Circularity and arbitrariness

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Responses to the Epistemic Regress Problem

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1 Introduction

There are many things that we believe. I believe that Kipchoge won the marathon of London in 2015, that the train to Hurdegaryp leaves at 12:23, that Anjum lies east of Moddergat, that the Van Starkenborghkanaal crosses the Reitdiep at Dorkwerd, that Wierumerschouw has more inhabitants than Wierum, and also many other things. Similarly, you may believe that Helena is the capital of Montana, that apples grow on apple trees, that many diseases are caused by microscopic organisms, that dark clouds are gathering over the mountains, that all fish have fins, and also many other things.

Holding these beliefs, we commonly find it important that there is something by which they are supported. This is because we want to act on our beliefs: we want to be able to rely on them in going about in the world surrounding us. And certainly, if we are to rely on our beliefs in that way, it is important that they somehow reflect that world. Our beliefs have to be likely to be true. We hope that they are not *mere beliefs about* the world, but that they constitute real *knowledge of* that world. Hence, our beliefs may not just be random guesses, and we may not hold them merely because we like the way they sound when they are uttered, or the way they look when they are written down. We should accept our beliefs in light of certain considerations; considerations suggesting to us that our beliefs are likely to represent rather than misrepresent actual states of affairs.

Epistemologists usually capture this intuition by claiming that our beliefs should be held for *reasons*. They say that a belief is acceptable, and counts as knowledge, only when the person holding that belief has a reason for it. Yet, what does it mean to have a reason for a belief? Very often, having a reason for a belief involves having a *further belief*. For example, I have a reason for my belief that Kipchoge won the marathon in virtue of having a further belief that Kipchoge received a handshake from the Prince just after he finished. And I have a reason for my belief that the train to Hurdegaryp leaves at 12:23 by having a further belief that that is what the train schedule tells me. Similarly, you may have a reason for your belief that Helena is the capital of Montana through having a further belief that that is what is said by the state capital listings in the World Almanac. And you may have a reason for the belief that dark clouds are gathering over the mountains by having the further belief that the weatherwoman just announced that.

Presumably, though, in order for us to have a suitable reason for a belief by having a further belief, that further belief should also be supported by a reason. Consider my belief that Kipchoge won the marathon of London, and assume that I have the further belief that Kipchoge received a handshake from the Prince. Yet suppose that I formed the latter belief merely by looking at the stars. In that case, I do not have an adequate reason for my belief that Kipchoge won the marathon by having this further belief. Similarly, think of your belief that clouds are gathering over the mountains, where you have the further belief that the weatherwoman said so. Imagine that you adopted the latter belief for no reason but just because, say, you *desired* her to say it. Then, most philosophers will agree, this further belief does not provide you with a suitable reason for your belief about the clouds.

Thus, most epistemologists think that we should also have a reason for the further belief. However, if having a reason for this further belief also involves having a further belief, we certainly need to have a reason for the latter belief too. And if having a reason for it implies that we should have an even further belief, we should have a reason for that belief as well; and so on, and so forth. Apparently, the requirement that we should have reasons for our beliefs gives rise to a very long *chain* or *regress* of beliefs where we need a reason for every further belief. It seems that we may accept one particular belief only if we have *infinitely many further beliefs*.

However, given that we are merely finite human beings, with a finite lifespan and a finite mind, how can we have so many beliefs? Is that not simply impossible for creatures like us? Yet if it is indeed impossible, the requirement that we should have reasons for our beliefs implies that we may not accept any belief at all, and that we cannot have any knowledge of the world surrounding us. And this outcome is rather unappealing, to say the least. Certainly, we think, many of the beliefs that we accept are beliefs we *may* also accept, and many of the beliefs that we accept, at least those which are true, also qualify as *knowledge*.

Thus, one rather plausible assumption, that we should have reasons for our beliefs, seems to have a rather implausible consequence, viz. that we should have infinitely many beliefs and, thereby, that we may not accept any belief and that we cannot have knowledge. That this plausible assumption has this implausible consequence is naturally assumed to be a problem: the *epistemic regress problem*.

How can we respond to this problem? Traditionally, three types of answers have been given. Historically the most dominant response is the

view that the regress of beliefs need not go on indefinitely. Rather, this response says, the regress should come to an end in certain privileged beliefs which are acceptable even when they are not supported by further beliefs. These privileged beliefs may be accepted for other reasons, for example because they are sustained by perceptual experience. Since this response stresses the fact that chains of beliefs should end with certain beliefs at a foundation, it has naturally been called 'foundationalism'.

A second response to the problem agrees that the regress need not go on, yet not because it ends in a foundation, but because it should not even arise in the first place. On this response, beliefs should form coherent sets, where the members of these sets mutually support each other in a variety of ways: some beliefs entail the content of other beliefs, some beliefs explain the content of other beliefs, some beliefs predict the content of other beliefs, etc. On this view, beliefs may be accepted just in case they are members of such coherent sets. Hence, this second view is called 'coherentism'.

A third response, historically less popular than foundationalism and coherentism, but recently defended by several commentators, claims that the regress should go on and on, but without end. This response says that a belief is acceptable only when the person holding it has infinitely many further beliefs. Unsurprisingly, this response is called 'infinitism'.

At this point it may be noted that all these responses to the regress problem, foundationalism, coherentism, and infinitism alike, are *normative* responses. Given the assumption that we may accept a belief only if we have an adequate reason, foundationalists, coherentists, and infinitists make claims about how the chain of beliefs engendered by that assumption *may* or *should* continue, or about the way our beliefs *may* or *should* form a structure.

However, why should one respond to the problem in such a normative way? After all, several key figures in the history of twentieth century philosophy have emphasized that philosophy's task, and hence epistemology's task, is not so much normative but rather *descriptive*. One may remember Wittgenstein writing the following:

> Philosophy may in no way interfere with the actual use of language; it can in the end only describe it.
> For it cannot give it any foundation either.
> It leaves everything as it is (Wittgenstein 1953, §124).

As is well known, Wittgenstein holds that philosophy's task is not to prescribe the use of words, or ways of behaving, but rather to do justice to our actual practices by giving 'perspicuous representations' of them.

Similarly, Quine has argued that since the attempt of 'first philosophy' to provide a foundation for science which is itself independent from science necessarily fails, philosophy, epistemology in particular, had better study science in order to see how it is actually organized. Epistemology, in Quine's view, should not be practiced as a normative enterprise, but as a part of empirical psychology (Quine 1969).

What if we followed the methodological imperatives of Wittgenstein and Quine, and instead of prescribing how our beliefs should be structured, settled for an adequate, perhaps scientifically informed, description of the actual structure of our beliefs? Maybe such a descriptive project would show that the actual structure of our beliefs resembles the way foundationalists hold they should be structured. Maybe it would evince that many of our beliefs are in fact based on further beliefs, and that many of these further beliefs are in fact based on even further beliefs, etc., but that ultimately all beliefs are accepted on the basis of beliefs which are not supported by other beliefs. Alternatively, it is possible that a descriptive investigation would reveal that the actual structure of our beliefs is infinite. Perhaps the investigation would show that all beliefs are based on other beliefs, and that at least very many of them are supported by infinite chains of beliefs – thereby, surprisingly, falsifying the philosophical armchair assumption that finite creatures cannot have infinitely many beliefs.

It is also possible that the descriptions provided by Wittgenstein and Quine themselves capture the way in which our beliefs are actually structured. Their accounts appear to be descriptive versions of coherentism. On one natural interpretation, Wittgenstein holds that our beliefs are held fast by the beliefs which surround them. Some beliefs are held more firmly than others. There are specific beliefs, in so-called 'grammatical propositions', which constitute 'hinges' without which other beliefs, in non-grammatical or 'empirical propositions', could not even be intelligible. These beliefs in hinge propositions are 'rules of measurement'. Yet, specific influences may even cause the abandonment of them (Wittgenstein 1969; cf. Phillips 1988, Ch. 4).

Seemingly not too different from Wittgenstein, Quine's holism implies that our beliefs form a large web of beliefs, where all beliefs are related to each other in a variety of ways, and where some beliefs are more central than others. In Quine's view, no beliefs, perhaps not even beliefs in

propositions of logic or mathematics, are immune from revision when confronted with adversary input from the senses (Quine 1970).

Although I feel strong sympathies for this descriptive philosophical project, and in particular for the descriptions of the structure of our beliefs provided by Wittgenstein and Quine, in this dissertation my central focus will be on normative responses to the regress problem. It will be so for two reasons in particular. A first reason is the fact that these normative theories are still extremely dominant in the current epistemological literature, and that I think they can benefit from further conceptual elucidation. A second and related reason is constituted by a fascinating argument that has recently been made in the normative debate. This argument is due to Peter Klein (esp. Klein 1999, 2005, and 2007a).

According to Klein, responses to the regress problem should be evaluated in terms of their performance with regard to two central desiderata: such responses should *avoid circularity*, and they should *avoid arbitrariness*. However, Klein argues, if we spell out what is involved by these desiderata, we find that neither of the two most popular responses to the regress problem, i.e., foundationalism and coherentism, is able to avoid both circularity and arbitrariness. While foundationalism cannot avoid arbitrary beliefs at the foundation, coherentism cannot avoid circular belief chains. Unlike foundationalism and coherentism, Klein submits, the only theory which can successfully avoid both circularity and arbitrariness is infinitism.

Since infinitism is usually treated as an option not deserving serious attention in the first place, Klein's conclusion is rather controversial. It is not surprising, therefore, that his argument has received much response. Several commentators have marshalled objections to the version of infinitism that Klein ends up advocating. Others focus on Klein's objection to their favourite theory. Foundationalists deny that their theory involves arbitrary beliefs, while coherentists usually reject the verdict that they accept circularity.

In this dissertation, I will discuss Klein's argument to the effect that infinitism is the only epistemic theory which avoids both circularity and arbitrariness. While I think that Klein has done very good work in presenting this argument, I think it could still be developed in more detail. In particular, I think that more attention can be paid to the accounts of circularity and arbitrariness to be employed in evaluating epistemic theories. Thus, what I will do in this dissertation is evaluate the various responses to the regress problem in terms of the two desiderata of avoiding circularity and avoiding arbitrariness, by first developing substantial accounts of these desiderata.

I will begin, in Chapter 2, by presenting the epistemic regress problem and the various responses to it. In particular, I will explain more precisely the assumptions which give rise to the problem, and in what sense the various responses aim to solve it. Then, in chapters 3 and 4, I will give detailed accounts of (avoiding) circularity and arbitrariness. While I will accept many elements of Klein's accounts, I will suggest some additional clauses both for a concept of circularity and for a concept of arbitrariness.

In light of the accounts from chapters 3 and 4, I will evaluate epistemic theories in chapters 5, 6, and 7. In Chapter 5, I will consider foundationalism. While I think that the foundationalist has a way to avoid circularity and arbitrariness when assessed in terms of Klein's accounts of the desiderata, I will argue that she cannot avoid arbitrariness on my account thereof. In Chapter 6, I will assess coherentism. Again, it will turn out that the coherentist may avoid both circularity and arbitrariness on Klein's account, but that she cannot meet the desiderata when assessed in terms of my account. Though at first sight the coherentist seems able to avoid circularity, I will argue that she can avoid arbitrariness only by nevertheless allowing circular chains.

In this way, the argument from chapters 2 to 6 aims to provide an addition to Klein's work: even on my extended concepts of circularity and arbitrariness, it follows that neither foundationalism nor coherentism succeeds to satisfy the two desiderata. Hence, the natural and exciting question becomes whether infinitism *can* successfully avoid both.

In Chapter 7, I will take up that question. I will argue that on my accounts of avoiding circularity and arbitrariness, none of the versions of infinitism actually defended in the literature, not even the version defended by Klein himself, can meet both desiderata. However, I will also show that the only theory which *does* avoid both circularity and arbitrariness on my accounts *is* a version of infinitism. Hence, in this sense Klein is right. At the same time, I will argue that the version of infinitism which avoids both circularity and arbitrariness imposes demands that not very many human beings may be able to meet. Hence, the version of infinitism appears to give rise to a form of scepticism.

Having reached this somewhat pessimistic conclusion, in Chapter 8 I will look at several remaining theoretical options. In order to circumvent scepticism, one may decide to reject one of the two desiderata. Some will argue that arbitrariness need not always be vicious; others will say that circularity can sometimes be benign. While these attempts to avoid the

sceptical consequence are very sensible, I will argue that they involve either serious costs or substantial challenges.

In Chapter 9, I will round off the discussion by drawing my final conclusions.

2 Knowledge, Reasons and the Epistemic Regress Problem

2.1 Introduction

The regress problem in epistemology has a very long history. Though most extensive and explicit discussion has taken place after the nineteenth century, some important considerations involved by the problem can be traced back to at least Aristotle's *Posterior Analytics* (Ch. 3). One can also find features of the problem discussed in the writings of Sextus Empiricus (Bk. 1, Ch. 15).[1]

In the twentieth century, the epistemic regress problem has become essentially associated with one of the necessary conditions for knowledge. It is widely thought that in order for a person, S, to know that *p*, at least three requirements should be met: (i) S must believe that *p*; (ii) *p* must be true; and (iii) S must be justified in believing that *p*. Though nearly all epistemologists agree that Gettier (1963) has shown that a belief's being justified and true is not sufficient for it to be a case of knowledge, these three conditions are still widely recognized as being both necessary and (at least) almost sufficient.

The epistemic regress problem is associated with the *justification* condition. In order for a person's belief to qualify as knowledge, it is not enough that it is true. Rather, most epistemologists think, he must hold the belief for a *reason*. If I believe that Kipchoge won the marathon of London, that belief will not qualify as a case of knowledge as long as I hold it due to wishful thinking; and if I believe that the train to Hurdegaryp leaves at 12:23, that belief does not count as knowledge if I merely adopted it through random guesswork. In both cases, my belief is an instance of knowledge only if I hold it for a suitable reason.[2]

In the present chapter, I will explain how this idea, that a belief should be held for a reason, gives rise to the epistemic regress problem. In Section 2.2, I will consider the nature of reasons. It will turn out that when a belief is held for a reason, it is typically held on the basis of a further belief. As we will see, though, most epistemologists think that a belief cannot be justified

[1] For some discussion of the history of the problem, see Klein 2007a, 1-6; and Klein 2011, Sect. 2.

[2] Like Klein, I will mainly work with examples of ordinary empirical beliefs such as the two mentioned in this paragraph. Yet I leave it open, and in fact think, that the analysis to be given later on can also apply to beliefs of other sorts, such as advanced scientific beliefs, mathematical beliefs, moral beliefs, political beliefs, etc.

by being held on the basis of a further belief if the latter belief has no epistemic credentials. Thus it is widely agreed that the further belief should be justified as well. Hence, it is thought, a belief is typically justified by a further justified belief. In Section 2.3, I will show how the epistemic regress problem arises as soon as it is assumed that a belief is not just typically, but *always* justified by a further justified belief. If a belief can only be justified by a further justified belief, we can have a justified belief only if we have infinitely many justified beliefs. But that seems to imply that we cannot have any justified belief at all. We will look at several possible responses to this problem. In Section 2.4, I will comment on a problem which appears rather similar to the epistemic regress problem, but which has been claimed to be significantly different. This problem may be called the *dialectical regress problem*, and concerns cases where it is not so much required that a person's belief is held for a reason, but where a person is required to give a reason for an assertion, and a further reason for the assertion of the reason, etc. I will note that our primary focus in later chapters will be on the epistemic rather than the dialectical regress problem. Finally, in Section 2.5, I will introduce the two desiderata for responses to the regress problem: avoiding circularity and avoiding arbitrariness.

2.2 Reasons for Belief

In order for a person's belief to be justified, he should hold that belief for a particular reason. But as several epistemologists have noticed, there are many different *kinds* of reasons for holding a belief (e.g. BonJour 1985, 6-7; Huemer 2001, 24, n. 21; Fumerton 2006, 3-4). For example, one may have *pragmatic* reasons. Consider this passage from William James:

> Suppose (…) that you are climbing a mountain, and have worked yourself into a position from which the only escape is by a terrible leap. Have faith that you can successfully make it, and your feet are nerved to its accomplishment. But mistrust yourself, and think of all the sweet things you have heard the scientists say of *maybes*, and you will hesitate so long that, at last, all unstrung and trembling, and launching yourself in a moment of despair, you roll in the abyss (James 1895, 59).

As James rightly notes, "[i]n such a case (…), the part of wisdom as well as of courage is to *believe what is in the line of your needs*, for only by such belief is the need fulfilled" (*ibid.*, 59). It may be said that what you have here is a *pragmatic reason* to believe that you can make the leap, since believing that will reduce the chance that you drop down.

One can also have *moral* reasons for believing something. Suppose you have a friend who has stood by you and has supported you through many trials and crises, often at considerable cost to himself. Now this friend stands accused of a horrible crime, everyone else believes him to be guilty, and there is substantial evidence for this conclusion. In fact, you have no independent evidence concerning the matter and your friend knows you well enough that an insincere claim to believe in his innocence will surely be detected. Clearly, if it is possible for you to bring yourself to believe in your friend's innocence, you have a strong reason for doing so. This reason is a moral reason for belief (BonJour 1985, 6).

However, virtually everyone agrees that if a belief is to qualify as knowledge, it is not such pragmatic or moral reasons that are relevant. Instead, it is assumed, a belief should be held for an *epistemic reason*: a reason for thinking it is *true*. Thus consider my belief that Kipchoge won the marathon of London. In order for that belief to qualify as knowledge, it is not enough if I have some pragmatic reason for this belief (perhaps I would come to feel extremely disappointed if I believed that Kipchoge lost). Rather, I should have a reason for thinking it is true that Kipchoge won, for instance by knowing that Kipchoge received a handshake from the Prince just after he had finished. Similarly, suppose I believe that my sister is trustworthy. In order for this belief to count as knowledge, it does not suffice that I have a moral reason for holding it (after all, she is my *sister*). Rather, what I need is a reason for thinking it is true that she is trustworthy, for example by knowing that she has always kept her promises. When epistemologists say that a belief should be held for a reason, what they have in mind are such epistemic reasons (henceforth I shall simply speak of 'reasons' instead of 'epistemic reasons').

Yet, what kind of things are reasons? What kind of thing does one have if one has a reason for a belief? Most epistemologists assume that beliefs are typically *justified by other beliefs*. Some intend this to mean that reasons are themselves beliefs. Davidson, for instance, endorses the claim that "nothing can count as a reason for holding a belief except another belief" (Davidson 1983, 141; cf. Lehrer 1974, 187-8; BonJour 1985, Ch. 4; and

Lyons 2009, Ch. 3). Others construe reasons as (believed) *propositions* (e.g. Armstrong 1973, 78; Audi 1986, 234; Fantl 2003, 540, fn. 7; Cling 2008, 408-12).

If we consider ordinary language, though, most reasons appear to be, not beliefs or propositions, but certain *facts* or *features of the world*. If you ask me why I believe that Kipchoge won the marathon, I say that my reason is, not so much my *belief* or the *proposition* that he received a handshake from the Prince, but rather the *fact* that he received the handshake. If you ask me why I think that the train to Hurdegaryp is about to leave, I cite, not my *belief* or the *proposition* that the schedule says it leaves at 12:23, but the *fact* that the schedule says that. Similarly, asked for my reason for believing that it will be raining very soon, I simply cite *the colour of the clouds*. Or when asked for my reason for believing that it would be good to buy these pretty shoes in Japan rather than in Europe, it is perfectly natural for me to mention *the current state of the Yen*. What I cite as a reason in the latter cases is not a belief or a proposition, but a particular *feature of the world*.[3]

But though this may sound intuitive, we cannot think of reasons for which one holds a belief as facts or features of the world without qualification. First, all too often we believe things on the basis of 'facts' or 'features of the world' which do not *obtain* and hence are not really facts or features of the world. I may say that my reason for believing that the train leaves at 12:23 is the fact that the schedule says so. But if the schedule does not say that at all, I *cannot* even hold my belief on the basis of that fact. Instead, in such cases I hold it on the basis of something I mistakenly *believe* to be a fact (cf. Turri 2009, 502).

Yet even in cases where the facts or features I cite *do* obtain is it unwarranted to say, without qualification, that those facts or features are my reasons. In order for a fact or feature to be the reason for which *a particular person* believes something, he must certainly *believe* that fact or feature to obtain. If it is a fact that the schedule says the train leaves at 12:23, then there may certainly *exist* a reason for S to believe that it leaves at 12:23. But if S does not *believe* that that is what the schedule says, the fact about the schedule cannot be the reason for which *he* believes that the train leaves at

[3] For philosophers emphasizing that ordinary usage suggests that reasons for belief are *facts*, see Pollock 1974, 25; Alston 1988a, 230; Millar 1991, 65; Thomson 2008; 128; Turri 2009, 501; Neta 2011, 110; and LittleJohn 2012, 102-5. For a philosopher recognizing *features of the world* as reasons for *action*, see Dancy 2000.

that moment in time. A fact or feature can only be S's reason if S believes that it obtains.

Thus if we want to take seriously ordinary usage suggesting that reasons are facts or features of the world, we should say that reasons for which we believe certain things are *believed facts or features of the world*. Similarly, epistemologists holding that reasons are *propositions* will say that propositions *as such* do not qualify as reasons for which a person believes certain things. Rather, it is these propositions insofar as the person *believes* them (cf. Audi 1983, 214).

Hence whenever S holds a belief for a particular reason, this typically implies that he has a further belief. Either we say, with Davidson and his adherents, that S's reason is itself a belief; or we say that S's reason is a fact or feature of the world which he believes to obtain, or that it is a proposition he believes to be true. Even if we disagree with epistemologists who say that reasons *are* beliefs, we can agree with them that when a belief is held for a reason, this usually involves the presence of a further belief. In this sense, beliefs are typically justified by further beliefs.

However, virtually everyone agrees that a belief cannot be justified by *any* further belief. Rather, it is thought, a belief can be justified by a further belief only if the further belief meets certain requirements as well. When can a belief that *p* (B*p*) be justified by a belief that *q* (B*q*)? Usually, it is assumed that two conditions should be met.

First, it is generally thought that *q* should bear an *appropriate relation* to *p*. This relation can be construed in various ways. Most think of it in terms of the supposed cognitive aim of reaching truth and avoiding error. Thus some philosophers hold that *q* should be a sufficient indication of the truth of *p*. Either *q* should entail *p*, or *q* should be such that the probability of *p*, given *q*, is very high. Hence on this view the appropriateness of the relation between *q* and *p* is understood *objectively* (Alston 1988a, 231-2). An alternative option denies that *q* and *p* should be objectively related, and contends that S should believe, or be justified in believing, that *q* is a good indication for *p*. Advocates of this view understand the relation *subjectively* (Fumerton 2006, 100-8). Still another possibility is to maintain that the relation should be both objective and subjective: *q* should *be* a sufficient indication of *p and* S should believe or be justified in believing that *q* is such an indication. For the purposes of the current chapter, it is not very important which stance we take here.

The second requirement is crucial, though. It concerns the epistemic status of B*q*. Suppose I hold the belief that the train to Hurdegaryp leaves at 12:23 in light of my further belief that the schedule says it leaves at 12:23. The belief about the schedule is true and a very good indication of the truth of the belief about the train's departure. But now suppose I formed the belief about the schedule, not by looking at the schedule or by asking an employee of the train service, but by considering the position of my favourite celestial bodies. As most epistemologists would judge, the belief about the schedule certainly cannot serve to justify the belief about the departure if it has this (supposedly) inferior epistemic status. For this reason, most commentators say that B*p* can be justified by B*q* only if B*q* is itself justified as well. Thus, my belief that the train leaves at 12:23 can only be justified by my belief that the schedule says it leaves at 12:23 if my belief about what the schedule says is justified as well (e.g. Quinton 1973, 119; Williams 1977, 63; BonJour 1985, 18; Fumerton 2006, 38-9).[4]

Thus, if B*p* is to be justified by B*q*, *p* and *q* should be appropriately related, and B*q* should itself be justified as well. Since beliefs are typically justified by further beliefs, and since the former can be justified by the latter only if the latter are justified too, we may say that beliefs are typically justified by further justified beliefs.

2.3 The Epistemic Regress Problem

Importantly, the assumptions from the previous section give rise to the epistemic regress problem. As we saw, when a belief, B*p*, is held for a reason, this usually involves the presence of a further belief, B*q*. As we saw also, most epistemologists think that B*p* can be justified by B*q* only if B*q* is justified as well. If these two assumptions are put only slightly stronger, they engender the regress problem. Thus suppose that we assume that (i) a belief, B*p*, can *only* be justified by a further belief, B*q*, and (ii) B*p* can be justified by B*q* *only* if B*q* is also justified. On the combination of (i) and (ii), one can have a justified belief only by having infinitely many justified beliefs. However, given that we are merely finite human beings, having infinitely many beliefs seems impossible for us. Hence, the two assumptions appear to

[4] Some philosophers contend that B*q* need not merely be *justified*, but that it should be a case of *knowledge* (Armstrong 1973, 152; Williamson 2000, Ch. 9). Whatever one thinks of their claim, accepting it has no consequences for the remainder of this chapter as long as knowledge is assumed to entail justified belief.

imply that we cannot have any justified belief at all. Yet, this sceptical consequence is usually thought to be unacceptable.

The epistemic regress problem can be responded to in (at least) the following six ways:

(a) A first response is *scepticism*. If one accepts both (i) and (ii), and assumes that finite beings cannot have infinitely many beliefs, one may conclude that human beings cannot have any justified belief at all.

(b) Advocates of *foundationalism* want to give a non-sceptical response to the problem. They do so by rejecting (i), that beliefs can only be justified by further beliefs. According to foundationalism, many beliefs are justified by further beliefs, which may be justified by still further beliefs, but at some point chains of beliefs should come to an end with *basic beliefs*, which are justified without depending for their justification on further beliefs in the way that other, non-basic beliefs, do.

(c) A position similar to foundationalism may be called the *unjustified foundations view*.[5] Defenders of this view deny (ii) by claiming that in some circumstances, a belief can be justified by a further belief even if the further belief is unjustified. Thus on this view, many beliefs may be justified by further beliefs, which may be justified by still further beliefs, etc., but at some point chains of beliefs should (or may) come to an end with beliefs which are justified by unjustified beliefs.

(d) According to a view called *linear coherentism*, neither (i) nor (ii) should be rejected. Rather, beliefs should be justified by further beliefs, which should be justified by still further beliefs, etc., and this chain of beliefs should loop back on itself at some point. Although linear coherentism is a possible response to the regress problem, it is unclear whether anyone has actually adopted this position.

(e) Unlike linear coherentism, *holistic coherentism* dismisses the whole conception of linear justificatory chains. According to this view,

[5] The position is given this name by Michael Bergmann (2007, 21).

beliefs are not justified by further beliefs, which are justified by still further beliefs, etc., but they are all justified through their membership of suitably coherent sets of beliefs.

(f) Like linear coherentism, *infinitism* accepts both (i) and (ii). Unlike linear coherentism, however, it claims that justificatory chains should somehow go on indefinitely. Thus a belief should be justified by a further belief, which should be justified by a still further belief, and the resulting chain should be infinite.

Historically, by far most epistemologists have embraced foundationalism. Even if they did not use the term, it has been said that Plato, Aristotle, Descartes, Locke, and Hume all held that epistemic chains should come to an end with certain privileged beliefs which are justified in virtue of something other than their reliance on further beliefs (cf. Lehrer 1974, 15, fn. 16; Plantinga 1993a, Ch. 1; Klein 2011, Sect. 2).

In the first part of the twentieth century, notably due to the influence of the British idealists (and more indirectly to Hegel), some philosophers came to adopt a version of coherentism. While there may be indications that some accepted the linear version, the position most commonly adopted is holistic coherentism. Holistic coherentists came to reject the idea that all knowledge and justified belief should have a stable foundation in basic beliefs. Rather, they claimed, if beliefs are justified, this is so because they form a coherent web or network with other beliefs, where all its members nicely hang together (cf. BonJour 1985, Appendix B).

After it had become very popular in the first part of the twentieth century, however, coherentism came to face some supposedly serious worries later on. In light of these worries, many thinkers returned to foundationalism, which regained its status as by far the most popular response to the regress problem.

In the last twenty years, though, several philosophers have come to be attracted to infinitism, a position significantly different from both foundationalism and coherentism. This position has been defended most articulately by Peter Klein, but has been embraced by some other prominent thinkers as well.

Since foundationalism, holistic coherentism, and infinitism are the most central theories in the current debate, it is on these three theories that I will focus in evaluating responses to the regress problem. After developing

accounts of the desiderata for such responses in chapters 3 and 4, I will devote one chapter to each theory. As for scepticism, I will briefly comment on it in Chapter 8. With regard to the unjustified foundations view, my analysis of foundationalism suffices to see whether it can avoid circularity and arbitrariness. With regard to linear coherentism, it will become clear whether it could meet our two desiderata in the chapter on holistic coherentism.

2.4 The Dialectical Regress Problem

Before turning to desiderata for responses to the epistemic regress problem, it is worthwhile to discuss a regress problem which seems very similar to the epistemic regress problem presented in the previous section, but which has been claimed to be significantly different from it.

In order to see this supposedly different regress problem arising, consider a situation where one asserts something, say that *p*, and an interlocutor demands a reason for thinking that *p* is true. Most people would say that in such a case one should give a reason for *p*. Suppose one gives a reason by citing a further proposition, *q*. In response, the interlocutor asks a reason for *q*. When one answers by adducing a further proposition, *r*, the interlocutor demands a reason for *r*. Of course, one could give a reason for *r* by citing a still further proposition, *s*. However, what if one's interlocutor is what Leite (2005) has called a '*persistent* interlocutor', one who asks for a new reason whenever one has given one?

If it is assumed that justifying an assertion requires that one gives a reason for that assertion when challenged by an interlocutor, and a further reason for the assertion one makes in giving a reason for the first assertion, etc., then the presence of a persistent interlocutor will make it virtually impossible for one to justify an assertion. Following Rescorla, we may call this problem the *dialectical regress problem* (Rescorla 2009, sects. 3 and 4).[6]

The dialectical regress problem has been responded to in the following two ways:

(a) According to *dialectical foundationalism*, a speaker should give a reason for many assertions when challenged by an interlocutor, but not for all. In particular, he does not have to give a reason for a

[6] For actual descriptions of the dialectical regress problem in the literature, see e.g. Chisholm 1977, 18-9; and Klein 2011, 488.

proposition which is dialectically basic, especially when that challenge is itself unmotivated. When faced with a persistent interlocutor, a speaker may still justify an assertion even if he is unable to give a reason for some basic propositions (cf. Brandom 1994, chs. 3 and 4; Norman 1997; Leite 2005).

(b) According to *dialectical egalitarianism*, a speaker should give a reason for *all* assertions when he is challenged to do so, even when the challenge is itself unmotivated. Unlike the dialectical foundationalist, the dialectical egalitarianist denies that some propositions are dialectically privileged. When faced with a persistent interlocutor, a speaker may often be unable to justify his assertion (cf. Rescorla 2009[7]).

Although the epistemic regress problem and the dialectical regress problem share some obvious similarities, many commentators have argued that we should keep them apart (Alston 1976a, 26-32; Audi 1993b, 118-25; Pryor 2005, 184; Rescorla 2009, 44-46). A first reason for doing so is that the two problems concern items that are seriously different. The epistemic regress problem concerns requirements for *knowledge* and for *justified belief*, whereas the dialectical regress problem concerns the legitimacy of *assertions* and *questions*. To claim that the two regresses are the same is to say that the rules governing knowledge and justified belief are the same as the rules governing assertion, which is a very strong claim.

A second reason for regarding the two regresses as different is the fact that they arise on different conditions. Accepting or denying the conditions that lead to the one regress does not imply accepting or denying those leading to the other. If one denies that beliefs can only be justified by other justified beliefs, one does not face the epistemic regress. But it does not follow that one does not face a dialectical regress problem either: one could still think that a speaker justifies his assertion only if he gives reasons as long as an interlocutor challenges him to do so. Similarly, if one denies that a speaker should always give a further reason when challenged to do so, one avoids the dialectical regress. Yet it does not follow that one thereby avoids the epistemic regress as well: one may still think that beliefs can only be justified by further justified beliefs.

[7] As other advocates of dialectical egalitarianism, Rescorla mentions the Pyrrhonian sceptics, Neurath, Klein, and Van Eemeren and Grootendorst (Rescorla 2009, 46).

Third and related, a particular response to the one problem need not commit one to an analogous response to the other. It seems that Neurath (1932/33) combines epistemic (holistic) coherentism with dialectical egalitarianism.[8] Lehrer and (the early) BonJour also advocate epistemic coherentism, but suggest a combination with dialectical foundationalism (Lehrer 1974, 14-8; BonJour 1976, 286; 1985, 90-2). Audi (1993b) defends foundationalism with regard to the epistemic problem, but claims that the dialectical problem favours an *anti*-foundationalist response. Rescorla (2009) holds that epistemic regresses end along foundationalist lines, but defends egalitarianism as a response to the dialectical problem. If the two regresses were the same, all these philosophers would be holding inconsistent views, which seems rather implausible.[9]

Though it may be important not to conflate the epistemic and the dialectical regress problem, there remains a vital question about the way they are nevertheless related. In order to clarify this question, it is helpful to point at the fact that terms like 'justification' and 'justified' suffer from a 'process-product ambiguity' (cf. Alston 1976a, 30, fn. 14). On the one hand, 'B*p* is justified' can mean that it has a certain epistemically desirable *status*, so that S is entitled (or licensed or warranted) to hold it. On the other hand, 'B*p* is justified' can also mean that S has successfully performed in the *activity* of *justifying* B*p* in response to challenges posed by an interlocutor.

Given this distinction, it may be questioned whether B*p*'s status of *being justified* depends on S's performance in *justifying* B*p* in dialectical situations where it is called into question. Some philosophers hold that B*p*'s epistemic status does indeed depend on whether S is able to successfully defend B*p* in response to critical challenges (Leite 2004; Aikin 2011, Ch. 1). Hence, their view implies that one's verdict about B*p*'s justificatory status depends on one's response both to the epistemic and to the dialectical regress problem.

However, by far most epistemologists deny that *being* justified requires *having justified* or *being able to justify* (e.g. Alston 1976b, 44-45; Goldman 1979, 2; Audi 1993b, 145-6; Korcz 2000, 533; Pryor 2000, 535-6;

[8] At least, it seems that Neurath does so on Rescorla's interpretation of him (Rescorla 2009, 51).

[9] For some additional arguments to the effect that the epistemic problem differs from the dialectical problem, see Audi 1993b, 120-3. For some epistemologists apparently conflating the two regresses, see e.g. Lehrer 1974, 15; Pollock 1974, 25-6; BonJour 1985, 17-9; and Huemer 2010, 22.

Rescorla 2009, 48-50; Van Woudenberg and Meester 2014, 225). To assume that S should be able to justify B*p* is to impose unrealistic requirements on justification which render many obviously justified beliefs unjustified. On this view, one's judgment about whether B*p* has the status of being justified depends on one's response to the epistemic regress problem, but not one's response to the dialectical regress problem.

For present purposes, we do not have to settle on either of these views about the relation between B*p*'s *being justified* and S's performance in *justifying* B*p*. Our main focus in the following chapters will not be on the dialectical but on the epistemic regress problem.

2.5 Desiderata for a Solution: Avoiding Circularity and Arbitrariness

Having said that we should not confuse the epistemic regress problem with the dialectical regress problem, let us return to the former problem. In the first three sections of this chapter, I have explained how this problem arises. Most philosophers agree that a belief is typically justified by a further belief. Most philosophers also agree that a belief can only be justified by a further belief if the latter belief is justified as well. If the slightly stronger assumption is made that beliefs can *only* be justified by further justified beliefs, this implies that one can have a justified belief only by having infinitely many justified beliefs. Yet if finite creatures cannot have infinitely many beliefs, this means that they cannot have any justified belief. As explained, the three most common responses to this problem are foundationalism, coherentism, and infinitism.

As I said also, while most epistemologists advocate foundationalism or coherentism, recently some philosophers have come to adopt infinitism. This increased popularity of infinitism is mainly due to the work of Peter Klein. Klein defends infinitism by appealing to two desiderata which he thinks any response to the epistemic regress problem should satisfy. According to Klein, such a response should *avoid circularity* and it should *avoid arbitrariness*. In order to make this a bit more precise, Klein has captured the desiderata in the following principles:

> Principle of Avoiding Circularity (PAC): For all x, if a person, S, has a justification for x, then for all y, if y is in the evidential ancestry of x for S, then x is not in the evidential ancestry of y for S (Klein 1999, 298).

> Principle of Avoiding Arbitrariness (PAA): For all x, if a person, S, has a justification for x, then there is some reason, r1, available to S for x; and there is some reason, r2, available to S for r1; etc. (*ibid.*, 299).

According to Klein, if one accepts his desiderata, especially when couched in terms of these two principles, one is committed to accepting infinitism as the only viable response to the regress problem. As Klein puts it, "the combination of PAC and PAA entails that the evidential ancestry of a justified belief be infinite and non-repeating" (*ibid.*, 299).

As for infinitism's main competitors, foundationalism and coherentism, Klein thinks they either fail to avoid circularity or fail to avoid arbitrariness. Since foundationalism claims that epistemic chains end with basic beliefs which are justified without relying on further beliefs in the way that other, non-basic beliefs do, Klein argues that it is doomed to allow arbitrariness:

> foundationalism is unacceptable because it advocates accepting an arbitrary reason at the base, that is, a reason for which there are no further reasons making it even slightly better to accept than any of its contraries (*ibid.*, 297).

With regard to linear coherentism, Klein argues that it fails to avoid circularity: "[t]raditional coherentism is unacceptable because it advocates a not too thinly disguised form of begging the question" (*ibid.*, 297). While holistic coherentism may succeed in avoiding circularity, Klein submits that it is just a version of "foundationalism in disguise" and, hence, that it too is unable to avoid arbitrariness (*ibid.*, 297).

While some epistemologists have felt attracted to Klein's argument (e.g. Fantl 2003, 559; Aikin 2011), most foundationalists and coherentists strongly disagree with him. Foundationalists maintain that their theory does *not* allow 'arbitrariness at the base' (e.g. Alston 1976a, 36-8; Bergmann 2004; Howard-Snyder 2005; cf. Engelsma 2015). While no one appears to defend linear coherentism, holistic coherentists reject Klein's assertion that their view is a version of foundationalism. At the same time, they deny that this implies that their position sanctions circularity (e.g. Kvanvig 1995; Poston 2012).

As I announced in Chapter 1, in this dissertation I want to determine who is right in this debate. Is Klein right that only infinitism can avoid both circularity and arbitrariness? Or can the foundationalist or the coherentist meet the two desiderata just as well? Obviously, answering these questions requires that we have a suitable concept both of circularity and of arbitrariness. It also requires that we have an adequate grasp of the specific details of foundationalism, coherentism, and infinitism. The following two chapters will be devoted to developing substantial accounts of avoiding circularity and arbitrariness. Then, in the chapters 5, 6, and 7, we will evaluate foundationalism, coherentism, and infinitism in terms of those accounts.

3 Avoiding Circularity and Arbitrariness

3.1 Introduction

As we saw in the previous chapter, Klein thinks that infinitism is the only epistemic theory which can meet the two desiderata of avoiding circularity and avoiding arbitrariness. That avoiding circularity and arbitrariness are in fact *desiderata* is assumed by advocates of all epistemic theories: all think that (forms of) circularity and arbitrariness are vicious, and that it is bad if an epistemic theory involves circularity or arbitrariness.

As regards circularity, Klein claims that theories which license it allow unacceptable forms of question begging. That circularity is to be ruled out, Klein says, merely reflects "an obvious presupposition of good reasoning" (Klein 1999, 297-8). Klein's own view avoids circular chains by requiring that they be "infinite and non-repeating" (*ibid.*, 297). Alston argues that if we envisage a circular epistemic chain, the most it tells us is "that the belief that *p* is justified only if the belief that *p* is justified." Alston comments that this is true enough, but that it "still leaves it completely open whether the belief that *p* is justified" (Alston 1976a, 27). Of course foundationalists like Alston think that their theory avoids circularity. Coherentists want to rule out circularity for reasons similar to those advanced by Klein and Alston. As we will see in Chapter 6, a wish to avoid circularity has motivated them to adopt holistic coherentism instead of linear coherentism (e.g. Lehrer 1974, 154-157; BonJour 1985, Sect. 5.2; Dancy 1985, Sect. 9.1).

That arbitrariness is vicious is assumed by advocates of all epistemic theories as well. Several commentators reject foundationalism because they think it allows arbitrariness. Lehrer contends that it appears impossible for foundationalism "to avoid the charge of being arbitrary", and regards this as a reason for favoring coherentism (Lehrer 1974, 143-4). Poston, too, argues that the requirement to avoid arbitrariness forecloses a foundationalist theory (Poston 2012; 2014). Just as Lehrer, Poston adopts coherentism as a position that does not license arbitrariness.

As we have seen in the previous chapter, Klein agrees with Lehrer and Poston that foundationalism fails because of arbitrariness considerations. However, Klein maintains that the kind of coherentism espoused by them also sanctions arbitrariness. As we saw, Klein is happy to defend infinitism as a theory which succeeds to circumvent arbitrary beliefs.

In responding to objections to their view, many foundationalists, too, assume that arbitrariness is something vicious. Alston notes that it is "the aversion to dogmatism, to the apparent arbitrariness of the putative foundations," that has led many philosophers to embrace a non-foundationalist theory (Alston 1976a, 36). Yet, Alston maintains that his version of 'simple foundationalism' does not involve arbitrariness (*ibid.*, Sect. IV). Howard-Snyder calls it a "semantic platitude that justification is nonarbitrariness *par excellence*" (Howard-Snyder 2005, 24). Since "justification just *is* being nonarbitrary", he argues, a foundationalist who chooses to allow arbitrariness thereby rejects his own theory (*ibid.*, 20). Of course, Howard-Snyder believes that foundationalism does not sanction arbitrariness. In arguing against the arbitrariness objection to foundationalism, Bergmann (2004), Howard-Snyder and Coffman (2006), Rescorla (2014, 193-4), and Goldberg (ms.) also take for granted that arbitrariness is something bad.[10]

Of course, the fact that all these epistemologists hope to avoid circularity and arbitrariness raises the question precisely what circularity and arbitrariness *are*. In this chapter and the following, I will explain what it means to avoid circularity and arbitrariness, and also why that is assumed to be so important, i.e., why arbitrariness and circularity are thought to be *vicious*.

In the present chapter, I will first give an account of avoiding circularity. I will explain exactly what should avoid circularity, in what sense it should avoid circularity, and also why the circularity it should avoid is commonly thought to be vicious. Having discussed circularity, I will begin the discussion of arbitrariness. I will first explain why arbitrariness is thought to be vicious and what items precisely are required not to be arbitrary. Then I will explain Klein's concept of avoiding arbitrariness, and raise four questions for his account. In the following chapter, I will address the questions for Klein by developing my own concept of arbitrariness.

[10] The assumption that arbitrariness is vicious is also made in other epistemological debates. It is often expressed, for example, in the literature on peer disagreement. Suppose that two peers who possess exactly the same evidence concerning a particular hypothesis nonetheless disagree over that hypothesis. Suppose further that they both know about the other's opinion. If, in such a case of perfect symmetry, one of the parties keeps privileging his own views, this is regarded as an indefensible form of epistemic arbitrariness (e.g. Kelly 2005, 178-9).

3.2 Avoiding Circularity

In this section, I will establish what is involved by meeting the circularity desideratum. In 3.2.1, I will explain that it is especially *epistemic chains* that should avoid (vicious) circularity. In an attempt to develop a suitable concept of (supposedly) vicious epistemic chains, I will begin by considering Klein's account of circularity. In 3.2.2, I will discuss a recently suggested, and rather slight, adjustment to Klein's account. Informed by the suggested adjustment, I will provide an account of circularity suitable for evaluating responses to the regress problem. In 3.3.3, I will discuss the question why avoiding circularity is thought to be a desideratum in the first place: why certain forms of circularity are considered to be *vicious*.

3.2.1 Circular chains and Klein's account

In order to give an adequate account of avoiding circularity, the first question is exactly *what* should avoid being circular. Items usually said to be circular are *arguments* (e.g. Van Cleve 1984, 558; Alston 1986, 326; Cling 2002, 2003). Suppose someone defends a claim, say the claim that *p*, by citing a proposition, *q*, where he defends the claim that *q* by citing *r*, which he defends by adducing *p* again. Certainly, it will be said, his argument for *p* is viciously circular. When an argument is considered viciously circular, that is usually understood in terms of the fact that no one will be convinced to accept a conclusion ultimately on the basis of a premise that is identical with that conclusion. Rather, the premise is thought to require support that is *independent* from the support provided by the conclusion.

When epistemic theories are required to avoid circularity, it is strictly speaking not arguments which are required to avoid it. Chains of epistemic justification do not consist of reasons given in support of assertions, but of beliefs supported by other beliefs. For this reason I assume that what should avoid being circular are such *epistemic* or *justificatory chains*.

The next question, then, is in what sense epistemic chains should avoid being circular. A good place to start is the analysis provided by Klein. As we saw in Chapter 1, Klein defends the following 'Principle of Avoiding Circularity' (PAC):

> For all x, if a person, S, has a justification for x, then for all y, if y is in the evidential ancestry of x for S, then x is not in the evidential ancestry of y for S (Klein 1999, 298; cf. Klein 2005, 136).

By 'evidential ancestry' Klein means

> the links in the chains of reasons, sometimes branching, that support beliefs. For example, if r is a reason for p, and q is a reason for r, then r is in the evidential ancestry of p, and q is in the evidential ancestry of both p and r (Klein 1999, 298).

If we think of epistemic chains, (PAC) says that when S has a justified belief, B*p*, and B*p* is supported by B*q*, then B*q* is not supported by B*p*. Klein contends that (PAC) hardly requires a defense, as it strikes him as "an obvious presupposition of good reasoning" (*ibid.*, 298). He disagrees with philosophers who maintain that circular chains avoid being vicious when they are sufficiently large:

> [t]hat a circle is larger might make it more difficult to detect the flaw in the reasoning, but large circles, nevertheless, involve question begging reasoning. An error in reasoning is still an error no matter how difficult it is to detect (*ibid.*, 300).

Despite this forceful repudiation of circular chains, Klein wants to leave room for some cases where x figures in the evidential ancestry of y, while y also figures in the evidential ancestry of x:

> For example, "all humans are mortal" is a reason for believing that "this human is mortal," and the converse is true. Some have thought that the universal generalization is always epistemically prior to the particular, and others have thought that the particular is always epistemically prior to the generalization. Each view runs afoul of our reasoning practice. Sometimes we offer the generalization as a reason for the particular – when the particular is what is questioned. Sometimes we offer the particular as a reason for the generalization – when the generalization is questioned (Klein 2005, 136).

What is crucial, though, is that "we cannot use the generalization as a reason for the particular and the particular as a reason for the generalization *in the course of one reasoning session*" (*ibid.*, 136). Klein's point can also be applied to epistemic chains. S's belief B*p* *can* be justified by a circular chain where B*p* is first supported by B*q*, and where, later on, B*q* comes to be

supported by B*p*. Yet S's belief B*p* *cannot* be justified by a circular chain in which B*p* is supported by B*q* while *at the same time* B*q* is supported by B*p*.

3.2.2 Cling on circular chains

On Klein's account, S's belief B*p* cannot be justified through a chain in which B*p* is supported by B*q* while at the same time B*q* is supported by B*p*. However, it may be wondered whether B*p* can *never* be justified through such a chain. According to Cling (2002), there can be cases where B*p* is justified by a chain in which B*p* is supported by B*q* while at the same time B*q* is supported by B*p*. Even stronger, when B*p* is sufficiently justified by B*q*, B*p*'s justification can be *enhanced* when B*p* is integrated into a larger framework of beliefs and B*q* comes to be supported by these beliefs. For example, suppose S holds the following justified beliefs:

B*q*: Bare feet running causes strained Achilles tendons.
B*r*: Verhaar is a bare feet runner.

On the basis of these beliefs S forms the belief, which I assume thereby to be justified:

B*p*: Verhaar has a strained Achilles tendon.

Now imagine that B*r* and B*p* are integrated into a larger network of justified beliefs, as follows:

B*r*: Verhaar is a bare feet runner.
B*p*: Verhaar has a strained Achilles tendon.
B*s*: Kipchoge is a bare feet runner.
B*t*: Kipchoge has a strained Achilles tendon.
B*u*: Bouma is a bare feet runner.
B*v*: Bouma has a strained Achilles tendon.
B*w*: Dijkstra is *not* a bare feet runner.
B*x*: Dijkstra does *not* have a strained Achilles tendon.

In the light of the probative force of these beliefs, S seems justified when he strengthens his confidence in

B*q*: Bare feet running causes strained Achilles tendons.

However, in thus strengthening his confidence in B*q*, the chain underlying B*p* becomes circular: B*p* was already supported by B*q*, but now B*q* is also (partly) supported by B*p*. But since B*q* was already justified before it received support from B*p*, Cling's diagnosis is that the circularity involved in this chain is benign. Even stronger, although this circular chain could not *create* B*p*'s justification, Cling argues that by integrating B*p* into a larger network of justified beliefs, S succeeds, by increasing B*q*'s justification, to *enhance* B*p*'s justification. When S first forms B*p* in the light of B*q* and B*r*, S forms a belief *from* an explanation. The explanation in B*q* provides him with a reason for thinking *that p* is true. When S later strengthens his confidence in B*q* on account of B*p* and the other beliefs, he forms a belief *to* the explanation in B*q*. According to Cling, by forming a belief *to* an explanation for *p* and thereby enhancing his justification for believing *how p* is true, S increases his justification for believing *that p* is true (*ibid.*, Sect. 5).

While I am not sure whether Cling establishes that a belief's justification can really be enhanced by a circular chain, I think he is definitely right that there are circular chains which most epistemologists would not regard as vicious. In particular, a belief may be justified by a chain in which it reoccurs later on as long as it is also justified independently from the support it (indirectly) receives from itself.

Informed by Cling's thoughts, I want to suggest the following account of avoiding circular epistemic chains:

(AC) An epistemic chain underlying S's belief B*p* avoids being *viciously circular* if and only if B*p* is not itself an indispensable member of that chain.

Two remarks for clarification are in order here. First, with the clause requiring that B*p* is not itself an 'indispensable member of that chain', I intend that *if* B*p* is justified, then its being justified does not depend on B*p*'s occurring in the chain underlying itself. In other words, if B*p* is justified, it remains justified even when B*p* is removed from that chain. So on (AC), B*p* may be a member of the epistemic chain underlying itself, as long as B*p* is

also independently justified. When B*p* is already justified independently of its membership of the chain, the circularity of that chain is benign.[11]

Second, (AC) is meant to capture what is needed for a chain underlying B*p* to avoid vicious circularity only insofar as B*p*'s justification is concerned. If B*p* is supported by B*q*, B*q* is supported by B*r*, and B*r* is supported by B*p* (and B*p* is not independently justified), the chain underlying B*p* is viciously circular. Yet from this it does not follow that the 'sub-chains' underlying B*q* and B*r*, which also underlie B*p*, are viciously circular as well. In fact, the latter chains need not be circular at all.

3.2.3 Why vicious circularity is thought to be vicious

Given the above discussion, one may still wonder *why* it is vicious if a belief is an indispensable member of a chain underlying itself: exactly why could not a belief be justified through such a chain? Most philosophers considering this question respond that this is *obvious*. As we saw above, Klein says that the avoidance of circular chains is "an obvious presupposition of good reasoning" (Klein 1999, 197-8). In a similar vein, BonJour vents the intuition that "the view that justification moves in a circle (…) would be quite futile by itself" (BonJour 1985, 90).

Yet apart from its supposed intuitive obviousness, it is also possible to *argue* for the impossibility of beliefs being justified through circular chains where they lack sufficient independent justification. A first argument is suggested by Cling.[12] Consider a chain of beliefs where B*p* is supported by B*q*, B*q* is supported by B*r*, and B*r* is supported by B*p*. Presumably, if B*p* can be *justified* through this chain, and if we assume that justification by such support relations follows contraposition, then B¬*p* may be justified "for the same person at the same time" by a negated analogue of the chain, where B¬*p* is supported by B¬*r*, B¬*r* is supported by B¬*q* and B¬*q* is supported by B¬*p*. Yet according to Cling, this is certainly impossible. The sorts of considerations which suffice for the justification of B*p* may not at the same time suffice for the justification of B*p*'s negation (Cling 2009, 341).

[11] While I shall mostly be concerned with circular chains where a belief, B*p*, is (thought to be) *justified*, we could also wonder what to say when B*p* occurs in the chain underlying itself in cases where B*p* is *unjustified*. Regarding such cases, we could think of a counterfactual clause saying that if B*p* *were* justified, then its being justified *would* not depend on B*p*'s occurring in the chain.

[12] That this argument is suggested by Cling is an observation I owe to Berker (2015, 337).

A second argument for the impossibility of beliefs being justified through circular chains where they lack sufficient independent justification relies on the following assumption, which is shared by virtually all epistemologists and which we have already seen at work in Chapter 2:

(J) A belief can be justified by a further belief only if the latter belief is justified.

On (J), my belief that the train to Hurdegaryp leaves at 12:23 can be justified by my further belief that the schedule says it leaves at 12:23 only if my belief that the schedule says this is justified. Crucially, however, (J) implies that beliefs cannot be justified by circular chains. Suppose that S's belief B*p* supported by his further belief B*q*, that B*q* is supported by his still further belief B*r*, and that B*r* is supported by his belief B*p*. On (J), B*p* can be justified by B*q* only if B*q* is justified. By the same means, B*q* can be justified by B*r* only if B*r* is justified. And again, B*r* can be justified by B*p* only if B*p* is justified. Hence, B*p* can be justified through this chain only if B*p* is justified. However, if B*p* can only be justified through this chain *if B*p *is justified*, B*p* certainly cannot *become* justified through the chain, or *be* justified *by* the chain (cf. Alston 1976a, 27; Cling 2002, 256).

In order to avoid this problem, one could of course reject (J). By doing so, one can maintain that in the above example, B*p* is justified by B*q*, B*q* is justified by B*r*, and B*r* is justified by B*p*, while this does not *presuppose* that B*p* is justified and, hence, that it is still thinkable that B*p* becomes justified *by* this chain.

Yet, although denying (J) creates room for beliefs being justified via circular chains, it has consequences that most epistemologists will consider unacceptable. When (J) is rejected, *any* belief might become justified by a further belief (true or false, justified or unjustified) with a suitable content. My belief that Anjum has exactly 2193 inhabitants might be justified by my further belief, from which it follows, that every village east of Moddergat has exactly 2193 inhabitants, even if the latter belief is just a silly hunch. And my belief that it will rain on the twentieth of March may be justified by my belief that it is meteorologically necessary that it rains on all days in March, even if the latter belief is based on absolutely nothing. I assume that given this result, most epistemologists will not be prepared to reject (J) in order to allow for justification through circular chains.

Given its intuitive appeal, and the two additional arguments, I will assume that (AC) captures what is usually thought to be involved when epistemic chains are regarded as viciously circular, and employ (AC) when evaluating epistemic theories in light of the circularity desideratum in later chapters.

3.3 Avoiding Arbitrariness

Having a grasp of what it means to avoid circularity, I now turn to our second desideratum for responses to the regress problem: avoiding arbitrariness. In 3.3.1, I will briefly discuss why epistemologists think that avoiding arbitrariness is a desideratum, i.e., why arbitrariness is something vicious. In the same subsection, I will also explain what items are supposed to avoid being arbitrary. While 'arbitrary' is most naturally used of *choices*, we will mainly be concerned with *beliefs* avoiding arbitrariness. In 3.3.2, I will begin the analysis of arbitrary beliefs by considering Klein's concept of arbitrariness. As we will see, Klein holds that a belief avoids arbitrariness if and only if there is a reason for that belief which is both 'objectively available' and 'subjectively available'. While Klein's concept nicely captures some very important intuitions concerning arbitrariness, in 3.3.3 I will raise four questions for his account (which I will attempt to answer later on, in Chapter 4, by extending the account).

3.3.1 Arbitrary choices and arbitrary beliefs

As we have seen above, advocates of all epistemic theories assume that avoiding arbitrariness is an epistemic desideratum: in their view, arbitrariness is vicious, and it is bad if an epistemic theory allows it. Of course, this assumption raises the question *why* precisely arbitrariness is vicious: exactly what is wrong with epistemic theories which somehow sanction arbitrariness? Unfortunately, most epistemologists expressing the assumption concerning arbitrariness do not have very much to say about this.

One consideration apparently motivating many is that it is *intuitively obvious* that arbitrariness is vicious. Klein writes that his 'Principle of Avoiding Arbitrariness' is "designed to capture the widely endorsed intuition that it is rational to accept a belief only if there is some reason for thinking the belief is true" (Klein 1999, 305). Howard-Snyder maintains that it is a "semantic platitude that justification is nonarbitrariness *par excellence*" and

that "justification just *is* being nonarbitrary" (Howard Snyder 2005, 24, 20). This intuition is also expressed by Huemer: "'Arbitrary' seems to be a negative (epistemically) evaluative term. Surely no one would wish to call any belief that he endorsed 'arbitrary'" (Huemer 2003, 142). And in the same spirit, foundationalists, coherentists, and infinitists who try to show that their theory does *not* allow arbitrariness, all seem to assume that it is intuitively clear that arbitrariness is vicious.

At some point, Klein hints at a different reason for thinking that arbitrariness is vicious. He suggests that what is wrong with arbitrary beliefs is that they manifest a form of epistemic *irresponsibility*. As epistemically responsible agents are "agents who have examined [their] beliefs and aim at holding only those which *after* that examination are worthy of belief", agents who accept arbitrary beliefs are epistemically irresponsible (Klein 2007a, 5-6). If epistemic arbitrariness does indeed imply epistemic irresponsibility, it may be thought, then arbitrariness is certainly vicious. After all, while 'arbitrary' seems a negative term already, that irresponsibility is something negative is even clearer. Despite this, however, the suggested motivation for dismissing arbitrariness in terms of irresponsibility raises difficult further questions. For instance, we may wonder exactly what is meant by 'epistemic irresponsibility', why epistemic irresponsibility is vicious, and how precisely arbitrariness and irresponsibility are related. Unfortunately, though, in the paper where Klein suggests epistemic irresponsibility as a reason for dismissing arbitrariness, he does not go into these details.

If we assume, on the basis of intuition or because of considerations concerning irresponsibility, that arbitrariness is vicious, we may next wonder what arbitrariness *is*. If we think about this, a first question that arises is what *items* can be, and may not be, arbitrary. Most naturally we speak of arbitrary *choices* or *decisions*, especially in contexts where we face multiple alternatives. Suppose you are in a supermarket in order to purchase a carton of yoghurt, and that you have decided to buy 'Pure & Honest' organic yoghurt. When you look at the shelve where that specific brand is displayed, however, you find many cartons that appear exactly the same. Clearly, since all the alternatives you are confronted with seem *equally attractive*, since none of them seems preferable to the others, this is a situation where you just have to make an arbitrary choice for one particular carton instead of any of the others.

Interestingly, choices can be arbitrary in both an objective and a subjective sense. When alternatives are *in fact* equally attractive, we could

say that a choice for one alternative rather than for any of the others is *objectively arbitrary*. When alternatives (merely, or also) *appear* equally attractive, we may say that a choice for one alternative is *subjectively arbitrary*. Thus, when the cartons of yoghurt are in fact equally attractive, i.e., when they in fact contain exactly the same amount of yoghurt, when the yoghurt they contain is equally fresh, etc., a choice for one specific carton instead of any of the others is objectively arbitrary; and when the cartons (merely, or also) appear equally attractive to you, a choice for one particular carton instead of any of the others is subjectively arbitrary.[13]

In epistemic contexts, however, it seems not so much choices or decisions which may not be arbitrary, but *beliefs* (e.g. Klein 1999, 299, 304; Huemer 2003, 142; Bergmann 2004; Howard-Snyder 2005; Howard-Snyder and Coffman 2006; Rescorla 2014, 194; Goldberg ms.). Yet having or adopting beliefs is very different from making choices, and situations where one happens to adopt a particular belief are very different from situations where one contemplates making a particular choice.[14] Most notably, whereas choices are usually made in a voluntary fashion, beliefs are not held or adopted voluntarily. I can freely choose to raise may arm, or take a sip of water, or walk to the other end of the room. But I don't have such direct control over my beliefs. I cannot decide to believe that there is a glass of water on my desk, that there are five people in this room, or that 1+2=3. I just happen to believe these things.[15]

If one thinks that the difference between choices and beliefs is too large to license the use of 'arbitrary' in connection with beliefs, it becomes quite easy to determine whether an epistemic theory allows arbitrary beliefs (or to answer an objection saying that one's favorite theory allows arbitrary beliefs). In that case, one can simply claim that beliefs cannot be arbitrary in the first place and, hence, that the theory does not (because it logically cannot) allow arbitrary beliefs.

However, while I agree that making choices is very different from adopting beliefs, and that beliefs cannot be arbitrary in exactly the same way as choices, I do not think that beliefs cannot be arbitrary at all. There is an

[13] In giving this very brief analysis of arbitrary choices, I largely rely on Ullmann-Margalit and Morgenbesser's classic paper 'Picking and Choosing' (1977). For the history of discussions about arbitrary choices, see Rescher (1959/60).
[14] I thank René van Woudenberg for fruitful discussion of this point.
[15] Though we lack *direct* voluntary control of our beliefs, it is plausible that there are other kinds of control that we are able to exert on them. See Alston (1988b) for discussion.

important sense in which adopting beliefs is also very similar to making choices: both in the context of making choices and in the context of adopting beliefs one faces possible *alternatives*. When I am about to go to work, I can decide to walk, or to take my bike, or to take the bus. In the example of the yoghurt cartons, you can choose to purchase one carton instead of any of the others. In a similar way, adopting beliefs, too, involves the presence of alternatives. In situations where one adopts a particular belief, there are always alternative, contrary, beliefs which one could adopt (or could have adopted). When I am about to form the belief that Kipchoge won the marathon, I face the alternative beliefs that Kipchoge ended second, that Kipchoge ended third, that Kipchoge did not participate, etc. When I am about to adopt the belief that the next train to Hurdegaryp leaves at 12:23, I face the alternative beliefs that it leaves at 12:17, that it leaves at 12:21, that no train will leave for Hurdegaryp today, etc.

So, just as making choices involves the presence of alternative options, adopting beliefs involves the presence of alternative beliefs. And since a choice for a particular option is regarded arbitrary when that choice fails to be preferable to its alternatives, i.e. when nothing favours that choice over its alternatives, a belief can be regarded arbitrary if it fails to be preferable to its alternatives or when nothing favours it over those alternatives.

At this point one may wonder whether adopting beliefs only involves the presence of alternative beliefs. Does not it also involve the alternative of adopting no belief at all? In the literature on peer disagreement, it is commonly assumed that we always face three options: believing that *p*, believing that *not-p*, and suspending judgment concerning *p* (e.g. Feldman 2007, 205). Similarly, could we not say that adopting beliefs always involves the presence of alternative beliefs *and* the alternative to suspend judgment, and that a belief may be considered arbitrary as soon as it fails to be preferable to both?[16] Although I think that the arbitrariness of beliefs could also be analyzed in terms of their being favorable both over alternative beliefs and over suspending judgment, I prefer to analyze it only in terms of alternative beliefs for the sake of concision. As I will explain in the following chapter, if we were to assume that in determining whether a belief is arbitrary, we should consider both alternative beliefs and suspending

[16] Thanks to Carrie Jenkins for raising this question.

judgment, this would create at most some gradual differences with an analysis that considers only alternative beliefs.[17]

Interestingly, just as choices can be arbitrary in an objective sense and in a subjective sense, we can also distinguish beliefs which are objectively arbitrary from beliefs which are subjectively arbitrary. Thus, we may say that a belief is objectively arbitrary when it is not *in fact* preferable to its alternatives, and that a belief is subjectively arbitrary when it is not preferable to its alternatives when judged *from the perspective of the person holding it*.

How can a belief be, or appear to be, preferable to its alternatives, and what sorts of considerations can favour a belief over its alternatives? Presumably, a belief can be preferable to its alternatives in different kinds of ways, and a belief can be favoured by different sorts of considerations. It can be preferable because of epistemic considerations, moral considerations, legal considerations, aesthetic considerations, pragmatic considerations, etc. So presumably, there are also different sorts of arbitrariness: epistemic arbitrariness, moral arbitrariness, legal arbitrariness, etc. While I think there are indeed these different sorts of arbitrariness, I follow others discussing responses to the regress problem by focusing on the arbitrariness that obtains when a belief is not preferable to its alternatives because of *epistemic* considerations: when the belief is not preferable in terms of the cognitive goal of achieving only true beliefs.

When is a belief epistemically arbitrary? And when does a belief avoid being epistemically arbitrary? Just as in the discussion of circularity, a good place to begin the analysis is the account provided by Klein.

3.3.2 Klein on avoiding arbitrariness

As we know from the presentation of his 'Principle of Avoiding Arbitrariness' in the previous chapter, Klein holds that a belief avoids being

[17] Here it is noteworthy that in debates on disagreement, suspending judgment is usually considered as an option only when, given a situation of 'peer disagreement', believing that *p* is not sufficiently favorable over believing that *not-p*. Some, especially defenders of 'conciliationist views', argue that one should always suspend judgment in such a situation (e.g. Feldman 2007), whereas others, notably advocates of 'steadfast views', claim that one may (sometimes) maintain the belief that *p* even then (e.g. Kelly 2005). However, when believing that *p* turns out to be a better option than believing that *not-p*, suspending judgment is not regarded as an alternative in the first place, and the question whether believing that *p* is preferable to suspending judgment does not even arise (cf. Kelly 2005, 178; and Feldman 2007, 204-14). Thanks to Pieter van der Kolk for discussion here.

arbitrary only if there is 'a reason available for it' (e.g. Klein 1999, 299; 2005, 136). However, Klein argues, the mere availability of a reason does not suffice, for in a sense there is a reason available for every belief. Suppose I believe that all fish have fins. When asked for a reason, I could say that all fish wear army boots and that anything wearing army boots has fins. Yet it is clear that the availability of this 'reason' hardly suffices for my belief to avoid being arbitrary (Klein 1999, 300).

In order to rule out the possibility of such *ad hoc* reasons, Klein maintains that a reason should be 'objectively available'. By this he means that a reason, *r*, must satisfy certain quality requirements. For instance, *r* could be regarded objectively available as a reason for a belief that *p* if (1) *r* has some sufficiently high probability and the conditional probability of *p* given *r* is sufficiently high; or if (2) an impartial, informed observer would accept *r* as a reason for *p*; or if (3) *r* would be accepted in the long run by an appropriately defined set of people; etc. Klein lists seven possible accounts of objective availability, and adds that it may turn out that another, yet unmentioned account could turn out to be even better (Klein 1999, 300).

While a reason's being objectively available is necessary for a belief not to be arbitrary, Klein thinks it is not sufficient. For if it were sufficient, any belief for which there is an objectively available reason would not be arbitrary, even if judged from the perspective of the person holding that belief it is merely an unfounded guess or hunch (*ibid.*, 302). Thus, Klein argues, a reason should also be 'subjectively available'. By this he means that the subject must "be able to call on that reason." The reason must "properly hooked up" with beliefs he already holds; it must be a reason that he would endorse at least "in some appropriately restricted circumstances" (*ibid.*, 300). Not only consciously believed reasons, such as the 'reason' that *2+2=4*, can be subjectively available. The 'reason' that *apples do not normally grow on pear trees* and the 'reason' that *366+71=437* can also be subjectively available, even though no one has never consciously entertained these 'reasons' and although being able to endorse them may require a bit of adding (*ibid.*, 308).

Elsewhere Klein says that reasons can be subjectively available (or available 'in the appropriate sense') even if what is needed in order to believe them is "new experiences, insight and perhaps a certain amount of luck" (Klein 2000, 23). For instance, though at some point in history we did not yet believe that many diseases are caused by microscopic organisms, we always had the capacity to form this belief. Hence, Klein says, this 'reason' has

always been subjectively available to us (*ibid.*, 23). In a later paper Klein suggests that a reason that *r* may be regarded as subjectively available to S "just in case there is an epistemically credible way of S's coming to believe that *r* given S's current epistemic practices" (Klein 2007a, 13). Reasons that are thus subjectively available to S "are like money in S's bank account that is available to S if S has some legal way of withdrawing it even if S is unaware that the money is there or takes no steps to withdraw it" (*ibid.*, 13). Suppose S is asked what is the capital of Montana. If her epistemic practices are such that for this she has to check the state capital listings in the World Almanac, then the fact that this almanac lists Helena as the capital of Montana entails that the 'reason' that Helena is the capital of Montana is subjectively available to S (*ibid.*, 13).

So, according to Klein, if S's belief is to avoid arbitrariness, it is *necessary* that there is a reason for it which is objectively and subjectively available to S. Presumably, Klein also regards this as *sufficient* for avoiding arbitrariness. A first reason for thinking this is the fact that he does not mention any further requirements. A second reason comes from the way Klein defends his version of infinitism. As we will find in Chapter 7, Klein holds that by requiring that there is a reason for every justified belief which is both objectively and subjectively available, infinitism succeeds to avoid arbitrariness. Hence, we may assume that on Klein's account, a belief avoids arbitrariness if and only if there is a reason for it which is objectively and subjectively available. (Below I shall often use 'objective' for 'objectively available', 'subjective' for 'subjectively available', and 'objective and subjective reason' for 'reason that is both objectively and subjectively available'.)

By requiring the presence of an objectively and subjectively available reason, Klein's view of avoiding arbitrariness nicely captures the intuitive idea, expressed in 3.3.1, that a belief avoids arbitrariness when there is an epistemic consideration favouring that belief over its contraries. Klein's view also accommodates the intuition, expressed in the same subsection, that beliefs can be arbitrary both in an objective and in a subjective sense. We may say that on Klein's view, a belief is objectively arbitrary when there is no objectively available reason for it, and subjectively arbitrary when there is no reason for it which is subjectively available to the person holding the belief.

Yet while Klein's account well succeeds to capture these intuitions, I think it still leaves room for a number of questions.

3.3.3 Four questions for Klein

In this subsection, I will raise four questions with regard to Klein's account of avoiding arbitrariness.[18] A first question concerns his requirement that reasons for beliefs must be subjective, introduced in order to assure that S's beliefs do not appear arbitrary from his point of view. As we saw above, Klein construes this requirement such that a reason should be 'properly hooked up with other beliefs he holds'; S should have an 'epistemically credible way' of arriving at that reason. It may be wondered, however, whether Klein's requirement, so construed, is not a bit *too lenient*. Suppose I believe that Kipchoge won the marathon of London. Since Kipchoge received a handshake from the Prince, and since that makes it very probable that Kipchoge won the marathon, we may assume that there is an objective reason for my belief. Moreover, since I am in a position where I can easily find a newspaper showing a photograph of Kipchoge receiving the handshake from the Prince, that reason is also subjective to me. Hence on Klein's account, my belief is not arbitrary.

However, suppose that *at the moment* I have no clue whatsoever as to why my belief that Kipchoge won the marathon would be true. Though I am in a position where I can discover an objective reason, at present I have no idea what to respond when someone asks me for a reason. In that case, does not my belief still appear arbitrary in a sense? Assessed in terms of the reasons I *actually have* for my belief, would it not be equally reasonable for me to adopt a contrary belief?

A second question regarding Klein's concept concerns the fact that when S has an objective and subjective reason for a belief, that may still appear insufficient for him to prefer the belief to its contraries *if he lacks any information about the relation between the reason and his belief*. Consider again my belief that Kipchoge won the marathon, and assume again that since Kipchoge received the handshake, there is an objective reason for this belief. Moreover, assume that I also know that he received the handshake, so that this reason is also subjective to me. Hence, Klein's account implies that my belief is not arbitrary.

However, now suppose that my knowledge that Kipchoge received the handshake is *all* I have to go on with regard to my belief that Kipchoge won the marathon, and that I possess no further information concerning Kipchoge, the Prince, or the marathon. If that is so, then why should I prefer the belief

[18] Most of the material from this subsection is based on Engelsma 2014, Sect. 3.

that Kipchoge won the marathon over its alternatives? If the only thing I know is that Kipchoge received the handshake, why should not I instead adopt the belief that Kipchoge ended second, or that he ended third, or that he was the nicest dressed spectator? Of course, given that Kipchoge received the handshake, it may in fact be very probable that he won the marathon. Hence objectively speaking, it may be advisable for me to adopt the belief that he won. Yet, as long as this fact about the relation between receiving the handshake and winning the marathon is not available to me, as long as I do not know, e.g., that the Prince usually congratulates only the winner, nothing within my perspective favours the belief that Kipchoge won the marathon over its contraries. But does not that mean that the belief is still arbitrary from my point of view? Judged in terms of the information I have concerning the *relation* between the reason and the belief, would it not still be equally reasonable for me to adopt a contrary belief?

A third question regarding Klein's concept of arbitrariness concerns cases in which there is an objective and subjective reason for S's belief, but where S does not hold his belief *in the light of that reason*. Consider this example from Pollock:

> Suppose (…) you are giving a mathematical proof. At a certain point you get stuck. You want to derive a particular intermediate conclusion, but you cannot see how to do it. In despair, you just write it down and think to yourself, "That's got to be true." In fact, the conclusion follows from two earlier lines by *modus ponens*, but you have overlooked that (Pollock 1986, 36).

Assuming that the 'earlier lines' provide a reason for the conclusion that is both objective and subjective, Klein would judge that your belief in the conclusion is not arbitrary. However, given that you hold the belief due to nothing but despair, does not it nevertheless seem arbitrary in a way? Assessed in terms of the reasons *through which* you hold the belief, would it not be equally reasonable (or unreasonable) for you to adopt a contrary belief?

For another example, consider again my belief that Kipchoge won the marathon. Since Kipchoge received the handshake, and I know this, there exists an objective and subjective reason for my belief, and Klein's concept judges that it is not arbitrary. However, now imagine that I hold this belief, not on the basis of my knowledge of the handshake, but through hatred of

Kipchoge's competitor, Kipsang. Again, is not my belief arbitrary in an important sense? Judged in terms of the reasons in the light of which I hold it (i.e. none), would it not be just as reasonable (or unreasonable) for me to adopt a contrary belief?

A fourth and final question regarding Klein's account concerns cases where S has an objective and subjective reason for his belief, but where he also has, or believes he has, a competing reason for *not* holding the belief. This is possible in at least three ways. First, S can have a reason for not holding the belief despite the presence of an objective and subjective reason when he has another reason for thinking the *belief is false*.[19] Suppose you wonder what is the capital of South Africa. Upon asking one of your colleagues who was born in South Africa, who tells you it is Johannesburg, you form the belief that Johannesburg is the capital. Since your colleague is very trustworthy, the fact that she told you that Johannesburg is the capital may well be an objective reason for your belief; and since you also know that she told you this, this reason is also subjective to you. Hence, Klein's concept judges that your belief avoids arbitrariness. However, now another colleague, who has overheard the conversation and whom you rightly believe to be very well informed about geographical matters of fact, denies what the first colleague says and claims that it is Cape Town. If your belief that the first colleague said what she did is just as firm as your belief that the second said what she did, and if you believe that the colleagues are equally trustworthy, but you *maintain* your belief that Johannesburg is the capital, then does not that belief appear arbitrary in a sense? After all, given all the information available to you now, it is not really clear why you should prefer that belief to the contrary belief that it is Cape Town.

S can also have a reason for not holding a belief despite the existence of an objective and subjective reason when he has, or believes he has, a reason for thinking this *reason is false* (or does not obtain). Suppose I believe that Kipchoge won the marathon. Since Kipchoge received a handshake from the Prince, and since I also believe this, there is an objective and subjective reason for my belief, and Klein's account judges that it is not arbitrary. However, now suppose that my friend, whom I correctly believe to be very well informed about the royal family, (mistakenly) tells me that the person giving the handshake was not the Prince but someone looking very much like the Prince. If I believe that what my friend says makes the proposition that it

[19] In the literature on defeaters, such a reason is usually called a 'rebutting defeater' (e.g. Pollock 1986, 38; Bergmann 2006, 158-9).

was not the Prince at least as probable as the proposition that it was the Prince, and if I nonetheless maintain my belief that Kipchoge won the marathon on the basis of my belief that he received a handshake from the Prince, then it seems to be arbitrary. Assessed in terms of all the information available to me, i.e. the belief that Kipchoge received a handshake from the Prince, the belief that my friend just told me it was not the Prince, and the belief that my friend's testimony is reliable, would it not seem equally reasonable (or unreasonable) for me to form the belief that Kipchoge did not win the marathon?

Finally, S can also have a reason for not holding a belief despite the presence of an objective and subjective reason when he has, or believes he has, a reason for thinking the objective and subjective reason is *not a sufficiently strong (or objective) reason* for the belief.[20] Suppose you believe that the train to Hurdegaryp will leave at 12:23. Since the schedule, which is in fact reliable, says this, and since you also believe that the schedule says this, there is an objective and subjective reason for your belief, and Klein's concept implies that your belief is not arbitrary. However, now imagine that an official of the train service, whose testimony you reasonably assume to be reliable, tells you that the trains do not follow the schedule today because of planned work on the switches. If you think that the official's testimony makes the proposition that the schedule is not reliable today at least as probable as the proposition that the schedule is still reliable, but if you nevertheless maintain your belief that the train will leave at 12:23 on the basis of the information provided by the schedule, that belief seems to be arbitrary in an important sense. Given the information available to you now, i.e. your belief that the schedule says that the train will leave at 12:23, your belief about what the official told you, and your belief about the official's reliability, would it not be at least as reasonable for you to adopt the belief that the train will *not* leave at 12:23?

In sum, then, the fourth question regarding Klein's concept of arbitrariness concerns cases where S has an objective and subjective reason, *r*, for his belief that *p*, but where he also has a reason for *not* holding that belief. This is the case when S has a reason for thinking that *p* is false, when

[20] In the literature on defeaters, such a reason is often called an 'undercutting defeater' (e.g. Pollock 1986, 39; Bergmann 2006, 158-9).

S has a reason for thinking that *r* is false (or does not obtain), and when S has a reason for thinking that *r* is not a sufficiently strong reason for *p*.[21]

So although Klein's concept accommodates some important features of avoiding arbitrariness, it gives rise to four questions. Some beliefs for which S has an objective and subjective reason may still seem arbitrary given the reasons S actually has; some may nevertheless appear arbitrary because S lacks information concerning the relation between reasons and the beliefs; some may still seem arbitrary because they are not held in light of a reason; and some may nevertheless appear arbitrary due to the availability of a competing reason for not holding the belief.[22]

3.4 Conclusion

In this chapter, I have given an account of avoiding circularity, and made a begin with the discussion of arbitrariness. As regards circularity, I have first explained that what should avoid being viciously circular are especially epistemic chains. I have then argued that an epistemic chain underlying S's belief B*p* avoids being viciously circular if and only if B*p* is not itself an indispensable member of that chain. Regarding arbitrariness, I have first explained that what may not be arbitrary are beliefs. In order to develop a concept of avoiding arbitrary beliefs, I have considered Klein's account thereof. While Klein's account nicely accommodates some important basic intuitions about avoiding arbitrariness, we have seen that it still leaves room for a number of questions. In the following chapter, we will attempt to answer these questions by extending his account.

[21] While Klein's view implies that S's belief avoids arbitrariness in the three kinds of situations considered here, in Chapter 7 we will find him posing a 'no overrider requirement' in order to rule out that it can also be *justified* in (at least some of) these situations.

[22] Bergmann has leveled an objection to Klein's concept of arbitrariness that is unrelated to the four questions I have raised. He maintains that "lacking a reason for a belief is not sufficient for that belief's being arbitrary" (Bergmann 2004, 164-5). I do not find Bergmann's arguments compelling. For my critique of his objection, see Engelsma 2015, Sect. 5.1 (cf. Ch. 5, Sect. 5.3.1).

4 Objective and Subjective Arbitrariness

4.1 Introduction

In the second part of the previous chapter, we have discussed Klein's account of avoiding arbitrariness. According to Klein, a belief avoids being arbitrary if and only if it is supported by an objective and subjective reason. With this characterization, Klein nicely captures some important intuitions concerning arbitrariness. However, as we found out, Klein's concept gives rise to several questions. Taking account of the valuable things Klein has to say about what is involved by avoiding arbitrariness, but also of the questions raised for his account, in this chapter I will attempt to extend his account in order to have a concept of avoiding arbitrary beliefs suitable for assessing responses to the regress problem in later chapters.

In Section 4.2 I will discuss the concept of objective arbitrariness; in Section 4.3 I will consider subjective arbitrariness. In the latter section it will become clear how the four questions for Klein can be answered by extending his account.

4.2 Objective Arbitrariness

As for a suitable concept of objective arbitrariness, it is useful to look again at examples of arbitrary choices. Recall the example from Chapter 3 of a situation where you are about to buy a carton of yoghurt. You have decided to buy 'Pure & Honest' organic yoghurt, but when you look at the shelve with yoghurt of that specific brand, you still find many cartons that appear equally attractive. If the cartons not only *appear* equally attractive, but in fact *are* equally attractive, nothing favours one specific carton. In that sense, a choice for a particular carton is objectively arbitrary. However, if the cartons are *not* in fact equally attractive, a choice for one specific carton need not be objectively arbitrary. Suppose that one of the cartons contains slightly more yoghurt than the others: say 0,79 liter, whereas the others contain exactly 0,75. Then, assuming you prefer as much yoghurt as possible, it would be best, objectively speaking, to choose that particular carton. Although from your perspective nothing favours one specific carton, the one which contains most yoghurt would in fact be preferable. In that sense, a choice for that carton would avoid being objectively arbitrary.

We can think of the objective arbitrariness of beliefs on the model of objectively arbitrary choices. Thus, we can say that a belief avoids objective arbitrariness just in case it is in fact preferable to its contraries. But when is adopting a belief in fact preferable to adopting its contraries? Assuming the cognitive goal of having only true beliefs, we could say that adopting a belief, say that *p*, is preferable to adopting an alternative belief, say that *not-p*, just in case *p* is *true*. If we said that, a belief would avoid objective arbitrariness if and only if it is true. On such an account, all true beliefs avoid objective arbitrariness. While this is a good result, such an account also implies that all false beliefs *are* arbitrary. And that consequence may seem problematic for at least two reasons.

First, it is possible that while a belief is false, there still exist very good reasons for holding it. Suppose I believe that Federer won Wimbledon 2015. Although my belief is false, it is supported by several facts: Federer's serve- and-volley skills were much better developed than those of his competitors, Federer reached the final without losing a single set, and in by far most cases where he reached the final in that way in the past, he also won the final. Thus although it is false, many facts favour my belief. Given their existence, it appears a bit harsh to call my belief objectively arbitrary.

Second, and most important for our purposes, nearly all current epistemic theories allow false beliefs to be *justified* (e.g. Goldman 1979, 11; Huemer 2001, 96). Yet, if all false beliefs are objectively arbitrary, this means that nearly all epistemic theories license arbitrary beliefs. Epistemologists could of course avoid such arbitrariness by maintaining that only true beliefs can be justified. Yet, this appears rather unrealistic. Certainly, it is possible that someone has extremely good reasons for a belief that, as a matter of fact, happens to be false. The claim that his belief must be unjustified would be regarded as too uncompromising by most epistemologists.

In light of these considerations, I will employ the following concept of avoiding objective arbitrariness:

(AOA) S's belief B*p* avoids being objectively arbitrary if and only if there exists a reason, *r*, to the effect that *p* is more probable than *not-p*.

For simplicity of exposition, I will call a reason, *r*, which exists and which is a reason to the effect that *p* is more probable than *not-p*, a 'factual reason for *p*'.[23]

What sorts of things can be factual reasons? I will assume that especially *facts* and *features of the world* can be such reasons. The fact that Federer reached the final without losing a single set may be a factual reason for the belief that Federer won the final, and the colour of the sky may be a factual reason for the belief that it will be raining very soon.

Given that factual reasons are usually facts or features of the world, *when* is a fact or feature of the world a factual reason for believing something? Here I will typically think of cases where a fact or feature of the world makes a belief more probable than its contraries. For example, the facts about Federer are factual reasons for the belief that he won the final because they make that belief more probable than the belief that he did not win. And the colour of the sky is a factual reason for the belief that it will be raining very soon because the sky having that colour makes it more probable that it will be raining soon than that it will not.

Importantly, (AOA) implies that B*p* can avoid objective arbitrariness even if S has no clue as to whether or how it does so. Since there are factual reasons for my belief that Federer won Wimbledon, (AOA) implies that it is not objectively arbitrary. But this is so even if I myself have no idea about the existence of these reasons.[24]

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[23] When I speak of a reason to the effect that *p* is 'more probable' than *not-p*, what I have in mind is an objective interpretation of probability. Instead of calling 'a reason, *r*, which exists and which is a reason to the effect that *p* is more probable than *not-p*' a 'factual reason', we could also say that this is my favourite version of a Kleinian 'objective reason'. Yet I will stick to 'factual reason' in order to assure that it is always clear, in later chapters, when I discuss applications of Klein's concept of arbitrariness and when I apply my own, extended, concept.

[24] What if we said that B*p* avoids objective arbitrariness only if it is preferable both to B*p*'s contraries and to suspension of judgment? Presumably, whether B*p* is preferable to suspension of judgment in cases where B*p* is preferable to B*p*'s contraries depends on the exact formulation of the epistemic goal. Suppose *r* is a factual reason to the effect that *p*'s probability is 0.60. If the epistemic goal is just to have more true beliefs than false beliefs, it seems better to adopt B*p* than to suspend judgement. Yet if the epistemic goal is to have *exclusively* true beliefs, it seems better to suspend judgement than to adopt B*p*. Thus, if we required that beliefs are also preferable to suspending judgment, the amount of beliefs which avoid arbitrariness would appear to depend on the exact specification of the epistemic goal. While much more could be said about these gradual variations, I will leave that for another occasion.

4.3 Subjective Arbitrariness

Assuming that (AOA) captures what is needed for avoiding objective arbitrariness, what is required to circumvent *subjective arbitrariness*? While S's belief B*p* is objectively arbitrary if nothing in fact favours it over its contraries, adopting B*p* is (also) subjectively arbitrary as soon as nothing favours it *from S's perspective*. If B*p* is to avoid subjective arbitrariness, his perspective should contain some consideration which favours B*p* over B*p*'s contraries. How can we make this rough idea more precise? In the following three subsections, I will try to answer this question by providing an extension of Klein's account.

4.3.1 Having a legitimate reason

As we saw in Chapter 3, Klein holds that B*p* avoids subjective arbitrariness as soon as there is a reason for *p available to S*. Yet, as we found also (in Section 3.3.3), it may be questioned whether Klein's requirement is not a bit too lenient. In order to circumvent this worry for Klein, I want to suggest that S should not merely have a reason *available*, but should actually *have* a reason for preferring B*p* to its contraries:

(ASA-i) S's belief B*p* avoids being subjectively arbitrary only if S has a reason, *r*, for thinking that *p* is more probable than *not-p*.

For the sake of conciseness, I will replace 'has a reason for thinking that *p* is more probable than *not-p*' with 'has a legitimate reason for *p*.' What does it mean for S to have such a legitimate reason? A couple of things should be said here.

First, we may wonder what is involved by the *having* of a legitimate reason. Usually, having such a reason involves having a *further belief*. For instance, I could have a legitimate reason for the belief that Kipchoge won the marathon by having the further belief that Kipchoge received a handshake from the Prince. And I could have a legitimate reason for the belief that it shall be sunny tomorrow in virtue of having the further belief that that is what the weatherwoman said. But having a legitimate reason for a belief can also be realized in other ways. In particular, I will allow that one can have a legitimate reason through having a *perceptual experience*. For instance, I could have a legitimate reason for the belief that there is a blue wall to my left due to having a visual experience of a blue wall to my left. And I could

have a legitimate reason for the belief that a bus is approaching from behind in virtue of having an auditory experience of a bus approaching me thus.[25]

Importantly, when one has a reason for a belief by having a further *belief*, that only qualifies as having a legitimate reason when the further belief has suitable epistemic credentials as well. Recall my belief that Kipchoge won the marathon, and suppose I have a further belief that Kipchoge received a handshake from the Prince. But now suppose that I have the latter belief merely as a result of a mysterious desire that Kipchoge and the Prince would touch at that moment in time. Then the fact that I believe that Kipchoge received the handshake certainly does not ensure that I have a legitimate reason for the belief that Kipchoge won the marathon.

Thus, I will assume that when S has a legitimate reason for a belief by having a further belief, the latter belief is *justified*. When I say it is justified, of course that cannot refer to an externalist concept of justification. When it is said that S has a legitimate reason for B*p* by having a further justified belief, B*q*, because B*q* is caused by some reliable mechanism, it is unclear how B*q* can help B*p* to avoid *subjective* arbitrariness: given the information available to S, who simply finds himself having B*q* but has no idea as to why it would be true, it is still not clear why he should adopt B*p* instead of one of its contraries. Hence, I will assume that the further belief should be justified in an internalist sense, where this involves that S has a legitimate reason for it as well.

How about experiences? Does having a legitimate reason by having an experience also require that the *experience* has appropriate epistemic credentials? Here I will follow nearly all epistemologists who claim that experiences are items which cannot be justified or unjustified in the first

[25] I speak of experiences 'of' a blue wall and 'of' a bus approaching me, but I do not mean to imply that experiences have to be veridical. Thus, on my usage, one can have an experience of a blue wall even when in fact there is no blue wall. In order to capture this thought, epistemologists usually speak of experiences 'as of' something, or of experiences 'as if something is the case', but I will leave out such qualifiers for the sake of presentation. The assumption that one can have a reason by having an experience is made by advocates of all epistemic theories. Many foundationalists think that epistemic chains terminate with beliefs which are justified by experiences (e.g. Huemer 2001, Rescorla 2009). Yet the assumption that one can have a reason by having an experience is also made by several coherentists (e.g. Kvanvig and Riggs 1992; Berker 2015, 333-5) and infinitists (e.g. Aikin 2011, Sect. 4.1). When foundationalists, coherentists, and infinitists agree that one can have a reason for a belief by having an experience, they usually disagree over whether having the experience can also suffice for the belief being *justified*.

place: one simply has them or fails to have them (e.g. Huemer 2001, 97-8; Bergmann 2006, 166).

Given that one can *have* a legitimate reason for a belief by having a further belief or by having an experience, we may further wonder *what* one has when one has a legitimate reason: what *items* can be legitimate reasons? Here, just as in Chapter 2, I want to leave room for multiple candidates. When one has a reason by having a further belief, we could say that the reason one has is that further belief itself, or that it is the proposition one believes to be true, or the fact or feature of the world one believes to obtain. When one has a reason by having an experience, we could say either that the reason is one's experience, or that it is the content of one's experience.[26]

In order for S to have a legitimate reason for *p*, that reason should also bear *a suitable relation* to *p*. Again consider my belief that Kipchoge won the marathon. Suppose you ask me why I think this is true. In response, I cite my belief that Kipchoge's wife was born in 1981. Although the latter belief may be perfectly justified, me having it certainly fails to imply that I have a legitimate reason for my belief that Kipchoge won the marathon.

When does a reason, *r*, bear a suitable relation to *p*? One thing we could say is that *r* bears such a relation to *p* just in case *r*, if it is true (or obtains), is *in fact* a reason to the effect that *p* is more probable than *not-p*, for instance by in fact making *p* more probable than *not-p*.[27] This requirement ensures that I have a legitimate reason for the belief that Kipchoge won the marathon by having the justified belief that he received the handshake, as Kipchoge receiving the handshake in fact indicates that he won. And it also ensures that I do not have a legitimate reason for the belief that Kipchoge won the marathon by having the justified belief that his wife was born in

[26] One might think, on the basis of my formulations of (ASA-i) and (AOA), that if S has a legitimate reason for *p*, there is a factual reason for *p*. After all, if S *has* a reason for thinking that *p* is more probable than *not-p*, there must also *exist* a reason to that effect. Although this thought is rather natural, I want to leave it open that S can have a legitimate reason, *r*, for *p*, even if *r* is not a factual reason for *p*. For example, suppose that S has a justified belief that the weatherwoman said that it will be sunny tomorrow, while in fact the weatherwoman did not say that. In that case, S may have a legitimate reason for the belief that it will be sunny tomorrow, e.g. the believed fact that the weatherwoman said it, although this reason is not a factual reason for the belief, since the believed fact does not obtain.

[27] In the terminology adopted in the discussion of objective arbitrariness, the suggestion is that *r* bears a suitable relation to *p* just in case *r*, if it is true or obtains, is (or corresponds to) a factual reason for *p*.

1981, since the fact about Kipchoge's wife is not in fact a reason to the effect that it is more probable that he won than that he did not.

However, although the requirement that *r*'s truth (or obtaining) would *in fact* form a reason to the effect that *p* is more probable than *not-p* may succeed for an account of 'having a legitimate reason', it does not suffice for avoiding subjective arbitrariness. As we saw in the discussion of Klein, if S has an objective and subjective reason for a belief, it is still questionable whether that is sufficient for him to prefer the belief to its contraries if he has no information about the *relation* between the reason and his belief. Similarly, the requirement that *r*'s truth would *in fact* form a reason to the effect that *p* is more probable than *not-p* does not imply that B*p* is subjectively preferable to its alternatives when S possesses no information concerning the relation between *r* and *p*.

If I have a reason for my belief that Kipchoge won the marathon by having the further justified belief that Kipchoge received a handshake from the Prince, that still need not favour the belief that Kipchoge won the marathon over the contrary beliefs that Kipchoge ended second, that Kipchoge was the nicest dressed spectator, etc., if the justified belief that Kipchoge received the handshake is the *only information* I possess. Since Kipchoge receiving the handshake makes it extremely probable that he won the marathon, it would be best, objectively speaking, if I formed the belief that he won. However, if the belief about the handshake is the only information I have, if I possess no further information about Kipchoge, the Prince, or the marathon, if I do not know, e.g., that the Prince only congratulates the winner, it is unclear why I, contemplating alternative beliefs from within *my* perspective, should prefer the belief that he won over any of the contraries. In that case my belief is still subjectively arbitrary.

Analogously, if I have a reason for my belief that there is a blue wall to my left by having a visual experience of a blue wall to my left, that still need not favour the belief that there is a blue wall to my left over the belief that there is a white wall illuminated by blue lights, or the belief that there is a white wall which appears blue to me because of my visual system functioning in an atypical way, if the experience is the *only information* I have. Since my experience makes it very probable that there is a blue wall to my left, it would be best, objectively speaking, to adopt the belief that there is a blue wall to my left. Yet if the experience is *all* I have to go on, if I know nothing about the relation between me having certain experiences and the actual colour of physical objects, it is unclear why I should adopt the belief

that there is a blue wall to my left and not one of its contraries. In that case, my belief that there is a blue wall is clearly subjectively arbitrary (cf. Poston 2014, 185-6)

In order to rule out subjective arbitrariness in cases where S has a reason, *r*, for a belief that *p*, but no relevant information about the relation between *r* and *p*, I want to introduce a clause requiring that S also has a further *belief* that *r* (if true or obtaining) is a reason to the effect that *p* is more probable than *not-p*. Thus, in order for my belief about Kipchoge to avoid subjective arbitrariness, what I need in addition to my justified belief that Kipchoge received a handshake from the Prince is a further belief that receiving the handshake is a reason to the effect that it is more probable that he won than that he did not. And in order for my belief about the blue wall to avoid subjective arbitrariness, what I need in addition to my experience of a blue wall is a further belief that this experience is indeed a reason to the effect that it is more probable that there is a blue wall than that there is not.

Presumably, though, this further belief about the relation between *r* and *p* should itself bear appropriate epistemic credentials as well. If my belief about the relation between the handshake and the winner of the marathon is held for no reason at all, then it is unclear how me having it can contribute to my belief about Kipchoge avoiding subjective arbitrariness. And if my belief about the relation between my experience and the colour of the wall is based on nothing whatsoever, me having it certainly cannot help my belief about the wall's colour avoiding subjective arbitrariness. Hence, I will assume that the belief about the relation should be *justified*:

(ASA-ii) S's belief B*p* avoids being subjectively arbitrary only if S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*.[28]

As in the discussion of (ASA-i), the concept of 'justified belief' in (ASA-ii) cannot be an externalist concept. Thus, when it is said that S has a justified belief about the relation between *r* and *p* because it is caused by some reliable

[28] (ASA-ii) is similar to the well-known 'Principle of Inferential Justification' (PIJ), first defended by Fumerton and later adopted by several others, to the effect that S's belief that *p* can only be justified by S's justified belief that *q* if S also has a justified belief that *q* makes *p* probable (Fumerton 1995, 85-9; cf. Cling 2003; Leite 2008; Van Woudenberg and Meester 2014, 223-4). Yet while (PIJ) only concerns cases where S has a reason for a belief by having a further *belief*, (ASA-ii) also concerns cases where S has a reason by having an experience.

mechanism, it is unclear how that belief can help B*p* to avoid *subjective* arbitrariness: given the information available to S, who simply finds himself having the belief about the relation but has no idea as to why it would be true, it is still not clear why he should adopt B*p* instead of one of its contraries. Hence, I will assume that the justified belief about the relation between *r* and *p* should be justified in an internalist sense, where this involves that S has a legitimate reason for it as well.

4.3.2 Two worries for (ASA-ii)

The requirement posed by (ASA-ii) gives rise to several worries. A first worry concerns its consequences for the beliefs of children and animals. As children and animals may not even have a *concept* of a reason to the effect that *p* is more probable than *not-p*, they may be unable to even *have* the belief which S is required to have according to (ASA-ii). In that case, (ASA-ii) renders *all* beliefs held by children and higher animals subjectively arbitrary. But does not that show that (ASA-ii) unrealistically over-intellectualizes the avoidance of arbitrariness?[29]

In response, I want to say two things. First, if (ASA-ii) implies that all beliefs of children and animals are subjectively arbitrary, I am willing to accept that consequence. Perhaps animals simply lack the level of intellectual sophistication needed to avoid subjectively arbitrary beliefs, and perhaps human beings attain that level, if they attain it at all, only when they grow to maturity.

Second, however, I do not think that children and animals need to be unable to have the belief required by (ASA-ii) if we make the assumption, plausibly defended by several philosophers, that having beliefs is a matter of having particular *dispositions* (e.g. Marcus 1990; Klein 1999; Schwitzgebel 2002; cf. Thomson 1964, 297; Poston 2014, 188). Advocates of the view that beliefs are dispositions typically assume that having a specific belief involves having a disposition to exhibit particular verbal or nonverbal *behaviour* when one is triggered in a certain way. For instance, when I believe that Anjum lies east to Moddergat, this involves me being disposed to assert that Anjum lies east to Moddergat when you ask me about Anjum's geographical location; and it amounts to me being disposed to turn right when I want to cycle to Anjum from the south but discover that I am approaching Moddergat. Having

[29] Thanks to Thomas Raleigh, Job de Grefte, and Alan Millar for (independently) raising this worry.

a particular belief may also involve certain *cognitive* dispositions, such as a disposition to draw certain inferences from the content of that belief. Thus, me having the belief that Kipchoge won the marathon may involve a disposition to infer that Kipsang did *not* win the marathon, and also a disposition to expect that Kipchoge will soon receive a handshake from the Prince. Moreover, as is pointed out by Schwitzgebel, having a belief can also involve certain *phenomenal* dispositions. To use an example from Schwitzgebel, when one believes that there is beer in the fridge, this may involve a disposition to 'say silently to oneself' that there is beer in the fridge, and also a disposition to feel surprise when one opens the fridge and sees no beer (*ibid.*, 252).[30]

If we assume that having a particular belief means having certain dispositions, even children and animals can have the beliefs required by (ASA-ii). For instance, suppose a child has a reason for her belief that her mother is entering the room through having a visual experience of her mother entering the room. If beliefs are dispositions, the child may also have a further belief that the experience is a reason indicating the truth of her belief. She may have this further belief in virtue of being disposed to utter 'Mummy' as soon as she has the experience, by being disposed to expect some attention from her mother as soon as she has the experience, etc. Similarly, imagine a dog who has a reason for his belief that he is going to be fed by having a visual experience of his boss taking the box with his food from the cupboard. If beliefs are dispositions, the dog may also have a further belief that the experience is a reason indicating that it is true that he will be fed. Although the dog cannot have this further belief by virtue of having a disposition to make particular assertions, he may have the belief by being disposed to expect being fed upon having the experience, or by being disposed to develop an increased desire to eat upon having the experience, etc.

As this discussion shows, on a rather natural concept of belief, children and higher animals are able to have beliefs about the relation between their beliefs and the reasons they have for them. Hence, (ASA-ii) need not render all their beliefs subjectively arbitrary or over-intellectualize the avoidance of subjective arbitrariness.[31]

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[30] For some good arguments to the effect that *beliefs construed as dispositions* should not be assimilated with *dispositions to believe*, see Audi (1994).

[31] Another way to assure that even children and higher animals can have beliefs about the relation between their beliefs and the reasons they have for them is by invoking

A second worry for (ASA-ii) concerns the fact that it requires S to have information about the relation between *r* and *p* by having a further *belief*. Could not S have the relevant information in alternative ways? One suggestion is that where S can have a legitimate reason for *p* by having a certain perceptual experience, S may also be able to have information about the relation between *r* and *p* by having a perceptual experience. However, if we consider this suggestion seriously, it becomes unclear what kind of perceptual experience would be able to fulfill this role. Although we have perceptual experiences of certain objects being a certain way, or standing in a certain relation to other objects, etc., we clearly do not have perceptual experiences of specific reasons standing in certain relations to particular beliefs. I can have a visual experience of a blue wall to my left, but I cannot have a higher-level visual experience of this blue wall experience being a reason to the effect that the belief that there is a blue wall is more probable than its contraries; and I can have an auditory experience of a bus approaching me from behind, but I cannot have a higher-level perceptual experience of this auditory experience being a reason to the effect that the belief that a bus is approaching me is more probable than its contraries.

Another suggestion is that while S may be unable to have perceptual experiences of relations holding between reasons and beliefs, S may nonetheless have information about the relation between *r* and *p* by being in some other non-doxastic state. In particular, it might be said that S may have the relevant information through having a particular *seeming*. In debates on inferential justification, it is often claimed that in order for S's belief that *p* to be justified by S's belief that *q*, S should have a higher-level attitude concerning the relation between *p* and *q*. While it is commonly assumed that S can have this attitude only by having a justified belief (e.g. Fumerton 1995, 85-9; Cling 2003; Leite 2008; Van Woudenberg and Meester 2014, 223-4), some philosophers, notably Tucker and Huemer, have recently argued that S can also have the required attitude through having a particular seeming. On this proposal, S's belief that *p* can be inferentially justified by S's belief that *q* (in part) because it seems to S that *q* supports *p* (Tucker 2012; Huemer 2016). In a similar way, one could say that what is needed for S's belief that

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the distinction between *de dicto* beliefs and *de re* beliefs. While children and higher animals are incapable of having *de dicto* beliefs about that relation, they can still have *de re* beliefs about it. If we said that what is required for the satisfaction of (ASA-ii) is *at least* a suitable *de re* belief about the relation, then the beliefs of children and higher animals could also satisfy (ASA-ii) (cf. Audi 1986, 241).

p to avoid subjective arbitrariness is that S has a legitimate reason, *r*, for *p*, but also appropriate information concerning the relation between *r* and *p*; and that S can have this information by having a *justified belief* that *r* is a reason to the effect that *p* is more probable than *not-p*, but also by having a *seeming* that *r* is a reason to the effect that *p* is more probable than *not-p*.

Does this suggestion force us to modify (ASA-ii)? I think that is far from clear. First of all, we may wonder exactly what sort of *things* seemings are supposed to be. Some philosophers claim that seemings are just *beliefs*; others argue that they are *dispositions to believe*; and still others hold that seemings are special sorts of *experiences*.[32] However, the suggestion concerning (ASA-ii) cannot be viable on all these accounts. If seemings are just beliefs, it is obvious that they cannot help to establish that S can have the required information about the relation between *r* and *p* in a way *other* than by having a belief about that relation. This problem is avoided if seemings are not beliefs but dispositions to believe. However, if seemings are only dispositions to believe, it is unclear in what way they can really provide S with relevant *information* about the relation between *r* and *p*. Surely, when S has a disposition to form the belief that *r* is a reason to the effect that *p* is more probable than *not-p*, he may be disposed to *attain* information concerning the relation between *r* and *p*. Yet as long as his disposition is not manifested, as long as it is *merely* a disposition, of which S might not even be aware, it is unclear how S having that disposition can constitute him having the relevant information. Apparently, the suggestion concerning (ASA-ii) makes sense only when seemings are construed as specific experiences. If seemings are experiences, then S having a seeming about the relation between *r* and *p* does not imply that he has a further *belief*, while it can still assure that the seeming provides him with *information* concerning the relation between *r* and *p*.

However, even if we assume that seemings are specific sorts of experiences, we may still wonder whether it is realistic to think that it is very common for us to have seemings with contents of the form '*r* is a reason to the effect that *p* is more probable than *not-p*', *while these seemings are still not beliefs*. Philosophers emphasizing that seemings are different from beliefs usually give examples concerning vision. When looking at a straight stick partly put in water, I have a visual experience of a bent stick and it also seems to me that the stick is bent. Yet when I know the stick is straight, my seeming

[32] For an overview of the various accounts, see Tucker 2013, Sect. 1.

is overridden by my knowledge, and I do not form, and need not have, a belief that the stick is bent. Similarly, when considering the Müller-Lyer illusion, I have a visual experience of the upper line being longer than the lower line and it also seems to me that the upper line is longer. But if I have just measured both lines, I know they have the same length and I need not form the belief that the upper line is longer (cf. Huemer 2001, 100-1).

However, when it comes to the suggestion concerning (ASA-ii), it is not such simple perceptual seemings which are required. What is required are seemings regarding very sophisticated contents. Instead of having a seeming that a particular object has a specific size or colour, S should have a seeming that some consideration, *r*, is a reason to the effect that *p* is more probable than *not-p*. In certain exceptional cases, it can make sense to attribute to someone a seeming about the relation between a reason and a belief which is not a further belief. For example, suppose that you are tossing a fair coin, and that the coin comes up heads a number of times in a row. After a while, say when it has come up heads twenty times, you get the feeling that it should also come up tails at some point. Given that the coin is fair, it *seems* to you that the next coin is going to land tails. However, well-versed in the fallacies, you do not form the *belief* that the coin is going to land tails: the chance of that is still 0.5. In this example, it may be said that you have a seeming about the relation between a reason and a belief, but not a corresponding belief: you have a seeming that the coin having landed heads twenty times indicates that it will land tails at the next throw, but you do not believe that.

However, as I said, it appears that such cases, where S has a seeming that *r* is a reason to the effect that *p* is more probable than *not-p* but not a corresponding belief, are rather exceptional. Usually when someone is said to have a particular seeming but not a corresponding belief, as in the example of the apparently bent stick, this just means that she has a perceptual *experience* of certain objects being a specific way. Sometimes people may be inclined to say something to the effect that a specific consideration seems to them to be a reason indicating the truth of a particular belief, e.g. when someone contemplating an instantiation of *modus ponens* asserts that the reasoning seems valid to him, or when someone witnessing a piece of iron being heated asserts that it seems to him that it will soon expand. Yet when people say such things, that usually amounts to them holding a belief, perhaps not very confidently, about the relation between a reason and a belief. Since cases where people have a seeming about the relation between *r* and *p*, but not a corresponding belief, are very rare, it is doubtful whether the suggestion that

S can have appropriate information concerning the relation between *r* and *p* in a way other than by having a further belief can benefit from seemings in a very substantial way.[33]

But what if we not only assume that seemings are experiences, but also ignore the fact that seemings about the relation between *r* and *p* (which are not beliefs) are very rare? Even then, I think, is it doubtful that seemings provide a way in which S can have appropriate information concerning the relation between *r* and *p* other than by having a belief about that relation.

First of all, given the purpose of having suitable information for preferring B*p* to its contraries, a mere seeming that *r* is a reason to the effect that *p* is more probable than *not-p* appears to be a very *weak* state. If it merely seems to you that *r* is a reason for thinking that *p* is more probable than *not-p*, why would you, by adopting B*p* instead of one of its contraries, *trust* that it is so? If it only seems to you that *r* bears the relation to *p*, but you do not really think this and you do not want to commit yourself to it, how can it make B*p* a better option for you than B*p*'s contraries? If a mere *belief* that *r* is a reason for thinking that *p* is more probable than *not-p* is not enough to favour B*p* over its contraries, how can a mere seeming, which appears to be even less firm, psychologically speaking, than a belief, *be* enough? A mere seeming, unaccompanied by a corresponding justified belief, simply seems too flimsy a state to give S information appropriate for preferring B*p* to its contraries.

A second worry comes from the fact that when S is to have the relevant information about the relation between *r* and *p* by having a *belief*, that belief should be justified. An unjustified belief that *r* is a reason to the effect that *p* is more probable than *not-p* cannot help B*p* to avoid arbitrariness. However, if an unjustified belief about the relation between *r* and *p cannot* help B*p* to avoid arbitrariness, it is odd to say that a seeming with exactly the same content, and supported in exactly the same way, *can* help B*p* to avoid arbitrariness. If the only difference between the seeming and the belief is that the seeming is a *seeming*, it is not yet clear why it can help B*p* to avoid arbitrariness whereas the belief cannot.

A third and related worry concerns the reasons why an unjustified belief about the relation between *r* and *p* cannot help B*p* to avoid arbitrariness. If S holds such a belief for no reason whatever but due to, say, wishful thinking, him having it certainly cannot contribute to B*p* avoiding

[33] It is worth noting that neither Tucker nor Huemer gives a concrete example, let alone a realistic example, of a seeming with regard to the evidential relation holding between two beliefs which does not involve, or amount to, a further belief.

arbitrariness. Yet if such an unjustified belief about the relation between *r* and *p* cannot help to prevent B*p* from being arbitrary, it is not sure how an analogous seeming concerning the relation between *r* and *p* could do so much easier. Consider the following examples from Lyons:

> It seems true to my neighbours that America is the greatest country in the world, but only because they've been told so thousands of times. $10 seems like a reasonable price for that item, but only because you've just been primed with the number 12 (you'd have thought it worth no more than $7 otherwise). It seems true to my cousin that abortion causes breast cancer, but only because his vehement opposition to abortion makes the spurious evidence seem compelling to him. We are all subject to the 'belief bias' whereby arguments whose conclusions we believe to be true thereby seem to be valid, even if they're not (Lyons 2015, 155).

In the same way, S might have a seeming that *r* is a reason to the effect that *p* is more probable than *not-p*, not informed by considerations supporting that seeming, but through wishful thinking. However, on the present suggestion concerning (ASA-ii), this seeming can nonetheless help to favour B*p* over its contraries. Yet given that it is formed the same way as the unjustified belief about the relation between *r* and *p*, it is very odd, to say the least, that whereas the unjustified belief *cannot* contribute to B*p*'s avoiding arbitrariness, the seeming *can*. Even stronger, it might happen that S has the seeming that *r* is a reason to the effect that *p* is more probable than *not-p* as a causal *result* of him having the unjustified belief that *r* and *p* are so related. On the suggestion concerning (ASA-ii), the unjustified belief *cannot* help B*p* avoiding arbitrariness, but the seeming which it engenders *can* help B*p* to avoid it. This result strikes me as absurd.

On the basis of all these considerations, I conclude that we can safely ignore the suggestion to modify (ASA-ii) in terms of seemings.

4.3.3 Basing and No competing reasons

In addition to (ASA-i) and (ASA-ii), our extended account of avoiding subjective arbitrariness should also feature a clause which ensures that B*p* is held in a suitable way. As we saw in Chapter 3, Klein's account implies that a belief avoids arbitrariness when there exists an objective and subjective

reason for it, even when it is not held *in light of* that reason. Thus my belief that Kipchoge won the marathon avoids arbitrariness when I have an objective and subjective reason for it, even if I hold the belief merely through hatred of Kipchoge's competitor, Kipsang. Yet, we wondered, would not my belief still be arbitrary in such a situation? Judged in terms of the reasons through which I hold it, would not it be just as reasonable (or unreasonable) for me to adopt a contrary belief?

In order to ensure that beliefs which are not held in light of a legitimate reason do not avoid subjective arbitrariness, I propose to introduce a *basing requirement* for the avoidance of subjective arbitrariness. The condition I suggest is as follows:

(ASA-iii) B*p* avoids being subjectively arbitrary only if it is *based* on a legitimate reason.

Of course, (ASA-iii) gives rise to the question what it means for a belief to be 'based on a legitimate reason'. Since giving an account of the basing relation requires a rather lengthy discussion, however, I postpone that discussion to the next section. Here it suffices if we have an intuitive grasp.[34]

In order to see how (ASA-iii) gives the right verdict in cases where a belief is adopted in some haphazard way, consider again my belief that Kipchoge won the marathon and suppose that I hold this belief, not in light of my justified belief that Kipchoge received a handshake from the Prince, but through hatred of Kipsang. Although I *have* a legitimate reason for my belief, my belief is not *based on that reason*. Hence, (ASA-iii) judges that my belief is subjectively arbitrary.

As a final condition for the avoidance of subjective arbitrariness, we should include a clause requiring that S does not have competing reasons for *not* holding the belief. As we have seen in Chapter 3, Klein's account implies that B*p* can avoid arbitrariness when S has an objective and subjective reason, *r*, for *p*, even when he also has reasons for not believing *p*. This is possible in at least three ways. S can also have a reason for thinking that *p is false*, S can have a reason for thinking that *r is false* (or does not obtain), and S can have a reason for thinking that *r is not a sufficiently strong reason for*

[34] A similar motivation for introducing a basing requirement is given in Gage 2016, Sect. 5. While I introduce the requirement as a condition for the avoidance of subjective arbitrariness, Gage introduces it in an account of what is needed for S's belief to avoid 'being accidentally true from S's perspective'.

p. In order to assure that B*p* fails to avoid arbitrariness in such cases, I want to pose the requirement that S may not believe that there exists a competing reason for not holding the belief:

(ASA-iv) B*p* avoids being subjectively arbitrary only if S does not believe there is a competing reason for not believing *p*.

As for the notion of 'a competing reason for not believing *p*', what I have in mind is a reason which makes it unclear why S, contemplating different beliefs from within his perspective, should hold B*p* rather than a contrary belief, such that all beliefs mentioned in this connection in the discussion of Klein's account (in Section 3.3.3) turn out to be arbitrary. Thus, when S believes he has a reason for *not-p*, where he is as convinced of this reason as of the reason for *p* and thinks that the reason for *not-p* supports *not-p* just as well as the reason for *p* supports *p*, as in the example of the belief about the capital of South Africa, it is unclear why S should maintain B*p* rather than adopt a contrary belief, and (ASA-iv) implies that B*p* (provided S still has it) is subjectively arbitrary. Similarly, when S believes he has a reason for thinking that his (only) reason for *p*, *r*, is false (or fails to obtain), where he thinks *r*'s being false is just as likely as *r*'s being true, as in the example of my belief about Kipchoge, it is uncertain why S should hold B*p* instead of a contrary belief, and (ASA-iv) implies that it is subjectively arbitrary. Finally, when S believes he has a reason for thinking that *r* is not a sufficiently strong reason for *p*, such that he thinks *r*'s not supporting *p* is at least as probable as *r*'s supporting *p*, as in the example of my belief about the departure of the train to Hurdegaryp, it is unclear why S should maintain B*p* and not adopt a contrary belief, and (ASA-iv) implies that his belief is subjectively arbitrary.[35]

[35] It may be that some of these cases of clearly arbitrary beliefs are already taken account of by (ASA-i) and (ASA-ii). For example, when S has a reason for thinking that *r* is false, it could be said that (ASA-i) already judges (or should judge) that B*p* is arbitrary (if he does not have additional reasons, at least), since S certainly cannot have a legitimate reason for *p* by having *r* if he also has a very good reason for believing *not-r*. Also, when S has a reason for thinking that *r* is not a sufficiently strong reason for *p*, it could be said that (ASA-ii) already judges (or should judge) that B*p* is arbitrary (if he does not have additional reasons), since S certainly cannot have a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p* if he also has the reason for thinking *r* is *not* a sufficiently strong reason for *p*. However, since situations where S believes he has a reason for *not-p* are not so clearly captured

At this point it worth noting that (ASA-iv) only requires that S does not *believe* there is a competing reason for not believing *p*. Thus, B*p* can *avoid* subjective arbitrariness when S does not believe there is a competing reason, even when *in fact* there exists such a reason. Given that we are trying to explicate a concept of *subjective* arbitrariness, this consequence is acceptable. What appears controversial, however, is that (ASA-iv) implies that B*p* *is* subjectively arbitrary if S has a belief that there is a competing reason, even when in fact there exists *no* such reason, and even when S's belief that there is one is *unjustified*. Especially the latter consequence may seem problematic: how could a belief in a competing reason ensure that B*p* is arbitrary, i.e., that it would be equally reasonable for S to adopt one of B*p*'s contraries, if that belief in a competing reason is unjustified?

I think intuitions pull in two different directions here. On the one hand, it appears a bit harsh to say that an unjustified belief in a competing reason renders B*p* subjectively arbitrary. If the belief in a competing reason is formed through wishful thinking or guessing, then it does indeed appear odd to say that it may nonetheless render B*p* arbitrary. On the other hand, given that S really *believes* there is a competing reason for not believing *p*, there also seems to be something seriously strange about S's nevertheless holding B*p*. If S is really convinced that there is a reason such that B*p* is not preferable to its contraries, then judged from his perspective B*p* is clearly arbitrary. Given that he has a sincere belief that there is a competing reason for not believing *p*, it is at least as reasonable, subjectively speaking, for S to adopt a contrary belief.

Fortunately, it is not necessary for our purposes to decide whether (ASA-iv) should be modified, for instance by saying that S may not have a *justified* belief in a competing reason. As will become clear in later chapters, since (ASA-iv) merely specifies a negative condition, it does not really matter whether the belief S may not have is a justified belief or not. Thus I will accept (ASA-iv) as specifying a fourth necessary condition for avoiding subjective arbitrariness, leaving it open that the condition could still be improved.[36]

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by (ASA-i) and (ASA-ii), and also for the sake of completeness, I will leave (ASA-iv) intact.

[36] This discussion of the required absence of a belief in a competing reason resembles Bergmann's discussion of a no-defeater condition on justification (Bergmann 2006, Sect. 6.2). Just as I assume that a belief is arbitrary as soon as S *believes* there is a competing reason, Bergmann argues that the justification of S's belief B is defeated as

With (ASA-iv) at our disposal, we now have four necessary conditions for avoiding subjective arbitrariness. Given their intuitive force, and given that they answer the four questions concerning Klein's account that we raised in Chapter 3, I assume that these conditions are not only necessary but also sufficient for avoiding subjective arbitrariness:

(ASA) S's belief B*p* avoids being subjectively arbitrary if and only if (i) S has a legitimate reason, *r*, for *p*; (ii) S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*; (iii) B*p* is based on *r*; and (iv) S does not believe there is a competing reason for not believing *p*.

In the chapters where we evaluate epistemic theories in terms of their performance with respect to the arbitrariness desideratum, I will assume (ASA) as our extended concept of avoiding subjective arbitrariness.[37]

4.4 The Basing Relation

As indicated in the previous section, giving an account of the basing relation, as it features in the third condition of (ASA), requires a rather lengthy discussion. What does it mean for a belief to be based on a reason?[38] By far most epistemologists hold that the basing relation is a *causal* relation. On

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soon as S *believes* that B is epistemically inappropriate, whether or not that belief is justified.

[37] What if we said that B*p* avoids subjective arbitrariness only if it is subjectively preferable both to other beliefs and to suspension of judgment? As in the case of objective arbitrariness (cf. fn. 24), whether B*p* is also preferable to suspension of judgment presumably depends on the exact formulation of the epistemic goal. Suppose S has a justified belief that *r* is a reason to the effect that *p* is only slightly more probable than *not-p*, e.g. by believing that *r* indicates that *p*'s probability is 0.6. If the epistemic goal is just to have more true beliefs than false beliefs, it seems better, subjectively speaking, to adopt B*p* than to suspend judgement. Yet if the epistemic goal is to have *exclusively* true beliefs, it may seem better to suspend judgement than to adopt B*p*. Thus, if we required that beliefs are also preferable to suspending judgment, the amount of beliefs which avoid subjective arbitrariness would appear to depend on the exact specification of the epistemic goal. Of course, much more could be said about these gradual variations. But just as in the discussion of objective arbitrariness, I will leave that for another occasion.

[38] I will be concerned only with the question what it is for a belief to be based on *a reason*. I do not assume that the reason on which a belief may be based is a factual or legitimate reason. Beliefs can also be based on bad reasons.

their view, my belief that Anjum lies east to Moddergat is based on my further belief that Moddergat lies west to Anjum only if the latter belief figures in the causation of the former belief, and my belief that a bus is approaching from behind is based on my auditory experience of a bus approaching from behind only if my belief is causally affected by my experience.[39]

Assuming this is correct, in what way should a belief be caused by a reason? Here it is useful to draw the familiar distinction between, on the one hand, *efficient* or *originating causes* and, on the other, *sustaining causes* (cf. Armstrong 1973, 80; Alston 2005, 84).While an originating cause of S's belief B*p* assures that B*p* is *acquired* by S, a sustaining cause makes it the case that S *maintains* B*p*. Usually an originating cause of a belief will later become a sustaining cause of that belief. When my belief that Kipchoge won the marathon is originally caused by my belief that he received a handshake from the Prince, the latter belief may later become the sustaining cause of the former. But it is also possible that what originally causes a belief plays no role in sustaining it later on. While my belief that Kipchoge won the marathon is originally caused by my belief about the handshake, later on it may become sustained only by my belief that I saw Kipchoge crossing the finish line before Kipsang.

Given this distinction between originating and sustaining causes, what sort of causes are relevant for analyzing the basing relation? Following Armstrong, I will assume that it is most natural to think of sustaining causes here (Armstrong 1973, 80; cf. Audi 1983, 215-6; Fumerton 1995, 92). When B*p* is based on a reason, *r*, S's having *r* should assure that he maintains B*p*,

[39] For philosophers assuming that the basing relation is causal, see Armstrong (1973, 79-82), Pollock (1974, 47-8; 1986, 36-7), Audi (1986, 268-70), Alston (1988a, 227-9; 2005, 84-5), Plantinga (1993a, 69), Fumerton (1995, 91-2), Huemer (2001, 55-6), Lyons (2009, 138), Turri (2011, Sect. 2), and Tucker (2012, 337, fn. 23). For an epistemologist denying that basing is causal, see Kvanvig (2003). Often Lehrer, too, is characterized as someone rejecting a causal account of the basing relation (e.g. Kvanvig 2003, 44; and Turri 2011, 386, fn. 6). Yet, carefully reading the passages where he is supposed to do so reveals that this characterization is far too hasty. In the relevant passages, Lehrer does not talk about what is involved when a *belief* is based on evidence, but about what is involved when a belief's *justification* is based on evidence. Lehrer claims that the latter concept does not imply that the belief is caused by the evidence, but does not make that claim about the former concept (cf. Lehrer 1974, 122-6; 2000, 195-7). For some convincing arguments favouring a causal account over a non-causal account, see Audi (1983; 1986, 239-50) and Turri (2011, Sect. 2).

whether or not *r* also figured in the original acquisition of B*p*. Although the originating cause of B*p* is certainly relevant for an analysis of what B*p has been based on*, it is not relevant for understanding what it *is* based on.

Yet, we may still distinguish at least three kinds of cases where B*p* is sustained by (S's belief that, or experience to the effect that) *r* (cf. Audi 1983, 215-6). First, when S's having *r* by itself suffices for S to maintain B*p*, B*p* is *fully sustained* by *r*. Second, when S's having *r* does not by itself suffice for S to maintain B*p*, but does so only in combination with another reason, say *s*, B*p* is only *partly sustained* by *r*. And third, when B*p* is maintained because of S's having *r* and S's having *s*, but both his having *r* and his having *s* would also individually suffice for S to maintain B*p*, we may say that B*p* is *sustained by multiple reasons*.

Assuming that the causal element in the basing relation can be instantiated by these three kinds of causal sustenance, we can now propose the following simple account of B*p* being based on *r*:

(i) B*p* is based on *r* if and only if B*p* is *caused* by *r*.

As has been pointed out by many epistemologists defending a causal account of the basing relation, however, (i) is far too simple. Consider the following, slightly modified, example from Plantinga:

> Suddenly seeing Sylvia, S forms the belief that he sees her. As a result, he becomes rattled, which causes him to believe that he will soon drop his cup of tea and, hence, scald his leg, which causes him to believe that his leg will hurt (cf. Plantinga 1993a, 69, fn. 8).

Although S's belief that his leg will hurt is caused by his belief that he sees Sylvia, the former belief is not based on the latter. For another example, suppose I see an unknown man riding a bike which I take to be *my* bike. This causes me to believe that my bike is stolen, which causes me to feel very sad about almost everything, which causes me to believe that I will lose my job within a couple of weeks. Although my belief that I will lose my job is caused by my belief that my bike is stolen, it is certainly not based on that belief. As these examples make clear, a belief's being caused by another belief (or by an experience) does not *suffice* for its being based on that belief

(or experience). Some beliefs are caused by beliefs or experiences though not based on them.[40]

John Turri (2011, 389) suggests that one way to circumvent such counterexamples is to be more restrictive as to the items that may figure as causes. Suppose we gave the following account:

(ii) B*p* is based on *r* if and only if *r* is a *proximate cause* of B*p*.

In the above examples, S's belief that he sees Sylvia is not a proximate cause of his belief that his leg will hurt, and my belief that my bike is stolen is not a proximate cause of my belief that I will lose my job. Hence, (ii) correctly judges that in these examples the second belief is not based on the first.

However, as Turri also observes, this account faces new problems. First, the stress on a reason being a *proximate* cause renders (ii) *too* restrictive. Since the causation of beliefs always involves the presence of a myriad of electrical and chemical events, a belief *never* has a further belief or experience as its proximate cause. Second, (ii) does not respect the plausible thought that the basing relation is *transitive*. If my belief that Kipchoge has sore calves is based on my belief that he ran a marathon, and my belief that he ran a marathon is based on my belief that Kipchoge's wife said so, then certainly my belief that Kipchoge has sore calves is (indirectly or ultimately) based on my belief about what his wife said. But since my belief about what his wife said is not a proximate cause of my belief about Kipchoge's calves, (ii) incorrectly rules this out.

How to circumvent these problems? According to Turri, we could avoid the problem that (ii) is too restrictive by saying that what matters for basing is not proximate causes as such, but proximate *mental* causes like beliefs and experiences; and we could avoid the transitivity problem by stipulating that what matters is not the *cause* of a belief, but the *causal chain* that leads to it. Let's say that a *proximate mental causal chain* is a sequence of mental states m_1, m_2, m_3, …, m_n, where m_1 is the proximate mental cause of m_2, m_2 is the proximate mental cause of m_3, and so on. A new suggestion would then be the following:

[40] For other counterexamples to (i), see Armstrong (1973, 83) and Pollock (1986, 37). Although the example from Pollock mainly concerns originating causes of belief, it can easily be rewritten in terms of sustaining causes.

(iii) B*p* is based on *r* if and only if *r* sustains B*p* through a *proximate mental causal chain*.

This assures that beliefs can be based on further beliefs and experiences, and not only on electrical and chemical events, by stressing the role of mental states. It also allows for the basing relation being transitive. Since my belief about what Kipchoge's wife said sustains my belief that Kipchoge has sore calves via a proximate mental chain, (iii) says that the latter belief is based on the former.

However, as Turri acknowledges, (iii) is still problematic. Consider this example from Pollock:

> a person who is mentally unstable, when faced with a difficult situation, might lapse into a psychotic state which is characterized in part by his believing that he is Napoleon. His belief that he is in this difficult situation would then be the cause of his believing that he is Napoleon (Pollock 1974, 48; cf. Turri 2011, 389).

Here one belief sustains a further belief via a proximate mental causal chain, but the latter belief is not based on the former.

According to most epistemologists, the main problem brought to light by almost all of the counterexamples above concerns, not the items that may be causes (mental states or proximate mental states), nor the issue of whether what is crucial is a cause or a causal chain but, rather, the very concept of (mental) causation. The examples arise because it is assumed that a belief should *just be caused* by another mental state. This requirement allows beliefs to be based on other mental states through wildly abnormal causal chains. In order to rule out such chains, most epistemologists maintain that a belief should be *non-deviantly caused* by a further belief or experience (e.g. Pollock 1986, 36-7; Alston 1988a, 228; Plantinga 1993a, 69; Fumerton 1995, 92; Turri 2011, 390).

I side with these philosophers: a belief is based on a reason if and only if it is non-deviantly caused by that reason. Of course this raises the further question what it *means* for a belief to be 'non-deviantly caused' by a reason. Importantly, though, I think that this question has already been answered in ways that plausibly respond to all the counterexamples presented above, viz. by the accounts of Audi, Alston, and Turri.

According to Audi, when B*p* is based on *r*, this requires, besides B*p* being caused by *r*, that S also sees *r* as supporting *p*. If S does not see *r* that way, B*p*, though perhaps caused by *r*, remains 'cognitively unmotivated.' For this reason, Audi proposes a 'disjunctive connecting belief requirement' to the effect that when B*p* is based on *r*,

> there is a connecting relation, specifically, a support relation, C, such that either S believes C to hold between *r* and *p*, or S believes something to the effect that *r* bears C to *p* (Audi 1986, 241).

As for the support relation, C, Audi holds that this relation can be of many kinds: (material) implication, confirmation, justification, explanation, etc. Audi distinguishes between 'S believing C to hold between *r* and *p*', on the one hand, and 'S believing something to that effect', on the other, in order to assure that children can also have beliefs based on reasons. Although they may lack the conceptual capacities to *believe* that *r* bears C to *p*, they can surely believe something *to that effect* (*ibid.*, 241).

While S having the connecting belief (in addition to B*p* being caused by *r*) is necessary to assure that B*p* is based on *r*, Audi argues that it is still not sufficient. If it were sufficient, B*p* could be based on a reason even in cases where the connecting belief "does no connecting" (*ibid.*, 247). For instance, suppose I believe both that Kipchoge won the marathon and that Kipchoge received a handshake from the Prince, that the former belief is caused by the latter, and that I also believe that the former is strongly supported by the latter. Yet, suppose that my belief that Kipchoge won is causally sustained by my belief that he received the handshake in the following way: my belief that Kipchoge received a handshake causes me to remember my hatred of Kipsang, which causes me to hope that Kipchoge beat Kipsang, which causes me to believe that Kipchoge won. Although my belief that Kipchoge won is caused by my belief that Kipchoge received the handshake, and although I believe that Kipchoge receiving the handshake supports the belief that he won, my belief that he won is certainly not based on my belief that he received the handshake. In order to avoid cases where a connecting belief is 'causally idle' in such a way, Audi adds the requirement that S's belief that *r* supports *p* is part of what causally sustains B*p* (*ibid.*, 247-8).

This is what Alston has to say about the way a belief should be caused by a reason (or ground):

> Wherever it is clear that a belief is *based on* another belief or on an experience, the belief-forming "process" or "mechanism" is *taking account* of that ground or features thereof, being *guided* by it (…). To say that my belief that the streets are wet is based on the way they look is to say that in forming a belief about the condition of the streets I (or the belief-forming "mechanism") am differentially sensitive to the way the streets look; the mechanism is so constituted that the belief formed about the streets will be some, possibly very complex, function of the visual experience input. (…) [T]he belief formation is the result of a *taking account* of features of the experience and forming the belief *in the light of* them, rather than just involving some subcognitive transaction (Alston 1988a, 229).

Alston says that although this 'taking account' does not require an explicit or conscious belief in a support relation holding between a belief and its reason, it could still be said to involve the subject's having and using some "minimal, low-level grade of belief" in such a relation: "[o]ne could "have" and "use" the belief in this way (…) without the belief's being available for conscious entertainment, assertion, or use in inference" (*ibid.*, 229, fn. 4).

Turri wants to understand the non-deviant causation involved by basing in terms of the 'manifestation of a cognitive trait' (*ibid.*, 391). By a 'cognitive trait' Turri means a disposition or habit to form (or sustain) a doxastic attitude in certain circumstances. On his account, a subject's belief is based on a reason if and only if the belief's being caused by the reason manifests (at least some of) the subject's cognitive traits (*ibid.*, 393). For example, imagine a shepherd whose belief that a storm is brewing is based on his belief that the sky looks a particular way. According to Turri, the belief about the upcoming storm is based on the belief about the way the sky looks in virtue of the fact that the former belief is caused by the latter belief, and its being so caused manifests the shepherd's disposition to trust that the particular look of the sky indicates the upcoming storm (*ibid.*, 392).[41]

[41] Turri's account of basing bears streaking similarities to the account presented by Armstrong (1973, Ch. 6). According to Armstrong, when B*p* is based on (his belief that) *r*, this means that B*p* being caused by *r* is a manifestation of a disposition of S to adopt B*p* as soon as he has *r*. Following Frank Ramsey, Armstrong takes the relevant disposition of S to connect *r* with *p* to be a 'general belief' of S (*ibid.*, 89). Thus, when B*p* is caused by *r* through the manifestation of S's disposition to connect *r* with *p*, this evinces that S believes that *r* supports *p*. Even stronger, Armstrong claims that S's disposition to accept B*p* as soon as he has *r constitutes* S's belief that *r* supports *p*

The accounts of Audi, Alston, and Turri circumvent the problems for accounts (i) to (iii). Since they do not speak of proximate causes, they have no problem accommodating the (supposed) fact that the basing relation is transitive. The accounts also avoid the counterexamples involving abnormal causes or chains. Recall the example where S's belief that his leg will hurt is caused by his belief that he sees Sylvia. On Audi's account, the former belief is not based on the latter belief since the former belief is not in part caused by a connecting belief, held by S, that (or to the effect that) it is supported by the latter belief. On Alston's account, the former belief is not based on the latter belief since S's belief forming mechanism does not take account of (is not guided by) the latter in forming the former. On Turri's account, the former belief is not based on the latter belief because the former's being caused by the latter does not manifest a disposition of S to trust that him seeing Sylvia indicates that his leg will hurt.

The accounts given by Audi, Alston, and Turri deal in analogous ways with the example where my belief that I will lose my job is caused by my belief that my bike is stolen and with Pollock's example where a person's belief that he is Napoleon is caused by his belief that he is in a difficult situation. Regarding both cases, the accounts rightly judge that while the first belief is caused by the second, the former is not based on the latter.

Crucially, I take it that the accounts by Audi, Alston, and Turri reveal two important necessary conditions of basing. First, they show that B*p* can be based on *r* by being caused by *r* only when S has a (meta-)belief that *r* supports B*p*. On Audi's account, S should have a connecting belief that (or to the effect that) *r* supports *p*. On Alston's account, S should hold B*p* in the light of, or by taking account of, *r*. This involves him having a (low-level) belief that *r* is an indication of the truth of *p*. On Turri's account, S should manifest a disposition to take something to be the case, or to trust that something is the case. Thus, S should in fact *take* it that *r* is an indication that *p* is true, or *trust* that *r* is an indication of the truth of *p*.

Second, the three accounts, most explicitly Audi's, show that what is also needed is that B*p* is in part *caused by his belief that* r *supports* p. In order to rule out causally idle connecting beliefs, Audi claims that the connecting belief should be part of what sustains B*p*. Similarly, Alston says that the causation of B*p* should be guided by S's (low-level) belief in a support

(*ibid.*, 89). Although Turri does not refer to Armstrong, the similarities between his account and Armstrong's account suggest that Turri is influenced by him.

relation, and Turri holds that the causation of B*p* should involve S's taking or trusting that *r* indicates the truth of *p*.[42]

Convinced by the success of the accounts by Audi, Alston, and Turri, I want to defend the following account of S's belief, B*p*, being based on a reason, *r*:

(BAS) B*p* is based on *r* if and only if B*p* is caused by *r*, and *r*'s causing B*p* is guided by S's belief that *r* supports *p*.

As for the kind of support relation that S must believe to hold between *r* and *p*, I follow Audi in assuming that this relation may be of a variety of kinds. S may believe that *r* implies *p*, that *r* confirms *p*, that *r* explains *p*, etc.[43]

Apart from its success to rule out deviant causal chains, there is another reason for adopting (BAS). At some place in her discussion of the concept of reasoning, Judith Jarvis Thomson considers a man who says "*p*, so *q*". She claims that it is clear that this man must believe that *p* is a reason for *q*, since otherwise "he can't *mean* his 'so'" (Thomson 1964, 296, italics mine). I think a similar point applies in the case of beliefs being based on reasons. Suppose I believe that Kipchoge has sore calves, and that you ask me what my belief is based on. In response, I say: "It is based on my belief that Kipchoge just finished a marathon." Now you ask me: "So you think that having run a marathon makes it likely that one's calves are sore?" Imagine that I reply by saying: "No, I don't have any clue as to whether it makes that likely or not." Certainly, that reply makes no sense. In Thomson's terms, if that is what I say, I cannot *mean* my 'based on'. When one asserts that one bases a belief on a further belief, one is committed to the claim that one thinks the latter belief supports the former. Thus, the way we talk about basing a belief on a reason strongly suggests that whenever S's belief is based on a reason, this involves S having a further belief to the effect that the reason supports the belief.

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[42] It should be noted that Audi, unlike Alston and Turri, is mainly concerned with analyzing what it is for a belief to be based on another *belief*. It is not certain that he would accept the same conditions for basing in contexts where a belief is based on an *experience* (cf. Audi 1986, 270). Yet I take Audi's arguments to establish the need for the conditions in the latter context as well.

[43] Interestingly, S can have the belief that *r* supports *p* in virtue of B*p* satisfying the second condition of (ASA). For if B*p* satisfies that condition, S not only has a legitimate reason, *r*, for *p*, but also a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*.

As for the *kind* of belief that S is supposed to have according to (BAS), I will follow Audi and Alston in assuming that S need not be aware that he has this belief, and that he need not be able to put his belief into words. If we make the natural assumption, presented in Section 4.3.2, that beliefs are dispositions, S may have the belief in virtue of being disposed to exhibit particular verbal or nonverbal behaviour when he is triggered in a certain way.

As noted above, Thomson holds that when S reasons from *p* to *q*, that involves him having a belief that *p* is a reason for *q*. As a possible worry for this view, Thomson recognizes the following:

> a child might reason that *q* because someone said it was, and the question might be raised whether the child must be supposed to believe that X's saying that *q* is a reason for *q*. Does a child so much as 'have the concept' *reason for*? (*ibid.*, 297).

Thomson replies to this worry as follows:

> No doubt the child may not have the words 'reason for' in his vocabulary, but it seems to me to be wrong to take this as a reason for thinking he cannot have a belief which we might express by the use of these words. Surely the matter is like this: the more his behaviour (or the behaviour of a chimpanzee) makes it look as if he was reasoning (…) the more we can say he does have beliefs of this sort (*ibid.*, 297).

Analogous to the worry suggested by Thomson, one may wonder how the belief of a child or higher animal can be based on a reason if this requires that it has a further belief that the reason supports the belief. While children and higher animals may sometimes base their beliefs on reasons, it is clear that they do not even possess a concept of support (cf. Lyons 2009, 138-9). Like Thomson, I assume that S's behaviour can show that he believes that his reason supports his belief. S need not be able to put the belief into words, nor need he have a concept of support. It suffices if *we* can express S's belief. In this way, (BAS) allows the beliefs of mature human adults as well as those of children and higher animals to be based on reasons.

In later chapters, I will assume (BAS) as our account of what is involved by the concept of a belief which is based on a reason as that concept features in (ASA).[44]

4.5 Conclusion

In the previous chapter and the present chapter, I have given substantial accounts of our two desiderata for responses to the regress problem: avoiding circularity and avoiding arbitrariness. In the previous chapter, I have defended the following notion of avoiding viciously circular epistemic chains:

(AC) An epistemic chain underlying S's belief B*p* avoids being *viciously circular* if and only if B*p* is not itself an indispensable member of that chain.

With regard to arbitrariness, I have followed Klein in distinguishing between objectively and subjectively arbitrary beliefs. In the present chapter, I have defended the following concept of avoiding objective arbitrariness:

(AOA) S's belief B*p* avoids being objectively arbitrary if and only if there exists a reason, *r*, to the effect that *p* is more probable than *not-p*.

Responding to the questions that we raised for Klein's account of arbitrariness in the previous chapter, in the present chapter I have developed the following extended notion of avoiding subjective arbitrariness:

(ASA) S's belief B*p* avoids being subjectively arbitrary if and only if (i) S has a legitimate reason, *r*, for *p*; (ii) S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*; (iii) B*p* is

[44] Given that the concept of basing as captured by (BAS) is a concept of a causal relation, one may wonder why it is relevant in an account of avoiding *subjective* arbitrariness. As the way a belief is caused does not in any relevant sense affect the information available to a person contemplating alternative beliefs from within his perspective, is not a basing requirement more at home in an account of avoiding *objective* arbitrariness? While I see the force of this question, I choose to keep the basing requirement part of (ASA) because I think it also captures something clearly subjective: the basing relation concerns the way in which a person, given a certain reason that he has, forms a belief in light of that reason.

based on *r*; and (iv) S does not believe there is a competing reason for not believing *p*.

Given these accounts of our two desiderata, an epistemic theory should not allow *epistemic chains* which do not meet the condition for avoiding vicious circularity, and it should not allow *beliefs* which do not satisfy the conditions for avoiding arbitrariness. In the chapters to follow I shall discuss whether foundationalism, coherentism and infinitism can succeed in meeting these demands.

5 Foundationalism

5.1 Introduction

In Chapter 2 I presented the epistemic regress problem. In chapters 3 and 4 I gave accounts of the two central desiderata for responses to that problem: avoiding circularity and avoiding arbitrariness. It is now time to evaluate various responses to the problem in terms of these desiderata. In the current chapter I shall focus on foundationalism. In Chapter 6 I shall discuss coherentism, and in Chapter 7 I will consider infinitism.

This chapter is structured as follows. In Section 5.2 I will explain in what sense foundationalism is a response to the regress problem. It will turn out that all foundationalists think that epistemic chains end with particular 'basic beliefs', but that different foundationalists hold very different opinions as to the precise nature of these basic beliefs. In Section 5.3, I will evaluate all versions of foundationalism with regard to the aims of avoiding circularity and avoiding arbitrariness. As is to be expected, foundationalism has no problem with the circularity desideratum. Foundationalism has much more trouble with evading arbitrariness. As we will see, the foundationalist can avoid objective arbitrariness, and she can assure that two conditions for avoiding subjective arbitrariness are met. Yet, the foundationalist will appear unable to ensure the satisfaction of all conditions for avoiding subjective arbitrariness.

5.2 The Epistemic Regress Problem and Foundationalism

As we saw in Chapter 2, the epistemic regress problem arises on two assumptions. The first is that a belief can be justified only by a further belief; the second that a belief can only be justified by a further belief if the latter belief is itself justified as well. On the two assumptions, one can have a justified belief only through having infinitely many justified beliefs.

In response to this problem, foundationalists reject the assumption that beliefs can only be justified by further beliefs. According to them, many beliefs are justified by further beliefs, which may be justified by still further beliefs, etc., but chains of justified beliefs must come to an end with so-called 'immediately justified beliefs' or 'basic beliefs'. Basic beliefs are justified, but not by further beliefs.

However, as to the question precisely what basic beliefs are, different foundationalists give seriously different answers. These different answers are related to two different ways of characterizing basic beliefs: one negative, the other positive. First, basic beliefs are often *negatively* characterized in terms of what they do *not* need in order to be justified. Yet, different foundationalists present different accounts of what exactly basic beliefs do not need for their justification. Second, most foundationalists also provide a *positive* account of how basic beliefs *are* (nevertheless) justified. But here, too, different foundationalists present different theories. In the following two subsections I will present the different foundationalist interpretations of basic beliefs. In 5.2.1, I consider the different negative characterizations; in 5.2.2, I discuss the different positive accounts.

5.2.1 What basic beliefs do not *need*

It is possible to isolate at least four different negative characterizations of basic beliefs. On a first account, basic beliefs do not depend on other *beliefs*:

(No-B) Basic beliefs are justified beliefs which do not depend for their justification on other *beliefs* (e.g. Quinton 1973, 119; Audi 1978, 49; Lyons 2009, 3).

Other foundationalists present a slightly different account by saying that basic beliefs do not rely on other *justified beliefs*:

(No-JB) Basic beliefs are justified beliefs which do not depend for their justification on other *justified beliefs* (e.g. Alston 1976b, 19;[45] Howard-Snyder 2005, 18; Smithies 2014, 73).

[45] Alston is usually assumed to be a typical foundationalist, but at the end of the original version of his paper 'Has Foundationalism Been Refuted?' from 1976, he makes the following striking remark: "It is no part of my purpose in this paper to advocate Minimal Foundationalism. In fact I believe there to be strong objections to any form of foundationalism, and I feel that some kind of coherence or contextualist theory will provide a more adequate general orientation in epistemology" (Alston 1976c, 302). In the 'reprint' of the paper from 1989, these two sentences are omitted (Alston 1976b, 56). Apparently, Alston has become more convinced of the merits of foundationalism during his career.

Usually foundationalists endorsing (No-B) or (No-JB) do not mean that basic beliefs do not *in any sense* rely on other (justified) beliefs. Presumably, one can *have* a particular belief only if one also has certain conceptual beliefs. I can have the belief that a bus is approaching me from behind only if I have suitable concepts of 'bus', 'approaching', and 'behind'. And I can have such concepts only if I have certain (justified and true) conceptual beliefs, e.g. that a bus is a long motor vehicle for carrying passengers, that to approach is to come near or nearer, that if something is behind one, one does not face it, etc. Since I can only be *justified* in holding the belief that a bus is approaching me from behind if I *have* that belief, and since I can only have it if I also have the required (justified) conceptual beliefs, I can only be justified in holding the belief if I also have other (justified) beliefs. It is because of such considerations that foundationalists usually distinguish between conditions necessary for the *existence* (or entertaining or forming) of basic beliefs and conditions necessary for their *justification* (e.g. Alston 1983; Van Cleve 1985, 102, fn. 11). They admit that the existence of a basic belief may require the presence of other (justified) beliefs, but claim that once the belief exists, no further (justified) beliefs are needed for its justification. My belief that a bus is approaching me from behind depends for its existence on certain (justified) conceptual beliefs; but given its existence, it need not depend on further (justified) beliefs for its justification. (No-B) and (No-JB) should be understood in light of this distinction: given their existence, basic beliefs do not need further (justified) beliefs in order to be justified.

Instead of assuming that basic beliefs do not depend for their justification on other (justified) beliefs *as such*, a third account of basic beliefs holds that they do not depend on other beliefs only in the sense that they are not *based* on other beliefs:

(No-Bas-B) Basic beliefs are justified beliefs that are not accepted *on the evidential basis of other beliefs* (Plantinga 1993a, 68; 1993b, 177-8;[46] Bergmann 2004, 161; 2006, 184, fn. 10).

Like defenders of (No-B) and (No-JB), foundationalists endorsing (No-Bas-B) need not claim that basic beliefs do not rely on other beliefs at all. Perhaps all basic beliefs rely on certain conceptual beliefs for their existence. They can still be basic, as long as they are not accepted on the evidential basis of

[46] Of course, strictly speaking Plantinga does not write about 'justified beliefs' but about 'warranted beliefs'. For present purposes this difference can be ignored.

those other beliefs (cf. Plantinga 1993a, 71, fn. 11). Some basic beliefs may even depend for their justification on other empirical beliefs. Suppose that while having breakfast this morning I formed the belief that I just ate oatmeal with raisins. Halfway the afternoon I form a memory belief that I had oatmeal with raisins for breakfast. It may be that this memory belief can be justified only if the belief I formed this morning was justified. In that case my memory belief in a sense depends for its justification on the justification of my earlier belief. Yet this does not prevent the memory belief from being basic, as long as it is not accepted on the evidential basis of the earlier belief (Plantinga 1993b, 61, fn. 22).

Unlike (No-B), (No-JB), and (No-Bas-B), which all define basic beliefs in terms of other *beliefs* which are somehow unnecessary for their justification, a fourth account of basic beliefs construes them in terms of *reasons* which are somehow unnecessary:

(No-R) Basic beliefs are justified beliefs that do not depend for their justification on the person holding them having *reasons* for them (Pollock 1974, 25; Van Cleve 1985, 91; Huemer 2003, 141).

However, when it comes to the exact specification of the 'reasons' which are not needed, (No-R) will mostly boil down to one of the other interpretations, especially (No-B) or (No-JB). For example, while Huemer adopts (No-R) in the mentioned paper from 2003, in his book from 2001 he defines basic beliefs as beliefs "which we are justified in holding and which do not depend on any other beliefs for their justification" (Huemer 2001, 98). Similarly, whereas Van Cleve assumes (No-R) on p. 91 of his 1985 paper, one page later he says that basic beliefs are "justified beliefs that do not depend for their justification on other beliefs" (Van Cleve 1985, 92). Because in practice (No-R) seems thus reducible to one of the other accounts, I will ignore the notion in later sections.

Given the variety of negative characterizations of basic beliefs, some claims, made by foundationalists, about the essence of foundationalism are rather striking. Plantinga says that basic beliefs are justified beliefs which are not accepted on the basis of other beliefs, and writes that this notion is "what is common to all foundationalists" (Plantinga 1993a, 68). Bergmann writes that basic beliefs are justified beliefs which do not depend for their justification on their being inferred from other beliefs, and adds that this concept of basic beliefs is something "all forms of foundationalism have in

common" (Bergmann 2004, 161). Huemer construes basic beliefs as justified beliefs for which one needs no reason, and comments that this is "*the central idea* of foundationalism" (Huemer 2003, 141, emphasis mine). Certainly, these claims fail to respect the existing differences in accounts of basic beliefs.[47]

As I said above, all the negative characterizations specify what basic beliefs do not need for their justification. Whatever items they do not depend on, it is their presence that is unnecessary for the justification of basic beliefs. However, most foundationalists hold that these items could still provide *additional* support for basic beliefs. For example, a foundationalist who construes basic beliefs as beliefs that do not stand in need of other beliefs might still hold that they can receive supplementary support from other beliefs. Because of this, foundationalists often say that basic beliefs can be 'epistemically overdetermined' (e.g. Alston 1976b, 45; Huemer 2001, 102-3; Smithies 2014, 86).

5.2.2 In virtue of what basic beliefs are *justified*

Having considered views on what basic beliefs do *not* need for their justification, another topic of concern is what they *do* need in order to be justified. For whatever basic beliefs do not rely on, there should also be something by which they are justified. Different foundationalists have importantly different views on this also. Despite the variety of opinions, however, a useful distinction can be drawn between two kinds of views. A first type of view on the justification of basic beliefs stresses the role of other mental states:

(States) Basic beliefs are justified by certain *non-doxastic mental states*.

[47] Not only foundationalists give different accounts of basic beliefs. Non-foundationalists, who deny that there are any basic beliefs, also give varying accounts of them. Jonathan Dancy says that basic beliefs are beliefs "which can support others and need no support [from other beliefs] themselves" (Dancy 1985, 53). Jeremy Fantl says that basic beliefs (or believed basic propositions) are justified while standing in need of "no further reason" (Fantl 2003, 539). Michael Williams claims that "[b]y definition, basic beliefs do not depend for their justification on further evidence" (Williams 2007, 96).

Advocates of (States) claim that non-doxastic mental states can justify beliefs without themselves standing in need of justification, and that this enables basic beliefs to terminate epistemic regresses.

During the past decades, a large number of foundationalists have defended (States). According to Pollock (1974, Ch. 3), basic beliefs are justified by being based on certain *appearance states*. For instance, my basic belief that there is a red object before me may be justified through being based on my appearance of a red object before me. In later work Pollock says that basic beliefs are justified by particular *perceptual states* or *memory states* (Pollock 1986, Ch. 5). For instance, my basic belief that I had oatmeal with raisins for breakfast could be justified through my apparent memory of my breakfast.

Huemer's discussion of foundationalism focuses on perceptual basic beliefs. According to Huemer, "perceptual beliefs are justified by the perceptual experiences on which they are based. A perceptual experience can justify a belief in much the same way that a belief can justify another belief" (Huemer 2001, 96-7). For example, when someone has an experience of a red ball on the table, that experience can serve to justify his belief that there is a red sphere on the table (*ibid.*, 103). Although Huemer concentrates his discussion on perceptual basic beliefs, he thinks that basic beliefs can also be justified by memory experiences and intuitions (*ibid.*, 99-100).

Like Huemer, Rescorla assumes that perceptual experiences provide immediate justification for associated beliefs. For example, "my perceptual experience of seeing that a red cube is located before me justifies the belief that a red cube is located before me. The justification does not depend upon ancillary beliefs, such as the belief that my perceptual systems are functioning reliably" (Rescorla 2009, 44-5). Rescorla holds that memories, too, can justify basic beliefs. Thus, my belief that I saw a red cube can be justified by my memory of seeing a red cube, even when I lack ancillary beliefs about the reliability of memory (*ibid.*, 45).

Declan Smithies defends what he calls 'The Experience Thesis', saying that "some beliefs are non-inferentially justified in a way that depends solely upon their relations to experience" (Smithies 2014, 75). While Smithies thinks that this thesis may apply both to beliefs about the physical world and to beliefs about one's inner states, he argues that it especially applies to the latter. Thus, when S believes that he has a particular experience, that belief may be justified by that very experience (*ibid.*, Sect. 2).

On a second sort of view on the justification of basic beliefs, what matters for their justification is not so much other mental states, but particular facts:

(Facts) Basic beliefs are justified in virtue of particular *facts* about them.

Foundationalists endorsing (Facts) claim that basic beliefs are justified by these facts about them, whether or not the subject holding the beliefs bases them on (further beliefs in) those facts or on other mental states. Non-basic beliefs are justified by further beliefs, which may be justified by still further beliefs, but the chain of belief ends with beliefs which are sufficiently justified by these facts.

What facts, according to defenders of (Facts), are sufficient for the justification of basic beliefs? Here different advocates provide different answers. Alston thinks that there are various ways in which basic beliefs can be justified by certain facts about them. Consider S's belief that he currently feels depressed. According to Alston, this belief, being a belief of the sort that it is (e.g. a belief about S's current state of mind), could be justified in virtue of the mere fact that S holds it. In that case, it would be 'self-justified'. It could also be justified by the fact which makes it true, i.e., the fact that S does currently feel depressed. Or it could be justified by the fact that it is formed by a subject who is wide awake, alert, and in full possession of her faculties (Alston 1976b, 48-9). None of the possibilities mentioned by Alston involves the basic belief's being based on a further mental state.

Plantinga, too, thinks that basic beliefs are justified (or 'warranted', cf. fn. 46) in virtue of certain facts about them. According to Plantinga, every justified belief, hence every basic belief, owes its status to the fact that "it is produced by cognitive faculties functioning properly (subject to no malfunctioning) in a cognitive environment congenial for those faculties, according to a design plan successfully aimed at truth" (Plantinga 1993b, viii-ix).

Ginet also thinks of the justification of basic beliefs in terms of particular facts about them. According to him, both *a priori* beliefs and *a posteriori* beliefs can be justified in virtue of certain facts. As for *a priori* beliefs, consider the proposition that anything that lasts exactly one hour lasts exactly sixty minutes. According to Ginet, one may be justified in believing this proposition simply in virtue of the fact that one understands this proposition. After all, that one understands what this proposition says entails

that one believes it. How could epistemic rationality require that one ought not to believe this proposition even though one understands it? (Ginet 2005, 141-2). With regard to *a posteriori* beliefs, Ginet considers the example of someone's belief that he sees a blue smear on a white surface. On Ginet's view, this belief may be justified in virtue of two facts: the fact that his visual experience is as if he sees a blue smear on a white surface and the fact that he is not aware of any reason to think that in this instance things may not be what they visually seem to him to be (*ibid.*, 142-3).

According to Lyons, basic beliefs are justified by facts about the way they are produced (Lyons 2009, 112). In his view, basic beliefs are justified if and only if they result from a reliable perceptual process. However, Lyons emphasizes that their resulting from such a process does not imply that they are based on, for example, a perceptual experience.

Like Lyons, Bergmann maintains that basic beliefs are justified by facts about the way they arise. Roughly speaking, Bergmann's view is that a belief is justified if and only if it is produced by a cognitive faculty that is functioning properly (Bergmann 2006, esp. Ch. 5). A *basic* belief is a belief that is thus produced without being inferred from another belief. Though Bergmann thinks this implies that the belief is caused by an appropriate input to the cognitive process by which it is produced, it does not imply that the belief should also be based on that input (*ibid.*, 61-2).

At this point it is good to point out that both foundationalists holding (States) and foundationalists holding (Facts) think that a basic belief can at most be *prima facie* justified in the way they suggest (e.g. Huemer 2001, 101-2; Rescorla 2009, 44-5). In order for a basic belief to become also *ultima facie* justified, it is assumed that the person holding the belief may not have a *defeater* for it. For example, on a view in line with (States), your belief that there is a blue wall to your left may be *prima facie* justified by your visual experience of a blue wall to your left. However, if you know (or have a justified belief) that there are blue lights shining on that wall, your *prima facie* justification is defeated and your belief fails to be *ultima facie* justified. Similarly, on a theory associated with (Facts), your belief that there is a barking dog in the neighbouring house may be *prima facie* justified in virtue of the fact that this belief is the output of a properly functioning auditory system. Yet, when you come to learn that the boy next door, who is a very skilled imitator of dogs, usually practices his skills at exactly that time of the day, your prima facie justification gets defeated and your belief is not *ultima facie* justified.

Let me summarize the presentation of foundationalism in this and the previous subsection. As we have seen, all foundationalists hold that epistemic chains terminate with basic beliefs. But as to the nature of these basic beliefs, different foundationalists give dissimilar accounts. First, they give different negative accounts of what basic beliefs do not need in order to be justified. Second, they give different positive accounts of the way basic beliefs are in fact justified. With this variety of interpretations at our disposal, we can now turn to consider foundationalism's performance in light of our two central desiderata. Can at least one version of foundationalism avoid both circularity and arbitrariness?

5.3 Foundationalism, Circularity and Arbitrariness

Whether foundationalism can avoid vicious circularity can be established rather easily. In Chapter 3, we developed the following account of what is needed for that:

(AC) An epistemic chain underlying S's belief B*p* avoids being *viciously circular* if and only if B*p* is not itself an indispensable member of that chain.

Of course, foundationalists do not construe epistemic chains underlying beliefs as being circular. They say that a belief, B*p*, may be justified by a further belief, B*q*, which may be justified by a still further belief, B*r*, etc., but that at some point in the chain a belief should be justified by a basic belief, B*b*. When they present epistemic chains in this way, foundationalists assume that the first justified belief (B*p*) does not occur again later in the chain. Hence, they typically assume that the first belief is not a member, let alone an indispensable member, of the chain underlying itself.

However, the fact that epistemic chains as usually presented by foundationalists do not involve circularity does not imply that foundationalist chains *need* not involve circularity. Yet, the stronger claim seems true as well. Foundationalists can simply require that epistemic chains are not viciously circular. That is, they can simply require that an epistemic chain underlying a belief B*p* does not feature B*p* as an indispensable member. B*p* may occur in that chain, thereby maybe even enhancing its justification, but it may not be an indispensable member of the chain. Nothing in the concept of foundationalism prevents its advocates from posing such a constraint. And

often when they talk about other theories, especially linear coherentism, foundationalists also (at least implicitly) endorse something like it (e.g. Alston 1976a, 27; Plantinga 1993b, 177-8; Bergmann 2006, 185).

Whether foundationalism can also avoid *arbitrariness* is much harder to establish. This is due to the fact that (as we saw in chapters 3 and 4) there are two forms of arbitrariness, one objective, the other subjective, where the subjective form involves four conditions, and also to the fact that (as we saw above) foundationalism can be construed in a variety of ways.

I will discuss the relation between foundationalism and arbitrariness in four subsections. In 5.3.1., I will consider three attempts by foundationalists to show that their theory does not, or need not, license arbitrariness. It will become clear that as they stand, these attempts do not suffice to show that foundationalism can avoid arbitrary beliefs. Then, in 5.3.2, I will consider foundationalism in terms of Klein's concept of arbitrariness. I will argue that on his concept, foundationalism can avoid arbitrariness. After the discussion in terms of Klein's account, I will evaluate the theory in light of our extended account of arbitrariness from Chapter 4. In 5.3.3, I will determine whether foundationalism can avoid objective arbitrariness; in 5.3.4, I will discuss foundationalism in relation to subjective arbitrariness.

5.3.1 Three foundationalist arguments

A number of foundationalists have argued that foundationalism does *not* have to allow arbitrariness. As we saw in Chapter 3 (Sect. 3.1), Alston thinks that it is "the aversion to (…) the apparent arbitrariness of the putative foundations" that has led many philosophers to embrace a non-foundationalist theory (Alston 1976a, 36). According to Alston, epistemologists opposing foundationalism might think that

> foundationalism (…) must allow that some beliefs may be accepted in the absence of any reasons for supposing them to be true. And this is (…) arbitrary dogmatism (*ibid.*, 37).

However, Alston thinks the foundationalist has an answer to this arbitrariness worry. It draws on the notion of a meta-justification to the effect that a basic belief is immediately justified. According to Alston, foundationalism

> does not require anyone to accept any belief without having a reason for doing so. Where a person *is* immediately justified in believing that *p*, he may find adequate reasons for the higher level belief that he is immediately justified in believing that *p*. And if he has adequate reasons for accepting this epistemic proposition, it surely is not arbitrary of him to accept the proposition that *p*. What better reason could he have for accepting it? (*ibid.*, 37).

Does this answer show that foundationalism need not allow arbitrariness? By showing that foundationalism leaves room for persons finding meta-justifications in support of their basic beliefs, Alston establishes that foundationalism does not, or need not, *require* that anyone accepts a basic belief without having a reason for it. So perhaps he thereby shows that foundationalism does not, or need not, *require* that anyone accepts an arbitrary basic belief. However, the Kleinian worry for foundationalism, also recognized by Alston in the first quote above, is not so much that it *requires* people to hold arbitrary beliefs, but rather that it *allows* people to hold arbitrary beliefs: that foundationalism implies that some arbitrary beliefs can still be immediately justified. Thus, Alston's reference to the *possibility* of finding meta-justifications in support of basic beliefs does nothing to ensure that basic beliefs *actually* avoid arbitrariness.

Like Alston, Bergmann has also attempted to show that foundationalism need not accept arbitrariness in terms of a meta-justification. But while Alston stresses the possibility of people to *find* meta-justificatory *arguments* in support of their basic beliefs, Bergmann emphasizes the role played by the mere *existence* of meta-justifications. He advices foundationalists to argue that

> a belief for which one has no reason can avoid being arbitrary if it has some feature F such that beliefs having F are noninferentially [i.e., immediately] justified (Bergmann 2004, 164).

On Bergmann's view, the foundationalist may be able to avoid arbitrary beliefs by not just pointing at a *possibility* of meta-justificatory arguments, but by requiring that all basic beliefs are *in fact* supported by an existing meta-justification. When they are supported by such a justification, the person holding the basic beliefs need not have further *beliefs* about these

meta-justification, or be able to *show* that they are supported by the meta-justifications: it suffices if the meta-justifications exist (*ibid.*, 164-5).

While Bergmann's proposal does not suffer from the weakness in Alston's response to the arbitrariness worry, I think it does not fare much better. As we have learned from Klein (cf. Ch. 3), there is an important distinction between beliefs which are objectively arbitrary and beliefs which are subjectively arbitrary. A belief is objectively arbitrary when it is not *in fact* preferable to its alternatives, and a belief is subjectively arbitrary when it is not preferable to its alternatives when judged *from the perspective of the person holding it*. When Bergmann claims that the foundationalist can avoid arbitrary basic beliefs by requiring that they are in fact supported by an existing meta-justification, he may well ensure that foundationalism can avoid *objectively* arbitrary basic beliefs. After all, the existence of a meta-justification for a basic belief might certainly make that belief in fact preferable to its contraries.

But while Bergmann's argument may succeed in showing how foundationalism can avoid objective arbitrariness, it is entirely unclear how the appeal to existing meta-justifications helps the foundationalist in avoiding subjective arbitrariness. Though the existence of a meta-justification can in fact make a belief preferable to its contraries, it does nothing to make it also preferable to its contraries *from the perspective of the subject* as long as he *has no information* concerning the existence of the meta-justification. Even if there exists a meta-justification for a particular belief, adopting that belief can still be subjectively arbitrary as long as the subject has no idea about its existence.

A third argument attempting to show that foundationalism need not accept arbitrary beliefs is given by Rescorla.[48] As an example, Rescorla considers a person, Fred, who believes that *that cube is green*, where this belief is formed by Fred while inspecting a green cube. According to Rescorla, Fred's belief "derives immediate justification from his perceptual experience. If no defeating evidence arises, then the perceptual experience provides all things considered justification for Fred's belief" (Rescorla 2014, 193-4). According to Rescorla,

> Fred's perceptual belief is not arbitrary. It is non-arbitrarily related to Fred's perceptual experiences. Fred may lack the cognitive resources

[48] Strictly speaking, Rescorla defends not foundationalism, but dogmatism, against an arbitrariness worry. This subtle difference can be ignored here.

> to explain to himself or to others what makes the perceptual belief non-arbitrary. So Fred may not be justified in believing that his perceptual belief is non-arbitrary. But this is consistent with the perceptual belief being non-arbitrary (*ibid.*, 194).

So in Rescorla's view, an immediately justified belief can avoid arbitrariness by being 'non-arbitrarily related' to a perceptual experience. It does not matter if S does not know anything about his basic belief being thus related to his experience. It suffices if it *is* thus related.

Does Rescorla show that foundationalism need not allow arbitrariness? As his argument is not put in terms of the existence of meta-justifications of which S may be unaware, but in terms of experiences which S really has, Rescorla may be better situated than Bergmann when it comes to avoiding subjective arbitrariness. This being so, however, his argument remains very sketchy. Rescorla says that beliefs can avoid arbitrariness by being 'non-arbitrarily related' to experiences. But in order to see how they can avoid arbitrariness in this way, he owes us an *account* of beliefs being related to experiences in that way. As long as he has not explained when and how a belief avoids being arbitrary by being related to an experience, Rescorla's argument is at most a (perhaps promising) suggestion for the foundationalist who hopes to ensure that her theory does not allow arbitrary beliefs.[49]

In sum, then, Alston, Bergmann, and Rescorla have not succeeded in showing that foundationalism does not, or need not, allow arbitrariness.

5.3.2 Klein's objection

As we have seen in Chapter 2, Klein maintains that foundationalism cannot meet the arbitrariness desideratum. According to Klein,

> foundationalism is unacceptable because it advocates accepting an arbitrary reason at the base, that is, a reason for which there are no further reasons making it even slightly better to accept than any of its contraries (Klein 1999, 297).

[49] As we will find below, when Rescorla's suggestion is investigated in more detail, it will turn out that it is not as easy for beliefs to avoid arbitrariness with the help of experiences as he assumes.

Elsewhere Klein argues that foundationalism "embrace[s] arbitrariness at the very foundation of all of our beliefs" (Klein 2000, 17; cf. Klein 2007a; 2012). How should we assess Klein's objection?[50]

As for the items supposedly allowed to be arbitrary, we can rely on Klein's claim that foundationalism allows 'arbitrariness at the base' or 'at the foundation of all of our beliefs.' Since what foundationalism posits at the foundation or base are basic beliefs, he means that it is these basic beliefs which are allowed to be arbitrary. As to Klein's notion of arbitrariness, we can fall back on the explanation provided in Chapter 3. On Klein's account, a belief is arbitrary just in case it is not supported by a reason which is both objective and subjective. A reason for a belief is *objective* when it satisfies particular quality requirements. Klein says that there are various concepts of an objective reason, and asks his readers to choose their favourite notion. For the sake of evaluating Klein's objection, we may assume the following rough account of objective reasons, which comes rather close to the first candidate from Klein's list (cf. Klein 1999, 300):

(OR) *r* is an objective reason for S's belief B*p* if and only if *r* makes *p* very probable.

According to Klein, a reason, *r*, is (also) *subjective* just in case S would endorse *r* "at least in some appropriately restricted circumstances" (*ibid.*, 300).

Is foundationalism deemed to allow arbitrary beliefs if we assume Klein's concept of arbitrariness? This depends on what precisely the foundationalist can say about basic beliefs. If she can only construe basic beliefs such that they do not need an objective and subjective reason, she has to accept arbitrariness. Yet if she can also *require* that basic beliefs *are* supported by such a reason, she can avoid arbitrariness. In order to determine whether the foundationalist can require that basic beliefs are supported by an objective and subjective reason, we first need an account of basic beliefs. Let us, for the sake of the argument, assume (No-B) as a negative characterization of basic beliefs, saying that they do not depend for their justification on other *beliefs*. And let us, as regards a positive

[50] In this section I rely on the arguments developed in Engelsma 2015 (esp. sects. 3 and 5). In that paper I also evaluate Klein's objection interpreted as targeting *dialectical* foundationalism (cf. Ch. 2, Sect. 2.4).

characterization, assume that basic beliefs may be justified in line with either (States) or (Facts).

Given our assumptions, the only ground for thinking that the foundationalist cannot require that basic beliefs are supported by an objective and subjective reason is that the presence of such a reason implies the presence of a further belief. If the existence of an objective and subjective reason implies the presence a further belief, foundationalism cannot require that basic beliefs are supported by such a reason. In that case, it cannot avoid arbitrariness. Yet, if the presence of an objective and subjective reason does not imply the presence of a further belief, nothing prevents the foundationalist from requiring that basic beliefs are supported by such a reason. In that case, she can avoid arbitrariness.

Whether the existence of an *objective* reason for S's belief implies that S has a further belief depends on what kinds of items can be objective reasons. If only beliefs can be objective reasons, then the existence of such a reason obviously involves the presence of a further belief. But regardless of whether beliefs can be objective reasons at all, the suggestion that only beliefs can be objective reasons is very implausible. As we saw in Chapter 2, it is very natural to think of reasons for belief as specific *facts* or *features of the world*. Asked for my reason for believing that Kipchoge won the marathon, I will naturally mention the fact that he received a handshake from the Prince; and asked for my reason for believing that it will be raining very soon, I will certainly mention the colour of the clouds. Given (OR), facts and features of the world can also be objective reasons for beliefs. Since the fact that Kipchoge received a handshake from the Prince makes it very probable that he won the marathon, that fact is an objective reason for the belief that he won. And since the colour of the clouds makes it very probable that it will be raining very soon, that colour is an objective reason for the belief that it will be raining. Apart from facts and features of the world, many epistemologists claim that certain perceptual *experiences* can be reasons for beliefs (e.g., Pryor 2000; Alston 2002, 81-5; Turri 2009; Rescorla 2009, 50-4). When a visual experience of a maple tree prompts me to believe that there is a maple tree outside, they say that my experience is an adequate reason for holding that belief. And on (OR), experiences can also be objective reasons: my experience of a maple tree could certainly make it very probable that there is in fact such a tree. Thus, regardless of whether beliefs can be objective reasons, it is clear that many other items can. Hence, nothing prevents

foundationalists from requiring the existence of an objective reason for basic beliefs.[51]

How about *subjective* reasons, though? Does an objective reason being also subjective imply the presence of a further belief? As we have already seen in Chapter 3, it does not. Reasons can be subjective although they are not consciously believed. Even reasons that one has never entertained, such as the 'reason' that apples do not normally grow on pear trees and the 'reason' that 366+71=437, can be subjective. What suffices for such reasons to be subjective is that they are "correctly hooked up to already formed beliefs"; they should be such that a subject would endorse them at least "in some appropriately restricted circumstances." Given this very lenient characterization of subjective reasons, it is obvious that an objective reason being subjective need not involve further beliefs. Hence, foundationalists can require that an objective reason is also subjective.[52]

Neither the existence of objective reasons nor the existence of subjective reasons implies the presence of further beliefs. So assuming (No-B) as our notion of basic beliefs, nothing prevents foundationalism from requiring that they are supported by an objective and subjective reason. Thus on Klein's account of arbitrariness, the foundationalist endorsing (No-B) can avoid arbitrariness. Moreover, that this foundationalist can avoid arbitrariness implies that foundationalists accepting (No-JB) or (No-Bas-B) can avoid it as well. If the existence of an objective and subjective reason for S's belief does not imply that S has a further *belief*, then it certainly does not imply that S has a further *justified* belief, or that S accepts the belief *on the basis of* a further belief.

5.3.3 Avoiding objective arbitrariness

That foundationalism need not allow arbitrariness on Klein's concept does not mean that foundationalism need not allow arbitrariness at all. I now turn to an evaluation of foundationalism in terms of the extended concept of

[51] Presumably, both (States) and (Facts) usually involve the existence of objective reasons (in the sense of (OR)) for basic beliefs. Foundationalists assuming that basic beliefs are justified by non-doxastic mental states will require that those states are objective reasons; foundationalists who think that basic beliefs are justified by certain facts will require that those facts are objective reasons.

[52] In Engelsma 2015 (Sect. 5.3), I show that foundationalists can require objective reasons for basic beliefs to be subjective also on a much stronger notion of reasons being subjective.

arbitrariness that we developed in Chapter 4. In that chapter, we saw that a belief avoids being arbitrary just in case it is neither objectively arbitrary nor subjectively arbitrary. In order to determine whether foundationalism can avoid arbitrary beliefs on the extended concepts of objective arbitrariness and subjective arbitrariness, I will again concentrate on basic beliefs. Since basic beliefs are not supported in the way non-basic beliefs are, it is particularly these beliefs which face a threat of arbitrariness. In the present subsection, I will consider foundationalism with regard objective arbitrariness. In 5.3.3, I will consider foundationalism in relation to subjective arbitrariness.

Let us recall the concept of objective arbitrariness from Section 4.2:

(AOA) S's belief B*p* avoids being objectively arbitrary if and only if there exists a reason, *r*, to the effect that *p* is more probable than *not-p*.

As in Chapter 4, I will call a reason, *r*, which exists and which is a reason to the effect that *p* is more probable than *not-p*, a 'factual reason'.

Whether the foundationalist can avoid objective arbitrariness depends on whether she can require that a basic belief is supported by a factual reason. And whether she can require that depends on the account of basic beliefs she holds. If she endorses (No-B), she cannot require that a basic belief is supported by a factual reason if this implies that the person holding the basic belief has a further belief. If she holds (No-JB), she cannot require that a basic belief is supported by a factual reason if this entails that the person holding the basic belief has a further justified belief. And, finally if the foundationalist assumes (No-Bas-B), she cannot require that a basic belief is supported by a factual reason if this implies that the basic belief is accepted on the basis of a further belief. However, just as in the discussion of Klein's objective reasons, it does not imply any of these things.

As we saw in Section 4.2, (AOA) implies that B*p* can avoid objective arbitrariness even when S has no idea as to whether or how it avoids it. In the discussion of Klein, we saw that facts, features of the world, and experiences can be objective reasons. As it turns out, facts, features of the world, and experiences can also be factual reasons. As for facts, recall the example of my belief that Kipchoge won the marathon. Since the fact that he received a handshake from the Prince makes it very probable that he won the marathon, that fact is not only an objective reason, but also a factual reason for my belief. With regard to features of the world, think again of my belief that it will be raining very soon. Since the colour of the clouds makes it extremely

probable that my belief is true, that colour also constitutes a factual reason for my belief. As for experiences, finally, suppose that my auditory experience of a bus approaching from behind causes me to believe that a bus is approaching. Since my experience makes it very likely that my belief is true, it clearly forms a factual reason for my belief.

Given this variety of items which can be factual reasons, nothing prevents foundationalists endorsing (No-B) from requiring that basic beliefs are supported by a factual reason. They can require the existence of a particular fact, a relevant feature of the world, or a specific experience. Since they can do this, foundationalists can assure that basic beliefs are not objectively arbitrary. And, as became clear above, that foundationalists endorsing (No-B) can avoid objective arbitrariness entails that foundationalists accepting (No-JB) or (No-Bas-B) can avoid it as well.

Not only *can* foundationalists require the presence of a factual reason (and thereby avoid objective arbitrariness), what most foundationalists say about the way in which basic beliefs are justified in fact involves the existence of a factual reason. Foundationalists endorsing a view in line with (States), i.e. who hold that basic beliefs are justified by further mental states, will typically claim that such states should render basic beliefs very probable. Hence, what they require implies that basic beliefs should be supported by a factual reason. Similarly, foundationalists adopting (Facts), i.e. who say that basic beliefs are justified in virtue of certain facts about them, usually assume that those facts should make it very likely that the corresponding basic beliefs are true. Again, what they require entails that those facts are factual reasons for the basic beliefs.

In sum, given the concept of objective arbitrariness developed in Chapter 4, nothing prevents foundationalists from avoiding objectively arbitrary basic beliefs; and on most accounts of the way basic beliefs are justified, foundationalists do in fact assure that basic beliefs avoid objective arbitrariness.

5.3.4 Avoiding subjective arbitrariness

Can foundationalism also avoid subjective arbitrariness? Let us recall the concept of subjective arbitrariness from Chapter 4:

(ASA) S's belief B*p* avoids being subjectively arbitrary if and only if (i) S has a legitimate reason, *r*, for *p*; (ii) S has a justified belief that *r* is

> a reason to the effect that *p* is more probable than *not-p*; (iii) B*p* is based on *r*; and (iv) S does not believe there is a competing reason for not believing *p*.

If foundationalists are to avoid subjective arbitrariness, they have to ensure that basic beliefs meet all four conditions from (ASA). And just as above, they can assure this only if it is allowed by the concept of basic beliefs.

Since clause (iv) is a merely negative condition, it can be dealt with very briefly. Requiring that S does *not* believe certain things about a basic belief does not imply that S should have a further belief, that S should have a further justified belief, or that S should accept the belief on the basis of a further belief. So foundationalists can certainly require that (iv) is satisfied. In fact, given their talk of defeaters as cancelling *prima facie* justification, most foundationalists seem open to accepting (iv) as a requirement on basic beliefs. This leaves us with conditions (i), (ii), and (iii): given S's basic belief B*b*, can the foundationalist require that S has a legitimate reason, *r*, for *b*, that S has a justified belief that *r* is a reason for thinking that *b* is more probable than *not-b*, and that B*b* is based on *r*? Let us consider these three conditions.

(i) Having a legitimate reason, r, *for* b

As we saw in Chapter 4, one can have a legitimate reason for a belief in two ways. First, one can have a legitimate reason by having a further justified belief. Second, one can have a legitimate reason for a belief by having a perceptual experience.

Given these two ways of having a legitimate reason, not all foundationalists, especially not all who accept (Facts) as a positive account of basic beliefs, assure that S has a legitimate reason for *b*. When Alston says that B*b* can be justified by the mere fact that S holds it, or by a fact that makes it true, that need not involve S having a reason for *b*. Similarly, when Ginet writes that B*b* can be justified in virtue of the fact that S understands B*b*'s content, it is unclear whether S thereby has a reason for *b*. And finally, the accounts of Lyons and Bergmann, saying that B*b* is justified as soon as it is formed in a specific reliable way, do not imply that S should have a reason for *b*. Since these foundationalists allow B*b* to be justified even in cases where S has no reason for *b*, they do not require that (i) is satisfied. Hence, they allow basic beliefs which are subjectively arbitrary. On their accounts,

B*b* can be justified even if S does not have any information favouring B*b* over its contraries.

However, that these foundationalists do not ensure that S has a legitimate reason for *b* by no means implies that foundationalists *cannot* ensure that S has such a reason. As it turns out, foundationalists can require that S has a legitimate reason for *b* in a variety of ways. Foundationalists accepting (No-B) or (No-JB) cannot require that S has a reason by having a justified belief, since those accounts rule out that B*b*'s justification depends on another belief or justified belief. However, foundationalists endorsing (No-Bas-B) can require that S has a reason for *b* by having a justified belief, as long as B*b* is not accepted on the basis of that further belief. More important, *all* accounts of basic beliefs enable the foundationalist to require that S has a legitimate reason for *b* by having a perceptual experience. Having a reason for *b* by having an experience does not imply having a further belief, nor having a further justified belief, nor accepting B*b* on the basis of a further belief. Hence, nothing prevents the foundationalist from posing a requirement to the effect that B*b* satisfies condition (i) from (ASA).

And importantly, most foundationalists endorsing (States) as a positive account of basic beliefs think that the justification of basic beliefs implies that S has a legitimate reason by having an experience. As we saw above, Pollock claims that basic beliefs are justified by certain appearance states or, in his later writings, perceptual states and memory states. Other foundationalists, such as Huemer, Rescorla, and Smithies, explicitly say that basic (perceptual) beliefs are justified by perceptual experiences. Presumably, all these foundationalist accounts entail that S has a legitimate reason for *b*.

(ii) Having a justified belief that r *is a reason to the effect that* b *is more probable than* not-b

Can the foundationalist also require that S has a justified belief that *r* is a reason to the effect that *b* is more probable than *not-b*? Foundationalists endorsing (No-B) or (No-JB) certainly cannot require that this clause is satisfied. On their accounts, basic beliefs do *not* depend on other (justified) beliefs. How about the foundationalist who adopts (No-Bas-B)? For her it does not matter if B*b* depends for its justification on a further justified belief, as long as B*b* is not accepted *on the basis of* this further belief. Thus, she could argue that S should have a legitimate reason, *r*, for B*b*, and also a further justified belief that *r* is a reason to the effect that *b* is more probable

than *not-b*, but that this does not imply that S accepts B*b* on the basis of this further justified belief, so that B*b* could still qualify as basic. Is this a viable way of meeting (ii)?

I think that is far from clear. Given (ASA) and given (No-Bas-B), a (putatively) basic belief B*b* avoids arbitrariness when S has a legitimate reason, r_1, for *b*, and a further justified belief, B*c*, that r_1 is a reason to the effect that *b* is more probable than *not-b*, but does not accept B*b* on the basis of B*c*. How about B*c*, though? Since B*c* is a justified belief, the foundationalist who wants to avoid arbitrariness certainly has to require that S also has a legitimate reason, r_2, for *c*, and a further justified belief, B*d*, that r_2 is a reason to the effect that *c* is more probable than *not-c* (where B*c*, if it too is a basic belief, is not accepted on the basis of B*d*).Yet of course, the same line of reasoning applies to B*d*: in order to avoid arbitrariness, the foundationalist should require that S has a legitimate reason, r_3, for *d*, and also a further justified belief, B*e*, that r_3 is a reason to the effect that *d* is more probable than *not-d* (where B*d*, if it too is a basic belief, is not accepted on the basis of B*e*), etc. In other words, the foundationalist who tries to assure that basic beliefs meet clause (ii) from (ASA) by employing interpretation (No-Bas-B) of basic beliefs is confronted with a (new) regress: if B*b* is to meet (ii), that gives rise to a chain of (basic) justified beliefs about the relation between beliefs and reasons for them.

Arguably, the foundationalist has two options: either she claims that this chain should loop back on itself, or she says that it should continue indefinitely. However, both options are very unattractive for her. If she claims that the chain should loop back on itself, she no longer avoids vicious circularity. For in that case, B*b* becomes an indispensable member of the chain underlying itself. Moreover, when she chooses this option, she also ceases to be a foundationalist. Instead, by endorsing the view that beliefs are ultimately justified in a circular manner, she accepts a version of *linear coherentism* (cf. Sect. 2.3). On the other hand, if the foundationalist claims that the chain should continue indefinitely, she clearly abandons the idea that the structure of justified beliefs should terminate with particular foundations. In that case, she accepts *infinitism*.

So, although the foundationalist who accepts (No-Bas-B) as a concept of basic beliefs is in a better position in relation to the satisfaction of condition (ii) from (ASA), even she cannot require that this condition is met while still avoiding circularity and remaining a distinctive foundationalist.

Therefore, we may conclude that foundationalism cannot ensure that basic beliefs satisfy (ii).

*(iii) Basing B*b *on* r

For the moment ignoring the result concerning clause (ii), can the foundationalist assure that B*b* is based on *r*? It may be mentioned at the outset that most foundationalists who claim that basic beliefs are justified by further mental states also think that they should be based on those states (e.g. Pollock 1986, 36-7 and Ch. 5; Huemer 2001, sects. 5.2 – 5.3). But although many foundationalists *do* or *want to* require that basic beliefs are based on a legitimate reason, we may still wonder whether they really *can* require it. Given what it means for a belief to be based on a reason, can foundationalists *consistently* require that a basic belief is based on a legitimate reason? Recall the account of the basing relation defended in Section 4.4:

(BAS) B*p* is based on *r* if and only if B*p* is caused by *r*, and *r*'s causing B*p* is guided by S's belief that *r* supports *p*.

Given this account, can the foundationalist require that S's basic belief, B*b*, is based on a legitimate reason, *r*? Since (BAS) says that basing a belief on a reason involves the presence of a further (guiding) belief, it is clear that the foundationalist assuming (No-B) cannot ensure that B*b* is based on a legitimate reason. As we saw above, she cannot require the presence of any further belief.

The situation is different, however, for foundationalists endorsing (No-JB) or (No-Bas-B). Foundationalists accepting (No-JB) could say that S should have a legitimate reason, r_1, for *b*, and that B*b* should also be based on r_1, which means that S should have a guiding belief, B*c*, that r_1 supports *b*, but that B*c* does not have to be *justified*, so that B*b* can still be basic. Similarly, foundationalists endorsing (No-Bas-B) could say that S should have a legitimate reason, r_1, for *b*, and that B*b* should also be based on r_1, which implies that S should have a guiding belief, B*c*, that r_1 supports *b*, but that this does not mean that B*b* is accepted *on the basis of* B*c*, so that B*b* can still be basic. Is this a promising line of argument for the foundationalist?

As in the discussion of clause (ii), the question is what we should think of this further belief, B*c*. Either this belief may be arbitrary, or it may not. What if the foundationalist allows B*c* to be arbitrary? (BAS) does not

require that B*c* is justified. Hence, when the foundationalist allows B*c* to be arbitrary, this does not entail that she allows arbitrary justified beliefs. Yet, this suggestion is still not very attractive for the foundationalist, for at least two (related) reasons. First, while the foundationalist can ensure that B*b* avoids arbitrariness in this way, the suggestion implies that B*b* depends for its justification on an arbitrary belief. Hence, although B*b* itself avoids arbitrariness, all justified beliefs, including B*b*, ultimately depend for their justification on an arbitrary guiding belief. It is clear that this consequence strongly violates the spirit of foundationalism, which hopes to provide a solid foundation for all our justified beliefs. Second, it is unclear that the suggestion really helps to avoid subjective arbitrariness. While allowing B*c* to be arbitrary does not involve allowing an arbitrary justified belief, it does imply that a *necessary* condition for the justification of B*b* is met by an arbitrary belief. Given the essential role still played by B*c*, I submit that the foundationalist, in his attempt to meet the arbitrariness desideratum, cannot accept the suggestion that B*c* may be arbitrary.

Thus, the foundationalist should require that B*c* avoids arbitrariness as well. However, if she requires that, S should also have a legitimate reason, r_2, for B*c*, and B*c* should also be based on r_2. But of course, this implies that S has a further (guiding) belief, B*d*, that r_2 supports *c*. And for the same reason that B*c* should avoid arbitrariness, B*d* should avoid it as well. Hence, S should also have a legitimate reason, r_3, for B*d*, and B*d* should also be based on r_3; and so on. In other words, the foundationalist who tries to ensure that B*b* satisfies (iii) from (ASA) by endorsing (No-JB) or (No-Bas-B) faces a regress, similar to the one faced in the discussion of condition (ii), of guiding beliefs about the support relation between beliefs and reasons.

And just as in that discussion, this foundationalist has two options: either she claims that the chain of guiding beliefs should loop back on itself, or she says that it should continue indefinitely. However, both options appear to be unacceptable. If she claims that the chain should loop back on itself, she no longer avoids vicious circularity. In that case, B*b* becomes an indispensable member of the chain underlying itself. Moreover, when she accepts this option, she ceases to be a genuine foundationalist and becomes a *linear coherentist*. On the other hand, if she claims that the chain should continue indefinitely, she abandons her foundationalism by becoming an *infinitist*.

While foundationalists accepting (No-JB) or (No-Bas-B) as a concept of basic beliefs are in a better position for ensuring the satisfaction of (iii)

from (ASA), even they cannot require that this condition is met while still avoiding circularity and remaining foundationalists. Hence, despite the fact that many foundationalists want to do so, they cannot ensure that basic beliefs satisfy (iii) on our concept of the basing relation.

Avoiding subjective arbitrariness: summary

Let me summarize the discussion of foundationalism and subjective arbitrariness. As we saw, foundationalists can assure every basic belief meets clauses (iv) and (i) from (ASA). Since (iv) is merely a negative condition, nothing prevents the foundationalist from requiring that it is satisfied. She can assure that (i) is met by requiring that S has a reason for a basic belief by having an experience. However, we also found that the foundationalist cannot assure that every basic belief meets conditions (ii) and (iii). The satisfaction of both conditions engenders a regress of beliefs which forces her to accept circularity or to abandon her foundationalism by endorsing a version of coherentism or infinitism. Hence, we may conclude, foundationalism cannot avoid subjective arbitrariness.

5.4 Conclusion

In this chapter, we have considered foundationalism as a response to the regress problem, and evaluated it in terms of our two desiderata. As we saw, foundationalism holds that chains of justified beliefs must come to an end with basic beliefs which do not depend for their justification on further beliefs in the way that other, non-basic beliefs, depend on further beliefs. It turned out that foundationalism has no problems with avoiding circularity. Nothing prevents the foundationalist from ruling out circular chains, and most foundationalists in fact rule them out. On the other hand, foundationalism cannot avoid arbitrariness in such an easy way. While it can avoid objective arbitrariness, it cannot guarantee that basic beliefs satisfy all conditions for avoiding subjective arbitrariness. Hence, we may conclude that foundationalism can avoid circularity, but not all forms of arbitrariness. Let us see whether other theories could fare better with regard to our desiderata. In the following chapter, we will consider coherentism. In Chapter 7, we will assess infinitism.

6 Coherentism

6.1 Introduction

As we saw in the preceding chapter, foundationalism can avoid circularity, but not all forms of arbitrariness. In particular, since S's belief B*p* avoids subjective arbitrariness only when S has a further belief about the relation between *p* and a reason for *p*, foundationalism turned out unable to ensure that *basic beliefs* avoid subjective arbitrariness. A natural response to this verdict about foundationalism is to consider, or perhaps even adopt, coherentism. Contrary to foundationalism, coherentism holds that every belief depends for its justification on the support from other beliefs. Hence, it may be able to accommodate the further beliefs that foundationalists could not accommodate. In the current chapter, I will consider coherentism and its performance with respect to the desiderata of avoiding circularity and arbitrariness.

In Section 6.2, I will explain coherentism as an alternative response to the regress problem. I will show how coherentists think an infinite regress of beliefs can be avoided even when the foundationalist endorsement of basic beliefs is rejected. In Section 6.3, I will discuss coherentism in relation to our two desiderata. It will turn out that at first sight, coherentists have no trouble with avoiding circularity, but that they can avoid arbitrariness only at the cost of nonetheless accepting circular chains.

6.2 The Epistemic Regress Problem and Coherentism

How does coherentism deal with the epistemic regress problem? As we saw in the previous chapter, foundationalism solves the problem by claiming that chains of justified beliefs should come to an end with basic beliefs. These basic beliefs are supposed to be justified without relying for their justification on further (justified) beliefs, or without being accepted on the evidential basis of further beliefs. Some foundationalists hold that basic beliefs are justified by further mental states; others think that they are justified in virtue of particular facts about them.

Coherentists strongly disagree with this foundationalist solution. According to them, there cannot exist any basic beliefs, since it is impossible for a belief to be justified without relying on the support provided by further beliefs. Whenever a belief is justified, that always involves a reliance on

other background beliefs. According to Lehrer, even "[t]he most modest beliefs turn out to be ones requiring independent information for their justification" (Lehrer 1974, 107). According to BonJour,

> there is no way for the foundationalist's allegedly basic empirical beliefs to be genuinely justified for the believer in question without that justification itself depending on further empirical beliefs which are themselves in need of justification (BonJour 1985, 84; cf. Poston 2014, Sect. 2).

Yet, if coherentists think that a belief always requires support from further beliefs, how do they deal with the regress problem? If all beliefs depend for their justification on further beliefs, how can any belief be justified at all?

One possibility would be to maintain that epistemic chains should be *circular*. Thus, one could envision an epistemic chain where B*p* is justified by B*q*, B*q* is justified by B*r*, B*r* is justified by B*s*, etc., until at some point in the chain a particular belief is again justified by B*p*. On this proposal, epistemic chains should form a loop. However, since the circularity involved by this suggestion is assumed to be so obviously vicious, no coherentist has ever defended such a view as a serious response to the regress problem.

What, then, is the coherentist response? Instead of claiming that epistemic chains should be circular, coherentists approach the issue in a more fundamental way: they question the nature of the regress problem itself. Both in formulations of the problem and in the foundationalist solution to it, it is taken for granted that justification is *linear*. That is, it is taken for granted that a belief should always be justified by one or more further beliefs, where these further beliefs should be justified by still further beliefs, etc., so that the justification of one belief always yields a *chain* of beliefs each of which is justified by one or more further beliefs. It is the thought of such an expanding linear chain of beliefs that gives rise to the question how that chain should continue (if it should continue at all). Crucially, coherentists reject this assumption that justification is linear. They reject the assumption that a belief is always justified by one or more further beliefs, which are justified by even further beliefs, etc. Thus coherentists deny that the justification of one particular belief gives rise to an endlessly expanding chain of beliefs. Consider Sellars's comment on the linear picture of justification:

> Above all, the picture is misleading because of its static character. One seems forced to choose between the picture of an elephant which rests on a tortoise (What supports the tortoise?) and the picture of a great Hegelian serpent with its tail in its mouth (Where does it begin?). Neither will do (Sellars 1963, 170).

Such a rejection of the linear view of justification can be found in the writings of many coherentists. After expressing his dissatisfaction with foundationalism, BonJour writes that

> the primary coherentist response to the regress problem cannot be merely that justification moves in a circle, for this would be quite futile by itself; rather such a position must repudiate the linear conception of justification in its entirety (BonJour 1985, 90; cf. Lehrer 1974, 16; 2000, 16; Poston 2012).

Yet, if justification is not linear, what is it? The coherentist answer to this question is that justification is intrinsically *holistic*. When a belief is justified, the coherentist claims, it is not justified by one or more further beliefs, which are justified by still further beliefs, etc.. Rather, it is justified in virtue of the fact that it is a member of a *set* of beliefs. More specifically, the coherentist claims that a belief is justified in virtue of the *coherence* of the set of which it is a member. Again consider BonJour:

> What might a nonlinear conception of justification amount to? (…) [T]he main idea is that inferential justification, despite its linear appearance, is essentially systematic or holistic in character: beliefs are justified by being inferentially related to other beliefs in the overall context of a coherent system (*ibid.*, 90).[53]

According to BonJour, a belief is justified just in case it is a member of a coherent set of beliefs. Many coherentists agree with BonJour that what matters for a belief's justification is its coherence with other *beliefs* (e.g. Sellars 1963, 170; Dancy 1985, Ch. 8;[54] Lehrer 2000, 16-7). Other

[53] In a later stage of his career, BonJour has left coherentism and turned into a foundationalist (see esp. BonJour 1999 and 2003). When I discuss BonJour's position in the current chapter, what I have in mind is his early work.

[54] It strikes me that Klein (2011, 494) and Turri and Klein (2014b, 16; 2016, Sect. 4d) call Dancy a 'contemporary foundationalist'. Especially chs. 4-9 of Dancy 1985, and

coherentists defend a more liberal view, according to which a belief's justification is determined not only by its coherence with other beliefs, but by its coherence with other *beliefs and experiences* (e.g. Kvanvig and Riggs 1992; Kvanvig 1995; Cohen 2002; Berker 2015).[55] I will follow Berker by calling the form of coherentism on which a belief's justification is fully determined by its coherence with other beliefs *doxastic coherentism*, and by calling the form of coherentism on which a belief's justification is determined by its coherence with other beliefs and experiences *non-doxastic coherentism* (*ibid.*, 333).

On the basis of the above characterizations, I will assume that coherentism is the view which affirms the following:

> S's belief B*p* is justified if and only if B*p* is a member of a sufficiently coherent set of beliefs (and experiences).

Of course, this characterization is only a first step towards a mature epistemic theory. In order to develop a serious coherentist position, a lot of work needs be done in order to spell out, for instance, when a set of beliefs (and experiences) is 'sufficiently coherent', when a belief (or an experience) is a 'member of a set of beliefs (and experiences)', etc. Different coherentists analyze these notions in different ways. However, the above characterization of coherentism will suffice for current purposes.

Because coherentism implies that the justification of a belief does not engender a *chain* of justified beliefs, several epistemologists have argued that coherentism is just a special sort of foundationalism. According to Plantinga,

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also Dancy 1984, make it clear that he favours coherentism. At some point Dancy even argues that there is "a reason for rejecting all forms of foundationalism" (Dancy 1985, 83). Dancy recognizes much holism in the writings of Quine, but argues that Quine's holism is incomplete (Dancy 1984, 361; 1985, Sect. 7.4). Because of the 'asymmetries' and the 'two-tier structure' still to be found in Quine's epistemology, Dancy calls him a foundationalist (Dancy 1985, Sect. 7.2). Dancy himself defends a version of holistic coherentism that is meant to "out-Quine Quine" (Dancy 1985, 103; chs. 8-9; cf. Dancy 1984, Sect. II).

[55] Kvanvig argues that there is nothing about the nature of coherentism which implies that only relations among beliefs are relevant for justification. He claims that this 'doxastic assumption' is just one of "coherentists' distractions" which "focus attention elsewhere than on the important tasks for coherentists, which are to clarify the nature of coherence and demonstrate the superiority of coherentism to foundationalism" (Kvanvig 1995, 258).

> the coherentist reveals her true colors as a nonstandard foundationalist with unusual views about what is properly basic [i.e. with unusual views to the effect that only beliefs cohering with other beliefs are properly basic] (Plantinga 1993a, 79).

Similarly, Klein argues that coherentism is just a form of "foundationalism in disguise" (Klein 1999, 297). Coherentists, Klein writes,

> are really closet foundationalists because it is not the propositions within a set of coherent propositions that serve as reasons for other beliefs in the set; rather *the* reason for every belief in the set is simply that it is a member of such a set (*ibid.*, 298).

Elsewhere Klein calls coherentism "one step foundationalism" (Klein 2005, 135; cf. Sosa 1980, Sect. 7; Bergmann 2006, 186).

Whether Plantinga and Klein are right that coherentism is just a version of foundationalism depends on one's concept of basic beliefs (cf. Sect. 4.2.1). If one construes basic beliefs like Plantinga, viz. as justified beliefs which are not accepted on the evidential basis of other beliefs, then the claim may be true. After all, the coherentist thinks it suffices that a belief is a member of a coherent set of beliefs (and experiences), and being such a member certainly need not involve being accepted *on the basis of* other beliefs. The situation is different, however, if it is assumed that basic beliefs are justified beliefs that do not depend for their justification on other (justified) beliefs. Since coherentism holds that a belief is justified only if it coheres with other beliefs, its justification certainly requires the presence of those other beliefs. Hence, on the latter concept of basic beliefs, it is not the case that coherentism is just a special version of foundationalism.

6.3 Coherentism, Circularity and Arbitrariness

Now that we have a rough understanding of the nature of coherentism, let us see how the theory fares in the light of our two desiderata for epistemic theories. Given the characterization given above, it seems that coherentism need not run a serious risk of allowing circular chains. Recall the account of epistemic circularity from Chapter 3:

(AC) An epistemic chain underlying S's belief B*p* avoids being *viciously circular* if and only if B*p* is not itself an indispensable member of that chain.

With this account of epistemic circularity, it appears rather obvious that coherentism need not allow circular epistemic chains. Coherentism holds that B*p* is justified just in case it is a member of a sufficiently coherent set of beliefs (and experiences). Since B*p*'s membership of such a set is both necessary and sufficient for its justification, that justification need not involve the existence of an epistemic *chain* underlying B*p* at all. Hence, neither need it involve the existence of an epistemic chain of which B*p* is itself an indispensable member. Thus, at first sight coherentism does not face a threat of sanctioning circularity.[56]

Can coherentism also avoid arbitrariness? I will address that question in the following three subsections. In 6.3.1, I will consider Klein's claim that coherentism cannot avoid it. It will turn out that on his concept, coherentism can avoid arbitrariness. After discussing Klein's claim, I will evaluate coherentism in light of our extended account of avoiding arbitrariness. In 6.3.2, I will consider whether coherentism can avoid objective arbitrariness; in 6.3.3, I will discuss coherentism in relation to subjective arbitrariness.[57]

6.3.1 Klein's objection to coherentism

As we saw above, Klein holds that coherentism is just a special type of foundationalism. Hence, he thinks that coherentism, too, fails because it cannot avoid arbitrariness. As Klein puts it somewhere,

> [c]laiming that a belief is justified because it is a member of a set of propositions that is coherent cannot stop the regress in any but an arbitrary way (Klein 1999, 304; cf. Klein 2005, 135).

[56] I say 'at first sight' because later on in this chapter, it will become clear that the coherentist nevertheless faces a serious threat of licensing circularity when she also wants to avoid arbitrariness.

[57] In a recent paper, Poston claims that coherentism can avoid both circularity and arbitrariness (Poston 2012, esp. Sect. 3). Yet, it remains unclear *how* precisely Poston thinks coherentism can do this. In any case, he does not establish that coherentism can do it on concepts of circularity and arbitrariness like the ones we developed in chapters 3 and 4.

Is Klein right that coherentism sanctions arbitrariness? In order to answer this question, we should establish two things at the outset: first, what items the coherentist supposedly allows to be arbitrary and, second, what is meant by 'arbitrary'. As to the relevant items, it is useful to regard Klein's remark that coherentism is just a version of 'one step foundationalism'. He uses this label because coherentism holds that a belief is justified if and only if it is a member of a coherent set. Since every justified belief is justified *in virtue of that membership*, and not, say, by on one or more further beliefs, Klein takes the coherentist to hold that every justified belief is a basic belief. And since Klein's objection to foundationalism is that it allows arbitrary basic beliefs, it is warranted to assume that he thinks coherentism allows *every* justified belief to be arbitrary.

As to Klein's notion of arbitrariness, we may recall the explanation provided in Chapter 3: a belief is arbitrary just in case there is no reason for it which is both objective and subjective. Let us, again for the sake of evaluating Klein's objection, assume the rough account of an objective reason that we also assumed in the discussion of Klein's objection to foundationalism:

(OR) *r* is an objective reason for S's belief B*p* if and only if *r* makes *p* very probable.

As we have seen, *r* is (also) subjective just in case S would endorse *r* in suitably restricted circumstances.

Given Klein's concept of arbitrary beliefs, the question is whether coherentism should allow beliefs for which there is not an objective and subjective reason. If the coherentist is somehow forced to permit justified beliefs for which there is no such reason, it follows that she sanctions arbitrariness. On the other hand, if she can require that there exists an objective and subjective reason for every justified belief, then nothing prevents her from ruling out arbitrary beliefs.

Can the coherentist require that every justified belief is supported by an *objective* reason? Given that she holds that the coherence of a set is *sufficient* for B*p*'s justification, what items could she think of as reasons which make a belief very probable? One rather natural candidate comes from the suggestion to interpret not only justification, but also *truth* in a coherentist way, for example in the way this has been done by Dancy (1985, Sect. 8.2). On a coherentist theory of truth, a proposition is true just in case it

suitably coheres with other (believed) propositions. If truth is construed in this way, an obvious objective reason for a belief is the fact that it coheres with other beliefs. Given the assumed concept of truth, that fact certainly makes the belief very probable.

Yet, while the suggestion to construe truth as coherence provides the coherentist with objective reasons for justified beliefs, most coherentists will not find it acceptable. For example, BonJour assumes that the coherentist has a serious problem if the only way to save her theory is "by adopting a coherence theory of truth and the absurd idealistic metaphysics which goes along with it" (BonJour 1976, 289). Rather than a coherentist theory of truth, most coherentists assume, at least implicitly, a correspondence theory (e.g. BonJour 1976, 303).

Another possible objective reason is provided by the thought that the coherence of a set of beliefs is indicative of the truth of those beliefs even on a correspondence theory of truth. It has sometimes been suggested that coherence is truth conducive in this way (e.g. BonJour 1985, 147-8; cf. Roche 2010; 2014). If coherence is truth conducive, then the fact that a belief set is coherent may clearly make the (contents of) beliefs in that set very probable. Hence, this fact might also be a good candidate for being an objective reason. On the other hand, several other epistemologists have presented arguments to the effect that coherence among beliefs is *not* truth conducive (e.g. Klein and Warfield 1994; Olsson 2005). If they are right, the fact that a belief set is coherent cannot be an objective reason for a belief.

A third option for the coherentist is to assign a special role to perceptual input from the outer world. This option seems especially appealing for non-doxastic coherentists. As we saw earlier, they hold that the justification of a belief is determined by its cohering with other beliefs *and experiences*. Perhaps non-doxastic coherentists can say, not only that justification is determined by coherence with beliefs and experiences, but that a coherent set *should* contain a suitable amount of experiences. Requiring this gives her a natural possible objective reason: the fact that a belief set is coherent *and contains an appropriate amount of experiences*. This fact could make beliefs within that set very probable.

Doxastic coherentists might also assign a special role to perceptual input from the world. According to BonJour, in order to circumvent some traditional worries for her theory, the doxastic coherentist should give a special role to beliefs which are 'cognitively spontaneous', i.e. beliefs which are directly 'caused by the world' (Bonjour 1976, 300). For example,

> [a]s I look at my desk, I come to have the belief, among many others, that there is a red book on the desk. This belief (…) is not arrived at via any sort of conscious ratiocinative process, but simply occurs to me, strikes me, in a coercive manner over which I have no control (*ibid.*, 291).

BonJour assigns a special role to observation by requiring that coherent sets contain beliefs in "laws attributing a high degree of reliability to a reasonable variety of kinds of cognitively spontaneous beliefs" (*ibid.*, 301; cf. BonJour 1985, 141). By imposing this 'observation requirement', BonJour hopes to assure that beliefs which are justified according to the doxastic coherentist are not cut off from the external world (BonJour 1976, 301-2). When a coherentist imposes a requirement like BonJour's observation requirement, this too provides her with a possible objective reason, viz. the fact that a belief set is coherent *and meets the observation requirement*. Perhaps the fact that a set is coherent and satisfies the requirement makes its members very probable.

Yet while giving a special role to input from the outer world seems to give the coherentist possible objective reasons, it is unsure whether everyone agrees that these possible reasons are in fact objective reasons according to (OR). As for the non-doxastic coherentist proposal, some may argue that the fact that a belief set is coherent and contains an appropriate amount of experiences does *not* make beliefs in that set very probable. There may always be an incompatible set of beliefs, with exactly the same amount of experiences, or even exactly the same experiences, which is equally coherent. In that case, the fact that a particular set is coherent and contains the required amount of experiences cannot make the beliefs in that set very probable. The same worry applies to the doxastic coherentist proposal: some will argue that the fact that a belief set is coherent and meets an observation requirement does *not* make beliefs in that set very probable: there may always be an equally coherent but incompatible set of beliefs which also satisfies the observation requirement. In that case, the fact that a set is coherent and meets the requirement cannot make beliefs in that set very probable.

However, apart from the rather *global* objective reasons considered so far, i.e., general facts about the coherence of beliefs (and experiences) and facts about coherent sets meeting a general requirement, the coherentist can also think of more *specific* items as objective reasons. First, she can think of specific facts as objective reasons for belief. If the fact that Kipchoge

received a handshake from the Prince makes it very probable that he won the marathon, (OR) implies that that fact is an objective reason for the belief that he won. For another example, if the fact that a belief is reliably formed makes it very probable that that belief is true, that fact counts as an objective reason for it. Second, the coherentist can think of specific features of the world as objective reasons. Since the current state of the Yen makes it very probable that it would be best for me to buy these pretty shoes in Japan, that state constitutes an objective reason for my belief that it would be best to buy them there. Third, the non-doxastic coherentist can think of specific experiences as objective reasons. If my visual experience of a blue wall to my left makes it very probable that there is a blue wall, (OR) renders that experience an objective reason for my belief that there is a blue wall.

At this point one may wonder whether the coherentist, when she requires that every justified belief is supported by an objective reason, and where she thinks that especially facts, features of the world, and experiences can be objective reasons, does not cease to be a genuine coherentist. After all, her view now becomes that S's belief B*p* is justified if and only if B*p* is a member of a sufficiently coherent set of beliefs (and experiences) *and* B*p* is supported by an objective reason, typically a fact, feature of the world, or experience. But when the coherentist thinks of facts, features of the world, or experiences supporting justified beliefs in this way, does not her view become indistinguishable from that of the foundationalist? The foundationalist also thinks that S's beliefs are justified by specific facts or experiences, and she also thinks S's beliefs should not be incoherent with his other beliefs. So, it appears that the coherentist who requires the existence of objective reasons in the way suggested here actually is a foundationalist.

I think this need not be so for two reasons. First, although the foundationalist also thinks that S's justified beliefs should not be *incoherent* with his other beliefs, she does not claim that they should also be very *coherent* with his other beliefs. According to the foundationalist, B*p* can be justified even when B*p* does not cohere with any of S's other beliefs, for instance when B*p* concerns a topic about which S has never formed beliefs before, or when B*p* is caused by an experience entirely new to S (cf. Plantinga 1993a, 82-3). Second, while the foundationalist claims that chains of justification terminate with basic beliefs, which are supposed to be justified without the need of other (justified) beliefs, or without being accepted on the basis of other beliefs, the coherentist who requires the existence of an objective reason, and thereby particularly thinks of facts,

features of the world, and experiences, need not accept the presence of basic beliefs. She can still hold that every belief depends for its justification on other (justified) beliefs, and she can even require that every justified belief is accepted on the evidential basis of another belief (cf. Kvanvig and Riggs 1992, 211; Kvanvig 1995, 263-4; Berker 2015, 333-5).

We may assume, then, that the coherentist can require that there exists an objective reason for every justified belief. Requiring this, she can think of very global facts about coherence and about sets meeting general requirements, although it is unsure whether very many of such facts will qualify as objective reasons. But she can also think of more specific facts, features of the world, or experiences.

Can the coherentist also require that an objective reason is *subjective*? Nothing in the concept of coherentism or in the concept of a subjective reason prevents her from doing this. Yet if the coherentist requires that an objective reason is also subjective, how often is that requirement satisfied? As for the global facts about coherence and facts about belief sets meeting an observation requirement, these will not be subjective to very many people. After all, not very many people may be able to even grasp the thought that a set of beliefs (and experiences) is coherent, or the thought that a belief set meets an observation requirement. And if they cannot grasp these thoughts, it is not so clear how the corresponding facts could really be subjective to them. Yet, given that Klein's concept of subjective availability is very lenient (cf. Sect. 3.3.2), it may be possible on that concept that even such facts are subjective.

But apart from the global facts, it is obvious that the more specific facts, features of the world, and experiences can naturally be subjective to many people. When the fact that Kipchoge received a handshake from the Prince is an objective reason for S's belief that Kipchoge won the marathon, this reason is also subjective to S when S believes that Kipchoge received the handshake, or when S is able to discover that Kipchoge received the handshake, e.g. by watching a television report of the ceremony. In a similar way, when a specific feature of the world is an objective reason for S's belief, that feature can also be subjective to S is various ways. As for experiences, finally, these are subjective states by nature. Hence, when an experience is an objective reason for S's belief, it is at the same time a subjective reason.

We may conclude that on Klein's concept of an objective and subjective reason, the coherentist can assure that every justified belief is

supported by such a reason. Hence, on Klein's concept of arbitrariness, coherentism need not allow arbitrary beliefs.[58]

6.3.2 Avoiding objective arbitrariness

Coherentism need not sanction arbitrariness on Klein's concept of arbitrary beliefs. Yet, that does not imply that it need not sanction arbitrariness at all. I now turn to consider whether coherentism can also avoid arbitrariness on our extended account from Chapter 4. In that chapter, we saw that in order for a belief to avoid being arbitrary, it should be neither objectively arbitrary nor subjectively arbitrary. In the present subsection, I will consider whether coherentism can avoid objective arbitrariness. In 6.3.3, I discuss coherentism's prospects with regard to the avoidance of subjective arbitrariness.

In order to find out whether coherentism can rule out objectively arbitrary beliefs, let us recall the concept of objective arbitrariness from Section 4.2:

(AOA) S's belief B*p* avoids being objectively arbitrary if and only if there exists a reason, *r*, to the effect that *p* is more probable than *not-p*.

As before, I will call a reason, *r*, which exists and which is a reason to the effect that *p* is more probable than *not-p*, a 'factual reason'.

Can the coherentist require that every justified belief is supported by a factual reason? What items could she think of as factual reasons? Given the work already done in the discussion of Klein's claim about coherentism, I think we can be rather brief here. In that discussion, it turned out that when the coherentist wants to assure that every justified belief is supported by an objective reason, she can think of several items: general facts about coherence, general facts about coherent sets meeting an observation requirement, specific facts and features of the world, and perceptual experiences. Since some of these items, especially the latter three, can sometimes make a belief very probable, they can be objective reasons for beliefs, and the coherentist can realistically require that there is an objective reason for every justified belief by thinking specifically of them.

[58] For an additional argument to the effect that coherentism need not allow (circularity or) arbitrariness on Klein's account(s) thereof, see Poston 2014, esp. Sect. 3.

However, that the coherentist can require that there is an *objective* reason for every justified belief in an obvious way *implies* that she can require that there is a *factual* reason for every justified belief. After all, if *r* makes *p* very probable, then *r* is definitely a reason to the effect that *p* is more probable than *not-p*. So if the coherentist can realistically require that every justified belief is supported by a reason which makes *p* very probable, she can also realistically require that every justified belief is supported by a reason to the effect that *p* is more probable than *not-p*.

So, just as the coherentist can assure that every justified belief is supported by an objective reason, she can also ensure that every justified belief is supported by a factual reason. Therefore, coherentism can avoid objective arbitrariness.

6.3.3 Avoiding subjective arbitrariness

Can coherentism avoid subjective arbitrariness also? Let us recall our account from Chapter 4:

(ASA) S's belief B*p* avoids being subjectively arbitrary if and only if (i) S has a legitimate reason, *r*, for *p*; (ii) S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*; (iii) B*p* is based on *r*; and (iv) S does not believe there is a competing reason for not believing *p*.

If coherentists want to avoid subjective arbitrariness, they have to ensure that every justified belief meets all four conditions from (ASA).

As in the discussion of foundationalism, we can be very brief about clause (iv). Nothing in the concept of coherentism prevents the coherentist from posing this negative requirement. This leaves us with conditions (i), (ii), and (iii): can the coherentist require that for every justified belief, B*p*, held by S, S has a legitimate reason, *r*, for *p*, S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*, and B*p* is based on *r*? Let us consider what the coherentist can say with regard to these three conditions.

(i) Having a legitimate reason, r, *for* p

As we assumed in Chapter 4, one can have a legitimate reason for a belief in two ways: by having a further justified belief and by having a perceptual

experience. Given that this is how one can have a legitimate reason, can the coherentist require that S has a legitimate reason for every justified belief?

As we saw above, doxastic coherentists hold that a belief's justification is fully determined by its coherence with other beliefs. Hence, these coherentists presumably think that one can only have a legitimate reason for a belief by having a further justified belief. Consider this passage from Lehrer:

> In whatever way a man might attempt to justify his beliefs, whether to himself or to another, he must always appeal to some belief. There is nothing other than one's belief to which one can appeal in the justification of belief. There is no exit from the circle of one's beliefs (Lehrer 1974, 187-8).

In a similar vein, Davidson famously endorses the claim that "nothing can count as a reason for holding a belief except another belief" (Davidson 1983, 141; cf. BonJour 1985, Ch. 4).

Can the doxastic coherentist assure that S has a legitimate reason for every justified belief through having a further belief? This appears to be rather problematic. Consider B*p*. Suppose S has a reason for *p* by having a further belief, B*q*. Since S has a legitimate reason for *p* by having B*q* only if B*q* is justified, B*q* should avoid arbitrariness as well. Hence, S should also have a legitimate reason for *q*. According to the doxastic coherentist, this means that S should have a still further belief, B*r*. But of course, B*r* should be justified too, which means that S should have a reason for *r* as well, which implies that he should have an even further belief, B*s*, etc.

Thus the condition specifying that S should have a legitimate reason for *p* confronts the doxastic coherentist with a chain of justified beliefs. Since doxastic coherentists usually deny that we have (or can have) infinitely many beliefs (e.g. BonJour 1985, 24), they are forced to hold that this chain loops back on itself at some point. Thus, S would have a legitimate reason for *p* by having B*q*, a legitimate reason for *q* by having B*r*, etc., until at some point in the chain he has a legitimate reason for a belief by having B*p* (or another belief which occurred earlier in the chain). Given our concept of circularity, this would imply that the doxastic coherentist, while explicitly insisting on

not doing so, licenses vicious circularity. Hence, the doxastic coherentist can satisfy condition (i) from (ASA) only at the cost of permitting circularity.[59]

The situation is different for non-doxastic coherentists. In their view, a belief's justification is determined by its coherence with other beliefs and experiences. Hence, we may assume, they think that one can have a legitimate reason for a belief both by having a further justified belief and by having an experience. For that reason, the non-doxastic coherentist can require that S has a legitimate reason for every justified belief, either by having a further justified belief or by having an experience, and that any chain arising because S has reasons for beliefs by having further beliefs ends with S having a reason for a belief by having an experience. Thus, consider again B*p*. S can have a legitimate reason for *p* either by having a further justified belief or by having an experience. If S has a reason for *p* by having a further justified belief, say B*q*, then S should also have a legitimate reason for *q*. S can have a legitimate reason for *q* either by having a further justified belief or by having an experience. If S has a reason for B*q* by having a further belief, say B*r*, then S should also have a legitimate reason for *r*. However, at some point in this chain, S should have a legitimate reason for a belief not by having a further justified belief but by having an experience.

Hence, by allowing S to have a legitimate reason for a belief by having an experience, the non-doxastic coherentist can assure that S has a legitimate reason for every justified belief from the coherent set, without thereby requiring endless or circular chains of beliefs. So, unlike the doxastic coherentist, the non-doxastic coherentist can ensure that every justified belief meets clause (i) from (ASA).[60]

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[59] Given their judgment about linear coherentism, doxastic coherentists should not be happy to allow such circularity. According to BonJour, for instance, a coherentist may never adopt the view that "justification moves in a circle, for this would be quite futile by itself" (BonJour 1985, 90).

[60] Usually non-doxastic coherentists invoke experiences not in response to worries concerning endless regresses or circularity, but in order to deal with (more) standard objections to coherentism. Kvanvig and Riggs (1992, 212-3), Kvanvig (2007, Sect. 3.2) and Berker (2015, 333) employ experiences in their response to the 'isolation objection' or 'input problem'. Kvanvig and Riggs also advance experiences in response to what they call the 'the data problem' (*ibid.*, 213-5).

A worry immediately coming to mind when a coherentist introduces experiences in order to avoid an endless regress is that her position becomes just a special form of foundationalism. According to Plantinga, when a coherentist invokes experiences in such a way, "[her] views may then become indistinguishable from those of the ordinary foundationalist" (Plantinga 1993b, 182). Several epistemologists have responded that coherentism has a way to allow experiences as reasons without lapsing

(ii) Having a justified belief that r *is a reason to the effect that* p *is more probable than* not-p

Can the coherentist ensure that S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*? Apparently, this is very hard not only for the doxastic but also for the non-doxastic coherentist, since this clause requires not merely that S has a legitimate reason for *p*, but also that he has a further justified belief about the relation between that reason and *p*. And the latter requirement engenders a chain of beliefs even on the view that one can also have legitimate reasons by having experiences.

To illustrate the problem, consider B*p*. On condition (ii), S should have a legitimate reason, r_1, for *p*, and a justified belief, B*s*, that r_1 is a reason to the effect that *p* is more probable than *not-p*. Yet since B*s* is justified, S should also have a legitimate reason, r_2, for *s*, and a justified belief, B*t*, that r_2 is a reason to the effect that *s* is more probable than *not-s*. But again, since B*t* is justified, S should also have a legitimate reason, r_3, for *t*, and a justified belief, B*u*, that r_3 is a reason to the effect that *t* is more probable than *not-t*; etc.

So whether S can have reasons for his beliefs only by having further beliefs or also by having experiences, clause (ii) gives rise to a chain of beliefs about the relation between his reasons and his beliefs. But if the coherentist is right that we cannot (or do not) have infinitely many beliefs, this chain should loop back on itself at some point. Hence, both doxastic and non-doxastic coherentists can ensure that B*p* meets condition (ii) only at the cost of sanctioning circularity.[61]

*(iii) Basing B*p *on* r

Temporarily ignoring the result concerning clause (ii), can the coherentist ensure that every justified belief is *based* on a legitimate reason?

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into foundationalism. See esp. Kvanvig and Riggs (*ibid.*), Kvanvig (1995), and Berker (*ibid.*, 333-5). I think the latter authors are right, for reasons similar to the ones mentioned in Section 6.2.

[61] As I explained in fn. 59, doxastic coherentists should not like this result. Given the vigor with which non-doxastic coherentists like Kvanvig and Riggs condemn the circularity supposedly to be found in the writings of BonJour, they should not appreciate it either (*ibid.*, 212). On the other hand, Selim Berker defends a non-doxastic coherentism which accepts circular chains, but denies that such chains are inherently vicious (Berker 2015, 335-8). I will come back to Berker's argument concerning putatively benign circularity in Chapter 8.

Interestingly, several epistemologists have argued that coherentists cannot accommodate a basing requirement. According to Pollock, the coherentist cannot accommodate such a requirement because of her view on the nature of justification. The coherentist holds that S's belief B*p* is justified just in case it coheres with S's other beliefs (and experiences). Since it is B*p*'s cohering with S's other beliefs which is responsible for B*p*'s justification, says Pollock, the coherentist who wants to impose a basing requirement is committed to the claim that B*p* should also be *based* on its cohering with S's other beliefs (Pollock 1986, 82). However, since the basing relation is a causal relation, it is very hard to see how such a requirement could be met. For given the coherentist view on what confers justification, and given that basing is causal,

> the coherence relation (whatever it is) must be such that the belief's cohering with one's overall doxastic system *can* cause one (in an appropriate way) to hold the belief. The coherence relation must be "appropriately causally efficacious" in the formation of belief (*ibid.*, 82).

According to Pollock, there are two ways in which the coherence relation could possibly 'cause one to hold the belief.' A first possibility is that B*p*'s cohering with S's other beliefs could cause S to hold B*p* by means of his holding a further belief, B*q*, to the effect that B*p* coheres with those other beliefs. This possibility appears to be very problematic, though. One obvious problem is that "we do not ordinarily have any such beliefs about coherence" (*ibid.*, 82). Moreover, even if we usually had such beliefs, the proposal would yield an infinite regress. On the proposal, when S holds B*p*, he should have a further belief, B*q*, to the effect that B*p* coheres with S's other beliefs. But presumably, B*q* would have to be justified also. In that case, S needs a still further belief, B*r*, that B*q* coheres with S's other beliefs. And by the same lights, B*r* should be justified as well, which would require that S has a still further belief, B*s*, about B*r*'s cohering, etc. In Pollock's view, these considerations suffice to show that the causation of B*p* by B*p*'s cohering with S's other beliefs cannot be thought of in terms of S holding a further belief *about* B*p*'s so cohering (*ibid.*, 82).

A second possibility for the causation of B*p* by its cohering with S's other beliefs is that its cohering can cause B*p* even when S has no beliefs about this. Yet, says Pollock, this is extremely implausible, since

> coherence relations will always involve elaborate logical relationships between beliefs, and the holding of such relationships can only be causally efficacious by virtue of one's coming to *believe* that the relationships hold. As a matter of psychological fact, such elaborate relationships cannot be nondoxastically causally efficacious (*ibid.*, 82).

Pollock concludes that coherentism cannot accommodate a basing requirement. Since he regards that requirement pivotal, not only for avoiding arbitrariness but for "any correct epistemological theory" (*ibid.*, 81), Pollock suggests that we should reject coherentism (*ibid.*, 83; cf. Pollock 1979, 103-5; and Pollock and Cruz 1999, 79-80).[62]

Since Pollock is a foundationalist, it comes as no surprise that he sees problems for coherentism. However, even epistemologists with strong coherentist sympathies think that the basing requirement poses a threat for the view. Consider this fragment from Cohen:

> There is a well-known distinction between merely having good reasons for believing P and believing P for good reasons. This latter notion requires that one's good reasons for believing be psychologically related in the right way to one's believing P, i.e., that one's believing P be *based* on one's good reasons for believing P (Cohen 2002, 325).

However, says Cohen, the fact that the coherentist thinks that a

> significant chunk of one's beliefs become knowledge in virtue of mutual support relations (…) entails that each member of the mutually supporting set of beliefs must be based on the other members of the set (*ibid.*, 325).

[62] Kvanvig appears to construe Pollock's objection slightly differently. He says that according to Pollock, coherentism cannot account for basing since that "would require a coherentist to maintain that *every belief is a partial cause of every other belief* because of the holistic picture of warrant adopted by coherentists" (Kvanvig 1995, 270, emphasis mine). I cannot go into detailed Pollock exegesis here, but simply note that carefully reading the relevant passages on pp. 81-3 of Pollock 1986 makes it sufficiently clear that he thinks that coherentism implies that a belief should be caused by *its cohering with other beliefs*, not by *all the beliefs it coheres with*. For the worry that Kvanvig finds in Pollock, though, see my discussion of Cohen below.

Moreover, if the basing relation is indeed a causal relation, the coherentist "must hold that the members of the mutually supporting set of beliefs are in some epistemologically important way causally related to one another" (*ibid.*, 325). As Cohen says, "clearly there is cause for concern here" (*ibid.*, 325).

I do not think the worries about basing adduced by Pollock and Cohen are fatal for coherentism. Pollock argues that the coherentist cannot pose a basing requirement since that would mean that beliefs should be based on their *cohering* with other beliefs, which would mean that they should be *caused* by their cohering with other beliefs. But why would Pollock assume that a coherentist can accommodate a basing requirement only through requiring that beliefs should be based on *coherence relations*? A coherentist holds that B*p*'s justification is *determined* by its cohering with S's other beliefs. But this does not imply that she can pose a basing requirement only by demanding that B*p* should also be *based* on its so cohering. If the coherentist can require that S *has* a legitimate reason for every justified belief, either by having a further belief or by having an experience (an assumption not rejected by Pollock), she might also be able to claim that every justified belief should be *based* on a legitimate reason, either by being based on a further belief or by being based on an experience. If she posed a basing requirement in that way, the coherentist would not be committed to the problematic view that coherence relations can be causally efficacious.

Cohen's worry can be allayed in more or less the same way. Cohen thinks that the coherentist who wants to impose a basing requirement is forced to hold that every justified belief from a coherent set is based on all other beliefs from that set. However, why should the coherentist think that beliefs should be based on *all other beliefs in the set*? That a belief's justification depends on coherence relations with other beliefs does not imply that the belief should also be based on those other beliefs. Again, if the coherentist can require that S *has* a legitimate reason for every justified belief by having a further belief or an experience, it seems equally natural for her to demand that all S's beliefs are *based* on such a legitimate reason, either by being based on a further belief or by being based on an experience. If the coherentist posed a basing requirement in that way, she would not be committed to the view that every justified belief from a coherent set is based on all other beliefs from that set.

Kvanvig responds to worries about basing in a similar way. According to him, accommodating a basing requirement forms no problem for the coherentist once she properly distinguishes between propositional and

doxastic justification. In Kvanvig's view, the coherentist should say that the *propositional* justification of B*p* is entirely determined by B*p*'s cohering with S's other beliefs and experiences. Yet, she should add that B*p*'s *doxastic* justification requires that B*p* is also based on relevant items from the set of which B*p* is a member.[63] B*p* need not be based on (its cohering with) *all beliefs* in the set, but may be based on just one other item from that set, which could be either a further belief or an experience (Kvanvig 1995, 273; cf. Kvanvig 2007, 3.1).[64]

Thus, the coherentist need not worry that her theory cannot accommodate basing for the reasons given by Pollock and Cohen. When she rejects the assumption that beliefs should be based on *their cohering with other beliefs*, or on *all beliefs with which they cohere*, and instead claims that beliefs may be based on legitimate reasons by being based on other beliefs or experiences from the coherent set, she is not committed to the unacceptable positions that Pollock and Cohen suspect she is committed to.

However, that the coherentist need not worry about basing for the reasons given by Pollock and Cohen does not mean that she need not worry about the basing relation *at all*. Perhaps there are other reasons why coherentists would have trouble accommodating a basing requirement. Kvanvig argues that as soon as the coherentist rejects the assumption that on her view a belief can only be based on (its cohering with) *all* other beliefs in a coherent set, and argues that a belief may (also) be based on a suitably related further belief or experience, she has no trouble accommodating a basing requirement. It is striking, however, that Kvanvig draws this conclusion while at the same time admitting that he lacks "a good theory of the basing relation" (Kvanvig 1995, 273). How can he be so sure that coherentists may require that justified beliefs are based on reasons if he has no *concept* of beliefs being based on reasons? Presumably, we can establish coherentism's possibilities with respect to the basing relation only with a suitable concept of that relation at our disposal. Let us, therefore, recall our account from Chapter 4, of S's belief B*p*, being based on a reason, *r*:

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[63] In speaking about propositional justification in this way, Kvanvig diverges from common philosophical usage. Philosophers usually assume that not beliefs but *propositions* are (or are not) propositionally justified (e.g. Turri 2010). For present purposes, this difference can be ignored.

[64] Kvanvig develops his theory in terms of the so-called 'INUS conditions' that Mackie (1974) used to analyze causation. I cannot go into the nature of these conditions here. My slightly simplified presentation of Kvanvig's position suffices for current purposes.

(BAS) B*p* is based on *r* if and only if B*p* is caused by *r*, and *r*'s causing B*p* is guided by S's belief that *r* supports *p*.

Can the coherentist require that every justified belief is based on a legitimate reason on this notion of the basing relation?

Consider B*p*, for which S has a legitimate reason, r_1. If the coherentist requires that B*p* should be based on r_1, (BAS) implies that S should have a further belief, B*s*, to the effect that r_1 supports *p*. How about B*s*? Either it too should be based on a legitimate reason, or it need not be based on a legitimate reason. If the coherentist claims that B*s* need not be based on a legitimate reason, she grants that B*s* may be subjectively arbitrary. Since (BAS) does not require that B*s* is justified, this does not imply that the coherentist thereby allows arbitrary justified beliefs. However, as meeting (BAS) is supposed to be necessary for the avoidance of arbitrary justified beliefs, it does imply that B*p* may depend for its justification on an arbitrary belief. Hence, the suggestion that B*s* need not be based on a legitimate reason cannot help to meet the desideratum of avoiding arbitrariness.

Thus, suppose that the coherentist claims that B*s* should also be based on a legitimate reason, r_2. If she says that, (BAS) entails that S should have a further belief, B*t*, to the effect that r_2 supports *s*. And by the same means, B*t* should be based on a legitimate reason, r_3, which requires a still further belief, B*u*, that r_3 supports *t*, etc. So, the requirement that B*p* should be based on a reason also yields a chain of beliefs about support relations holding between beliefs and reasons. And again, since the coherentist denies that S can have (or has) infinitely many beliefs, the consequence of imposing a basing requirement is that this chain will loop back on itself at some point. Hence, the coherentist who wants to pose a basing requirement on justification can do so only at the cost of accepting circularity.

Avoiding subjective arbitrariness: summary

Let me bring together our findings concerning coherentism and its prospects for meeting the four conditions from (ASA). We first noted that condition (iv) could be met rather easily: nothing prevents the coherentist from posing the negative requirement that S may not believe there is a competing reason for not believing *p*. As regards condition (i), we saw that the doxastic coherentist cannot require that S has a legitimate reason for every justified belief, but that the non-doxastic coherentist can require that. However, with

regard to condition (ii), we found that both the doxastic and the non-doxastic coherentist can ensure that S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p* only at the cost of accepting circularity. We reached a similar conclusion with regard to condition (iii). While the coherentist need not worry about posing a basing requirement for the reasons adduced by several commentators, she can pose such a requirement only by accepting circularity. I conclude that coherentism cannot avoid subjective arbitrariness without sanctioning circularity.

6.4 Conclusion

In this chapter, we have considered coherentism's response to the regress problem. As we saw, the coherentist holds that justification is not linear but holistic, and that beliefs are justified in virtue of their membership of coherent sets of beliefs (and experiences). With regard to the desideratum of avoiding circularity, we found that nothing in the nature of coherentism suggests that the coherentist cannot discard circular epistemic chains. As for the arbitrariness desideratum, we saw that she need not allow arbitrariness on Klein's concept thereof. When we evaluated coherentism in light of our concept of arbitrariness, it became clear that the coherentist can avoid objective arbitrariness. However, we also found that the coherentist can avoid subjective arbitrariness only by licensing circular epistemic chains. Our overall conclusion, therefore, is that coherentism cannot avoid both circularity and arbitrariness.

Let us turn to infinitism, the third and final response to the regress problem, in the following chapter.

7 Infinitism

7.1 Introduction

In the previous chapters we have seen that foundationalism and coherentism cannot avoid both circularity and arbitrariness. In Chapter 5, we saw that foundationalism can avoid circularity, but that it has severe problems ruling out arbitrariness. In particular, the foundationalist proved unable to ensure that S has a legitimate reason for every basic belief, and that every basic belief is based on a legitimate reason, since these conditions yield a chain of further beliefs, so that any belief which meets them cannot be 'basic'. In Chapter 6, we saw that coherentism cannot avoid both circularity and arbitrariness. At first sight, the coherentist has no trouble avoiding circularity. Yet, it turned out that she can avoid subjective arbitrariness only by nevertheless accepting circular chains. This is due to the conditions that also proved problematic for the foundationalist. On the coherentist picture, the chain of beliefs engendered by meeting these conditions should loop back on itself at some point.

Given the difficulties that foundationalism and coherentism have in dealing with the chains engendered by our conditions for avoiding circularity and arbitrariness, it is very natural to turn to infinitism in the present chapter. As infinitism holds that endless chains are harmless, that theory may be able to meet our desiderata.

In Section 7.2, I will describe infinitism as one possible response to the regress problem, and consider the most prominent actual defence of infinitism: the version defended by Klein. In Section 7.3, I will evaluate Klein's theory in light of our two desiderata. Despite initial prospects, it will become clear that Klein's theory cannot satisfy them either. While Klein's theory avoids circularity and objective arbitrariness, it does not rule out subjective arbitrariness. In sections 7.4 and 7.5, I will briefly consider two other versions of infinitism, one by Jeremy Fantl, the other by Scott Aikin. I will argue that both theories may fare slightly better than Klein's theory, but that it is still doubtful that they rule out subjective arbitrariness. Then, in Section 7.7, I will present a version of infinitism that *does* avoid circularity and all forms of arbitrariness. Indeed, I will show that our extended concepts of avoiding circularity and avoiding arbitrariness *imply* this version of infinitism. Yet, in Section 7.7 I will explain that this version of infinitism imposes requirements on finite human beings which they can hardly be

expected to meet. As a consequence, I will explain, the discussion of this chapter will lead us to a theoretical impasse.

7.2 Klein's Infinitism

Infinitism responds to the regress problem not, as foundationalism and coherentism do, by denying one of the assumptions that engender the regress but, rather, by rejecting the claim that finite human beings cannot have infinitely many beliefs. According to the infinitist, there may in fact be a sense in which humans can have an infinite amount of beliefs. Hence, she argues, the regress does not imply skepticism. Rather, she maintains, having justified beliefs requires having infinitely many beliefs, and this does not imply that we have no justified beliefs.

In order to see how infinitism can be fleshed out in more detail, it is good to consider its most sophisticated version in the current literature: the version defended by Klein. Klein's main motivation for adopting infinitism is formed by two principles that we have already seen at work in Chapter 2: the principle of avoiding circularity and the principle of avoiding arbitrariness:

> Principle of Avoiding Circularity (PAC): For all x, if a person, S, has a justification for x, then for all y, if y is in the evidential ancestry of x for S, then x is not in the evidential ancestry of y for S (Klein 1999, 298).
>
> Principle of Avoiding Arbitrariness (PAA): For all x, if a person, S, has a justification for x, then there is some reason, r1, available to S for x; and there is some reason, r2, available to S for r1; etc. (*ibid.*, 299).

A question prompted by these principles is what *items* Klein thinks can be reasons for beliefs (or can be 'in the evidential ancestry' of beliefs). Although Klein is not always very clear about this (cf. Turri 2009, 491; Engelsma 2015, 402, fn. 9), it is most natural to read him as assuming that reasons are *propositions*.[65]

[65] Klein very often speaks of reasons as if they are propositions (e.g. Klein 1999, 300; 2007a, 11, 12; 2014a, 109; 2014b, 97). At some places Klein also speaks of reasons as if they are *beliefs*. But the confusion thus arising appears to be due to the fact, recognized by Klein himself, that 'belief' suffers from a state/object ambiguity: it can

In order to see what is implied by (PAC) and (PAA), consider a proposition, *p*, for which S 'has a justification'. Given (PAA), there is a proposition, *q*, available to S, which is a reason for *p*; and a further proposition, *r*, available to S, which is a reason for *q*; etc. And given (PAC), none of the available propositions from this chain may occur as a reason in that part of the chain underlying itself. So given (PAC) and (PAA), S has a justification for *p* only if there is an infinite amount of propositions available to him. As Klein puts it, together (PAC) and (PAA) imply that "the structure of justificatory reasons is infinite and non-repeating" (*ibid.*, 297).

To see how Klein thinks finite human beings can have infinitely many reasons available, we should recall the distinction already discussed in Chapter 3, between reasons which are objectively available and reasons which are (also) subjectively available. A reason is objectively available when it satisfies particular quality requirements; a reason is (also) subjectively available to S just in case S would endorse that reason in appropriately restricted circumstances (cf. Sect. 3.3.2). Given the distinction between objective and subjective availability, we can see in what sense Klein thinks finite humans should and can have infinitely many reasons available. According to Klein, S has a justification for *p* if and only if *p* is supported by an infinite chain of reasons *all of which are both objectively and subjectively available* (Klein 1999, 309; 2005, 138). And crucially, given Klein's characterization of objective and subjective availability, it is certainly possible that a finite being has infinitely many reasons available. (Hereafter, I will again follow the practice of Chapter 3, and write 'objective' instead of 'objectively available' and 'subjective' instead of 'subjectively available'.)

As regards *p* being supported by an infinite chain of *objective* reasons, this need not be problematic for finite creatures at all, since reasons for *p* are objective in virtue of certain facts about their relation to *p*. Since they can be objective even if S is not aware of them, there could certainly be an infinite chain of objective reasons underlying *p*. As for these reasons also being *subjective* to S, this need not form a problem either, since reasons can be subjective to S even if S does not (yet) consciously believe them. If reasons are subjective as soon as they would be endorsed in certain appropriately restricted circumstances, or as soon there is an epistemically credible way for

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refer either to the mental state of *believing*, as in "she held that belief for many years", or to the proposition which is the *object* of that state, as in "her belief is true" (see Klein 2011, 500; 2014a, 111; 2014b, 96). Thus when Klein calls reasons 'beliefs', this can be construed as 'propositions which are (or can be) the objects of belief states'.

S to come to believe them, then it is clearly possible for S to have infinitely many subjective reasons (Klein 1999, 306-10; 2007a, 12-3).

Klein's concept of an objective and subjective reason allows him to claim that S has a justification for *p* just in case *p* is supported by an infinite chain of reasons. Yet Klein's position involves more than just this claim about 'having justification for *p*'. In order to attain a full understanding of Klein's view, it is crucial to consider a further distinction often drawn, between *propositional justification* and *doxastic justification*.

Propositional justification is a quality attaching to *propositions* in relation to persons. On Klein's characterization of the notion, a proposition, *p*, is propositionally justified for a person, S, "just in case there is an *epistemically adequate basis* for *p* that is available to S regardless of whether S believes that *p*, or whether S is aware that there is such a basis, or whether if S believes that *p*, then S believes *p* on that basis" (Klein 2007a, 6). For example, the proposition that *Jones committed the crime* is propositionally justified for Watson just in case there is an adequate evidential basis, available to Watson, which supports this proposition, even if Watson does not believe the proposition, or believes the proposition for entirely different reasons (or for no reason at all).[66]

On Klein's infinitism, a proposition, *p*, is *propositionally justified* for S if and only if there is an objective and subjective reason for *p*, say *q*, and an objective and subjective reason for *q*, say *r*, and so on *ad infinitum*. Thus, Klein thinks *p* is propositionally justified for S if and only if *p* is supported by an infinite chain of objective and subjective reasons.

Doxastic justification, on the other hand, attaches to a person's *beliefs*. In order for S's belief B*p* to be doxastically justified, it does not suffice that *p* is propositionally justified for S. Although that is necessary, Klein claims that doxastic justification requires in addition that "S is acting in an epistemically responsible manner in believing that *p*" (*ibid.*, 6). What, exactly, is needed in order for S to 'act in an epistemically responsible manner' in holding B*p*?

Throughout his writings, Klein has provided rather different answers to this question. At some point, he says that what is needed besides S's merely *having* a reason, *q*, available for *p*, is that (his belief that) *q* "is playing the appropriate causal role in sustaining (…) [B]*p*" (Klein 1999,

[66] In characterizing propositional justification in this way, Klein diverges slightly from common philosophical usage. Most epistemologists say that *p* is propositionally justified for S, not when there is a reason for *p available* to S but, rather, when S *has* a reason for *p* (e.g. Bergmann 2006, 4; Turri 2010, 312-3).

315). At another point, Klein maintains that doxastic justification requires that beliefs are "formed" in the right way, or that they are "held for the right reasons" (Klein 2007a, 6). Elsewhere Klein argues that in order for B*p* to be doxastically justified, S need not only have a reason available for *p*, but B*p* "must [also] be "based" (…) upon a belief whose propositional content is a reason" (Klein 2007b, 26). At still other places, Klein speaks of doxastic justification as if that involves some *dialectical* performance. For instance, if *p* is propositionally justified for S, B*p* is doxastically justified if and only if S can adduce a sufficient amount of reasons for *p* (Klein 2007a, 8-11; 2007b, 28). Finally, in yet another paper Klein says that what is required for B*p*'s doxastic justification is *both* that B*p* is reliably produced *and* that S provides 'enough' reasons for *p* (Klein 2011, 497, 502-3). Since Klein most often presents his view in dialectical terms, I will assume that he has a dialectical concept of doxastic justification, remaining aware that what he says is compatible with other (e.g. causal) interpretations.

In Klein's view, S's belief B*p* is *doxastically justified* just in case *p* is propositionally justified for S and "S has engaged in providing "enough" reasons along an endless path of reasons" (Klein 2007a, 10). Klein adds that since providing reasons takes some time, B*p* can never be *completely* doxastically justified. However, he says, the more reasons 'along the endless path' S has provided, the better doxastically justified B*p* becomes. Of course, this raises the question exactly *how many* reasons S should adduce in order for B*p* to be or become doxastically justified. Klein answers that this

> is a matter of the pragmatic features of the epistemic context—just as which beliefs are being questioned or which can be taken as reasons is contextually determined. It is not surprising that in many contexts we can legitimately stop giving reasons when we have reached what would satisfy the inquirers—at least for the moment (Klein 2007a, 10; 2011, 503-4; 2014a, 120-1).

For instance,

> [a]t one point in our history (i.e., in the mid 20th century when Wittgenstein was writing what was to be published as *On Certainty*) *I have never been on the moon* was taken as a bedrock proposition, but one could have easily imagined a situation in which the rules of the

> "game" changed and some reasons for that proposition would be required (Klein 2007a, 10).

Similarly, in most contexts I need not give a reason for my sensation belief that *I am appeared to redly*, although there may be circumstances where even that belief requires that I provide a reason. And in most situations one does not have to give a reason for believing that one's name is thus-and-so, though it is possible to imagine cases where even that belief requires support (*ibid.*, 10). Hence, although Klein's infinitism allows one to stop giving reasons at some contextually determined point, it is always possible that one needs to give a further reason when the situation asks for one. Doxastic justification is never settled once and for all (Klein 2011, 502-3; 2014a, 122).

Interestingly, since the process of giving reasons ends with (a belief in) a proposition that counts as contextually basic, and since one does not need to give a further reason for one's belief in this final proposition, Klein holds that the chain of doxastically justified beliefs may end with an unjustified belief. Although the doxastic justification of B*p* requires that *p* is propositionally justified, and hence that there is an infinite chain of available *propositions* supporting *p*, the chain of justified *beliefs* underlying B*p* comes to an end with a belief in a proposition that is contextually basic, which may itself be doxastically unjustified (Klein 2007b).[67]

In sum, then, Klein's infinitism consists of two claims: a proposition, *p*, is propositionally justified for S if and only if S has an objective and subjective reason, *q*, for *p*, and an objective and subjective reason, *r*, for *q*, and so on *ad infinitum*; and S's belief B*p* is doxastically justified if and only if *p* is propositionally justified for S and S has provided a reason for *p*, say *q*, and a reason for *q*, say *r*, and so on until he has reached a proposition that counts as a contextually acceptable stopping point.

7.3 Klein's Infinitism, Circularity and Arbitrariness

Having a grasp of Klein's position, we can now turn to evaluate it in light of our two desiderata. In order to do so, we first need to decide what component

[67] Michael Bergmann argues that this feature of Klein's theory shows that Klein advocates not infinitism about doxastic justification, but the 'unjustified foundations view' (Bergmann 2007, 21-2). Klein has responded to Bergmann's objection in his 2007b. I agree with Klein that his theory is definitely not a version of the 'unjustified foundations view', but will not go into this here.

(or components) of Klein's theory we are going to focus on. For as we saw in the previous section, Klein's position features a claim about propositional justification and a claim about doxastic justification. However, because Klein's view on doxastic justification 'contains' his view on propositional justification, and also because our accounts of avoiding circularity and arbitrariness are phrased in terms of *beliefs*, I will concentrate on Klein's view on *doxastic* justification.

As we saw above, Klein holds that B*p* is justified if and only if *p* is propositionally justified for S, where this means that there is an infinite, non-repeating chain of propositions underlying *p*, all of which are objective and subjective reasons, and S has cited enough reasons along that chain, where what counts as 'enough' is determined by contextual considerations. Does this view avoid circularity and arbitrariness?

If we evaluate Klein's position in terms of *his* concepts, it is trivial that it avoids both circularity and arbitrariness. After all, the position is implied by those concepts. But how does Klein's view fare in light of our extended concepts? Does Klein's theory avoid circularity and arbitrariness on them as well?

Presumably, the view does not face a serious threat of licensing circularity on our concept:

(AC) An epistemic chain underlying S's belief B*p* avoids being *viciously circular* if and only if B*p* is not itself an indispensable member of that chain.

Klein holds that when B*p* is justified, there is a proposition, *q*, which is an objective and subjective reason for *p*, and a proposition, *r*, which is an objective and subjective reason for *q*, etc., so that the chain does not contain a proposition, *x*, which is an objective and subjective reason for another proposition, *y*, while at the same time *y* is an objective and subjective reason for *x*. Since Klein rules out chains which contain two *propositions* where the first is a reason for the second and the second is a reason for the first, he surely also discards chains containing two *beliefs* where the first belief justifies the second and the second justifies the first. Thus, a chain may not contain two beliefs, B*x* and B*y*, such that B*x* justifies B*y* and B*y* justifies B*x*. But in that case, a chain may certainly not contain two beliefs, B*x* and B*y*, such that B*x* justifies B*y* and B*y* is *indispensable* for the justification of B*x*. Thus, Klein's infinitism avoids vicious circularity on our concept also.

Given the subtleties of our concept of *arbitrariness*, however, it is much harder to determine whether Klein's infinitism can also avoid that. As we saw in Chapter 4, a theory avoids arbitrariness only when it avoids both objectively arbitrary beliefs and subjectively arbitrary beliefs. In the following two subsections I will consider whether Klein's theory succeeds in doing that. In 7.3.1, I will consider its prospects with regard to the avoidance of objective arbitrariness; in 7.3.2, I will evaluate the theory in terms of subjective arbitrariness; in 7.3.3., I will sum up my findings.

7.3.1 Klein's infinitism and objective arbitrariness

In order to find out whether Klein's infinitism can rule out objectively arbitrary beliefs, let us recall our concept of objective arbitrariness:

(AOA) S's belief B*p* avoids being objectively arbitrary if and only if there exists a reason, *r*, to the effect that *p* is more probable than *not-p*.

As before, I will call a reason, *r*, which exists and which is a reason to the effect that *p* is more probable than *not-p*, a 'factual reason'. Does Klein's theory ensure that every justified belief is supported by a factual reason? Presumably, this depends on one's choice for a concept of an objective reason. Let us look at some of Klein's suggestions for the concept of *r* being an objective reason for *p*:

(1) *r* has some sufficiently high probability and the conditional probability of *p* given *r* is sufficiently high;
(2) an impartial, informed observer would accept *r* as a reason for *p*;
(3) *r* would be accepted in the long run by an appropriately defined set of people (Klein 1999, 299).

Does the fact that *r* is an objective reason for *p* on (some of) these characterizations imply that *r* is a factual reason for *p*? Given that *r* is supposed to refer to *propositions*, the fact that *r* is an objective reason for *p* on the above interpretations will not by itself suffice for being a factual reason. Since propositions can be true or false, they need not refer to some actual state of affairs. However, a factual reason for *p* is typically assumed to be a fact or feature of the world which *exists*. Hence, if the fact that *r* is an

objective reason for *p* is to imply that *r* is a factual reason for *p*, it should be added to every suggestion that *r* is true:

(1') *r* is true and the conditional probability of *p* given *r* is sufficiently high;
(2') *r* is true and an impartial, informed observer would accept *r* as a reason for *p*;
(3') *r* is true and would be accepted in the long run by an appropriately defined set of people.[68]

Clearly, if *r* is an objective reason for *p* according to one of these interpretations, it does correspond to an existing fact or feature of the world. Moreover, if *r* is an objective reason for *p* on one of these interpretations, it may also correspond to a factual reason for *p*. That is, most of these characterizations imply that if *r* is an objective reason for *p*, then *r* could very well correspond to an existing reason to the effect that *p* is more probable than *not-p*. Hence, if Klein's theory is fleshed out with one of these concepts, it could ensure that every justified belief avoids objective arbitrariness.

Yet given that Klein asks his readers to choose their own favourite account of an objective reason, one could also invoke a still different notion:

(4) *r* is true and a reason to the effect that *p* is more probable than *not-p*.

Obviously, if one adopts (4) as one's favourite concept of an objective reason, then it is trivial that *r* being an objective reason for *p* implies that there is a factual reason for *p*: an objective reason is then simply *defined* as implying the presence of a factual reason. So if one assumes (4), Klein's

[68] It may be doubted whether the accounts specified by (1') – (3') are very much in line with Klein's infinitist orientation. After all, if *r*, in order to be an objective reason for *p*, has to be *true*, does not that bring a regress of reasons to an end? For if *r* is true, does not that remove the need for any further reasons? Although this is a natural worry, I do not think that requiring that *r* is true is intrinsically at odds with Klein's infinitism. For even if *r* is true, (a belief that) *r* is still arbitrary as long as it fails to be supported by a further objective and subjective reason, *s*. And even if *s* is also required to be true, (a belief that) *s* is still arbitrary as long as it is not supported by a further objective and subjective reason, *t*; etc. So (1') – (3'), or other accounts specifying that *r* should be true, do not imply that regresses terminate. And in fact, in a paper different from the one where he cites (1) – (3), Klein mentions an account of objective reasons which requires that they are true: "For example, it could be that x is objectively available as a reason for y just in case x is true and such that the objective probability of y given x is sufficiently high" (Klein 2003, 722).

theory also ensures that every justified belief avoids objective arbitrariness. We may conclude that Klein's infinitism can avoid objective arbitrariness rather easily.

7.3.2 Klein's infinitism and subjective arbitrariness

Can Klein's infinitism avoid subjective arbitrariness also? Let us recall the extended concept from Chapter 4:

(ASA) S's belief B*p* avoids being subjectively arbitrary if and only if (i) S has a legitimate reason, *r*, for *p*; (ii) S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*; (iii) B*p* is based on *r*; and (iv) S does not believe there is a competing reason for not believing *p*.

If Klein's theory is to avoid subjective arbitrariness, it has to ensure that every justified belief meets all four conditions from (ASA). Let us consider Klein's infinitism in light of these conditions.

(i) Having a legitimate reason, r, *for* p

As we assumed in Chapter 4, one can have a legitimate reason for a belief in two ways: by having a further justified belief and by having a perceptual experience. Given this understanding of having a legitimate reason, does Klein's theory ensure that S has a legitimate reason for every justified belief?

We have seen that on Klein's theory, B*p* is justified if and only *p* is propositionally justified, which requires that *p* is supported by an infinite chain of objective and subjective reasons, and S has provided enough reasons along this chain. Does this imply that S has a legitimate reason for every justified belief? As for the requirement that *p* is propositionally justified, that implies that there should be an infinite chain of reasons all of which are *available* to S. Yet it does not imply that S should *have* any of these reasons. So, the propositional justification of *p* does not assure that B*p* meets condition (i).

How about the reasons which S has to *provide* in order for B*p* to be doxastically justified? If the context determines that *p* needs support from a reason, S should provide a reason for *p*, say *q*. And if the context determines that *q* needs support as well, S should also cite a reason for *q*, say *r*; etc.

When at some point S reaches a reason that counts as a contextually acceptable stopping point, S does not have to adduce a further reason.

Unlike the propositional justification of *p*, the required providing of reasons in support of *p* could assure that S really *has* a legitimate reason for very many of his beliefs. For, Klein could say, one may only *provide* a reason if one also *has* that reason (e.g. by having a justified belief in the proposition which is the reason). Thus, S may only provide *q* as a reason for *p* if he really has *q* as a reason for *p*; and S may only provide *r* as a reason for *q* if he really has *r* as a reason for *q*; etc. In this way, Klein's requirement concerning providing reasons may ensure that S has a legitimate reason for very many beliefs.

Crucially, however, Klein's infinitism does not require that S has a legitimate reason for *all* his beliefs. When S has provided reasons for a while, and at some point adduces a reason by citing a proposition that counts as contextually basic, say *z*, he does not have to provide a further reason. Yet, if S does not have to *give* a further reason, then nothing in Klein's theory ensures that he nonetheless *has* a further reason. S may have a legitimate reason for his belief in the proposition preceding *z*, say *y*, but he need not have a reason for his belief that *z*.

But if Klein's infinitism says that S does not need to have a reason for B*z*, it certainly sanctions beliefs which fail to satisfy clause (i): S should have a legitimate reason for many beliefs, but not for beliefs in propositions which are contextually basic. Hence, Klein's theory allows the latter kind of beliefs to be subjectively arbitrary.

Consider my belief that the train to Hurdegaryp leaves at 12:23. In support of this belief, I cite the proposition, *q*, that the schedule says that the train leaves at 12:23. In support of my belief that *q*, I adduce the proposition, *r*, that I *see* the schedule says the train leaves at 12:23. If my belief that *r* also requires a reason, I may support it by adducing the proposition, *s*, that *it appears to me that the schedule says the train leaves at 12:23*. Let us say that this proposition is contextually basic. In that case, I need not give or have a reason for my belief that *s*. However, if I need no reason for my belief that *s*, that belief is allowed to be subjectively arbitrary. If I *have* no reason for *s*, it is just as reasonable, subjectively speaking, for me to adopt the belief that it appears to me that the schedule says the train leaves at 11:17, or the belief that it appears to me that the schedule says nothing about trains to Hurdegaryp, etc.

At this point one may object that Klein does not think that beliefs in contextually basic propositions have to be *justified*. He thinks that B*p* is justified only if S has provided *q* and B*q* is justified, and that B*q* is justified only if he has provided *r* and B*r* is justified, etc., but he denies that when B*y* can be justified by S's adducing the contextually basic proposition *z*, B*z* has to be justified as well. Hence, it is not the case that Klein's theory licenses subjectively arbitrary *justified* beliefs. Only certain *unjustified* beliefs in contextually basic propositions are allowed to be subjectively arbitrary.

At the same time, however, these (possibly) unjustified beliefs play a crucial role in the justification of beliefs higher up in the epistemic chain. If S is unable to mention, at some point in the process of giving reasons in support of B*p*, a possibly unjustified belief in a contextually basic proposition, then B*p* cannot be justified. And since all justified beliefs higher up in the chain depend for their justification on a belief in a contextually basic proposition, Klein's theory implies that all these justified beliefs may ultimately depend on the support from an arbitrary belief.

Thus, even if Klein ensures that every *justified* belief meets clause (i) from (ASA), he does not avoid subjective arbitrariness. In particular, Klein's infinitism does not assure that beliefs in basic propositions meet clause (i).

(ii) Having a justified belief that r *is a reason to the effect that* p *is more probable than* not-p

Does Klein's theory ensure that (ii) is met? Presumably, Klein's failure to assure that enough beliefs satisfy (i) brings with it a failure to assure that enough beliefs meet (ii). Given that Klein does not require that S has a legitimate reason for his belief in a contextually basic proposition, neither will (or can) he require that S has a justified belief about the relation between that (not required) reason and the basic proposition. And if Klein's theory does not ensure that S has such a belief in the case of beliefs in basic propositions, his theory fails to satisfy (ii) for beliefs on which the justification of many other beliefs ultimately depends.

However, even if Klein succeeded in assuring that enough beliefs meet (i), he would still not want to rule out all justified beliefs and beliefs in basic propositions which do not satisfy (ii). This becomes clear if we consider his thoughts on Fumerton's 'Principle of Inferential Justification':

> To be justified in believing one proposition *P* on the basis of another proposition *E*, one must be (1) justified in believing *E* and (2) justified in believing that *E* makes probable *P* (Fumerton 1995, 36).

As we saw in Chapter 4, the second condition from this principle is very similar to condition (ii) from (ASA). Yet, about the condition from Fumerton's principle, Klein writes:

> I can see no reason to agree to the premiss that in order for S to be justified in believing that p on the basis of e, S must be justified in believing that e is a good reason for p. I think this simply confuses having a justified belief that p with having justified beliefs about p's justificatory status (Klein 1999, 309).

Given Klein's rejection of Fumerton's principle, we may assume that Klein also rejects the requirement that when S has a legitimate reason for *p* by having *r*, he should also have a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*. Yet, this means that Klein's theory accepts both justified beliefs and beliefs in basic propositions which do not meet (ii).

*(iii) Basing B*p *on* r

Does Klein's infinitism imply that every justified belief is based on a legitimate reason? Recall our account of the basing relation from Chapter 4:

(BAS) B*p* is based on *r* if and only if B*p* is caused by *r*, and *r*'s causing B*p* is guided by S's belief that *r* supports *p*.

Does Klein require something to the effect that every justified belief meets (BAS)? As we saw Section 7.2, Klein usually writes about doxastic justification in dialectical terms. Reasons should be available to S, and S should (be able to) *give* enough reasons. However, being able to *give* a reason for a belief is not the same as *basing* one's belief on that reason. I have good reasons for my belief that Kipchoge won the marathon, and I am able to adduce these reasons when it is questioned. Yet, it is still possible that my belief is not based on these reasons. Perhaps it is based on different reasons, or on no reason at all. So, if we assume Klein's dialectical construal of

doxastic justification, his theory does not ensure that every justified belief is based on a reason.

However, as we also saw, Klein sometimes speaks of doxastic justification in terms of (something resembling) a basing requirement. At a certain point, he writes that when S believes that *p*, he need not only have a reason available for *p*, but his belief "must be "based" (…) upon a belief whose propositional content is a reason" (Klein 2007b, 26). Elsewhere, Klein says that what is needed besides S's merely having a reason, *r*, available for his belief that *p*, is that (his belief that) *r* "is playing the appropriate causal role in sustaining (…) S's belief [that] *p*" (Klein 1999, 315). Finally, Klein somewhere writes that doxastic justification requires that beliefs are "formed" in the right way, or that they are "held for the right reasons" (Klein 2007a, 6).

However, even if we assume that Klein accepts a basing requirement on (doxastic) justification, and that he agrees that (BAS) correctly captures the nature of the basing relation, it still does not follow that he ensures that enough beliefs meet condition (iii). The reason for this is the same as in the discussion of clause (ii). Given that Klein does not require that S has a legitimate reason for beliefs in contextually basic propositions, neither will (or can) he require that S's beliefs in such propositions are based on such a (not required) reason. And if Klein's infinitism allows beliefs in basic propositions which are not based on a reason, his theory fails to satisfy (iii) with regard to beliefs on which the justification of many other beliefs ultimately depends.

(iv) Not believing there is a competing reason for not believing p.

Finally, how does Klein's infinitism fare with respect to clause (iv)? Does the theory imply that when S has a justified belief that *p*, he does not believe he has competing reasons for not believing *p*? Here it is relevant to notice that Klein holds that one necessary condition for the propositional justification of a proposition, *p*, over and above the satisfaction of (PAC) and (PAA), is that

> there must not be another proposition, d, available to S that overrides p (unless there is an ultimately non-overridden overrider of d) (Klein 1999, 318, fn. 8; cf. Klein 2014b, 98).

While this requirement is not equivalent to our condition (iv), it is very much in the same spirit. Hence, I will assume that Klein would not be unwilling to accept (iv) as a condition for propositional justification. If he accepts it as a requirement for propositional justification, he ensures that every justified belief meets condition (iv). Moreover, accepting it as a requirement on propositional justification also ensures that beliefs in basic propositions meet (iv). If *z* is a basic proposition, B*z* need not be doxastically justified. Yet, since *z* needs to be propositionally justified, (iv) has to be satisfied for *z* and, thereby, also for B*z*.

Klein's infinitism and subjective arbitrariness: summary

In sum, apart from condition (iv), Klein's infinitism does not (or cannot be expected to) meet the conditions for avoiding subjective arbitrariness. As for (i), the theory does not assure that S has a legitimate reason for beliefs in contextually basic propositions. Since the satisfaction of (ii) and (iii) presupposes the satisfaction of (i), neither does Klein's theory guarantee that beliefs in basic propositions meet (ii) and (iii). Therefore, Klein's version of infinitism does not avoid subjective arbitrariness.

7.3.3 Klein's infinitism, avoiding circularity and avoiding arbitrariness

Klein's main motivation for adopting infinitism is the putative fact that it is the only theory which avoids both circularity and arbitrariness. In the preceding subsections, we found that his version of infinitism easily avoids viciously circular chains, and that it does not have any problems with avoiding objective arbitrariness either. When it comes to the avoidance of subjective arbitrariness, however, we found that Klein's theory faces severe problems. Of the four conditions for avoiding that form of arbitrariness, Klein's theory can be expected to do a good job only with respect to one. Our conclusion is that Klein's infinitism avoids circularity and objective arbitrariness, but not subjective arbitrariness.

7.4 Fantl's Infinitism

Jeremy Fantl has defended a version of infinitism slightly different from Klein's. While Klein's theory is motivated by the principles (PAC) and (PAA), Fantl's central motivation is formed by two different requirements for

any theory about the structure of justification: a *degree requirement* and a *completeness requirement*:

> The degree requirement: a theory of the structure of justification should explain why or show how justification is a matter of degree.
>
> The completeness requirement: a theory of the structure of justification should explain why or show how complete justification makes sense (Fantl 2003, 538).

The degree requirement holds that a theory should explain how justification admits of degrees, how a proposition can be more justified for a particular person than another proposition (or more justified for one person than for another person). The completeness requirement says that an epistemic theory should accommodate a notion of justification "for which there is no higher degree" (*ibid.*, 538).

In Fantl's view, infinitism is the only theory that can accommodate a notion of justification which satisfies both the degree requirement and the completeness requirement. According to him, "[i]nfinitism (…) is the view that justification is a matter of having a non-terminating series of non-repeating reasons" (*ibid.*, 553). Infinitism can meet the degree requirement by claiming:

> All else being equal, the longer your series of adequate reasons for a proposition, the more justified it is for you (*ibid.*, 554).

Consider two subjects, S_1 and S_2, where both have an adequate reason, *q*, for *p*, but where S_1, unlike S_2, also has an adequate reason for *q*, viz. *r*. In that case, *p* is more justified for S_1 than for S_2.

Infinitism can meet the completeness requirement by claiming:

> p is completely justified for S iff S has an infinite array of adequate reasons for p (*ibid.*, 558).

Here two things should be noted. First, complete justification does not require that S adds infinitely many reasons sequentially or that S is able to sequentially produce an infinite series of reasons. If one of these things were required, then (infinitist) complete justification would be impossible. Rather,

what is required is that S has a series of adequate reasons for a proposition such that, for every reason in the series, S has a further adequate reason (*ibid.*, 558).

Second, Fantl does not hold that (his construal of) complete justification is the only valuable epistemic status. He says that a proposition can be *very well justified*, and also *justified to the degree required for knowledge*, even if it is less than completely justified (*ibid.*, 558-9). Thus, a proposition could be very well justified or justified to the degree required for knowledge when it is supported by a chain containing only, say, three reasons. However, Fantl holds, complete justification requires that S has an infinite amount of reasons.

How does Fantl's theory fare with regard to the aim of avoiding circularity and arbitrariness? In response, it should be stressed again that Fantl's infinitism concerns only propositions being completely justified, not propositions being very well justified or propositions being justified to the degree required for knowledge. Hence, even if infinitism avoids circularity and arbitrariness at the level of complete justification, it may still allow circularity or arbitrariness with regard to the other forms of justification. Moreover, if infinitism avoids circularity and arbitrariness with regard to complete justification, this does not yet favour infinitism over foundationalism or coherentism, since the latter theories are not concerned with complete justification, but rather with very good justification or, especially, justification required for knowledge. At some point Fantl says that while infinitism is the best theory about complete justification, foundationalism may be a good account of propositions being very well justified or justified to the degree required for knowledge (*ibid.*, 552). So, if we were right in Chapter 4 that foundationalism cannot avoid arbitrariness, Fantl himself does not have an epistemic theory about the other forms of justification which meets our two desiderata.

This said, let us consider Fantl's infinitism about complete justification. Does *it* avoid circularity and arbitrariness? Just as Klein's infinitism, Fantl's account easily avoids circularity and objective arbitrariness. Since he construes infinitism as requiring 'a series of non-repeating reasons', Fantl rules out chains underlying a belief where that belief is an indispensable member of the same chain. As regards the avoidance of objective arbitrariness, it is worth noting that on Fantl's account, a proposition is justified for S only if S has an *adequate reason* for that proposition (and an adequate reason for the proposition which is the reason,

etc.). If one can *have* an adequate reason only if there *is* such a reason, a proposition being justified, and a belief in that proposition being justified, requires the existence of an adequate reason. Just as with Klein's talk about objective reasons, this requirement can presumably be fleshed out in a way that implies that every justified belief avoids objective arbitrariness (*ibid.*, 554-5).

How about avoiding subjective arbitrariness? Since Fantl holds that for every adequate reason in the chain, S needs to have a further adequate reason, his account presumably assures that every justified belief, B*p*, meets clause (i) from (ASA), that S should have a legitimate reason, *r*, for *p*. Fantl's account can also ensure that every justified belief meets condition (ii), that S should have a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*. Consider the following passage:

> For complete justification, not only must you have an infinite series of adequate reasons to back up a proposition, you must be able to meet all challenges to that proposition and to all of your reasons and inferences with an infinite series of adequate reasons (*ibid.*, 557).

Being able to meet all these challenges presumably involves having suitable beliefs about the relation between reasons and your beliefs. As regards clauses (iii) and (iv), Fantl does not provide any information. He does not say whether B*p*'s complete justification requires that B*p* is based on an adequate reason, nor whether B*p*'s complete justification requires that S does not believe that he has competing reasons for not believing *p*.

To conclude, Fantl's account of complete justification succeeds in avoiding circularity and arbitrariness if complete justification requires that beliefs are based on an adequate reason and that S does not believe he has competing reasons for contrary beliefs. However, it should be emphasized again that Fantl's account is an account of complete justification, whereas other epistemologists write about very good justification or justification required for knowledge. If Fantl's infinitism meets our two desiderata, it is still unclear whether infinitism regarding the other, more central, forms of justification can meet them also and, hence, whether infinitism is really preferable to foundationalism and coherentism.

7.5 Aikin's Infinitism

Like Fantl, Scott Aikin has developed a version of infinitism which is slightly different from Klein's. Aikin combines a theory he calls 'strong impure epistemic infinitism' with a view he calls 'strong impure foundationalism'. He holds that every justified belief, B*p*, is supported by a multitude of epistemic chains. The infinitist element in Aikin's theory is the requirement that at least one epistemic chain underlying B*p* is infinitely long (Aikin 2011, 75). The foundationalist element in Aikin's theory is the constraint that at least one of those chains should terminate with a basic belief (*ibid.*, 74), where a basic belief is a belief which is supported by an experience.[69] Thus, when B*p* is justified, that means that at least one of the chains underlying B*p* is infinitely long, and that at least one of the other chains underlying B*p* terminates with a belief that is sufficiently supported by an experience.

It can immediately be noted that Aikin's theory succeeds in avoiding circularity. Considering what he writes about 'reflexive justificatory relations', it becomes clear that he discards epistemic chains underlying B*p* of which B*p* is an indispensable member (*ibid.*, 26-7). Aikin's theory can also avoid objective arbitrariness. According to Aikin, when B*p* is justified, there should be a reason, *q*, such that *q* actually supports *p* or such that *q* actually is a reason in favour of *p*'s truth (*ibid.*, 14). When B*p* meets this requirement, it will also satisfy (AOA).

However, just as in the discussion of Klein and Fantl, it is less clear whether Aikin's theory also avoids subjective arbitrariness. Unlike Klein and like Fantl, Aikin seems to ensure that every justified belief meets (i) from (ASA). Aikin not just says that S should have a legitimate reason for B*p* 'available to him', but repeatedly notes that S should really *have* infinitely many legitimate reasons (*ibid.*, 14, 46, 63, 77-8, and 177), where S can have such a reason either by having a further belief or by having an experience.[70] Aikin also ensures that every justified belief meets (ii). He claims that when B*p* is justified, that not only means that S has a legitimate reason, *q*, for B*p*, but also that "S is justified in holding *q* to support *p*'s truth" (*ibid.*, 18). When

[69] Aikin introduces this foundationalist constraint in order to avoid what he calls the 'modus ponens reductio' for infinitism. This *reductio* says that if the presence of an infinite series of beliefs *suffices* for a belief's justification, then *any* belief can be justified by virtue of infinitely many instantiations of *modus ponens* (cf. *ibid.*, 58-9 and Sect. 3.5). As the 'modus ponens reductio' is not relevant for our central question, I will not discuss it here.

[70] For Aikin's view that one can have a reason by having an experience, see *ibid.*, Ch. 4.

this meta-condition is fulfilled, S certainly has a justified belief that *q* is a reason to the effect that *p* is more probable than *not-p*.

When it comes to clauses (iii) and (iv), Aikin's theory seems less promising. As for (iv), Aikin does not explicitly present a clause to the effect that S may not believe he has competing reasons for not believing *p*. Regarding (iii), it seems that Aikin wants to deny that every justified belief should be based on a legitimate reason. At some point, he writes that "the subject needs to have something to say in favour of the belief. The belief needn't be a *result* of inference (often it is, but that's not what is required)" (*ibid.*, 15). Elsewhere, Aikin writes that it suffices for justification if a person *has* infinitely many reasons, whether or not he has also *done* something with those reasons (*ibid.*, 63). If Aikin holds that justified beliefs do not have to be based on a legitimate reason, then his infinitism allows subjective arbitrariness.

Thus, although Aikin's infinitism does a good job with regard to circularity and objective arbitrariness, his position does not rule out all forms of subjective arbitrariness.

7.6 A Version of Infinitism That Avoids Circularity and Arbitrariness

Despite the conclusions we have reached concerning the work of Klein, Fantl, and Aikin, I think that any theory which meets our two desiderata is a version of infinitism. Consider again our accounts of circularity and arbitrariness:

(AC) An epistemic chain underlying S's belief B*p* avoids being *viciously circular* if and only if B*p* is not itself an indispensable member of that chain.

(AOA) S's belief B*p* avoids being objectively arbitrary if and only if there exists a reason, *r*, to the effect that *p* is more probable than *not-p*.

(ASA) S's belief B*p* avoids being subjectively arbitrary if and only if (i) S has a legitimate reason, *r*, for B*p*; (ii) S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*; (iii) B*p* is based on *r*; and (iv) S does not believe there is a competing reason for not believing *p*.

I think that the combination of these conditions, especially the combination of (ASA) and (AC), *implies* a version of infinitism. In order to show this, let us consider S's belief B*p*. What does it take for B*p* to meet both (ASA) and (AC)?

According to clause (i) from (ASA), S should have a legitimate reason for *p*, say *q*. S can have *q* either by having a further belief or by having an experience. If S has *q* by having a further belief, B*q*, S should also have a legitimate reason for *q*, say *r*. Again, S can have *r* either by having a further belief or by having an experience. If S has *r* by having a further belief, B*r*, S should also have a legitimate reason for *r*; and so on. In this way, (i) can engender a long chain of beliefs. When S has legitimate reasons for his beliefs *only* by having further beliefs, he will be in need of further beliefs indefinitely. Since (AC) requires that no belief from a chain of beliefs is an indispensable member of that chain, this means that chains underlying his beliefs have to be infinite. However, the chain engendered by (i) can also terminate. When at some point S has a legitimate reason for a belief by having an experience, (i) does not require that S has a further belief. So, although the satisfaction of condition (i) may involve infinitely many beliefs, that is not required.

Let us move on to condition (ii). Combined with (i), (ii) engenders a new regress of beliefs. But unlike the regress prompted by (i), this regress cannot come to an end with experiences. For while (i) requires the presence of a further belief or an experience, (ii) unqualifiedly requires that S has a further justified *belief* about the relation between a belief and a reason. Moreover, given (AC), this new regress may not move in a circle. So all beliefs in the chain implied by clause (ii) require that S has a further, new belief. Hence, (i) and (ii) from (ASA), together with (AC), imply that in order to have a justified belief, S should have *infinitely many beliefs*.

Let us consider condition (iii), assuming the account of basing that we developed in Chapter 4:

(BAS) B*p* is based on *r* if and only if B*p* is caused by *r*, and *r*'s causing B*p* is guided by S's belief that *r* supports *p*.

According to (BAS), when B*p* is based on *q*, S has a further (guiding) belief that *q* supports *p*. Hence, meeting (iii) will give rise to a scenario similar to that involved in relation to (ii). Just as (ii), (iii), when combined with (i), engenders a regress which cannot terminate with an experience, since (iii)

explicitly requires the presence of a further *belief*. Also, given (AC), the chain of beliefs engendered by (i) and (iii) may not form a loop. So, together with (AC), (i) and (iii) imply that having a justified belief requires having infinitely many beliefs.

Thus, our concepts of avoiding circularity and arbitrariness imply an infinite chain of beliefs in two ways: combined with (AC), both (i) and (ii) from (ASA), and (i) and (iii) from (ASA), imply that having a justified belief requires having infinitely many beliefs. How about clause (iv) from (ASA), and how about (AOA)? Although these conditions do not create another chain of beliefs, they do not prevent one of the above chains from arising either. Since (iv) only requires that S does *not* have a specific belief, meeting this condition does not prompt a further chain of beliefs, nor does it have any consequences for what is involved by the satisfaction of the other conditions from (ASA). Similarly, (AOA) need not give rise to a new epistemic chain. It is satisfied when some fact or feature of the world is a factual reason for *p*. And that a belief is supported by such a reason has no tendency to block the regresses engendered by (i), (ii), and (iii) from (ASA) and (AC).

Thus, given our concepts of avoiding circularity and avoiding arbitrariness, an epistemic theory that satisfies both the circularity desideratum and the arbitrariness desideratum requires that a person has infinitely many beliefs. Hence, our two desiderata imply that an adequate theory about the structure of justification is a version of infinitism.

7.7 Four Worries for This Version of Infinitism

The fact that our desiderata dictate the acceptance of infinitism brings us back to one of the main motivations for *not* accepting infinitism, and for adopting either foundationalism or coherentism instead. Does not the requirement that finite humans have infinitely many beliefs imply that they have no justified beliefs at all? In the present section, I will consider some worries for the infinitism dictated by our desiderata, all related to human finitude.

A problem that comes to mind very naturally is that human beings, just because they are *finite* beings, may be unable to have *infinitely* many beliefs. Does not the fact that they have a finite mind, and a finite brain capacity, imply that humans cannot even *store* infinitely many beliefs? Consider this representative quote from John Williams:

> The regress in justification for *S*'s belief that *p* would certainly entail that he holds an infinite number of beliefs. This is psychologically, if not logically, impossible. If a man can believe an infinite number of things, then there seems no reason why he cannot know an infinite number of things. Both possibilities contradict the common intuition that the human mind is finite. Only God could entertain an infinite number of beliefs. But surely God is not the only justified believer (Williams 1981, 85; cf. Audi 1998, 183).

Although this worry sounds intuitive, I do not think that infinitism has a problem with the notion of humans having infinitely many beliefs *as such*. As we saw in Chapter 4 (Sect. 4.3.2), one can think of having beliefs as having dispositions to behave in particular ways. If having beliefs is a matter of having dispositions, then it is unclear why finite beings cannot have infinitely many beliefs. But even if one denies that all beliefs are dispositions, one can still draw a distinction between occurrent beliefs and dispositional beliefs. In that case, too, it may be plausible to think that finite human beings can, and indeed do, have infinitely many beliefs. Consider two examples from Fumerton:

> In whatever sense it is that people can be said to believe propositions they are not currently considering, it seems entirely plausible to say of you that you believe that $2 > 1$, that $3 > 1$, that $4 > 1$, and so on ad infinitum. When you believe *P*, you also believe $P \vee Q$, $P \vee Q \vee R$, $P \vee Q \vee R \vee S$, and so on ad infinitum (Fumerton 1995, 58-9).

Fumerton adds that since "all of these beliefs will be equally justified (…) there is no obstacle to having an infinite number of justified beliefs" (*ibid.*, 59). While Fumerton's examples concern *a priori* beliefs, Aikin argues that we can also think of finite beings having infinitely many empirical beliefs:

> Take the simple belief that there is a football in a specific position on a field. If the space between it and the goal line is infinitely divisible, we have a potentially infinite number of beliefs as to how close the football is to the goal line. It is this close, but it is capable of being closer than *that*, namely *this* close… (Aikin 2011, 63).

As Fumerton and Aikin show, there is no intrinsic problem with the notion of finite human beings having infinitely many (justified) beliefs as such.

Yet while the examples from Fumerton and Aikin show that there is no intrinsic problem with humans having an infinite amount of beliefs as such, it may still be wondered how they could help the version of infinitism implied by our desiderata. Even if the examples show that finite beings can have infinitely many justified beliefs in the specific cases and about the specific propositions considered by Fumerton and Aikin, it is still not sure whether finite beings can also have infinitely many justified beliefs in other cases, and about more common propositions. In the examples, the specific sort of content of one belief (an equation, a proposition of logic, a claim about a particular distance) entails the content of infinitely many other beliefs. Yet, it is very doubtful that the same holds for the content of many other ordinary beliefs, such as the belief that Anjum lies east to Moddergat, the belief that Kipchoge won the marathon, etc. The examples from Fumerton and Aikin do nothing to show that human beings can also have infinitely many beliefs of this ordinary kind.

A second worry also concerns the amount of beliefs human beings should have. Whether or not it is realistic to assume that humans can have infinitely many beliefs as such, one may further doubt whether it is realistic to think that they can have infinitely many justified beliefs which form a chain *underlying and supporting* one particular belief. In the examples from Fumerton and Aikin, the fact that someone has one justified belief entails that he has infinitely many justified beliefs. If you have a justified belief that $2 > 1$, then you also have justified beliefs that $3 > 1$, that $4 > 1$, etc; if you have a justified belief that *p*, then you also have justified beliefs that $p \vee q$, that $p \vee q \vee r$, etc; and if you have a justified belief that the distance between two places is *x*, then you also have justified beliefs that it is larger than $x/2$, larger than $x/4$, etc. However, the fact that someone's having one justified belief *provides* justification for infinitely many other beliefs does nothing to show how one justified belief can *receive* justification from infinitely many other beliefs. That having the first justified belief implies having infinitely many other justified beliefs does not show how or why that *first* belief is justified. Even if an ordinary belief can give justification to infinitely many other beliefs, it may still be wondered how an actual person might have an infinite amount of justified beliefs which together form a chain in support of an ordinary belief. In order to make her theory look plausible, an infinitist who accepts the view implied by our desiderata should give examples of beliefs

where a human being can have infinitely many other beliefs supporting them through an infinite chain.

A third worry for the infinitism dictated by our desiderata concerns the beliefs which human beings are supposed to have about the relation between their beliefs and the reasons they have for them. Condition (ii) from (ASA) says that S should have a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*; and condition (iii), the basing requirement, implies that S should have a belief that *r* supports *p*. As we have seen in Section 7.6, together with condition (i) and (AC), conditions (ii) and (iii) imply that S should have infinitely many beliefs. However, it appears that having infinitely many beliefs along the chains engendered by these clauses sooner or later involves beliefs which are far *too complex* for human beings to hold, even when beliefs are dispositions and even if we distinguish between occurrent and dispositional beliefs. For example, let us consider S's belief B*p*, and let us see what exactly is involved by clause (i) in combination with clause (iii). In order for B*p* to meet (i) and (iii), S should have a reason, r_1, for *p*, and a belief,

B*s*: r_1 supports *p*;

In order for B*s* to meet (i) and (iii), S should have a reason, r_2, for *s*, and a belief,

B*t*: r_2 supports (r_1 supports *p*);

And in order for B*t* to meet (i) and (iii), S should have a reason, r_3, for *t*, and a belief,

B*u*: r_3 supports [r_2 supports (r_1 supports *p*)].

And again, in order for B*u* to meet (i) and (iii), S should have a reason, r_4, for *u*, and a belief,

B*v*: r_4 supports (r_3 supports [r_2 supports (r_1 supports *p*)]).

And so on, *ad infinitum*. Especially when r_1, r_2, r_3, r_4, etc., are replaced by real propositions, possibly about complex empirical affairs, it appears that at some point in this chain (e.g. at B*v*) the further beliefs S is still supposed to

have will simply be too *complex* for finite human beings to seriously entertain and have. And this result will be even more obvious when we spell out the consequences of condition (i) in combination with condition (ii), as (ii) requires S to have beliefs with even more complex contents than those required by (iii).[71] Here it is worth mentioning that Klein draws a similar conclusion. He says that when a requirement like (ii) from (ASA) were coupled with infinitism, "the consequence would be that any person having a justified belief must have a belief that gets "so complex" that no human could ever have it", and adds that "such a requirement would force the rejection of infinitism" (Klein 1999, 309).

A fourth and final worry for the infinitism dictated by our desiderata concerns the beliefs we *actually* have. Even if, contrary to what I have argued, it were *possible* for finite human beings to have all the beliefs required by the theory imposed on us by our accounts of the two desiderata, it seems rather doubtful that many humans *actually* have the required beliefs. So, even if the requirements posed by our desiderata do not necessarily have the sceptical implications I suggest they have, as a matter of fact the requirements will still imply that extremely few human beings, at least far less than most epistemologists hope, have justified beliefs.[72]

Summing up the discussion of these worries in terms of human finitude, it appears that there are at least four serious problems for the version of infinitism that is entailed by our desiderata of avoiding circularity and arbitrariness. Although there is no difficulty with the requirement that human beings should have infinitely many beliefs *as such*, it seems unrealistic to assume (1) that finite humans can have infinitely many *ordinary beliefs* (2)

[71] In a slightly different context, Bergmann makes the same point about the inability of human beings to have an infinite number of justified beliefs 'of ever-increasing complexity' (Bergmann 2006, 15-6; cf. Rescorla 2014, 183).

[72] The conclusion that human beings cannot (or do not) have the beliefs required by our accounts of the two desiderata has an interesting implication for a discussion briefly mentioned in Chapter 1. There I said that while most current epistemological research, including our project, approaches the regress problem and the structure of our beliefs in a *normative* way, one could also approach these topics in a *descriptive* way, as suggested by, e.g., Witgenstein and Quine. Yet the conclusion, reached in the normative discussion, that no human being can have the beliefs required by the two desiderata, has implications for descriptive accounts as well. For if it is true, then any correct description of the structure of our beliefs will evince that that structure does not avoid both circularity and arbitrariness: as a matter of fact, either we hold some beliefs arbitrarily, or we hold beliefs on the basis of circular chains (or, of course, both). Apparently, such is the *condition humaine*.

that finite humans can have infinitely many justified beliefs forming a chain *underlying and supporting* every specific justified belief, and (3) that finite human beings can have infinitely many beliefs of ever increasing *complexity*, and (4) that any actual human being *in fact* has all the beliefs he is required to have by the infinitism implied by our desiderata. Hence, that infinitism gives rise to a kind of scepticism.

7.8 Conclusion

In this chapter, we have considered infinitism as a response to the regress problem, and evaluated it in terms of our desiderata of avoiding circularity and arbitrariness. First, we discussed Klein's version of infinitism. We found that Klein's theory avoids circularity and objective arbitrariness, but that it does not rule out subjective arbitrariness. Then we considered the theories by Fantl and Aikin, and found that both do not meet our two desiderata in a satisfying way. Finally, I sketched a version of infinitism that does in fact avoid circularity and all forms of arbitrariness, as it is implied by the accounts of our two desiderata. However, we saw, that version of infinitism requires the satisfaction of conditions that no finite human being is able to (or does in fact) satisfy.

Thus, combining the results of this chapter with those attained in the previous chapters, we may now conclude (1) that foundationalism and coherentism cannot avoid both circularity and arbitrariness, and (2) that only a version of infinitism can avoid circularity and arbitrariness, but that the demands imposed by that kind of infinitism cannot be met by finite human beings. Hence, it seems that given our desiderata of avoiding circularity and arbitrariness, we have reached an impasse. If we accept the desiderata of avoiding circularity and arbitrariness, we cannot have any justified belief at all. But this result strikes most epistemologists as unacceptable. In the following chapter, I will consider some ways in which one might attempt to deal with that impasse.

8 Remaining Options

8.1 Introduction: Where We Stand

Given the regress problem, the two desiderata, and the problems attaching to all epistemic theories, what should we think of our theoretical situation? Is there anything the foundationalist, the coherentist, or the infinitist can do in order to avoid the problem for her particular view? In this final chapter, I want to look at five remaining options. In Section 8.2, I will consider the option of accepting our desiderata, and accepting their implications by endorsing a form of scepticism. Then I will consider the alternative of rejecting one of the two desiderata: in Section 8.3, I will discuss the option of rejecting the ban on arbitrariness; in Section 8.4, I consider the possibility that circularity need not be vicious. In Section 8.5, I will look at the suggestion to avoid our impasse by distinguishing higher and lower kinds of justification, where the higher kinds require that circularity and all forms of arbitrariness are ruled out, whereas the lower kinds do not require that. Finally, in Section 8.6, we will consider a suggestion to be found in the writings of Jeanne Peijnenburg and David Atkinson, where a fascinating result concerning probabilistic support constitutes a reason for thinking that in some specific cases, the viciousness of arbitrariness can be emasculated. In Section 8.7, I will sum up our findings with regard to all the options.

8.2 Accepting Scepticism

One obvious way to respond to the conclusion we have reached is to accept the desiderata of avoiding arbitrariness and circularity, to accept what is implied by those desiderata, and also to accept the verdict that human beings, or most human beings, cannot satisfy what is required by them. If one endorsed this line of reasoning, one would accept a form of scepticism.

Andrew Cling has provided a response to the regress problem which suggests a move in this direction. Analogous to our attempt, in chapters 3 and 4, at explaining what is required for avoiding circularity and arbitrariness, Cling seeks conditions necessary and sufficient for attaining the valuable state of "rational intellectual autonomy" (Cling 2009, 342). Having found what he thinks are such conditions, however, Cling sees himself forced to conclude that

> our predicament is tragic because (…) rationality is valuable and intellectual autonomy is valuable, but these values impose conditions that cannot be jointly satisfied (*ibid.*, 342).

If Cling thinks that rationality and intellectual autonomy are not only valuable, but also necessary for justified belief and knowledge, he may be willing to adopt a form of scepticism.

However, although adopting scepticism is one possible response, most epistemologists do not find it an attractive option. Foundationalists, coherentists, and infinitists alike rule out scepticism from the beginning, and often treat it as a desideratum of epistemic theories that they accommodate the fact that human beings *have* justified beliefs and knowledge (e.g. BonJour 1985, Ch. 2; Bergmann 2006, Ch. 1; Rescorla 2009, 44).

8.3 Rejecting the (Subjective) Arbitrariness Desideratum

A second kind of response is to reject elements of one of the two desiderata that gave rise to it. Thus one thing one could do is reject the arbitrariness desideratum or elements of it. Since it turned out that the avoidance of arbitrariness is especially problematic for the foundationalist, this option seems attractive in particular for her. More specifically, since it turned out that the foundationalist cannot avoid *subjective* arbitrariness without ceasing to be a foundationalist, it may be attractive for her to deny that every justified belief should avoid that form arbitrariness.

Interestingly, a similar move is made by Bergmann in a discussion of what he calls 'awareness requirements on justification'. As one possible requirement Bergmann considers the following:

> *Actual Doxastic Strong Awareness Requirement (ADSAR)*: S's belief B is justified only if (i) there is something, X, that contributes to the justification of B and (ii) S is actually aware of X in such a way that S justifiedly believes that X is in some way relevant to the appropriateness of holding B (Bergmann 2006, 14-5).

According to Bergmann, ADSAR implies that "one has a justified belief only if one actually has an infinite number of justified beliefs of ever-increasing complexity" (*ibid.*, 15). However, given that ordinary human beings cannot have so many beliefs with that level of complexity, Bergmann argues that

"it's very difficult to see how a supporter of ADSAR could resist the conclusion that none of our beliefs are justified." And, Bergmann concludes, "[t]he very ease with which this skeptical conclusion follows from ADSAR gives us a reason to reject it" (*ibid.*, 15).[73]

Like Bergmann, a foundationalist could argue that our requirement for avoiding subjective arbitrariness should be abandoned, since it gives rise to an infinite regress and, thereby, to scepticism. In order for a belief to be justified, she could say, it is not necessary that it avoids subjective arbitrariness. It suffices if the belief avoids objective arbitrariness. Although avoiding *all forms* of arbitrariness may be a wonderful intellectual achievement, the avoidance of subjective arbitrariness is not a requirement for justification. When a belief is subjectively arbitrary, that arbitrariness may simply be *benign*.

Is this a promising line for the foundationalist? In response, I want to say two things. First, it seems that if the foundationalist wants to reject the subjective arbitrariness requirement, she should provide an argument showing that such arbitrariness is *not* vicious. Certainly, the term 'arbitrary' has a meaning that is at least pejorative. As we saw in Chapter 3, this is acknowledged by many foundationalists. Consider again the following observation by Huemer:

> "Arbitrary" seems to be a negative (epistemically) evaluative term. Surely no one would wish to call any belief that he endorsed "arbitrary" (Huemer 2003, 142).

Similarly, Howard-Snyder calls it a "semantic platitude that justification is nonarbitrariness *par excellence*" (Howard-Snyder 2005, 24). Since "justification just *is* being nonarbitrary", he claims that a foundationalist who chooses to allow arbitrariness thereby rejects his own theory (*ibid.*, 20). The way other foundationalists, including Bergmann, argue that foundationalism does *not* sanction arbitrariness evinces that they, too, think that arbitrariness is something vicious (Alston 1976a; Bergmann 2004; and Howard-Snyder and Coffmann 2006; Rescorla 2014, Goldberg, ms.).

[73] Given that Bergmann's only reason for rejecting ADSAR is the fact that it implies an infinite regress and scepticism, a case could be made that Bergamnn fails to show that ADSAR is wrong, as he merely provides an *argumentum ad consequentiam*. Since this point is not very relevant for present purposes, I will not press it any further.

The foundationalist who denies that arbitrariness is vicious should explain why arbitrariness can (at least sometimes) be benign. It does not suffice if she just asserts that accepting the arbitrariness requirement gives rise to an infinite regress or scepticism. She must give a further argument to the effect that infinite regresses are intrinsically bad or that scepticism is false. So far, I do not know of any philosopher really establishing that epistemic arbitrariness is benign.

Second, even if foundationalists were to maintain that the subjective arbitrariness requirement should be rejected, and that subjective arbitrariness is not vicious, it is very doubtful that they would convince many other epistemologists of their position. Although a denial of the requirement could rescue foundationalism, it is obvious that non-foundationalists, notably coherentists and infinitists, would not accept this solution. For according to them it is even more obvious that arbitrariness is vicious (cf. Lehrer 1974, 143-4; Poston 2012; 2014).

If she were to claim that subjective arbitrariness is benign, the foundationalist would presumably get involved in a theoretical standoff with the non-foundationalist. While the foundationalist might be able to adduce intuitions putatively showing that subjective arbitrariness is *not* so damaging, coherentists and infinitists will express contrary intuitions to the effect that subjective arbitrariness *is* vicious. By way of example, let us consider BonJour's famous example of Norman the Clairvoyant:

> Norman, under certain conditions which usually obtain, is a completely reliable clairvoyant with respect to certain kinds of subject matter. He possesses no evidence or reasons of any kind for or against the general possibility of such a cognitive power or for or against the thesis that he possesses it. One day Norman comes to believe that the President is in New York City, though he has no evidence either for or against this belief. In fact the belief is true and results from his clairvoyant power under circumstances in which it is completely reliable (BonJour 1985, 41).

Since Norman does not have a legitimate reason for his belief, nor a belief about the relation between such a reason and his belief, and since his belief is not based on a legitimate reason, his belief is subjectively arbitrary. Hence, a non-foundationalist will say, Norman's belief is *unjustified*. However, the foundationalist who wants to reject the subjective arbitrariness requirement

could claim that she does not share the intuition that the status of Norman's belief should be that bad: after all, Norman's belief is formed through the proper functioning of one of his cognitive faculties; given the way it is formed, its chance of being true is very high, Norman does not have a defeater for his belief, etc.

When the foundationalist and the non-foundationalist disagree on such a basic intuitive level, we could say that, using terminology from Alston, they *press different epistemic desiderata* (Alston 2005). The foundationalist as well the non-foundationalist think that both (i) a belief's being reliably formed and (ii) a belief's avoiding subjective arbitrariness are valuable from an epistemic point of view. However, when a belief *is* reliably formed but does *not* avoid subjective arbitrariness, as in the case of Norman, their readiness to regard that belief as justified will depend on which of these two desiderata they consider *decisive*. The foundationalist may press the desideratum that the belief should be reliably formed, whereas the non-foundationalist will emphasize the arbitrariness desideratum. And as long as the foundationalist and the non-foundationalist keep appealing to their *intuitions*, it is very unlikely that this debate is going to be settled. Since the foundationalist will cite intuitions not shared by the non-foundationalist and vice versa, it will be hard to find a neutral way of bringing the dispute to an end (cf. Alston 2005, 53-7).

Thus, while the foundationalist could save her theory by rejecting the subjective arbitrariness requirement, doing so involves at least two theoretical disadvantages. First, she has to show why arbitrariness is *not* (always) vicious; and second, denying the requirement would not at all contribute to persuading non-foundationalist epistemologists.

8.4 Rejecting the Circularity Desideratum

Just as one can respond to the conclusion reached in the previous chapters by rejecting the (subjective) arbitrariness requirement, one could also avoid that conclusion by rejecting the circularity desideratum. While rejecting the arbitrariness desideratum seems especially interesting to foundationalists, a well motivated denial of the circularity desideratum seems appealing especially for coherentists. Very interesting in this regard is a recent argument provided by Selim Berker (2015), to the effect that the coherentist need not be troubled by all circular epistemic chains.

In order to show that worries about circularity are not as distressing as is usually assumed, Berker suggests that we distinguish two *kinds* of belief sets with circular support structures, one called 'circular', the other called 'entwined'. If the set {B*p*, B*q*, B*r*} is *circular*, this means that B*p* is supported by B*q*, that B*q* is supported by B*r*, and that B*r* is supported by B*p*. If the same set is *entwined*, though, this means that B*p* is supported by B*q* *and* B*r*, that B*q* is supported by B*p* *and* B*r*, and that B*r* is supported by B*p* *and* B*q*.

B*p* is justified in a circular way both when it is justified by the circular belief set and when it is justified by the entwined belief set. In both cases, B*p* is justified by the support it receives in the set. Since in both cases B*p* depends on itself for its support, in both cases B*p* also depends on itself for its justification.

Crucially, while Berker agrees that justification by circular sets is vicious, he claims that the circularity involved in justification by entwined sets need not be vicious. When the coherentist adopts not circular but entwined belief sets as her model for 'justification conferring structures', Berker thinks that she can assuage most worries normally associated with circular chains (*ibid.*, 35-6).

In order to see whether Berker is right, let us recall the three worries, presented in Chapter 3 (Sect. 3.2.3), for the view that beliefs can be justified through circular chains where they lack sufficient independent justification. A first worry, expressed by many philosophers, is that it is intuitively *obvious* that such circular chains are vicious. A second worry is that when a belief can be justified through a circular chain where that belief fails to be independently justified, then the *negation* of that belief can equally well be justified by a *negated analogue* of the chain. A third worry is based on the following widely accepted principle:

(J) A belief can be justified by a further belief only if the latter belief is justified.

As we saw, (J) entails that a belief can only be justified through a circular chain if it is justified. But in that case it certainly cannot *become* justified through such a chain, or *be* justified *by* such a chain. If one circumvents this worry by rejecting (J), one allows nearly *any* belief to be justified by a further belief (true or false, justified or unjustified) with a suitable content.

Can these three worries be assuaged by Berker's proposal that not circular but entwined belief sets are the proper model for justification conferring structures? Regarding the worry that it is intuitively *obvious* that circular chains are vicious, Berker says that it only applies to a view on which *circular* belief sets confer justification. When B*p* is supported by B*q*, B*q* is supported by B*r*, and B*r* is supported by B*p*, Berker agrees that the circularity is clearly and obviously vicious: this structure certainly cannot confer justification on B*p*. However, intuitions are very different if one considers *entwined* belief sets. When B*p* is supported by B*q* *and* B*r*, B*q* is supported by B*p* *and* B*r*, and B*r* is supported by B*p* *and* B*q*, the intuitive version of the objection against circular chains becomes "much less compelling" (*ibid.*, 336).

Berker also recognizes the worry concerning justification through *negated analogues* of circular chains. Just as in his response to the first worry, he thinks this worry can be alleviated by recognizing the distinction between circular and entwined belief sets. If B*p* could become justified through the *circular* belief set {B*p*, B*q*, B*r*}, B¬*p* could be justified for the same person at the same time by a negated analogue of that set. If B*p* can be justified in virtue of a set where B*p* is supported by B*q*, B*q* is supported by B*r*, and B*r* is supported by B*p*, then B¬*p* can be justified in the same way by a set where B¬*p* is supported by B¬*r*, B¬*r* is supported by B¬*q*, and B¬*q* is supported by B¬*p*. Berker agrees that this worry constitutes "a forceful challenge" to the view that *circular* belief sets can underwrite justification (*ibid.*, 337).

However, he claims, the situation is completely different for *entwined* belief sets. When B*p* is justified by the entwined set {B*p*, B*q*, B*r*}, there exists no associated negated analogue. There is no such analogue because the fact that B*p* is supported by B*q* *and* B*r* does not imply that *both* B¬*q* *and* B¬*r* are supported by B¬*p*; and the fact that B*q* is supported by B*p* *and* B*r* does not imply that *both* B¬*p* *and* B¬*r* are supported by B¬*q*; etc. As Berker notes, it is not even clear what such claims *mean* (*ibid.*, 337). He concludes that the second worry for circular chains also loses its force once we focus on entwined rather than circular belief sets.

I think Berker has succeeded in disqualifying both the intuitive worry and the worry concerning negated belief sets. These worries are removed by the important distinction between circular and entwined sets, especially when justification is construed in terms of the latter. How about the third worry,

however? Can Berker also establish that beliefs may *be* justified *by* circular chains where this does not *presuppose* that they are justified?

Though Berker does not explicitly consider this worry, we may reflect on what he might respond. Let us assume that B*p* belongs to an entwined set {B*p*, B*q*, B*r*}. Thus, B*p* is supported by B*q* and B*r*, B*q* is supported by B*p* and B*r*, and B*r* is supported by B*p* and B*q*. Given (J), Berker faces the following question: can B*p* become justified by belonging to this set when it is not justified already? This question presents him with a dilemma. If he claims that B*p* should be justified already, then it is not the case that B*p* *becomes* justified *by* its membership of the entwined set. However, since Berker wants to allow B*p* to be justified by its membership of the set, for him this is an unacceptable result.

On the other hand, if Berker *denies* that B*p* should have been justified, hence if he denies (J), there is a serious risk that he allows *any* belief to be justified by (a set of) further beliefs with a suitable content. As we saw in Chapter 3, once (J) is denied, my belief that Anjum has exactly 2193 inhabitants might be justified by my further belief, from which it follows, that every village east of Moddergat has exactly 2193 inhabitants, even if the latter belief is just a silly hunch.

In response, Berker could say that not *any* belief is allowed to be justified by a denial of (J), because there are *other* requirements on the justification of a belief by its membership of an entwined set. In particular, he may say, a belief can be justified through such a set only if that belief is supported by all (or very many) other beliefs from the set. On this requirement, my belief that Anjum has exactly 2193 inhabitants cannot be justified by my belief that every village east of Moddergat has exactly 2193 inhabitants as long as the latter belief is not supported by other beliefs of mine.

Yet even if the requirement that a belief should be supported by other beliefs from the set may seem to rule out that *any* belief can be justified, it still allows *extremely many* beliefs to be justified. For example, consider the following entwined belief set: {<B*p*: I will win Wimbledon 2016>, <B*q*: I am the best tennis player in the world>, <B*r*: I just won Roland Garros 2016>}. B*p* is supported by B*q* and B*r*, B*q* is supported by B*p* and B*r*, and B*r* is supported by B*p* and B*q*. While B*p* depends for its support on the support provided by itself, Berker submits that the circularity hereby involved is not vicious, and that B*p* may be *justified* by this set since B*p* is *supported* by all other beliefs from the set (and since the others are supported in the same

way). However, many philosophers will find this result rather unattractive, especially given that *p* is wildly false, and given that I might hold B*p* merely through a fantastic dream I had two weeks ago.

For another example, consider the entwined belief set: {<B*p*: I own 1 million euro>, <B*q*: I am extremely rich>, <B*r*: I can buy a brand new bike for all inhabitants of Sint Annaparochie>}. Again, B*p* is supported by B*q* and B*r*, B*q* is supported by B*p* and B*r*, and B*r* is supported by B*p* and B*q*. While B*p* depends for its support on the support provided by itself, Berker claims that the circularity involved here is not vicious, and that B*p* may be justified by this set, as long as B*p* is supported by all other beliefs from the set. However, most will find this an unwelcome result, since *p* is patently false, since as a matter of fact nothing suggests that *p* is true, and since I might hold B*p* merely due to consulting the stars.

Given this consequence, what could Berker, or what could an advocate of circular chains in general, say? In light of Berker's rejection of justification by *circular* sets, it seems that he should also be unhappy with the above consequence for justification by *entwined* sets. As we saw, Berker rejects justification by *circular* sets because it implies that when B*p* can be justified by such a set, then B¬*p* can be justified by a negated analogue of that set. Hence, it seems equally natural for him to be (or become) dissatisfied with justification by *entwined* sets, as that view implies, in a similar way, that when B*p* can be justified through such a set, very many other (if not *all*) patently false and intuitively irrational beliefs, presumably including B¬*p*, can be justified by such a set.

It is also possible, though, that Berker or the 'circularist' is *not* so unhappy with this consequence for the view. For instance, he could say that while the view implies that very many patently false and irrational beliefs could be justified, this is not worrisome as we do not *in fact* hold such beliefs. Thus, while my belief that I own 1 million euro *can* become justified through its membership of an entwined set, this is unproblematic as I will not adopt this belief; and though my belief that I will win Wimbledon 2016 *can* become justified through its membership of an entwined set, this is not worrisome as long as I do not care to form this belief.

However, though this is a response the 'circularist' can give, it will certainly fail to convince her opponents. Certainly, philosophers worrying about circularity will say, the problem is not that such beliefs are not *in fact* justified, but that on the present theory they can *become* justified.

What Berker or the circularist could also say is that while the view of justification by entwined sets implies that many patently false beliefs can be justified, he does not share the intuition that this result is very *vicious*. Instead, his intuition could be that the result is *correct*. Thus, he could say, when beliefs are adequately supported through such sets, it does not so much matter if they are false or if they are irrational in some sense. What really matters is that they *cohere* very nicely with many other beliefs, that they form an elegant and *comprehensive picture of the world*, which enables the subjects holding those beliefs to attain *understanding* (in some sense of that term) of themselves and of the world surrounding them, to make *predictions* about future events, etc.[74]

Presumably, when the circularist responds in this way, he and the 'non-circularist' will get involved in a theoretical standoff very similar to the one described in the previous section. Presumably, the circularist as well as the non-circularist thinks that both (i) a belief being (likely to be) true and (ii) a belief nicely cohering with other beliefs are epistemically valuable. Yet in cases where a belief *does* very nicely cohere with other beliefs but is *not* somehow likely to be true, as in the above examples, their readiness to regard that belief as *justified* will depend on which of these two desiderata they consider decisive. The circularist will press the coherence desideratum, whereas the non-circularist will emphasize the truth desideratum. And as long as the circularist and the non-circularist keep appealing to their *intuitions*, it is unlikely that this debate is going to be settled. If both parties cite intuitions not shared by the other party, it will be impossible to bring the dispute to an end.

As I said, one way to respond to the conclusion of the foregoing chapters, next to dismissing the arbitrariness requirement, is to reject the ban on circularity. In this subsection, we have considered Berker's attempt to motivate a rejection of the circularity desideratum in terms of the important distinction between circular and entwined beliefs sets. Relying on this distinction, Berker turned out able to avoid two worries usually associated with circular chains: that their viciousness is intuitively obvious and that they allow for justification via negated analogous belief sets. Despite this success, however, Berker's proposal cannot avoid the worry that extremely many patently false and intuitively irrational beliefs are allowed to be justified.

[74] For an indication that this is the response Berker would favour, see *ibid.*, 347, n. 19. For another coherentist who is likely to adopt this line of reasoning, see Lycan 2012.

While he or the circularist may claim that this result is unproblematic, that will not help him to persuade his non-circularist opponents.

8.5 Distinguishing Different Levels of Knowledge and Justification

Another normative response to the conclusion that no epistemic theory succeeds in avoiding both circularity and arbitrariness is to distinguish different kinds of knowledge and/or justification, some higher than others, and argue that avoiding circularity and/or arbitrariness is needed for the higher forms only.

For an example of such a distinction, consider the following passage from Sosa:

> Admittedly, there is a sense in which even a supermarket door "knows" when someone approaches, and in which a heating system "knows" when the temperature in a room rises above a certain setting. Such is "servo-mechanic" knowledge. And there is also an immense variety of animal knowledge, instinctive or learned, which facilitates survival and flourishing in an astonishingly rich diversity of modes and environments. Human knowledge is on a higher plane of sophistication, however, precisely because of its enhanced coherence and comprehensiveness and its capacity to satisfy self-reflective curiosity (Sosa 1983, 58-9).

In his later work, Sosa especially relies on a distinction between *animal knowledge* and *reflective knowledge*. Roughly speaking, animal knowledge is construed as knowledge one has when one's beliefs are direct responses to the impact of what they are about, e.g. one's immediate environment, where their formation does not require any further reflection or understanding. Reflective knowledge, on the other hand, is knowledge one has if one's beliefs are not merely formed in the direct way, but if they are also integrated in a wider perspective including understanding of how they came about (Sosa 1985, 214-2).[75]

[75] Similar to Sosa, Burge has drawn a distinction between a higher and a lower form of what he calls 'warrant'. Burge calls the lower form 'entitlement', and the higher form 'justification'. By focusing solely on justification, and by neglecting entitlement, Burge argues, traditional epistemologists have 'hyper-intellectualized' warrant (cf. Burge 1993; 2003).

Informed by this distinction, one could argue that while the avoidance of circularity and arbitrariness is needed for reflective knowledge (or justification), it is *not* needed for animal knowledge (or justification). In particular, it may be natural to argue that animal knowledge, unlike reflective knowledge, does not require the avoidance of (subjective) *arbitrariness*. Thus, one could admit that most animals are unable to attain reflective knowledge because they lack the intellectual capacities needed for avoiding arbitrariness, but add that they may nonetheless reach the level of animal knowledge, since this only requires that their beliefs are formed in a suitably direct way. And in the same vein, one could argue that while it is hard or impossible for human beings to attain reflective knowledge since that requires the avoidance of a kind of arbitrariness they cannot avoid, they can nevertheless acquire animal knowledge, e.g. when their beliefs are caused in some reliable fashion.

Is this a feasible strategy? I think a couple of things should be said here. In a sense, the suggestion that animal knowledge does not require that arbitrariness (or circularity) is avoided does give a promising answer to the conclusion that no theory can avoid both circularity and arbitrariness. For on that suggestion, there is a form of knowledge for which it is *not necessary* that both circularity and arbitrariness are avoided. Even if no epistemic theory succeeds in avoiding both, this need not prevent human beings from having knowledge.

On the other hand, while this response makes one form of knowledge invulnerable to the conclusion of the foregoing chapters, it does not save the other form. If reflective knowledge still requires the avoidance of circularity and arbitrariness, and if it is impossible for finite human beings to avoid both, human beings are unable to reach the level of reflective knowledge.

Moreover, it seems that many foundationalists, coherentists, and infinitists are chiefly interested in a form of knowledge higher than mere animal knowledge. Klein explicitly states that his infinitism deals with reflective knowledge. He claims that it is "the kind of knowledge that we value most highly" and says that it "is akin to the traditional concept of *scientia:* it is knowledge that results from carefully examining our beliefs in order to determine which, if any, deserve to be maintained" (Klein 2007a, 4). Similarly, many coherentists and foundationalists, whether or not responding to Klein, appear to be interested in a form of knowledge higher than mere animal knowledge (e.g. Lehrer 2000, 12-14; Fumerton 1995, 128, 218-22; 2006, 113-5). Hence, even if it is possible to isolate animal knowledge as a

kind of knowledge that is not vulnerable to the consequences of our desiderata, it is doubtful that this will satisfy all (or even many) epistemologists.

So, while using the distinction between animal and reflective knowledge in response to the implications of our desiderata entails that there is at least one level of knowledge we may actually reach, it does nothing to ensure that humans can obtain reflective knowledge, and it is doubtful that this strategy will be appealing to many other theorists.

8.6 Peijnenburg and Atkinson on 'Fading Foundations'

The last response to the conclusion of the foregoing chapters that I will consider is one that can be found in some recent writings by Jeanne Peijnenburg and David Atkinson. This response, which draws on a result about probabilistic support, is especially attractive for infinitists, but might also be helpful for foundationalists. In the following four subsections, I will discuss both the result about probabilistic support and the implications for epistemic theories. In 8.6.1, I will present the result concerning probabilistic support; in 8.6.2, I will discuss the consequences of this result for propositional and doxastic justification; in 8.6.3., I will explain the implications of these consequences for epistemic theories; and in 8.6.4, I will give my comments.

8.6.1 Probabilistic support

Peijnenburg and Atkinson begin their argument by assuming that justification is a matter of *probabilistic support*. Thus, when a belief, B*p*, is doxastically justified in virtue of its relation to another belief, B*q*, this means that B*p* is probabilistically supported by B*q*, or that B*q* makes B*p* more probable. And when a proposition, *p*, is propositionally justified by its relation to another proposition, *q*, this means that *p* is probabilistically supported by *q*, or that *q* makes *p* more probable.[76]

[76] While Klein's construal of propositional justification turned out to be different from the common construal, Peijnenburg and Atkinson's construal seems to be different both from the common construal and from Klein's construal. Whereas most epistemologists say that a proposition, *p*, is propositionally justified for a person, S, if and only if S *has* a suitable reason for *p*, and Klein says that a proposition, *p*, is propositionally justified for a person, S, if and only if S has a suitable reason *available* for *p*, Peijnenburg and Atkinson accept a fully abstract notion of propositional

In order to determine what exactly is implied by this assumption, Peijnenburg and Atkinson consider a chain of propositions, where some proposition, p, is probabilistically supported by further proposition, q_1, which is probabilistically supported by a still further proposition, q_2, which is probabilistically supported by a final proposition, r:

$$p \leftarrow q_1 \leftarrow q_2 \leftarrow r$$

Here p, the first proposition in the chain, is called the *target* and r, the last proposition, is called the *ground*. According to Peijnenburg and Atkinson, the probability of p is determined according to the rule of total probability, as follows:

$$\mathrm{P}(p) = \mathrm{P}(p \mid q_1) \cdot \mathrm{P}(q_1) + \mathrm{P}(p \mid \neg q_1) \cdot \mathrm{P}(\neg q_1)$$

Thus, in order to know $\mathrm{P}(p)$, one needs to know four terms:

$\mathrm{P}(p \mid q_1)$
$\mathrm{P}(q_1)$
$\mathrm{P}(p \mid \neg q_1)$
$\mathrm{P}(\neg q_1)$

$\mathrm{P}(p \mid q_1)$ and $\mathrm{P}(p \mid \neg q_1)$ are conditional probabilities, whereas $\mathrm{P}(q_1)$ and $\mathrm{P}(\neg q_1)$ are unconditional probabilities. Since $\mathrm{P}(q_1)$ and $\mathrm{P}(\neg q_1)$ add up to 1, knowing both probabilities requires knowledge of $\mathrm{P}(q_1)$ (or $\mathrm{P}(\neg q_1)$) only. Thus in order to know $\mathrm{P}(p)$, one needs to know the conditional probabilities $\mathrm{P}(p \mid q_1)$ and $\mathrm{P}(p \mid \neg q_1)$ and the unconditional probability $\mathrm{P}(q_1)$.

Ignoring for the moment the two conditional probabilities, $\mathrm{P}(q_1)$ is established as follows:

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justification where a person, S, seems to plays no role at all. They assume that a proposition, *p*, is propositionally justified when it is *justified by another proposition or a chain of propositions* (Peijnenburg and Atkinson 2014a, 205; Peijnenburg 2015a, 126, 144; Peijnenburg 2015b, 209-10). Thus on their concept, propositional justification not only means that what *is justified* is a proposition, but also that what *justifies* is a (chain of) proposition(s). For some commentators (implicitly) accepting Peijnenburg and Atkinson's construal of propositional justification, see Van Woudenberg and Meester 2014, 225; Muller 2015, 186; and Ghijsen 2015, 195.

$$P(q_1) = P(q_1|q_2) \cdot P(q_2) + P(q_1|\neg q_2) \cdot P(\neg q_2)$$

As with P(p), establishing P(q_1) requires knowledge of three terms: the conditional probabilities P($q_1|q_2$) and P($q_1|\neg q_2$) and the unconditional probability P(q_2). Again ignoring the conditional probabilities, P(q_2) is established as follows:

$$P(q_2) = P(q_2|r) \cdot P(r) + P(q_1|\neg r) \cdot P(\neg r)$$

And again, establishing P(q_2) requires knowledge of two conditional probabilities, P($q_2|r$) and P($q_1|\neg r$), and an unconditional probability, P(r). Yet, since r is the *ground* of the envisioned chain of propositions, knowing its probability does not require that we know the probability of still further propositions.

As this shows, in order to know the probability of a *target* proposition, p, which is probabilistically supported through a chain of propositions, q_1, q_2, …, q_n, r, one needs to know both (i) the conditional probabilities P($p|q_1$), P($p|\neg q_1$), …, P($q_n|r$), and P($q_n|\neg r$) and (ii) the unconditional probability P(r).

Importantly, Peijnenburg and Atkinson argue that when there are *more intermediate links* between the target p and the ground r, i.e. when there are more q's, the probability of p is determined *less* by the unconditional probability of r, and *more* by the conditional probabilities (of p given q_1, of p given $\neg q_1$, …, of q_n given r, and of q_n given $\neg r$). In order to substantiate this claim, they consider an example featuring a target, p, a ground, r, and a varying number of q's, n, where they assume, for the sake of the argument, that all conditional probabilities P($p|q_1$), P($q_1|q_2$), …, P($q_n|r$) are 0.99, and all conditional probabilities P($p|\neg q_1$), P($q_1|\neg q_2$), …, P($q_n|\neg r$) are 0.04.

Peijnenburg and Atkinson consider two scenarios: one where the probability of r is 0.7 and one where it is 0.95. When the probability of r is 0.7, the probability of p depends on the number of q's in the following way:

TABLE 1. Probability of p given P(r) = .7

Number of q's n	1	2	5	10	50	100	∞
P(p)	.709	.714	.726	.743	.793	.799	.8

Thus, when the number of *q*'s is 1, the probability of *p* is 0.709. When the number of *q*'s is 2, *p*'s probability rises to 0.714. And as the table shows, the more *q*'s are introduced, the higher *p*'s probability becomes, until it reaches its final value of 0.8 when the number of *q*'s is infinite.[77]

When *r* has a probability of 0.95, we get the following result:

TABLE 2. Probability of *p* given P(*r*) = .95

Number of *q*'s *n*	1	2	5	10	50	100	∞
P(*p*)	.935	.929	.910	.885	.811	.801	.8

Unlike in the first case, here the probability of *r* decreases as the number of *q*'s increases. With only one *q*, it is 0.935; with two *q*'s, it becomes 0.929; with five *q*'s, it becomes 0.910; and so on. However, just as in the first example, when there are infinitely many *q*'s, *p*'s probability is 0.8. So although *p*'s probability increases when P(*r*) is 0.7 and more *q*'s are added, and decreases when P(*r*) is 0.95 and more *q*'s are added, in both cases *p*'s probability comes closer and closer to 0.8 when more and more *q*'s are added.

According to Peijnenburg and Atkinson, this result should be explained by a phenomenon for which Peijnenburg has recently coined the term 'fading foundations' (Peijnenburg 2015a, 141).[78] *Fading foundations* says that the further removed a ground (or 'foundation'), *r*, is from a target, *p*, i.e., the more *q*'s there are, the lower the influence of the unconditional probability of *r* on *p*'s probability, and the higher the influence of the conditional probabilities on *p*'s probability.

Thus, consider the values of P(*p*) in Table 1, where P(*r*) is 0.7. When there is only one *q*, the probability of *p* (0.709) is still very close to, and still strongly influenced by, the probability of *r*. Yet, the larger the distance between *r* and *p*, the lower the influence of *r*'s probability on *p*'s probability becomes. The same goes for the values of P(*p*) in Table 2, where P(*r*) is 0.95. When there is only one *q*, the probability of *p* (0.935) is still close to, and strongly influenced by, the probability of *r*. Yet, as the distance between *r* and *p* gets larger, the influence of *r*'s probability on *p*'s probability gets

[77] The tables in this section are taken from Peijnenburg and Atkinson 2013, but similar tables can be found in Peijnenburg and Atkinson 2014a and 2014b, and in Peijnenburg 2015a.

[78] In an earlier paper, Peijnenburg and Atkinson called the same phenomenon DIG: the Decreasing Influence of the Ground (Peijnenburg and Atkinson 2014a, 203).

lower. In this way the envisioned scenarios illustrate that if the distance between a target, *p*, and a ground, *r*, is increased, *p*'s probability is determined less by the unconditional probability of *r* and more by the conditional probabilities (in this example, 0.99 and 0.04).

The idea behind *fading foundations* can be further illustrated by considering a scenario where all conditional probabilities are still 0.99 and 0.04, but where the probability of the ground is 0.5:

TABLE 3. Probability of *p* given P(*r*) = .5

Number of *q*'s *n*	1	2	5	10	50	100	∞
P(*p*)	.529	.534	.579	.629	.778	.798	.8

As with the scenarios where P(*r*) is 0.7 or 0.95, here the influence of the ground becomes less the further *r* is removed from *p*, and *p*'s probability becomes 0.8 when there are infinitely many *q*'s. Peijnenburg and Atkinson show that even when the probability of *r* is 0 (and with the same conditional probabilities), the influence of *r*'s probability on *p*'s probability becomes less the more *q*'s are involved, and that with infinitely many *q*'s, *p*'s probability becomes 0.8 even in that case (Peijnenburg and Atkinson 2013, 556-7).

Thus, Peijnenburg and Atkinson show that the further a target proposition, *p*, is removed from a ground proposition, *r*, the less the probability of *p* is determined by the probability of *r* and the more it is determined by conditional probabilities. When the distance between *p* and *r* is *infinite*, *p*'s the probability is *fully* determined by the conditional probabilities of intermediate propositions, given the propositions preceding them.

8.6.2 Consequences for propositional and doxastic justification

How is this result regarding the *probability* of propositions relevant for the *justification* of propositions (and for the justification of *beliefs* in those propositions)? As I said above, Peijnenburg and Atkinson assume that when *p* is justified by *q*, this implies that *p* is probabilistically supported by *q*, or that *q* makes *p* more probable. Here we can make their thoughts a bit more specific. While they think that *q* making *p* more probable is *necessary* for *p*'s being justified by *q*, they do not think it is *sufficient* for that. If it were sufficient, *q* would justify *p* even if *p* was made only slightly more probable, and even if *p* still had a very low probability. As a further necessary

condition, Peijnenburg and Atkinson suggest the introduction of a clause to the effect that the probability of *p* should be made greater than a certain threshold, *t* (Peijnenburg and Atkinson 2014a, 203; cf. 2013, 560; and 2014b, 168). The value of this threshold should be determined by contextual considerations. In some contexts, e.g. when the stakes are very high, the threshold should be high as well, say 0.95, whereas in other contexts the threshold may be much lower, say 0.8. If a proposition, *p*, is made probable by a further proposition or chain of propositions such that *p*'s probability is greater than *t*, *p* can thereby be propositionally justified.[79]

Crucially, since propositional justification is related to probability in this way, the phenomenon of 'fading foundations' also applies to propositional justification. That is, the fact that a ground, *r*, is further removed from a target, *p*, not only means that the *probability* of *p* is influenced less by the unconditional probability of *r* and more by the intermediate conditional probabilities, it also means that the degree of *justification* of *p* is less determined by the unconditional probability of *r* and more by the intermediate conditional probabilities: the further *r* is removed from *p*, the lower the influence of *r* on whether *p*'s probability exceeds *t*, and the higher the influence of the conditional probabilities on whether *p*'s probability exceeds *t*. And, interestingly, when *r* is infinitely far removed from *p*, *p* can still have a probability greater than *t* and be propositionally justified.

By way of example, consider again the scenarios specified in Table 3, and suppose that the context determines that *t* is 0.75. Imagine that *p* is supported by *r* via a finite chain of 10 *q*'s. In that case, *p* is not propositionally justified, since its probability (0.629) is lower than *t*. By contrast, suppose that *p* is supported by *r* via a finite chain of 50 *q*'s. In that case, *p* can be propositionally justified, since its probability (0.778) is then greater than *t*. Third, when *p* is supported by *r* via an *infinite* chain of *q*'s, *p*

[79] I say 'can' thereby be justified because Peijnenburg and Atkinson think that *p* being made more probable than *t*, though necessary, is still not *sufficient* for *p* being propositionally justified (Peijnenburg and Atkinson 2014a, Sect. 4). I come back to this point later on.

In private conversation, Peijnenburg and Atkinson have told me that they regard the threshold merely as an example of a clause to ensure that probabilistic justification does not become too easy. If there are problems for the notion of the threshold, another necessary conditions could be substituted. Below I keep writing in terms of the threshold condition for the sake of exposition.

can also be propositionally justified, since *p*'s final probability (0.8) is greater than *t*.

With this account of propositional justification in mind, Peijnenburg and Atkinson present an analogous view on doxastic justification. Following Klein, they assume that doxastic justification is *parasitic* on propositional justification (e.g. Peijnenburg 2015a, 145; cf. Klein 2007a, 8). If we envision a chain of propositions $\{p \leftarrow q_1 \leftarrow q_2 \leftarrow \ldots \leftarrow r\}$, where *p* is the target proposition and *r* the ground proposition, we could think of a corresponding chain of beliefs $\{Bp \leftarrow Bq_1 \leftarrow Bq_2 \leftarrow \ldots \leftarrow Br\}$, where B*p* is the target belief and B*r* the ground belief. Since doxastic justification is parasitic on propositional justification, the phenomenon of fading foundations applies to doxastic justification just as it applies to propositional justification. So, the further a ground belief, B*r*, is removed from a target belief, B*p*, the less B*p*'s justification is determined by the unconditional probability of *r* and the more it is determined by conditional probabilities (of *p* given q_1, of *p* given $\neg q_1$, etc).

Just as in the context of propositional justification, Peijnenburg and Atkinson suggest that the doxastic justification of B*p* requires that *p*'s probability is higher than a contextually determined threshold, *t* (Peijnenburg and Atkinson 2014a, 203). Thus, if B*p* is supported by a further belief or chain of beliefs which ensures that *p*'s probability is greater than *t*, then B*p* may thereby be doxastically justified.[80]

By way of example, again consider the scenarios from Table 3. Suppose that the threshold for doxastic justification, just as we assumed above for propositional justification, is 0.75. If *p* is supported by *r* through a chain of 10 *q*'s, then *p* is not propositionally justified. This means that if S's *belief* B*p* is supported by his belief B*r* via his beliefs Bq_1 to Bq_{10}, then B*p* is not doxastically justified either. Similarly, if *p* is supported by *r* through a chain of 50 *q*'s, then *p* may be propositionally justified. Hence, if S's belief B*p* is supported by his belief B*r* via his beliefs Bq_1 to Bq_{50}, then B*p* may thereby be doxastically justified. Finally, when *p* is supported by *r* through an *infinite* chain of *q*'s, then *p* can thereby be propositionally justified. So when S's belief B*p* is supported by his belief B*r* through an infinite chain of beliefs Bq_1, Bq_2, and so on indefinitely, then B*p* can thereby be doxastically justified.

[80] As in the case of propositional justification, I say 'may' since Peijnenburg and Atkinson think that *p* being made more probable than *t* is necessary but still not sufficient for B*p*'s doxastic justification (Peijnenburg and Atkinson 2014a, Sect. 4).

Importantly, though, these three examples all concern cases where the chain of beliefs completely 'overlaps' the chain of propositions. What if the doxastic chain does *not* overlap the propositional chain in this way? In particular, we can imagine cases where a chain of propositions $\{q_1, q_2, q_3, \ldots, r\}$ underlying *p* is simply *too long* for a finite person who is to adopt beliefs in all of them.

In such cases, Peijnenburg and Atkinson say, a person usually 'stops' at a belief when he thinks the probability *p* receives by the chain up and till that belief is 'accurate enough' vis-à-vis *p*'s *real* probability. That is, he stops forming or adducing further beliefs as soon as he thinks that doing so no longer has a significant influence on the probability of *p*, given *p*'s final probability. Presumably, at what point a person judges that he has formed enough beliefs along the chain of propositions is determined by pragmatic considerations. In some theoretical contexts, he will desire a very high degree of accuracy, whereas in other, more pragmatic, contexts he will be happy with a much lower degree of accuracy (Peijnenburg and Atkinson 2014a, 207; 2013, 561).

For instance, consider again Table 3. Suppose that *p* is supported by *r* through an infinite chain of *q*'s. If the threshold of acceptance, *t*, is 0.75, *p* can be propositionally justified, since its final probability is 0.8. Yet assume that S is unable to form beliefs in all propositions underlying *p*, and resolves to form beliefs 'only' in q_1 to q_{50}. In that case, the beliefs underlying his belief B*p* ensure that *p* has a probability of 0.778. Given the threshold of 0.75, B*p* may be doxastically justified. Thus in this case, *p* can be propositionally justified and B*p* may be doxastically justified.

It is also possible that *p* is propositionally justified, but B*p* is doxastically unjustified. Consider the same scenarios from Table 3. Suppose that *p* is still supported by an infinite chain of *q*'s and that *t* is still 0.75. Thus, *p* can be propositionally justified by that chain. However, suppose that S adopts beliefs only in the propositions q_1 through q_{10}. In that case, the beliefs underlying B*p* give *p* a probability (0.629) which is lower than the threshold. Hence, although *p* may be justified, B*p* is not.

What is also possible, finally, is that B*p* appears to be doxastically justified, whereas *p* is not propositionally justified. For an example, consider the scenarios from Table 2. Let us assume that *t*, both for propositions and for beliefs, is 0.85. Suppose that *p* is supported by an infinite chain of *q*'s. Thus, *p*'s probability is 0.8 and *p* is not propositionally justified. However, suppose that S adopts beliefs only in propositions q_1 to q_{10}. In that case, the chain

underlying his belief B*p* gives *p* a probability (0.885) which exceeds *t*. Peijnenburg and Atkinson claim that in such a situation, "[*p*] seems at first to be probabilistically justified (…), but later, as the chain lengthens, we discover that this is not so" (Peijnenburg and Atkinson 2013, 560).

8.6.3 Implications

Assuming that *fading foundations* does indeed apply to probabilistic support, and assuming it also applies to chains where propositions are justified by further propositions, and to chains where beliefs are justified by further beliefs, what implications does this have for our discussion? That is, what does it mean for the conclusion that all actual epistemic theories fail to avoid both circularity and arbitrariness, and that the only theory which really avoids both imposes demands that no human being may be able to meet?

Peijnenburg and Atikinson hold that *fading foundations* has important implications for responses to the regress problem. One important consequence is that it implies that both propositions and beliefs can in principle be justified by *infinite chains* of propositions and beliefs. As we have already noticed, *fading foundations* implies that it is possible that a target proposition, *p*, is justified by a ground proposition, *r*, via an infinite chain of *q*'s, because the probability of *p*, given such a chain, may perfectly well be greater than a contextually given (and possibly very high) threshold. Similarly, given *fading foundations*, it is possible that a target belief, B*p*, is justified by a ground belief, B*r*, via an infinite chain of beliefs, because the probability of *p*, given such a chain, can be greater than a given threshold. As *fading foundations* has these results for propositional and doxastic justification, it can be used to remove some common worries for infinitism.

In particular, *fading foundations* nicely helps to avoid the so-called 'no starting point objection'. According to philosophers pressing that objection, justification is a property attaching to propositions or beliefs, which they usually receive from further propositions or beliefs. Thus, when a proposition or belief is justified, it has a property which it receives from a further proposition or belief, which receives the same property from a still further proposition or belief, etc. However, these philosophers argue, if justification is a property transferred from proposition to proposition or from belief to belief, it makes no sense to envision an infinite justificatory chain of propositions or beliefs. In such an infinite chain of propositions or beliefs, the property of justification has no origin. Yet if the property does not have an

origin, it is unclear how the transmission of that property could even get started. Klein, who does not share the worry, has phrased it as follows:

> Just as with real property in which there must have been some original ownership established before the property can be transmitted, there must be some way for a proposition to be justified that does not require transference (Klein 2007a, 16).

According to Peijnenburg and Atkinson, *fading foundations* implies that this worry is misplaced: a proposition or belief can receive a probability higher than a required threshold and, thereby, be justified, even when a starting point for justification is infinitely far removed and, in that sense, nonexistent (cf. Peijnenburg and Atkinson 2013).

Another consequence of *fading foundations*, more interesting given the aim of the *current* chapter, concerns the justification of beliefs by *finite chains*. As we have seen above, a belief, Bp, can be justified by a chain of beliefs when p is propositionally justified, and the chain of beliefs underlying Bp, say Bq_1, Bq_2, …, Bq_n, gives p a probability which is both greater than t and sufficiently accurate given the contextual demands. Bp may be justified through such a chain when the number of Bq's, n, is 10, or when it is 50, or 100, etc.

How about the *last* belief in such a chain, say Bq_n? According to Peijnenburg and Atkinson, one possibility is that Bq_n is justified by another belief. Another possibility is that Bq_n is justified by itself. Crucially, however, Peijnenburg and Atkinson claim that in very specific cases, the last belief may also be *unjustified* (Peijnenburg and Atkinson 2014a, 206-7).

Their reason for claiming this is again provided by *fading foundations*. As we saw, *fading foundations* implies that the further the ground belief, Bq_n, is removed from the target belief, Bp, the less Bp's degree of justification is determined by the unconditional probability of q_n, and the more it is determined by the unconditional probabilities of intermediate propositions (of p given q_1, of p given $\neg q_1$, etc). Thus it is possible that when the finite chain is sufficiently long, the influence of q_n's probability on the justification of Bp becomes negligible. In such a case, Peijnenburg and Atkinson say,

> it does not matter for the doxastic justification of Bp whether Bq_n is justified or not: Bp can still be doxastically justified. (…) Recognizing that any justification that Bq_n gives to Bp diminishes as the distance

> between the two is augmented, we might decide to stop at Bq_n because the justificatory contribution that any further belief would bestow on Bp is deemed to be too small to be of interest (*ibid.*, 207).

Peijnenburg and Atkinson add that we might decide to stop at Bq_n since 'stopping at Bq_n' may be interpreted such that

> an agent can decide to stop at a belief Bq_n because she realizes that, for her purposes, Bq_{n+1} has become irrelevant for the justification of Bp. She finds the degree of justification conferred upon Bp by Bq_1 to Bq_n accurate enough and feels no need to make it more accurate by taking Bq_{n+1} into account. For her, the justificatory contribution that Bq_{n+1} gives to Bp has become negligible (*ibid.*, 207).

Since 'stopping at a certain belief' can mean this, a belief, Bp, may be justified through a long, finite chain of beliefs even when Bq_n is unjustified. And presumably, Peijnenburg and Atkinson think that Bp can also be justified through a long, finite chain of beliefs when the last member of that chain is *arbitrary*. When the influence of this last belief on Bp's justification is negligible, when Bp's degree of justification is almost fully determined by the conditional probabilities of the intermediate propositions, they will say that it is *harmless* if Bq_n is arbitrary.

Consider a finite chain of beliefs, Bp, Bq_1, …, Bq_n. Suppose that p is propositionally justified, the chain of beliefs underlying Bp gives p a probability which is both greater than t and sufficiently accurate, and the influence of q_n on p's probability is negligible. If all these conditions obtain, Peijnenburg and Atkinson's suggestion goes, Bp is doxastically justified, even if the last item in the chain of beliefs, Bq_n, is arbitrary. In this sense, Peijnenburg and Atkinson's argument may be construed as an attempt to show that even if arbitrariness as such is always vicious, it can sometimes be emasculated.

8.6.4 Comments

What should we say about Peijnenburg and Atkinson's suggestion concerning finite chains with unjustified or arbitrary ground beliefs? At first sight, the suggestion appears especially beneficial for *foundationalists*. After all, in their view justification is a property attaching to certain non-basic

beliefs which are ultimately justified, via finite chains, by basic beliefs. On our account of avoiding arbitrariness, the foundationalist has to license arbitrary basic beliefs: while she is able to assure that S has a legitimate reason for every basic belief, B*b*, she cannot require that S has a further belief about the relation between that reason and B*b*. Yet if arbitrariness is not vicious on the conditions specified by Peijnenburg and Atkinson, and for the reasons given by them, perhaps the foundationalist need not worry about this outcome. Even if basic beliefs cannot avoid being arbitrary, beliefs at the top of foundationalist chains can still receive a probability which is high and accurate enough. If so, may not the arbitrariness of basic beliefs be harmless?

While this suggestion is appealing at first sight, I do not think that many ordinary foundationalists can benefit from *fading foundations* in a very substantial way. The chains by which beliefs are justified on most foundationalist accounts can be very short. Suppose that S holds the belief, B*p*, that the bus drivers strike is over, which is based on S's further belief, B*q*, that a bus is approaching him from behind, which is based on an auditory experience, E, of a bus approaching him from behind. On a rather common type of foundationalism, B*p* is justified by B*q*, and B*q* is justified by E. Since B*p* depends for its justification on B*q*, B*p* is a non-basic belief. Since B*q* is justified by an experience, B*q* is a basic belief.

As we saw in Chapter 5, the foundationalist has to allow arbitrariness since she cannot ensure that S has a further belief about the relation between (the reason S has by having) E and *q*. On the suggestion under consideration, though, B*q*'s arbitrariness need not be vicious when *p* is propositionally justified, the doxastic chain underlying B*p* gives *p* an accurate probability greater than *t*, and the influence of *q* on *p*'s probability is negligible. Crucially, though, not all these conditions are satisfied in the envisioned example. It may be that *p* is propositionally justified by *q* and E, and also that the doxastic chain underlying B*p* gives *p* a probability greater than *t*. It is certainly not the case, however, that the influence of *q* on *p*'s probability is negligible: presumably the value of P(*q*) is still very important for the value of P(*p*). Hence, it is not the case that the arbitrariness of B*q* is harmless.

Thus, it is very important to realize that a foundationalist, or an epistemologist in general, can only benefit from the suggestion concerning (possibly) harmless arbitrariness if she thinks of finite chains where the influence of the ground belief on the target belief is *negligible*. This might also explain why Peijnenburg and Atkinson, when considering finite chains

conferring justification on a proposition or belief, commonly write about *long* finite chains (Peijnenburg and Atkinson 2014a, 206; 2013, 559).

But if the effect of *fading foundations* is only helpful when finite chains are sufficiently long, *how* long should they be in practice? Let us again consider the example with a target, p, a ground, r, and a varying number of q's, n, where all conditional probabilities $P(p|q_1)$, $P(q_1|q_2)$, …, $P(q_n|r)$ are 0.99, and all conditional probabilities $P(p|\neg q_1)$, $P(q_1|\neg q_2)$, …, $P(q_n|\neg r)$ are 0.04. Table 3 specifies the probabilities of p when $P(r)$ is 0.5:

TABLE 3. Probability of *p* given P(*r*) = .5

Number of *q*'s *n*	1	2	5	10	50	100	∞
P(*p*)	.529	.534	.579	.629	.778	.798	.8

If the propositional chain underlying p is infinite, so that the real probability of p is 0.8, in many cases accuracy could require that one forms beliefs in propositions up and till, say, q_{30}: a probability of 0.629 (at Bq_{10}) is still relatively close to the probability of the ground (0.5), whereas a probability of 0.778 (at Bq_{50}) is already *very* accurate. If, as we assumed above, there is a threshold for doxastic justification of 0.75, it may be required that one forms beliefs even further along the propositional chain.

Similarly, consider the table applying to the case where $P(r)$ is 0:

TABLE 4. Probability of *p* given P(*r*) = 0

Number of *q*'s *n*	1	2	5	10	50	100	∞
P(*p*)	.078	.114	.212	.345	.742	.796	.8

Again, if the propositional chain underlying p is infinite, accuracy may judge that one has not gone far enough if one has formed beliefs only until Bq_{10}. Presumably, it will require that one forms beliefs up and till some proposition in between q_{30} and q_{50}. And if there is a threshold for doxastic justification, it may be required that one forms even more beliefs along the chain.

However, while the *possibility* of justification by finite doxastic chains with an arbitrary ground is extremely fascinating, is it very often realized by ordinary human beings? Do they have many beliefs which are supported by doxastic chains of, say, 30 or 50 beliefs, where the influence of the ground belief on the target belief has become negligible? At some place, Peijnenburg admits that in practice, human beings already have difficulties processing doxastic chains with more than three or four members (Peijnenburg 2015a,

144). But if this is so, how often can they in fact benefit from the implications of *fading foundations* for finite doxastic chains?

The force of this question becomes stronger when we consider chains of beliefs engendered by our accounts of avoiding circularity and arbitrariness. As we have seen, in order for S's belief Bp to avoid arbitrariness, S should have a legitimate reason, r_1, for p, and a belief,

Bs: r_1 supports p;

If S has r_1 by having a belief, Br_1, very often the probability of p will still be strongly influenced by the probability of r_1 and s. So, on the suggestion concerning finite chains informed by *fading foundations*, Br_1 and Bs may not be arbitrary. In order for Bs to avoid arbitrariness, S should have a legitimate reason, r_2, for s, and a belief,

Bt: r_2 supports (r_1 supports p);

If S has r_2 by having a belief, Br_2, often the probability of p will still be strongly influenced by the probability of r_2 and t. Hence, it is likely that Br_2 and Bt may not yet be arbitrary either.

However, if we repeat this assessment a number of times, we very soon arrive at a belief with a content that is extremely complex, apparently too complex for finite beings to seriously entertain and adopt (cf. Sect. 7.7; Klein 1999, 309; Bergmann 2006, 15). Yet if arriving at a belief whose influence on the probability of p has become negligible often requires more than, say, fifteen levels along this chain, how often can human beings benefit from the result of *fading foundations* for finite chains?

A related worry is pressed by Rescorla in his discussion of infinitism. According to Rescorla, infinitism fails because it does not provide a plausible account of ordinary perceptual justification. He agrees that we may construct an infinite sequence of propositions, p, q_1, q_2, q_3, …, such that q_1 makes p probable, q_2 makes q_1 probable, q_3 makes q_2 probable, etc. However, says Rescorla, "these abstract schemata provide little if any support for infinitism. The question is whether there exists an infinite non-repeating chain of *specific* propositions that yield a plausible epistemological analysis" (Rescorla 2014, 181). Rescorla adds that

> [a] credible version of infinitism must provide compelling details for specific beliefs. Infinitists must indicate a specific infinite epistemic chain that is "available" to an ordinary thinker, and they must show why this chain illuminates the thinker's justification for the first belief in the chain. Infinitists have not discharged this burden. In particular, they have not indicated any infinite epistemic chain that illuminates why an ordinary thinker has justification for an ordinary perceptual belief (*ibid.*, 182).

My worry for the suggestion concerning long, finite chains with an arbitrary ground is similar to Rescorla's objection to infinitism. While I do not think the suggestion concerning finite chains *fails*, I wonder whether the envisioned possibility is often realized in cases where an ordinary person's belief is held on the basis of a chain of further beliefs.

It seems realistic to think that the possibility is realized during the cognitive history of whole societies. Suppose that at some point in time, a person adopts a particular arbitrary belief, say Bq_n. On the basis of Bq_n, he forms a further belief, and on the basis of this further belief, he forms a still further belief, etc., until he forms a belief that Bq_m. On the basis of Bq_m, a second person forms a further belief, and on the basis of that further belief, a still further belief, and so on, and so forth, until at some point in time, some particular person, S, forms the belief Bp. If this chain, by which S's belief Bp is ultimately caused, is sufficiently long, it is very well possible that it gives p a probability which is high and accurate enough in order for Bp to be doxastically justified even though Bq_n, the first belief in this chain, is wildly unjustified or arbitrary.

Moreover, it may even be realistic to think that the possibility is realized during the cognitive history of individual persons. Suppose that at some point in time, S adopts an arbitrary belief, Bq_n. On the basis of Bq_n, S later forms Bq_{n-1}. Still later, Bq_{n-1} leads him to form Bq_{n-2}, which causes him to form Bq_{n-3}, and so forth. Years later, this chain results in S's forming Bp. Again, if this chain by which Bp is ultimately caused is sufficiently long, which it may well be, it can render Bp doxastically justified even though Bq_n is arbitrary.

However, if the conclusion that an arbitrary ground belief may in principle be harmless is to be of very much *practical* help to epistemologists responding to the regress problem in terms of our desiderata, the possibility should at least regularly be realized in cases where a belief is held, at that

very moment, on the basis of a long finite chain with an arbitrary ground belief. Thus, it would be helpful if some *examples* were provided of actual beliefs held on the basis of the relevant kind of epistemic chain. This constitutes a challenge for epistemologists sympathizing with the suggestion, informed by *fading foundations*, concerning harmless arbitrariness.

In sum, while the possibility concerning long, finite chains is very fascinating, I have aired two reservations. First, it is doubtful that it is very helpful for ordinary foundationalists, as they think that justification is often obtained by very short chains. Second, it can be wondered whether the possibility is realized very often for finite human beings and, hence, whether it is of much practical help for epistemologists who try to avoid circularity and arbitrariness.

8.7 Conclusion

In this final chapter, we have considered what options are still available for epistemologists who try to respond to the epistemic regress problem and who hope to avoid both circularity and arbitrariness. First, we considered the option of accepting our desiderata, and accepting their implications by endorsing a form of scepticism. Second, we considered the possibility of rejecting the arbitrariness desideratum, which seems especially attractive for foundationalists. Third, we looked at a recent motivation for rejecting the circularity desideratum, attractive especially for coherentists. Fourth, we discussed the suggestion to distinguish higher and lower kinds of justification, where the higher kinds require that circularity and all forms of arbitrariness are ruled out, whereas the lower kinds do not require that. Fifth and final, we spent some time thinking about the work of Peijnenburg and Atkinson, whose fascinating result concerning probabilistic support constitutes an additional motivation for thinking that arbitrariness need not always be harmful.

As we found out, every option involves either serious costs or a significant challenge. The scepticism option implies the acceptance that we have no justified beliefs or knowledge. Rejecting the arbitrariness desideratum or the circularity desideratum requires that one explains why these desiderata, though accepted by so many theorists, are *not really* desiderata. Moreover, any attempt to convince others of the merits of rejecting one of the desiderata will result in a theoretical standoff where one party presses certain intuitions, while the other presses contrary intuitions.

Theorists accepting the option of distinguishing different kinds of knowledge and justification may save animal knowledge and justification, but have to accept the result that no finite human being can have reflective knowledge or justification. Finally, the suggestion found in the writings of Peijnenburg and Atkinson requires that it be shown, for instance by some examples or informed by empirical research, that beliefs are regularly supported by long, finite chains where the influence of the ground belief on their justification is negligible.

9 Conclusion

It is time to round off our discussion. In Chapter 1, we noticed the widely shared intuition that our beliefs should be held for reasons. We hope that they are not *mere beliefs about* the world, but that they constitute real *knowledge of* that world: we want them to represent rather than misrepresent actual states of affairs. As we found in Chapter 2, the assumption that we should have reasons for our beliefs gives rise to the epistemic regress problem: it appears that in order to have any justified belief, we need to have infinitely many justified beliefs.

In discussing normative responses to this problem, we focused on a fascinating argument by Peter Klein. That argument assumes two central desiderata for an adequate epistemic theory: avoiding circularity and avoiding arbitrariness. According to Klein, none of the traditional theories is able to meet both these desiderata. While foundationalism cannot avoid arbitrariness, coherentism cannot avoid circularity. In Klein's view, the only theory which can successfully meet both desiderata is infinitism.

Impressed by the force of Klein's contention, we have carefully evaluated its merits in chapters 3 to 7. Informed by the work already done by Klein, in chapters 3 and 4 we have developed substantial accounts of circularity and arbitrariness. With regard to circularity, we saw that not all forms of circular epistemic chains are commonly thought to be vicious, and constructed the following account of avoiding vicious circularity:

(AC) An epistemic chain underlying S's belief B*p* avoids being *viciously circular* if and only if B*p* is not itself an indispensable member of that chain.

With regard to arbitrariness, we found that a distinction can be drawn between an objective and a subjective form of arbitrariness, and provided the following accounts of avoiding objectively arbitrary beliefs and avoiding subjectively arbitrary beliefs:

(AOA) S's belief B*p* avoids being objectively arbitrary if and only if there exists a reason, *r*, to the effect that *p* is more probable than *not-p*.

(ASA) S's belief B*p* avoids being subjectively arbitrary if and only if (i) S has a legitimate reason, *r*, for *p*; (ii) S has a justified belief that *r* is a reason to the effect that *p* is more probable than *not-p*; (iii) B*p* is based on *r*; and (iv) S does not believe there is a competing reason for not believing *p*.

Having developed these accounts of circularity and arbitrariness, we assessed foundationalism, coherentism, and infinitism in the light of them. In Chapter 5, we discovered that foundationalism can easily avoid circularity and objective arbitrariness, but that it cannot avoid subjective arbitrariness.

In Chapter 6, we found that initially coherentism seems to have no trouble with avoiding circularity. Yet it turned out that if the coherentist also wants to avoid (subjective) arbitrariness, she can do so only at the cost of nonetheless allowing circular epistemic chains.

In Chapter 7, we saw that while all existing versions of infinitism succeed in avoiding circularity and objective arbitrariness, none of them is able to rule out subjective arbitrariness. Despite their failure, though, we found that the only theory which can avoid both circularity and arbitrariness *is* a version of infinitism. Hence, we concluded, in this sense Klein is right. Yet, we saw, what this particular version of infinitism demands of human beings may well lie beyond the scope of their finite capacities, so that it invites a form of scepticism. Thus, we concluded that accepting the two desiderata leads to a theoretical impasse: given the desiderata, it may be impossible to have any justified belief at all.

In Chapter 8, we considered various options for responding to this impasse. As we found, all these options involve either serious costs or a significant challenge.

Given the impasse, and given the costs and challenges associated with all responses to it, where should we go from here? Presumably, it all depends on the size or weight of the costs of the various responses, and on whether the challenges for them can be met. As for the size or weight of the costs, I do not see a clear way in which agreement can be reached on them. And as for the challenges, whether they can be met can only be established by further research.

Summary

According to Peter Klein, infinitism is the only viable response to the epistemic regress problem. Klein's reason is that infinitism is the only theory which can meet two central desiderata for epistemic theories: avoiding circularity and avoiding arbitrariness. This dissertation evaluates Klein's argument. Chapter 2 contains a presentation of the epistemic regress problem. If beliefs can only be justified by other justified beliefs, this implies that one can have a justified belief only by having infinitely many justified beliefs. Chapters 3 and 4 develop concepts of (avoiding) circularity and arbitrariness. Chapters 5, 6, and 7 assess the various responses to the regress problem on the basis of these concepts. Chapter 5 discusses foundatinalism. In line with Klein, and opposed to several foundationalists, it argues that foundationalism cannot avoid arbitrariness. Chapter 6 evaluates coherentism. It argues that while at first sight coherentism seems able to avoid circularity, it can only avoid arbitrariness when it nonetheless sanctions circularity. Chapter 7 discusses infinitism. Its argument is that none of the existing versions of infinitism, not even Klein's version, avoids circularity and arbitrariness. However, it also argues that the only theory which does avoid circularity and arbitrariness is a version of infinitism. As it turns out, though, this version of infinitism poses demands that no finite human seems actually able to satisfy. Chapter 8 contemplates various remaining theoretical options. It argues that those options involve either serious costs or significant challenges.

Samenvatting

Volgens Peter Klein is infinitisme het enige adequate antwoord op het epistemische regressieprobleem. Klein betoogt dat alleen infinitisme tegemoet komt aan twee theoretische *desiderata*: het vermijden van circulariteit en het vermijden van willekeur. Dit proefschrift evalueert Kleins argument. Hoofdstuk 2 geeft een beschrijving van het regressieprobleem. Als opvattingen alleen gerechtvaardigd kunnen worden met andere gerechtvaardigde opvattingen, kan iemand alleen een gerechtvaardigde opvattingen hebben als zij oneindig veel gerechtvaardigde opvattingen heeft. Hoofdstukken 3 en 4 ontwikkelen concepten van circulariteit en willekeur. Hoofdstukken 5, 6 en 7 evalueren afzonderlijke antwoorden op het epistemische regressieprobleem in termen van die concepten. Hoofdstuk 5 onderzoekt fundamentisme. Het betoogt dat fundamentisme niet in staat is willekeur te vermijden. Hoofdstuk 6 bespreekt coherentisme. Hoewel coherentisme op het eerste gezicht in staat lijkt circulariteit te vermijden, kan het alleen willekeur vermijden als het toch een vorm van circulariteit toelaat. Hoofdstuk 7 bestudeert infinitisme. Het laat zien dat geen van de bestaande versies van infinitisme, zelfs niet Kleins eigen versie, zowel circulariteit als willekeur vermijdt. Het toont echter ook aan dat de enige theorie die circulariteit en willekeur vermijdt, een versie van infinitisme is. Een groot probleem voor die theorie is evenwel dat geen eindig mens lijkt te kunnen voldoen aan haar vereisten. Hoofdstuk 8 besluit het proefschrift met een beschouwing van resterende theoretische mogelijkheden. Al die mogelijkheden brengen ofwel serieuze nadelen, ofwel grote uitdagingen met zich mee.

About the author

Coos Engelsma was born on 24 August 1983 in Groningen, The Netherlands. From 2004 to 2010, he studied philosophy at the University of Groningen. As a research master student, he specialized in the work of (the later) Wittgenstein. In his master thesis, which he wrote under the supervision of Michel ter Hark and Andy Sanders, he applied Wittgenstein's views on language and meaning to the use of words of God. In 2012, he joined Jeanne Peijnenburg's NWO-funded project "The Regress Problem in Epistemology: A Probabilistic Approach."

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