i.e. Bellarmine's] system as differing from ours only in some derived sense, attributing to him the view that there is evidence, of a perfectly ordinary sort, that the Holy Scripture is the revealed world of the Creator of the Universe. And it is only natural for someone with that belief to place a great deal of stock in what it has to say about the heavens …' (2006: 104-5)

This is a little sketchy but presumably Boghossian is submitting that Bellarmine's religious beliefs in general, and his belief in the Bible in particular, are due (primarily) to testimony, observation and inference to the best explanation. All these are governed by fundamental epistemic principles, principles that are parts of both Bellarmine's and our secular epistemic systems. Once Bellarmine's religious belief, and his belief in the Bible as the word of God, are in place, he indeed has reason to also accept *Revelation* as a further principle. And yet, without the more fundamental principles, *Revelation* could not have been motivated.

Finally, since Bellarmine's system differs from Galileo's and our own only slightly, and only with respect to one derived principle, there can be a *rational* debate over the justifiability of *Revelation* between him, Galileo and us. The question is simply whether there is 'evidence of a perfectly ordinary sort for believing that what was written down in some book by a large number of people over a vast period of time, internal inconsistencies and all, is really the revealed word of the Creator' (2006: 105).

3. Seidel's Further Development of Boghossian's Argument

Seidel (2014) follows Boghossian's lead but tries to make his ally's main arguments more precise. He does so by formulating what he takes to be two 'intuitive' criteria for concluding that given epistemic principles are not fundamental.

The first such criterion Seidel calls 'Instance'. Assume we have one epistemic system, ES_1, with norm N'; and another epistemic system, ES_2, with norm N''. Allow further that N' and N'' are instances of a further norm N that is part of both ES_1 and ES_2. In such a situation Seidel thinks we would all find it intuitive that ES_1 and ES_2 are not fundamentally different epistemic systems, at least not in virtue of their differing with respect to N' and N''. Seidel explains and justifies the principle with the following example: ES_1 is the epistemic system of Platonism; ES_2 is the epistemic system of Aristotelianism; N' is: 'If Plato says p, then I am prima facie justified in believing that p'; N'' is 'If Aristotle says p, then I am prima facie justified in believing that p'. N' and N'' are instances of N: 'If an ancient philosopher says p, then I am prima facie justified in believing that p.' Belief B', occurring in ES_1 but not in ES_2, is: 'Plato is an ancient philosopher'; and B'', occurring in ES_2 but not in ES_1, is : 'Aristotle is an ancient philosopher.' Seidel's verdict: However different the Platonists' and the Aristotelians' beliefs or derived norms may be, 'we would not say' that they have 'fundamentally different epistemic systems' (Seidel 2014: 169).

Seidel's second principle is called 'Derive'. Assume we have again ES_1 with norm N' and ES_2 with norm N''. This time N' and N'' can both be derived from a further norm N that is part of both ES_1 and ES_2. Here too Seidel is confident that we would deem it intuitive that ES_1 and ES_2 are not fundamentally different epistemic systems, at least not in virtue of their differing with respect to N' and N''. Seidel uses the same example as before except that N is now: 'If an epistemologist says that p, then I am prima facie justified in believing that p.' B' is: 'An epistemologist told me that: "If Plato says p, then I am prima facie justified in believing that p."' And B'' mutatis mutandis for the Aristotle. Seidel maintains that we have here no 'fundamentally different epistemic systems.' We have different beliefs, different derived norms, but the same fundamental norms.

Following in Boghossian's footsteps, Seidel applies his principles to Bellarmine's epistemic system. To make his case, Seidel contrasts Bellarmine's *Revelation* with a principle he calls *Science:*

'(Science) For certain propositions p, including propositions about the heavens, believing p is prima facie justified if p is included in the best physics books available.' (Seidel 2014: 175)

How does *Revelation* relate to *Science*? Seidel argues that both are instances of, or derived from, a more fundamental principle we might call '*Reliability of Books'*:

'(Reliability of Books) For certain propositions p, including propositions about the heavens, believing p is prima facie justified if p is included in books who have been assessed as highly reliable by appropriate experts.'

The upshot is of course that since *Science* and *Revelation* are both instances of, or derived from *Relialibity of Books*, they are not to be taken as fundamental. And hence the relativist case for EP collapses (2014: 177).

4. Mystical Perception

I have more than one worry concerning these arguments. Some relate to Boghossian's and Seidel's interpretation of what was at issue between Bellarmine and Galileo, others focus on their static and crystalline conception of epistemic systems. But I begin with an objection that grants the two authors this (problematic) conception.

Consider an epistemic principle I propose calling 'Mystical Perception':

(Mystical Perception): If it seems to S that God is telling him that p; and if S is not already fully committed to atheism; and if circumstantial conditions D obtain, then S is prima facie justified in believing that God is telling him that p.

Mystical Perception is not part of my epistemic system but it is a fundamental principle in the epistemic systems of others. And at least some of these others cannot be easily dismissed as fools or religious fanatics. After all, the most detailed defence of the principle of mystical perception comes from the pen of the distinguished epistemologist William Alston who wrote almost four-hundred pages on this topic (Alston 1991). Amongst other things, Alston argues in great detail that mystical perception has parallels with sensory

perception in that neither have noncircular demonstrations of their reliability; both are self-supporting; both have over-rider systems; both are sometimes inconsistent; and both cohere with other epistemic practices. To my mind the argument that there is no noncircular demonstration of the reliability of mystical perception makes a good case for treating it as a fundamental principle – in Alston's epistemic system.

Seidel disagrees (in response to Kusch (draft)). As Seidel has it, mystical perception and sensory perception are both *instances of perception*; and hence the principle of Instance applies, and rules out the option of treating Mystical Perception as fundamental (2014: 167). I am not convinced. It is true of course that in some sense mystical perception has always been modelled on sensory perception. That is after all why we call mystical perception 'mystical *perception*'. But it is not obvious to me that we should take our epistemic guidance from such vague analogies. It also is not clear to me how we should think of perception once we have abstracted from both the 'mystical' and the 'sensory'. In any case, I cannot see why these considerations should be weightier than Alston's argument to the effect that mystical perception has no noncircular demonstration of its reliability.

Can Seidel's argument be improved? Rather than saying that *Mystical Perception* and *Sensory Perception* are instances of *Perception* why not say that *Mystical Perception* and *Sensory Perception* are instances of a principle called '*Seeming*':

> (Seeming) If it seems to S that p, and circumstantial conditions D obtain, then S is prima facie justified in believing that p.

It obviously is right to say that *Mystical Perception* and *Sensory Perception* (as well as some other principles) can be construed as instances of *Seeming*. But I am not convinced that this fact tells against the possibility of fundamentally different epistemic systems. The problem is that if the principles common to different epistemic systems become too abstract, too thin, then it is no longer plausible to assume that the common principles prevent the respective epistemic systems from being, intuitively, fundamentally different. At least if we mean by 'intuitively, fundamentally different' something like the idea that to switch from one system to the other would feel like epistemic-cum-metaphysical trauma, dislocation, or revolution in thought.

Does *Seeming* rule out epistemic relativism? One might think so on the following grounds. Epistemic principles differ in what they regard as appropriate conditions for a seeming to confer justification. These differences trace back to factual beliefs about when seemings track the truth. These beliefs can be tested. Moreover, if two incompatible principles (belonging to two different epistemic systems) involve contradictory beliefs about which seemings are truth-tracking, what sense can be made of the relativist's claim that the two principle could be equally valid?

To answer this worry the epistemic relativist needs to insist again that the testing of factual beliefs does never happen in isolation but only against the background of specific epistemic systems. Does *Revelation* enable us to track the truth? That depends on what we mean by 'truth' and what we mean by 'tracking'. Moreover, remember that Alston argues that neither mystical nor sensory perception have noncircular demonstrations of their reliability. If Alston is right, then the fact that both are instances of seeming does not show that they can be tested and compared in a neutral way.

5. Rethinking the Role of *Revelation* the Galileo-Bellarmine Controversy

Up to this point I have challenged Boghossian's and Seidel's arguments without scrutinizing their readings of Rorty or their rendering of the dispute between Bellarmine and Galileo. I now turn to that latter task.

Open any standard historical account of the episode, and invariably you will find something like the following observation: 'This was a controversy involving issues of methodology, epistemology, and theology as well as astronomy, physics, and cosmology' (Finocchiaro 2005: 1). Authors influenced by the sociology of knowledge add period-specific relationships between patrons and courtiers; traditions of instrument-making; the tensions between different religious orders; the politics of the papal court; the political problems between Spain and the Vatican; the Thirty-Year War; and much else besides (Biagioli 1993, 2006).

In reducing the episode to a clash over the epistemic status of *one* epistemic principle, *Revelation*, Boghossian strips away pretty much all of this complexity. In his reconstruction, all non-epistemic considerations are set aside as irrelevant. In the process,

religion is turned into an epistemic system; and epistemic principles are treated as isolated or isolatable entities with fixed implications.

Boghossian's sketchy and quick reconstruction has its costs. One casualty is the interesting fact that Galileo and Bellarmine did not disagree over *Revelation* as such – only over its scope. As we saw above, as Boghossian has it, Bellarmine's belief in geocentrism resulted from an application of *Revelation*. And since Galileo rejected *Revelation* he was free to believe in Copernicanism on the basis of empirical evidence. This interpretation of the episode contradicts the best recent scholarship. (Boghossian's only reference is Giorgio de Santillana's *The Crime of Galileo* (1955).[1])

To cut a long story short, both Bellarmine and Galileo accepted the following tripartite distinction between propositions about the natural world:

(i) propositions about the natural world that have been *demonstrated* (by our natural lights, that is, by reason);
(ii) propositions about the natural world that in principle are *demonstrable*, but that have not yet been demonstrated; and
(iii) propositions about the natural world that are *beyond demonstration* (Blackwell 1991: 3328).

Consider propositions in these three categories that, *given a literal reading*, seem to contradict the Bible. Bellarmine and Galileo agreed on what to do about cases in (i): in such cases, the Biblical passages were to be re-interpreted figuratively in such a way that they would come out true, and that they would not contradict the demonstrated proposition. This procedure was motivated by a belief, shared by Bellarmine and Galileo, that the Bible – a text allegedly dictated by the Holy Spirit – spoke the truth and nothing but the truth. Galileo and Bellarmine also agreed on how to react to category (iii): when such propositions contradicted the Bible, then they had to be rejected as false and heretical. In this case, revelation invariably trumped philosophical speculation.

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[1] The following studies can be regarded as constituting or reflecting (in good part) the state of the art on Galileo and his conflict with the Catholic Church: Biagioli (1993, 2006), Blackwell (1991), Finocchiaro (1980, 2010), Drake (1978), Heilbron (2010), Koyre (1978), Machamer (ed.) (1998), McMullin (2005), Redondi (1987), Renn (2002), Wallace (1984).

To repeat, Bellarmine and Galileo both rejected *Revelation* for category (i), and they both accepted *Revelation* for category (iii). The point of contention was what to do about category (ii). Here Bellarmine and the Church insisted that, when such propositions contradicted a literal reading of the Bible, then they had to be considered false and heretical. This did not, however, preclude using these propositions (and the theories to which they belonged) as useful fictions. But no *realist* commitments to these propositions were acceptable. Galileo differed. He urged the Church not to treat such propositions as false and heretical. This proposal was of course inseparable from Galileo's belief that Copernicanism was an instance of category (ii). In other words, Galileo accepted that the truth of heliocentrism had not yet been demonstrated. Nevertheless, he asked that the Bible – read literally – should not be the yardstick for judging Copernicanism. Instead the Church ought to suspend judgement until a demonstration for either Copernicanism or the Ptolemaic system had been found. For Bellarmine (and later for Pope Urban VIII) this position was unacceptable. But this was not only because they rejected Galileo's rendering of category (ii) as problematic; the deeper reason was that they likely considered the question of the correct "world system" to belong into category (iii).

Why is all this important? Boghossian sees Bellarmine's and Galileo's judgements about geocentrism as guided by epistemic rules like *Revelation* (in Bellarmine's case) or *Observation* plus *Inference to the Best Explanation* (in Galileo's case). Someone who had adopted *Revelation* had to end up opposing Copernicanism; someone who had instead adopted *Observation* and *Inference to the Best Explanation* could opt for Copernicanism. My brief excursion into the historical scholarship shows that this reading of the event is mistaken. It was not the adoption or rejection of *Revelation* that made the difference – both Bellarmine and Galileo accepted it. But they differed in how they interpreted this rule. Their interpretations differed with respect to the categories (i), (ii) and (iii); and they differed concerning the proper position of Copernicanism as falling into either (ii) or (iii). Historians have shown us in great detail the great variety of considerations that influenced both streams of judgements: to repeat, the context of the Counter-Reformation, relationships between patrons and courtiers; traditions of instrument-making; the tensions between different religious orders; the politics of the papal court; the political problems between Spain and the Vatican; the Thirty-Year War; and much else besides (Biagioli 1993, 2006). Interpretative decisions made in light of such complex and intricate considerations cannot be reduced to a simple – or even a complicated – rule.

The Areas of Agreement and Disagreement between Galileo and Bellarmine

We can get at the same complexity also via a different route, that is, by dissecting more carefully the areas of agreement and disagreement of Bellarmine's and Galileo's views. Again I am taking my lead from historical scholarship of the episode (Blackwell 1991, McMullin 2005). I do not here have the space to cite the textual evidence these authors put forward in support of their historical claims. But it is readily available in these two sources in particular.

There was substantial agreement between Galilei and Bellarmine over many important scientific and theological issues:

(I)   The Bible is the word of God.

(II)   The Bible cannot be in conflict with natural philosophy.

(III)   No 'demonstration' (in natural philosophy) can trump the Bible in 'matters of faith or morals'.

(IV)   In cases other than (III), when a demonstration contradicts the literal meaning of a Biblical passage, the latter must be reinterpreted figuratively.

(V)   Concerning issues where no demonstration is possible, and where Bible passages apply, the latter are to be believed.

(VI)   One should not prematurely commit the Church to interpretations of difficult Biblical passages, lest these interpretations later conflict with demonstrations.

(VII)   At least sometimes it is appropriate to support cosmological views with Biblical passages.

(VIII) Copernican theory does an excellent job of 'saving the phenomena'.

(IX)   To date no 'demonstration' of Copernicanism has been offered.

(X)   *Revelation*.

Bellarmine's and Galileo's agreement on (X) *Revelation* is clear in light of (III), (V) and (VII). Turning from agreement to disagreement, the following propositions were all believed by Bellarmine but denied by Galileo:

(i)   Copernicanism contradicts common sense.

(ii)   The natural-philosophical case for Copernicanism is weak.

(iii) Mathematical astronomy (Copernicus, Galileo) cannot decide issues in physical astronomy (Aristotle).

(iv) The case for Aristotelian scholastic philosophy is strong.

(v) The consensus of the 'Church Fathers' on Biblical literalism is important.

(vi) 'Matters of faith or morals' include the belief that God is the truth-telling author of the Bible.

(vii) In assessing the Bible's cosmological claims, we need not give much weight to the fact that its addressees include the uneducated.

(viii) The same is true concerning the Bible's primary concern with human salvation.

(ix) When a demonstrable, but as yet undemonstrated, belief contradicts a literal reading of a Biblical passage, it is right to stick to the latter.

(x) According to the Bible, Solomon was the wisest of men. Thus his beliefs cannot have been contrary to what is demonstrable. Solomon thought that the Sun moves around the Earth. Solomon's belief is crucial cosmological testimony.

Isolationism vs. Holism; Foundationalism vs. Coherentism

Assume the historians of the episode are roughly on the right track regarding the above. What follows for the concerns of this paper?

The first thing to note is that Boghossian and Seidel are wrong to present the clash between Galileo and Bellarmine as one between a secular scientist (like 'us') and an unscientific religious believer. The conflict was one between two religious believers, both of whom had considerable knowledge of contemporary 'natural philosophy' – that is, what we today would classify as 'natural science' *and* what we today would call 'epistemology and metaphysics of natural science'.

Second, although we *could* rephrase the listed propositions as *rules*, this would be a bit artificial. At least it is not clear which rendering – the doxastic-descriptive or the normative – was more fundamental for the historical actors. This suggests that it is at best one-sided to insist that the "systems" of natural philosophy consisted only of norms or principles rather than beliefs; or that the more fundamental contents of an epistemic

system are norms. This position is not defended by Boghossian and Seidel in any way; it is simply assumed to be correct.

Third, in Bellarmine's and Galileo's respective "systems of beliefs and principles" ('systems$_{b\&p}$' from now on), epistemological issues were tightly woven together with concerns in theology, natural philosophy, logic, common sense, metaphysics, and epistemology. Take (IX) in an epistemic-normative format:

> 'Do not cease believing a literal reading of a Biblical passage just because it is contradicted by a demonstrable but as yet undemonstrated belief.'

To understand and apply this principle, the epistemic subject needed to appreciate: what counts as a *literal reading* of a Biblical passage; this was far from straightforward since there existed competing theological schools of Biblical hermeneutics, each with its own criteria of the literal); what was meant by a 'demonstration' (this was of course a key term of Aristotelian epistemology and metaphysics, variously interpreted by different Church Fathers and philosophers); or how to determine that a demonstration was possible even though it had not yet been carried out (this question was tied to different views on the metaphysics of modalities and theological premises).

We can of course always insist on 'filtering out' the epistemological from the metaphysical, the theological or the ethical. With enough patience and ingenuity we can often come up with a rational reconstruction or idealization of a given system$_{b\&p}$ such that only the epistemological side of a given system$_{b\&p}$ is salient. But we should be clear that to analyze a rational reconstruction of Bellarmine's system$_{b\&p}$ is not to analyze Bellarmine's system$_{b\&p}$. Conclusions drawn about the former are not automatically adequate to the latter. In other words, a rational reconstruction imposes our criteria of rationality on a system$_{b\&p}$ that – absent our reconstruction – may well encode a different form of rationality.

This is the point where it seems useful to introduce a distinction that captures where I differ from Boghossian and Seidel. I am referring to the distinction between 'isolationism' and 'holism'. The isolationist concerning systems$_{b\&p}$ deems it possible and fruitful to filter out, with respect to such systems, the epistemic from all other dimensions. The holist finds this distorting and unhelpful, even as an idealization. I submit that the historical

material adduced above makes at least a *prima-facie* case for holism. After all, it shows that both Bellarmine and Galileo thought and reasoned in ways that resist a separating out of epistemic, metaphysical, natural-philosophical and theological concepts and principles.

Recall also that Boghossian's starting point is Rorty's discussion of the disagreement between Bellarmine and Galileo. Boghossian reconstructs Rorty as an isolationist. But it seems that a holist reading would fit much better with Rorty's train of thought. Rorty's main point is to insist that it is anachronistic to evaluate the disagreement between the two sixteenth/seventeenth-centuries figures in terms of what we today call 'scientific' criteria. The sharp distinction between Bellarmine's (allegedly illegitimate) theological considerations and Galileo's (allegedly legitimate) scientific reasons, is, Rorty insists, a product of the 'grid' that emerged in the 'later seventeenth and eighteenth centuries' and this grid 'was not there to be appealed to in the early seventeenth century, at the time that Galileo was on trial' (1981: 330). For thinkers in the early-seventeenth century there was no such distinction; what we wish to separate for them formed a unity.

Note also that Rorty uses the Foucauldian concept of 'grid' instead of 'epistemic system'. 'Grid' is variously used as a translation for Foucault's concepts 'épistème', 'dispositif' or 'grille d'intelligibilité'. In each case Foucault is at pains to pick out a (by our, later eyes) *heterogeneous* sets of factors, ranging from the abstractly theoretical through architectural arrangements to forms of power (Dreyfus and Rabinow 1983, Gutting 1989, Kusch 1991). Let us also remember that Rorty's whole discussion occurs in a section entitled "Kuhn and Incommensurability". And scientific paradigms qua "disciplinary matrices" are constituted by epistemological, metaphysical, mathematical and scientific elements.

Fourth, my insistence above that both Bellarmine and Galileo accepted *Revelation* should not be read as support for Boghossian and Seidel's contention according to which the B/G-dispute took place on the basis of 'a common epistemic system'. Even in the absence of clear identity conditions for 'epistemic systems' or 'system$_{b\&p}$' it seems forced to suggest that two people can disagree over (i) to (x) above and yet do so on the basis of one and the same system. At least it is unclear what purpose talk of systems can serve, if it does not roughly track differences between the kinds of bodies of belief as different as Galileo's and Bellarmine's.

The assessment that Bellarmine and Galileo had *different* system$_{b\&p}$ can be supported by the observation that it is hard to imagine either men mounting a rational argument for their respective view that would have convinced their opponent. This, in any case, is the assessment of one of the leading contemporary historians and philosophers of Galileo's trial of 1616 (McMullin 2005). Bellarmine and Galileo each had a coherent system of beliefs and principles, and neither could rationally force the other to change their assessment of Copernicanism. Moreover, each side could comfortably account for what the other side counted as evidence. And there was no neutral vantage point from which one could decide which of the two webs of beliefs was right. Rorty agrees: this is why he suggests that it needed "three hundred years of rhetoric" to convince us that Galileo was right (1981: 330).

Fifth, and finally, Boghossian's and Seidel's rendering is not only 'isolationist' but also 'foundationalist'. They insist on a strict distinction between fundamental or underived, and non-fundamental or derived epistemic principles. *Observation* or *Inference to the Best Explanation* are fundamental, *Revelation* is not. And *Revelation* is not fundamental since other epistemic principles must have played a role in its rational adoption.

My central misgiving in this. As epistemologists using the history of science, we must be clear about what we are trying to do. Are we trying to identify the systems of beliefs and norms of our actors – as these actors understood these systems – or are we attempting to construct, in our terms, a maximally abstract and parsimonious system of principles from which we can derive, or in terms of which we can justify, our actors' normative judgements? Note that these two ways of proceeding come with two different ways of understanding 'fundamentality' or 'derivation': if we go by the *actors' categories*, a principle is fundamental if the actors do not regard it as derived; if we go by our *analysts' categories*, a principle is fundamental if we – within our constructed parsimonious system – would not derive it. It seems to me obvious from what I have already quoted from Rorty, that he is opting for the actors' categories. This is after all the whole point of his warning of illicit attempts to condemn Bellarmine by standards that were 'not there to be appealed to in the early seventeenth century'.

And yet, if we go with actors' categories then it is just not clear how we should divide up the principles involved into the more or less fundamental. Bellarmine accepted (I) to (X)

and (i) to (x). Galileo endorses (I) to (X) and the negations of (i) to (x). But it is difficult if not impossible to decide which of these various beliefs were derived from which others. It rather seems that the respective beliefs formed two sets, webs or systems, such that Galileo regarded the one, and Bellarmine the other, as coherent. And depending on the specific challenge they faced from specific opponents at different times, the cardinal and the courtier would take different paths through their respective webs. If this is roughly on the right track, then it seems that we should replace foundationalism with coherentism. And this is of course fully in line with Rorty's own insistence on giving up an 'epistemologically centered "foundational" philosophy' (1981: 329).[2]

Conclusions

In this paper I have argued for the following propositions. Even if Boghossian's and Seidel's fundamentalist and isolationist rendering of epistemic systems were right, their criticism of EP in light of the B/G-controversy would not be decisive. I offered the epistemic principle of *Mystical Perception* (as studied and justified by William Alston (1991)) as an example of a fundamental principle that might occur in one epistemic system but not in another. More principally, the central intuition pump or case study behind Boghossian's and Seidel's reasoning – Rorty's interpretation of the B/G-dispute – does not justify the foundationalism and isolationism that characterizes Boghossian's and Seidel's theorizing about epistemic systems and epistemic relativism. Moreover, this observation seems apt both as far as Rorty's interpretation of the B/G-dispute is concerned, and as far as the currently best historical scholarship of the episode is in question. Rorty and the best historical scholarship suggest a coherentist and holist rendering.

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[2] Some provisos are worth noting. First, although both Boghossian and Seidel seem to commit to a foundationalism of epistemic principles, Seidel's two criteria of 'Instance' and 'Derive' are not conclusive evidence for foundationalism *on their own*. It is Seidel's general agreement with the way Boghossian sets up epistemic systems that is conclusive. Second, it is not clear whether Boghossian's and Seidel's analysis of the B/G-controversy necessarily requires a foundationalist (rather than a coherentist) conception of epistemic systems. After all, even the coherentist can allow that some epistemic principles are *more fundamental*, closer to the centre of the web, than others. Even on a coherentist rendering of epistemic systems Boghossian and Seidel could insist that *Revelation* is *less fundamental* than *Observation*. Note though that this would force Boghossian and Seidel to change their definition of what makes two epistemic systems fundamentally different. And the question remains why we should accept the claim with that respect to each and every dispute over epistemic principles we are able to find more fundamental principles in terms of which the dispute can be rationally resolved.

If I am right about all this – admittedly a big 'if' – what follows for epistemic relativism in general and epistemic pluralism in particular? Needless to say, very little 'follows' in any strict sense of 'following'. And yet, perhaps my argument at least *suggests* the following hypotheses as worthy of further investigation. First, of all, the relativist position seems able to survive Boghossian's and Seidel's specific onslaughts. Furthermore, formulating the relativist position in terms of holism and coherentism is more promising than rendering it in terms of isolationism and foundationalism. It is, in any case, noteworthy that card-carrying relativists like Rorty or the advocates of the "Strong Programme" in the sociology of scientific knowledge (Barnes, Bloor, Henry 1996) have favoured the holist-coherentist formulation.

Shifting to a holist-coherentist version of relativism demands of course a re-thinking of EP:

> '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.' (Boghossian 2006: 73)

As it stands, this formulation – as well as the related criterion for 'fundamental difference' – is tied too closely to Boghossian's foundationalism and isolationism. We do well to replace it with a principles that befits holism and coherentism. The B/G-dispute e.g. might be taken to motivate a principle of 'scientific pluralism'. It is broader in scope than EP since it does not seek to filter out the epistemic domain. But it is also more specific in that it homes in on one important realm, namely science (and its predecessor, 'natural philosophy'):

> (Scientific pluralism) There are some fundamentally different, genuine alternative systems$_{b\&p}$ in the sciences. The fundamental difference between two systems S1 and S2 is not determined by fundamental principles appearing in S1 and not in S2 but by the difficulty of imaging a rational proponent of S1 convincing a rational proponent of S2 to switch her allegiance from S2 to S1. We have a fundamental difference between two systems when a switch would feel like an epistemic-cum-metaphysical trauma, dislocation or revolution in thought (cf. van Fraassen 2002).

Postscript: Two Forms of Epistemic Pluralism

Contemporary philosophers use the label "epistemic pluralism" for two rather different views. One is at issue in the paper above. The other is addressed by most authors in this collection and was first sketched in William P. Alston's little classic, "Epistemic Desiderata" (1993). Alston argues against the hope of finding the one and only correct account of epistemic justification. Instead he urges epistemologists to focus their attention on a variety of different 'epistemic desiderata', such as 'coherence', 'reliability', or 'cognitive accessibility'. It is natural to go one step beyond Alston by suggesting that different epistemic desiderata apply in different areas of discourse. (Similar steps have been suggested in the related but different realm of truth pluralism (cf. e.g. Wright 1992).)

How do Alston's pluralism and Boghossian's pluralism relate to one another? Perhaps surprisingly this question has not to date been systematically discussed. One initially tempting idea for distinguishing between the two forms of pluralism is to point to Alston's rejection of what he calls 'latitudinarianism' concerning epistemic desiderata. The latitudinarian is happy to let a thousand epistemic desiderata bloom, without scrutiny and evaluation. Alston's position is different. He holds that some of the conditions previously proposed as epistemically valuable 'may be eliminated as unattainable (or not sufficiently attainable), while others may be plainly more important than others' (1993: 543). In other words, Alston is very much concerned with the evaluation of theories concerning epistemic desiderata. And this invites the thought that latitudinarianism is really just another word for relativism, and that in rejecting the former, Alston has also rejected the latter.

On closer inspection, however, it turns out that the 'tempting idea' works only as long as we commit the epistemic relativist to abstaining altogether from the epistemic evaluation of epistemic systems or desiderata. And yet, it is not obvious that the relativist needs to apply her "equal validity" thesis so widely. Boghossian's pluralism says that there are 'many fundamentally different, genuinely alternative epistemic systems'—but that still leaves the option of rejecting some candidate alternatives as epistemically problematic in some way.

A different suggestion for distinguishing between the two forms of epistemic pluralism (a suggestion first put to me by Annalisa Coliva) builds on the notion that different epistemic

desiderata apply in different domains.[3] This might make the different epistemic desiderata *compatible* with one another. The relativist pluralism studied by Boghossian is different. It is the view that there is a plurality of epistemic systems or desiderata that are *not compatible* and yet in some sense equally valid. This suggestion seems to me to be on the right track, but needs a bit more development. Three points seem especially important to me.

First, relativism is typically invoked when we face (what appear to be) *irresolvable disagreements*. Boghossian's book is a case in point. On Boghossian's rendering, Galileo and Bellarmine are disagreeing over which epistemic principles to apply in the study of the heavens. They are disagreeing over issues in one and the same domain. And the relativist (in Boghossian's reconstruction) seeks to explain the irresolvable character of the disagreement by attributing different "fundamental" epistemic principles (and thereby fundamentally different epistemic systems) to the two men. Clearly, if we construe Alstonian pluralism as allowing for different epistemic desiderata in different domains (only), then the disagreement between Galileo and Bellarmine is not a case on which Alston's pluralism can be fruitfully brought to bear.

Second, it is nevertheless illuminating to relate Alston's distinction between different epistemic desiderata to relativistic pluralism as reconstructed by Boghossian. This is the point where we might separate Alston's original proposal from the further idea according to which different epistemic desiderata apply only in <u>different</u> domains. For Bellarmine 'accordance with scripture (literally understood)' was an epistemic desideratum for claims about the natural world, including the heavens; for Galileo it was not. This is of course just to offer a translation of "epistemic-principle" talk into "epistemic-desiderata" lingo. But the fact that such translation is easy and natural, suggests that there is an overlap of concerns between the epistemologists studying Alstonian pluralism, and the epistemologists concerned with relativistic pluralism: both have an interest in discovering just how many plausible epistemic goods (desiderata, principles) there are, and how they relate to one another.

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[3] I tentatively go along with this proposal here, though I am sceptical whether it can ultimately be made to work. Can we neatly assign different desiderata – like coherence or reliability – to different domains? I doubt it. But I grant that the value of the desiderata might differ from domain to domain.

Third, note also that Alstonian and relativistic pluralisms might have a common motivation, that is, to account for irresolvable disagreements. Thus the Alstonian might explain the gulf between internalists and externalists by pointing to their incompatible commitments to different epistemic desiderata. This is not the way Alston himself uses his pluralism. Alston is more concerned to explain away the disagreement between internalism and externalism: contrary to their initial self-conception, the two sides do not disagree over what one and the same concept of epistemic justification requires from us; they simply invoke different (and compatible) such concepts of epistemic justification.

Fourth, epistemic relativism need not commit to the idea that fundamentally different epistemic systems are committed to incompatible epistemic desiderata. At least this is so if we specify epistemic desiderata at the level of generality that Alston's original paper worked with. Epistemic relativism might also apply in cases where two epistemic communities (with their respective epistemic systems of principles) favor the same epistemic desiderata *but apply them in different ways*. Irresolvable epistemic disagreement can exist between two communities that both give great value to reliability as the central epistemic desideratum in a given domain. And yet, one community might favor reliability of predictions that allow us to minimize false positives, while another community might favor reliability of predictions that enable us to minimize false negatives.

These are just some preliminary ideas. The matter clearly deserves an extended discussion elsewhere.[4]

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