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Preserving Normativity in Epistemology: Quine's Thesis Revisited

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Abstract

Quine's epistemology amounts to what has been called the replacement thesis, according to which epistemology becomes a part of science by being replaced by the latter. The most forceful criticism of the thesis asserts that this sort of replacement is not successful due to the fact that an essential element of any epistemological endeavour has been eliminated, namely, normativity. The normativity charge claims that due to the descriptive nature of Quine's thesis normativity cannot be said to feature in his account. To begin with, the notion of normativity will be clarified, and it will be seen that normativity is not a simple notion as it admits of various formulations. In speaking of normativity one could be speaking of empiricist norms, the norms of rationality, prescriptive normativity within the context of practical reasoning as well as descriptive normativity. Also, in developing a theory of knowledge it becomes apparent that one is engaging with various sorts of beliefs, all of which must be accommodated and which I will articulate. The possible defenses presented by proponents of the Quinean project aim to meet the normativity charge by demonstrating that the replacement thesis is indeed normative, and the success of these defenses will be assessed. It will be argued that the most important sort of normativity that must be preserved in a theory of knowledge is the prescriptive normativity within the domain of practical reasoning successfully developed by one of the proponents of the Quinean project, Bishop and Trout. However, despite the success that naturalized epistemology achieves regarding prescriptive normativity of this sort, it will be argued that a naturalized epistemology will ultimately fail as a result of its purely a posteriori approach. Consideration of the rationality norm will make it apparent that a theory of knowledge must include an a priori component. It does seem, though, that science should feature in some capacity in a theory of knowledge. To this effect, the transformational thesis presents an alternative way in which science may be integrated with epistemology. It asserts that there are philosophical questions that capture traditional epistemological concerns in terms of conceptual analyses but that what is known is an empirical matter to be established by psychologists and cognitive scientists. The appeal of the thesis is that it allows for an a priori component while also implementing scientific findings. My specific concern, however, is whether it preserves prescriptive normativity within the context of practical reasoning which I will show to be essential to a theory of knowledge. It will be argued that though the replacement thesis and the transformational thesis do justice to prescriptive normativity of this sort they both fail to accommodate each kind of belief that must be considered due to the externalistic nature of both of these accounts. Ultimately I will argue that traditional epistemology, and more specifically an internalistic approach to epistemology, has a particular role to play in a theory of knowledge and cannot be dismissed.

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Introduction

Quine's project of a naturalized epistemology implies the replacement thesis which asserts that epistemology should become part of science by being replaced by the latter. According to Quine, epistemology is concerned with understanding how beliefs are formed based on the stimuli (data) that we receive from the external world. The epistemological task is to understand the causal relation between the 'meager input' we are given and the 'torrential output' that we produce.[1] Consequently, epistemology, by being made part of the sciences, no longer admits of an a priori element and proceeds in a purely a posteriori manner. The descriptive nature of this thesis, given its endorsement of scientific method as a result of its purely a posteriori approach, would seem to exclude the normative character typical of traditional epistemological pursuits. Epistemology traditionally concerns itself with the notion of justification, and with formulating the criteria of justified belief, since it is clear that true belief is not enough for knowledge given that beliefs can be accidently true. And it is in virtue of this preoccupation with justification that knowledge can be said to be a normative concept. For to state that a belief is justified is to assert that it is *permissible* and *reasonable* and thus *ought* to be held. It would be epistemically irresponsible not to hold it. And this concern with the criteria of justification and with what the concept consists in is traditionally thought to be a task that can only proceed in an a priori manner, since one is conducting a conceptual analysis of the concept in order to determine what it is for a belief to be justified. Quine, as we will see in later sections, seems to argue that we should abandon this framework of justification-centered epistemology. If this is indeed an accurate representation of his views, then one would in effect be eradicating the normative dimension of epistemology.[2] We must determine whether this is Quine's position and, if it is, whether a successful epistemology can be conducted in the manner he suggests.

The extensive criticism that Quine's thesis has received as a result of the difficulty presented by the normative nature of epistemology can conceivably be dealt with by accomplishing much of what Quine had in mind in the manner he proposed while still including an a priori component in order to capture traditional epistemological concerns. It has been supposed that a compromise may be reached by rather claiming that there are philosophical questions that include traditional epistemological concerns in terms of conceptual analyses, but that science must establish what is known. This is the transformational thesis. According to the

[1] Quine, W.V. *Epistemology Naturalized.* p. 83
[2] Kim, J. *What is "Naturalized Epistemology?"* p. 383

transformational thesis one does not proceed in a purely a posteriori manner since it allows that a conceptual analysis concerning what knowledge is must proceed a priori while holding that the question regarding whether the conditions required for knowledge (as set out by the conceptual analysis) have been fulfilled must be determined by turning to the findings of science. A thesis of this sort would not be a complete vindication of the naturalized epistemology that Quine had in mind, but it is a way of preserving what is promising in Quine (which is the consultation and incorporation of scientific findings) while also seeming to accommodate traditional epistemological concerns. The transformational thesis allows for both a priori and a posteriori components, thus seeming to avoid the problem of normativity that the replacement thesis must overcome. As we will see, however, even the transformational thesis will face significant difficulties even though it manages to avoid some of the specific objections that the replacement thesis faces.

I will examine both theses but will develop my argument within the framework of Quine's account. The normativity problem will be the central concern of this paper and in attending to this particular issue I will specify precisely what sort of normativity must be preserved in any theory of knowledge. My main aim, therefore, is to articulate this normativity and to determine whether it has been, or can be, preserved in Quine's account or the amended version of his account, i.e. the transformational thesis. Throughout the discussion to follow three distinct notions of normativity will emerge, and each will be discussed in substantive detail at various points. The first kind of norms are empiricist norms or *prescriptive norms within the theoretical domain* as advocated by Quine and other naturalistic epistemologists such as Foley and Rosenberg. Science can offer particular advice regarding the improvement of our theories. By means of experience we come to see that, for example, the simplest theory is usually correct because the simpler theory yields more accurate predictions. We are, therefore, being presented with particular prescriptions within the theoretical domain that are justified a posteriori. The second sort of normativity is the one that I will be most concerned with since it is this sort of normativity that reveals the value that epistemology holds for us, namely, *prescriptive normativity within the domain of practical reasoning*. It is in virtue of the advice that epistemology can offer us within the sphere of practical reasoning that we will make better decisions and lead better lives. It is this sort of normativity that I believe has been neglected the most and should receive the most attention. This particular sort of normativity has most successfully been captured by Ameliorative Psychology, which falls within the confines of a Quinean approach to epistemology through naturalization. The third and final

sort of normativity is the *rationality condition* captured by means of Davidson's principle of charity. According to this principle we are only able to consider persons as cognizers if we assume that they are at least minimally rational, since a person can only be said to hold beliefs if this minimal coherence is in place. Consideration of these various formulations of normativity will reveal the fact that though a naturalized epistemology is capable of yielding prescriptive normativity within the domain of theory and practical reasoning it can only ever be deemed partially successful in virtue of the fact that it cannot accommodate the rationality condition. Accepting the norm of rationality involves accepting an a priori component to knowledge and a naturalized epistemology only permits an a posteriori approach. As such a naturalized epistemology will only be successful, and address the normativity charge, up to a certain point, with the consequence that a predominant part of the Quinean project can be salvaged even though the project cannot be vindicated in its entirety.

As our starting point the notion of a *naturalized epistemology* must be clarified. Proponents of this approach standardly take the naturalization of epistemology to mean that epistemology is approached in a purely a posteriori manner. One can, however, differentiate between a *robust* form of naturalism as well as a more *modest* form of naturalism. The former argues that epistemology falls within the purview of the natural sciences and must be approached with the same rigour in terms of scientific method common to the natural sciences. That is, for any hypothesis to be viewed as legitimate there have to be statable sensory test implications that would allow us to confirm or disconfirm the hypothesis. The more modest form of naturalism simply claims that in doing epistemology one should only make use of experiential justification. One need not only find this justification within the natural sciences but in science generally, such as the social sciences. We need not restrict ourselves only to the natural sciences in our quest for experiential justification since the other sciences also provide us with the sort of evidence appropriate to a purely a posteriori approach. Throughout most of this paper I will be considering a more robust form of naturalism as proposed by Quine but will consider modest naturalism in Part VII as presented by Haack, which can be considered to be an alternative interpretation of Quine's thesis.

My consideration of a naturalized epistemology and whether such an approach is in fact a viable option will lead me to reject it on the basis that it fails to accommodate the rationality condition norm which, as an a priori condition, the replacement thesis does not allow for. The thesis will also be shown to be unsuccessful as a result of its purely externalistic approach, and it will be seen that a modest sort of internalism must be included in any theory of

knowledge, though this discussion will be left to one of the later sections. It is this externalistic approach which will prove problematic because the thesis will not be able to accommodate the various sorts of beliefs that we come across. These various sorts of beliefs will be articulated in a moment. What must be kept in mind, however, are the virtues of a naturalized epistemology, and these include the incorporation of scientific findings in terms of which prescriptive normativity in the domain of practical reasoning can be developed. This is precisely what I wish to take away from Quine's thesis. I will illustrate the way in which Bishop and Trout's Strategic Reliabilism does justice to normativity of the prescriptive sort in application to practical reasoning. Their account serves to articulate and capture the normativity I will argue for in terms of successfully generating guidelines for the purposes of daily application. But despite this success, the thesis in its entirety fails to establish itself given the fundamental objection stemming from its purely a posteriori nature. An a priori component must be included in a theory of knowledge. The replacement thesis can thus be said to fail on methodological grounds, in which case traditional epistemology is still required. And in speaking of traditional epistemology I will take it to include any epistemological theory that allows for an a priori component.

The weaknesses of the replacement thesis will lead me to consider the transformational thesis as an alternative. The transformational thesis meets one challenge that the replacement thesis cannot overcome in virtue of allowing for an a priori component. It attempts to salvage most of what Quine was after while conceding that there must be an a priori component. Consequently the thesis allows room for the rationality condition norm, while simultaneously ensuring that it has the potential to generate prescriptive normativity in the context of practical reasoning since it integrates scientific findings. The thesis does, however, face its own difficulties. The transformational thesis is also a form of externalism in the way that the replacement thesis is which means that the thesis also faces the difficulty of failing to accommodate all of the various sorts of beliefs we have. It would seem, therefore, that some sort of internalism is necessary, though whether this suggests a robust sort of internalism typical of foundationalism or coherentism remains to be seen. Each epistemological approach is successful in certain respects and I will aim to bring to light the various advantages of each. It seems, however, that traditional epistemological theories of the internalistic sort have something distinctive to bring to the table in virtue of being able to accommodate certain sorts of beliefs that externalists fail to accommodate.

I am not suggesting that a posteriori justification is to form no part of a theory of knowledge, but wish to articulate the distinctive features of traditional epistemology that must not be dismissed in a theory of knowledge. Though encouraging philosophers to keep traditional epistemology, and more specifically an internalistic epistemology, on the table I take seriously the reasons why an a priori component might seem unpalatable: in a world where science and a posteriori justification have become the order of the day one might not want to endorse a theory which allows for beliefs that seem "unrevisable". Science by its very nature endorses fallibilism according to which it is acknowledged that we might always be mistaken in whatever we think, and that all beliefs are revisable. Consequently, the notion of an unrevisable belief, which is what many naturalists take a priori beliefs to be, might be a genuine difficulty. This concern may be dealt with by considering the sense in which a priori beliefs are in fact revisable. I will develop this discussion in the last section.

In assessing various approaches to epistemology I believe that certain aspects of what a theory of knowledge would entail have been neglected. One element of this neglect stems from having failed to specify the various spheres of any epistemological endeavour. There are three interrelated components to epistemology: theoretical, practical and social. The *practical* or *applied component* concerns itself with what people do on a day to day basis and the ways in which people engage with reasoning activities. That is, in engaging in processes of deliberation or in evaluating evidence, we apply particular standards of assessment according to which we adopt or fail to adopt particular beliefs. We have certain *prima facie* notions of what knowledge amounts to and of whether we are well-justified in believing certain claims or the testimony of others. And in thinking about the practical or applied component, and the ways in which our deliberations and reasoning proceeds, we acknowledge that by making judgements in difficult cases where evidence is limited, for example, we often do employ faulty reasoning strategies. If a theory of knowledge is supposed to give us advice about the strategies we employ, which I believe is the case, then applied epistemology becomes about second-order reasoning strategies since "[i]t concerns thinking about how we can better think about the world."[3] And if applied epistemology recommends particular reasoning strategies, then the theoretical component must serve the explanatory function of making it clear *why* those strategies are better, or *why* what is prescribed amounts to knowledge. The applied component, therefore, concerns how we ought to reason and provides the relevant

[3] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 59

prescriptions, while the theoretical component explains why those are the relevant prescriptions.

The *theoretical component* is the articulation of what knowledge *in fact* amounts to, or constitutes a specification of the necessary and sufficient conditions for knowledge, and is partly drawn from practice. In considering how we are to develop a theory of knowledge we take into account certain *prima facie* notions we have concerning knowledge, such as the fact that we do consider ourselves to have some knowledge (even though it may not be extensive), or that in order to know one must be able to give reasons for knowing, and proceed with specifying conditions that we take to capture some of these intuitions. Our most perspicuous intuition in this regard seems to be that knowledge is justified true belief, for example. Of course, our theory progresses in terms of the detail and rigour of the conditions once we consider various types of counterexamples, such as Gettier-type proposals. By means of philosophical thought of this kind one can proceed to a particular level of abstraction which must be checked by considering our every day practices of applying knowledge-concepts and what our intuitions tell us. In this way theory and application continuously inform each other in the same way that intuition and theory can be said to inform each other in constructing a moral theory, as Rawls points out with his notion of *reflective equilibrium*.[4] That the two must achieve a balance can most easily be captured by means of the *stasis requirement* according to which the correct account of knowledge or justification will

> leave our epistemic situation largely unchanged. That is to say, it is expected to turn out that according to the criteria of justified belief we come to accept, we know, or are justified in believing, pretty much what we reflectively think we know or are entitled to believe.[5]

Ideally the theoretical aspect will be mirrored in application, since we hope to arrive at a theory which can in fact be applied in our daily lives and which satisfies our intuitions to a certain extent, but which is also capable of generating specific instruction as to how to be epistemically responsible and reason more effectively. Theory fulfils the function of explaining why certain reasoning strategies are better than others by specifying the conditions under which knowledge can be had, and should also explicate why good reasoning promotes good results.

[4] Rawls, J. *A Theory of Justice.*
[5] Kim, J. *What is "Naturalized Epistemology"?* p. 382

The final component is the *social component,* which is preoccupied with exposing and incorporating this reasoning advice into society. It concerns itself with the ways in which these guidelines are to be communicated to the public.[6] This component has been mostly neglected by epistemologists, and though I will not make it my aim to remedy this neglect, it is still important that we keep this concern in view.[7] Once we determine what the specific prescriptions are and how we ought to reason, we must make this information available to the public. If these prescriptions are to make a difference to our lives then we must find a way of integrating them into society.

The other aspect of epistemology that I believe has not received due attention is the fact that when it comes to knowledge we are not always concerned with beliefs of the same sort. Depending on what sort of belief we have in mind, different considerations might come into play in determining whether the belief constitutes knowledge. Consequently, there will be times, for example, when the way in which a belief has been generated is significant and times when it is not. Throughout the following discussion it is important to keep this issue in mind as it will continue to be relevant. Here is an articulation of the different sorts of beliefs that are to be considered:

(1) Straightforward perceptual beliefs, such as, *There is a sheep in the field*.
(2) Theoretical beliefs, such as a belief in the existence of the benzene ring.
(3) Beliefs that result from processes of reasoning or deliberation and problem-solving, such as seeing something at a distance, and deliberating as to whether a particular belief can justifiably be held given the context and certain evidential constraints.

The component that I believe has been neglected in epistemology is the application of the theory. And the sort of beliefs that have not been adequately addressed are those beliefs that are the result of reasoning processes captured by (3). Epistemology is valuable in virtue of the ways in which it guides our processes of reasoning, and as Bishop and Trout state: "It is the normative, reason-guiding promise of epistemology that makes it so much more than intellectual sport."[8] My discussion of normativity will be informed by this consideration of why epistemology is valuable to us; I will argue that it is in virtue of the guidelines and prescriptions that a theory must generate within the context of practical reasoning that we consider a theory of knowledge to be valuable and significant. An epistemology that lacks

[6] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.*
[7] For more discussion regarding the social component, see Kitcher, P. *The Naturalists Return.*
[8] Bishop, M.A. and Trout, J. D. *Epistemology and the Psychology of Human Judgement.* p. 18

this determinate prescriptivity, which is accessible and applicable, diminishes in value and, as I will argue, fails to be a successful theory of knowledge.

This paper will at various stages illustrate the ways in which one or more of the three components mentioned as well as the different sorts of beliefs above have not been addressed or fully accommodated by the theory in question. In spelling out these three components as well as the differing beliefs that epistemology must consider, it becomes clear that a theory of knowledge must be sufficiently nuanced in order to be successful.

Since I ultimately aim to argue that epistemology must indeed guide our processes of reasoning I will argue that traditional epistemological pursuits have the potential to accomplish this while avoiding certain pitfalls that a naturalized epistemology faces. The criticism I have in mind of a naturalized epistemology is that the theory itself cannot meet its own demands and assumes at least one a priori principle which challenges its status as 'naturalized', while also failing to accommodate various sorts of beliefs due to its externalistic approach. The transformational thesis, though being part of traditional epistemology in virtue of an a priori component, and despite avoiding certain difficulties that a naturalized epistemology faces, on the other hand, also does not accommodate all the beliefs that I have specified above in virtue of its equally externalistic nature. Consequently, internalistic theories cannot be pushed aside in constructing a theory of knowledge.

Part I and II will be concerned with articulating and explicating Quine's defense of a naturalized epistemology by providing his argument for abandoning traditional epistemology or a first philosophy (i.e. any form of foundationalism). An account of the normativity charge as presented by Kim will follow this exposition in Part III. It might be supposed that there are several ways in which the charge might be answered, and supporters of the Quinean project adopt various such strategies, which I will discuss in Part IV. Part V will be concerned with setting out the reasons why these defences of the Quinean project are only partially successful. The central criticism concerns the purely a posteriori nature of the account which creates significant difficulties, and though the replacement thesis might be able to generate the relevant normativity that I will argue for it will nonetheless fail on methodological grounds. The transformational thesis will be introduced in Part VI, and becomes relevant because it reintroduces an a priori approach which will meet the objection of the previous section while still including scientific findings. It will, however, be argued that this thesis does not accommodate theoretical beliefs due to its externalistic approach. As such, it would

seem that internalistic theories have something distinctive to contribute to epistemology. Science must be consulted, but given the necessity of an a priori component one cannot maintain that this will amount to a naturalized epistemology of even the modest sort, where epistemology is a part of the empirical sciences and continuous with the natural sciences. I will show that epistemology needs to be approached in a more context-driven way according to which the particular belief we are considering will make its own demands regarding the conditions under which it counts as knowledge. Part VII will be concerned with presenting Haack's modest naturalism and it will be shown that even this modest version is not successful due to its dismissal of an a priori component. My final focus in Part VIII will be on the revisability of a priori beliefs and I will argue that a priori beliefs are revisable in light of non-experiential evidence.

I

Quine Abandons a 'First Philosophy'

The traditional epistemology that is the target of Quine's attack, viz. foundationalism, is concerned with that which grounds science, and aims to justify the sciences by seeking an indubitable foundation that is prior to science. Establishing this foundation involves identifying states or beliefs that are incorrigible, such as beliefs about sensory states or objects, and reconstructing the physical world by showing that physical objects or entities can be reduced to observable ones. Justification for non-foundational beliefs would be generated in virtue of this relationship to the indubitable foundation. Quine rejects a 'first philosophy' of this kind. In this section, it is important to keep in mind that for Quine traditional epistemology includes any form of foundationalism rather than theses such as coherentism and reliabilism.

Quine opens his discussion of traditional epistemology, which is concerned with the foundation of science, by drawing a parallel with mathematics. Foundational studies in mathematics divide into two sorts: conceptual and doctrinal. The conceptual studies are preoccupied with meaning while the doctrinal studies are concerned with truth. On the conceptual side one clarifies concepts by defining them (occasionally in terms of others), and on the doctrinal side we hope to establish laws by proving them, some also on the basis of

others. The more obscure concepts will ideally become clearer by defining them in terms of less obscure concepts and less obvious laws will be proved from more obvious ones in the hope of maximizing their certainty. "Ideally the definitions would generate all the concepts from clear and distinct ideas, and the proofs would generate all the theorems from self-evident truths."[9]

A reduction in epistemology through the program of a first philosophy, if successful, could equally meet the requirements of both the conceptual and doctrinal side and provide a foundation which would justify science. Quine expresses the failure of the reductive approach by making it clear that even mathematics can only be reduced to set theory – a branch of mathematics that studies sets, i.e. collections of objects – and not to logic proper, which is the theory of the general conditions of the reference of symbols and other signs to their professed objects, i.e. the theory of the conditions of truth. It has been argued that set theory is not foundational to mathematics. Kronecker, for example, argues that mathematics is loosely related to computation and as such the treatment of infinite sets in set theory introduces methods and objects that are not computable, even in principle. It is logic proper that would provide us with certainty, and it is certainty that we are after: if we can derive clear concepts through definition then the truths embedded in them will be obviously true or at least derivable from obvious truths. But since a reduction to logic proper is not possible we are left without the ground of mathematical knowledge which would facilitate certainty and the necessary justification for any truths derived from this foundation. The parallel with the epistemology of natural knowledge becomes evident: "Just as mathematics is to be reduced to logic, or logic and set theory, so natural knowledge is to be based somehow on sense experience."[10] The conceptual side consists in explaining the notion of body in sensory terms, and the doctrinal side in justifying our knowledge of truths of nature in sensory terms. But this project has been unsuccessful.

Quine asserts that the conceptual side can, to a certain extent, be dealt with in the Humean way by identifying the body with sense impressions, where "the word 'iron' names an associated sight and feel."[11] But an approach of this sort failed to provide the epistemologist with the requisite resources to ground more complex terms, and "[e]pistemologists made progress on the conceptual project only to the extent that, like the mathematicians, they

[9] Quine, W.V. *Epistemology Naturalized.* p. 70
[10] Quine, W.V. *Epistemology Naturalized.* p. 71
[11] Quine, W.V. *Epistemology Naturalized.* p. 71

resorted to the use of set theory (to expand their resources from simple impressions, to sets of impressions, etc.) and contextual definition..."[12] According to Bentham's theory of fictions, in which Bentham recognizes contextual definition, to explain a term we only need to show how to paraphrase or translate all the whole sentences that contain the term, rather than being obliged to pick out an object for the term to refer to. One could now translate one's whole sentences about bodies into whole sentences about impressions, where these sentences do not mention bodies, and do not equate bodies to anything, while still communicating the sense of the terms. As such it is sentences rather than words that become the basic vehicles of meaning. From this one would now be able to play with sets of impressions and sets of sets of impressions all the way up, thus allowing that sentences which have been given meaning as wholes will facilitate the meaning of their component terms even if no translation is offered for those terms in isolation.

On the doctrinal side, however, little progress has been made. In characterising bodies in terms of sense impressions, Hume, according to Quine, achieved the indubitability of singular statements as truths about impressions directly known. But general statements and statements about the future lack this certainty, leaving us with Hume's well-known predicament, where we lack any justification for inductive inference. Theory cannot be derived from observation and fails to enjoy the epistemic status of the latter. The resolution of this matter has eluded us. Even a modest generalization about observable features will incorporate more cases than the person could ever have observed; it seems impossible to hope to confer upon the truths of nature the full authority of immediate experience. Epistemologists have not been able to strictly derive the science of the world from sensory evidence. Quine argues that, given this failure, two tenets have ultimately remained: (1) The only evidence for science is sensory evidence, and (2) all inculcation of meanings of words must rest ultimately on sensory evidence.[13] We must abandon a first philosophy and embrace science.

It is these two tenets that become the core of Quine's thesis. In claiming that these are the only two tenets that remain, Quine not only subscribes to a form of verificationism but also maintains that everything that is known is known a posteriori.[14] This is what Quine's

[12] Bayer, B. *How Not to Refute Quine: Evaluating Kim's Alternatives to Naturalized Epistemology.* p. 4
[13] Quine, W.V. *Epistemology Naturalized.*
[14] I am aware that Quine's position as a verificationist is a controversial and debatable issue. Most of the literature seems to endorse his status as a verificationist and since the main purpose of this paper is not an interpretation of Quine I will not pursue this matter any further, and will assert that he is a verificationist without articulating in precisely which sense. For the purposes of this paper verificationism is to be understood as the position that claims that the meaning of a sentence consists in the conditions of its verification.

naturalism amounts to. Science becomes the measure of all things, and what is central to his thesis is a rejection of reductionism as well as a dismissal of the distinction between analytic and synthetic truths which he argues for in *Two Dogmas of Empiricism.*

In his paper, *Two Dogmas of Empiricism*, Quine argues that no satisfactory explanation of analyticity has yet been given, and that all the explanations that have been given so far have been circular. He distinguishes between two classes of analytic statements, where the first is logically true and has the following sort of form: (1) No unmarried man is married. A sentence which has this form is true regardless of the interpretation of "man" and "married", provided that the logical particles such as "no", "-un", "is" and "and" retain their ordinary English meaning. The second class of analytic statements have the following sort of form: (2) No bachelor is married. One can change this into a statement of the first form by exchanging synonyms for synonyms, which in this case would mean exchanging "bachelor" with "unmarried man". But, according to Quine, the analyticity of the second class of statements is inexplicable. The notion of analyticity in the case of the second class depends on a notion of synonymy which equally requires clarification. He proceeds to show that in attempting to clarify the notion of synonymy in order to explain analyticity it can be seen that the notion of synonymy is in turn dependent on notions of analyticity, necessity and even synonymy itself.

It might be supposed that (2) can be changed into (1) by appealing to definitions. One can change the second class into the first because "bachelor" is defined as "unmarried man". But how do we know that the former is defined as the latter? We cannot simply appeal to a dictionary because it merely reports known synonyms and, as such, is already dependent on a notion of synonymy. Alternatively, it can be argued that synonymy can be explained in terms of interchangeability, according to which two linguistic forms are synonymous if they can be interchanged without altering the truth-value of the statement. But, according to Quine, if we were to consider the following example – *"Bachelor" has fewer than ten letters* – it becomes clear that "bachelor" and "unmarried man" are not interchangeable in that sentence.[15] Perhaps such counterexamples can be excluded by arguing that interchangeability explains *cognitive synonymy* rather than just synonymy.

But suppose we have language without modal adverbs like "necessarily". This sort of language would be extensional in such a way that two predicates which are true about the

[15] This seems to be a questionable objection though. "Bachelor" is not being used in the same way, since previously one was appealing to the concept, whereas in this sentence one is looking at the word and this why "bachelor" and "unmarried" man are not interchangeable.

same object would be interchangeable without altering the truth value. This would mean, however, that two predicates might be interchangeable, not in virtue of meaning, but in virtue of chance, since "creature with a heart" and "creature with kidneys" can be said to share the same extension without sharing the same meaning. But in the case of a language *with* such modal adverbs as "necessarily" the problem is solved, since *salva veritate* holds in the case of the following: (4) Necessarily all and only bachelors are unmarried men, whereas it does not hold in the case of the statement: (5) Necessarily all and only creatures with a heart are creatures with kidneys. This is because in the case of (5) the interchangeability of the terms by means of their extension rests on what is empirically found to be the case rather than cognitive synonymy. According to Quine, the problem now shifts to the fact that for *salva veritate* to hold as a definition of something more than extensional agreement in terms of cognitive synonymy the notion of necessity must be explained, which in turn requires an explanation of analyticity.[16] Thus, according to Quine, it can be seen that explanations of analyticity seem to be inevitably circular. This means that we are unable to clarify the notion and to provide an account that makes it comprehensible. Quine thus feels entitled to dispense with analyticity and aims to show that every statement is in fact synthetic.

Foundationalism as a thesis depends on the notion of a priori justification or an indubitable foundation, and it is supposed that in establishing that which can be known with certainty and independently of experience one is able to ground the sciences and provide them with legitimacy. In arguing for a form of verificationism, as well as the position of purely a posteriori approach, Quine effectively undermines this approach in epistemology. There are, of course, other approaches to epistemology that are not foundationalist but which are nonetheless traditional forms of epistemology in virtue of appealing in certain ways to a priori reasoning, namely, coherentism and reliabilism. Even if we accept Quine's argument against foundationalism it might still be maintained that traditional epistemology as a whole is still a viable project. But perhaps it is correct to argue, as Quine does, that science is all there is, and perhaps such an approach will yield a successful epistemology. After all, it seems that we think of science as significant and a predominantly successful endeavour. Let us examine how Quine's thesis proceeds and whether it is successful.

[16] This is a highly debatable point and depends on whether one maintains that necessity and analyticity go hand in hand in the way that Quine does.

II

Explaining Quine's Naturalized Epistemology

> The stimulation of his sensory receptors is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not just see how this construction really proceeds? Why not settle for psychology?[17]

Quine argues that such a move was once supposed to be circular, since if the epistemologist is aiming to validate the grounds of science then using psychology or other empirical science is to presuppose that these sciences are valid already. For Quine, however, the circularity only holds as long as we endeavour to deduce science from observation; and this is to strive for the unattainable. Rather, we should attempt to understand the link between observation and science, in which case we should use any available information, which includes the information provided by the science whose link with observation we are attempting to understand.

So how are we to account for the failure of translational deduction? Should we simply claim that the experiential implications of a typical statement about bodies are too complex for finite axiomatization? Quine replies that we should not, and proposes a holistic approach:

> It is that the typical statement about bodies has no fund of experiential implications it can call its own. A substantial mass of theory, taken together, will commonly have experiential implications; this is how we make verifiable predictions...Sometimes also an experience implied by a theory fails to come off; and then ideally, we declare the theory false. But the failure falsifies only a block of theory as a whole, a conjunction of many statements. The failure shows that one or more of those statements is false, but it does not show which.[18]

Quine thus introduces his holistic approach. His main criticism of the logical positivists is that they assumed that there is a clear notion of cognitive meaning that relates each sentence to the experiences which count for it or against it and can be applied to sentences taken individually. In the case of synthetic sentences their truth or falsehood is dependent on experience, while in the case of analytic sentences their truth or falsehood is established independently of experience and can be known a priori. It is this atomistic approach that Quine takes to lead to the failure of Carnap's project, and leads him to propose a holisitic

[17] Quine, W.V. *Epistemology Naturalized.* p. 75
[18] Quine, W.V. *Epistemology Naturalized.* p. 79

approach. Single sentences do not have experiential implications that they can call their own; chunks of theory do.

This holistic approach is captured by means of Quine's metaphor known as the "web of belief". Beliefs form a web since they are mutually dependent and interrelated. The beliefs towards the centre of the web are those beliefs that we are least likely to revise because these are the beliefs that most of our other beliefs depend on. The beliefs towards the periphery are the beliefs that we are most likely to revise since our entire system of beliefs does not depend on them. It is because we have these central beliefs that are so resistant to revision that we are convinced of the existence of beliefs that are unrevisable and are analytically true. According to Quine, however, these beliefs only appear to be unrevisable when in fact they are just as revisable as any other beliefs. The difference is that the central beliefs are less likely to be revised because so many of our other beliefs depend on them. We are more likely to cling to these beliefs because to sacrifice them would mean revising all of our beliefs which we are reluctant to do.

At this stage, the phenomenon of the indeterminacy of translation of theoretical sentences is also presented by Quine. This is the claim that there may be more than one correct method of translation such that we could have two different (in the sense that they are not only stylistic variants) but equally correct translations. If sentences only have meaning as a body, then translations can only be justified as a body. Therefore, the translation will be justified in so far as the net empirical implications of the theory as a whole are preserved in translation. But if this is so, then it can be seen that we could have two proposed sets of translations that both preserve the net empirical implications of the theory as a whole while also being incompatible with each other. Given this, we would have no grounds for choosing between the two translations. The point here is that Quine's commitment to holism entails that meaning itself is no longer fixed but becomes fluid within the context of a given theory or system of beliefs. This means that semantic notions such as "synonymy", "analyticity", "intention" and "belief" understood in their traditional sense as absolute, interlinguistic entities can no longer be used to ground scientific theory. In disrupting these assumptions Quine makes it apparent that, according to him, meaning only exists in virtue of verification.

But what would motivate us to accept the verification theory of meaning? Quine argues that the learning of language and the meaning which is basic to translation is necessarily empirical meaning and nothing more. Meaning is inculcated through the presence of external stimuli,

and reflecting on how we learned our language as children should be enough to convince us of this. For Quine everything can only be justified by means of experience and he states that one has no choice but to be an empiricist with regard to one's theory of linguistic meaning.[19] The indeterminacy of translation can now be said to rest on the fact that there are very few utterances that report concurrent external stimulation: there is thus much translation based on arbitrary choices which could make the translation come out 'right' by way of some sort of check, though individual sentences of two bodies of sentences might be quite different. Because so few sentences communicate concurrent external stimulation, we are forced to rely on related language in which translation practices have already become entrenched.

Quine's interest in language within the context of his epistemology stems from his view that knowledge is predominantly embodied in language. Language-use is subject to scientific inquiry because it is observable, and how we acquire knowledge is characterised by how we acquire cognitive language. "I am interested in the flow of evidence from the triggering of the senses to the pronouncements of science..." (Quine, 1990) Language makes the relation between evidence and theory observable by means of verbal behaviour, thus affording us the most instructive insight into this relation: "the evidential relation is virtually enacted, it would seem, in the learning." (Quine, 1975)[20]

What we are now left with is epistemology as a chapter of psychology or natural science:

> It [natural science] studies a natural phenomenon, viz., a physical human subject. This human subject is accorded a certain experimentally controlled input – certain patterns of irradiation in assorted frequencies, for instance – and in the fullness of time the subject delivers as output a description of the three-dimensional external world and its history. The relation between the meagre input and the torrential output is a relation that we are prompted to study for somewhat the same reasons that always prompted epistemology; namely, in order to see how evidence relates to theory, and in what ways one's theory of nature transcends any available evidence.[21]

Our interest now seems geared towards the causal connection between stimuli (data) and belief formation, and in this we may help ourselves to empirical psychology and the information that it provides. Previously, epistemology aimed to provide legitimacy for the

[19] But there is reason to think that this is a controversial point and not as perspicuous as Quine supposes. Note Chomsky's denial of this claim by means of his argument for a language acquisition device (LAD) that each person seems to be born with and which accounts for how we learn language. Also, isn't it an empirical issue whether linguistic competence can be accounted for in terms of experiential learning? What evidence does Quine produce to this effect?

[20] Foley, R. *Quine and Naturalized Epistemology.*

[21] Quine, W.V. *Epistemology Naturalized.* p. 83

sciences through rational reconstruction, yet now epistemology has stepped into the sciences, only to be made sense of within the broader theoretical framework which science provides. There is to be no foundation apart from this framework. Quine's dismissal of the distinction between analytic and synthetic truths supports his assertion that meaning only arises through methods of verification according to which epistemology only becomes significant by being a part of science. Here we are reminded of the parable of the mariner who has to rebuild his boat while staying afloat in it. Quine maintains that circularity no longer threatens because we are not after a deduction of science from sense data. Rather, we are aiming for an understanding of science as a process in the world. Quine's thesis, therefore, rejects attempts at a first philosophy and occupies itself with ongoing processes of knowledge formation.

What are the benefits of this approach? Firstly, Quine argues that it resolves the old enigma of epistemological priority. Previously we were concerned with identifying which apprehension would take epistemological priority when considering a case such as perception: our retinas are irradiated in two dimensions but we see things as three-dimensional without conscious inference, so which counts as observation: the unconscious reception or the conscious apprehension? According to traditional epistemology one would have to prioritize consciousness since we were aiming to legitimize our knowledge of the external world through rational reconstruction which would require awareness. But since Quine has abandoned this project one may settle for the stimulation of sensory receptors and "let consciousness fall where it may."[22] The matter can be settled on causal grounds: "A is epistemologically prior to B if A is causally nearer than B to the sensory receptors."[23]

According to Quine, all our knowledge is in some way based upon the stimulation of sensory nerves, and in most cases this connection to sensory stimulation is quite indirect. A given sentence is accepted because it forms part of an overall system of knowledge that as a whole allows us to deal with sensory experience. This means that there must be parts of our knowledge that are directly related to sensory experience. These observation sentences are of the utmost importance because they facilitate our entrance into language which I have already shown forms an important part of Quine's epistemology. They are also evidentially basic, even if not unrevisable as traditionally conceived, and in both capacities they seem to be independent of other parts of our language. Quine's aim is to provide a purely naturalistic account of these observation sentences.

[22] Quine, W.V. *Epistemology Naturalized.* p. 84
[23] Quine, W.V. *Epistemology Naturalized*. p.85

Quine states that what we want from observation sentences is that they be the ones in closest causal proximity to the sensory receptors. Or, phrased another way, "observation sentences are sentences which, as we learn language, are most strongly conditioned to concurrent sensory stimulation rather than to stored collateral information."[24] So if we rely on sensory stimulation *present at the time* in order to ascertain whether a particular sentence is true or false then it counts as an observation sentence. But, in accordance with Quine's holistic approach, our assent or dissent is not independent of stored information, and this will force us to opt for a less stringent definition: "a sentence is an observation sentence if all verdicts on it depend on present sensory stimulation and on no stored information beyond what goes into understanding the sentence."[25] But what information will count as going beyond what is necessary? This, according to Quine, is the problem of distinguishing between analytic truth and synthetic truth. Despite his dismissal of this distinction, Quine offers one way of handling the matter: if a sentence is true in virtue of meaning alone then it can be expected, at least in the case of simple sentences, that there will be community-wide acceptance of that sentence. (He is quick to add that this does not in itself serve to explicate analyticity.) Instead of using analyticity we should rather speak of the attribute of 'community-wide acceptance'. Thus, "an observation sentence is one on which all speakers of the language give the same verdict when given the same concurrent stimulation," or it is a sentence "that is not sensitive to differences in past experience within the speech community."[26] The key is inter-subjective agreement: under the same circumstances, members of a community will give uniform consent, and since this is the case it is more likely that observation sentences will be about bodies. And what will count as an observation sentence will vary with the width of community considered. Quine thinks that he has demonstrated that analyticity and a priori principles need not feature in our understanding or inquiry of the world and that meaning is not a fixed phenomenon to be had through abstracted consideration.

It might, however, be supposed that in abandoning a first philosophy a slippery slope may be said to threaten, since by abandoning a first philosophy one may tend toward epistemological nihilism. But, according to Quine, consideration of what an observation sentence is performs a two-fold function. When considering the duality of concept (knowing what a sentence means) and doctrine (knowing whether it is true), the observation sentence becomes basic to both. Observation sentences provide us with a means of determining the truth by functioning

[24] Quine, W.V. *Epistemology Naturalized.* p. 85
[25] Quine, W.V. *Epistemology Naturalized.* p. 86
[26] Quine, W.V. *Epistemology Naturalized.* p. 87

as evidence, and in terms of meaning they are essential since these are the ones that we learn to understand first. They provide us with our only entry into language, and it is here that meaning is firmest because we are able to correlate these with observable states of affairs. Sentences higher up lack these empirical consequences which they can call their own, which means that the indeterminacy of translation does not apply to observation sentences; beyond observation sentences meaning no longer has clear applicability to single sentences. The point remains, though, that meaning may be firmer in the case of observations sentences but is still never certain – epistemology enters the unsteady realm of science where everything becomes dubitable because it enters the framework of a theory which is always revisable. Nothing is certain and we can always be mistaken about what we think we know. According to Quine, epistemology now becomes semantics. "For epistemology remains centred as always on evidence, and meaning remains centred as always on verification; and evidence is verification."[27]

Quine's thesis is indeed a radical one which not only shifts the focus of epistemology but seems to threaten the role that philosophy plays. If science is all there is then we must ask ourselves whether philosophy still serves a purpose. The shift is a significant one because we seem to be distancing ourselves from the normative domain in favour of the descriptive domain. In what sense can we still be said to be doing epistemology if this is the case?

III

The Normativity Charge

Kim questions whether it can be maintained that Quine's naturalized epistemology is concerned with epistemology at all, given what he believes to be Quine's complete dismissal of the normative element in his epistemology. According to Kim, Quine sets himself apart by unfolding a radical theory which argues that we should abandon the entire framework of justification-centred epistemology and adopt a purely descriptive, causal-nomological science of human cognition. But in being asked to do so we are in effect, it seems, being asked to abandon that which is essential to the epistemological enterprise: normativity. Quine rarely mentions knowledge and asks us rather to focus on developing an empirical theory which

[27] Quine, W.V.O. *Epistemology Naturalized.* p. 89

reveals the nomological regularities of how organisms come to shape beliefs based on the causal interaction between these organisms and the stimuli in their environment. But is the output justified by the input, and are these causal processes subject to any evaluation? Is his epistemology prescriptive in the right kind of way, and does it exhibit clear standards according to which beliefs may be judged? Quine does not seem to address these concerns, without which epistemology itself seems to have been sacrificed in favour of a purely descriptive account of our belief-forming processes that are simply assumed to be legitimate. Kim argues that such an account does not address traditional epistemological concerns:

> ...the nomological patterns that Quine urges us to look for are certain to vary from species to species, depending on the particular way each biological (and possibly non-biological) species processes information, but the evidential relation in its proper normative sense must abstract from such factors and concern itself only with the degree to which evidence supports hypothesis.[28]

More importantly, in speaking of evidence we are speaking of justification. And this evidential relation, where evidence enhances the reasonableness of a claim, arises from the relation between the 'contents' of the items involved as opposed to the causal and nomological connections between these items. The evidential relation in the case of traditional epistemology is one of justification, and causal-nomological in the case of naturalized epistemology. Thus, if traditional epistemology and naturalized epistemology do not share the same concerns of justification and normativity, then the proposal that one can be replaced with the other becomes difficult to maintain.

To strengthen his claim, Kim argues that beliefs are essentially normative, in which case an epistemology that lacks normativity can no longer be said to be about beliefs. To be a science about beliefs, naturalized epistemology must presuppose a normative concept of belief. Kim argues as follows: to implement naturalized epistemology we need to identify and individuate the input and output Quine speaks of. The input is a physical event, such as the stimulation of sensory receptors, while the output is a theory (or a picture of the world) that the cognizer now has. We need to focus on the representations that the cognizer forms based on the stimulation that he has received. More specifically, we need to attribute beliefs and other contentful intentional states to the cognizer, but this attribution involves an interpretation of the cognizer; we construct an 'interpretive theory' that we apply in order to assign specific beliefs based on the utterances and behaviour which the cognizer exhibits. But in order to begin the interpretation we must assume that her beliefs and other propositional attitudes

[28] Kim, J. *What is 'Naturalized Epistemology'?* p. 390

conform to at least minimal rationality and that they are largely coherent. Unless the cognizer's beliefs are regulated and constrained by rationality we are unable to interpret her as possessing beliefs at all. And without belief-attribution we are prevented from viewing the subject as a cognizer since she cannot be said to have a 'picture of the world' anymore. So, "unless the output of our cognizer is subject to evaluation in accordance with norms of rationality, that output cannot be considered as consisting of beliefs and hence cannot be the object of an epistemological inquiry."[29]

IV

Defenses of the Quinean Project Against the Normativity Charge

In this section I will look at three interpretations of epistemic norms presented by Foley, Rosenberg as well as Bishop and Trout. I will assess the limitations of these defenses in vindicating the Quinean project. As will be seen, each has virtues and enable Quine to respond to some of his critics. It will also be seen, however, that each alone has problems and collectively will not entirely vindicate the Quinean project of naturalized epistemology. The first defense of the Quinean project comes from Foley who argues that standard interpretations of Quine have been erroneous in supposing that Quine dispenses with justification in his epistemology. He argues that Quine sees epistemology as continuous with science but holds that it is an exaggeration to claim that he sees it as exclusively a part of psychology.

"Quine thinks that the normative element in epistemology is ultimately a matter of identifying effective means to a valued end, where in epistemology the relevant valued end is truth, or more cautiously, accurate predictions."[30] The assumption is that making accurate predictions is valuable and can be viewed as our epistemic goal. As such, whatever assists us in making these predictions becomes valuable in an instrumental way. Justification, therefore, presents itself: we are justified to use a particular method insofar as it facilitates accurate predictions. The norms within epistemology are ones with which we can 'engineer' our way to accurate theories, and insofar as science provides information about which methods are reliable it is supplying us with the information to solve this 'engineering' problem. The content of these norms will be determined by looking at what needs to be done to a theory in

[29] Kim, J. *What is 'Naturalized Epistemology'?* p. 393
[30] Foley, R. *Quine and Naturalized Epistemology.* P. 249

order for it to achieve greater predictive success. For example, Quine believes that one norm which science has yielded is that of simplicity, since simpler theories have had greater predictive success. The content of the norm is therefore that of Occam's Razor, which science has yielded because in making theories conform to this standard we see that they produce better results in terms of predicting more accurately. Theories that do not conform to this standard and are more complex do not have the same predictive success. The norm is established by means of experience since experience shows us that it aids more accurate prediction, and science thus has normative dimensions.

Foley states that for Quine it is not the testing of theories (or the context of justification) but the thinking up of theories (or the context of discovery) which is the normative element in epistemology. The science game is where we adjust our theories according to observation, since something must be revised and tweaked if our theories fail to predict our observations and so naturally we adjust our theories to accommodate observation. Normative considerations enter the picture when we decide what precisely it is that we must give up, since we must decide how our theories are to be revised and in which ways, thus supposedly allowing for norms.[31] Quine identifies the normative considerations which should reign over this process of the creation and revision of theories. He mentions five virtues: conservatism, generality, simplicity, refutability and modesty. Or alternatively put: "the maximization of simplicity of our hypotheses and the minimalization of the mutilation of old hypotheses."[32] These may conflict with each other, but Quine offers no clear advice on how to weigh them appropriately. Moreover, he never clearly presents the a posteriori justification for these norms and it rather seems as if these have simply been assumed to be legitimate. But, lacking this experiential support, the question arises as to why Quine supposes that the norms which he has mentioned are the right ones.

Foley claims that to maintain Quine's utter rejection of a priori epistemology it must be supposed that these norms are drawn from science as part of the technology of truth-seeking. An allegiance to these norms helps produce better, or more accurate, theories. According to Quine, empiricism tells us that we must look to observation sentences for the content and truth conditions of our theories. For Quine, empiricism, understood as the method of

[31] Taking the normative element to operate in the context of discovery is odd, for it seems that the revision of theories forms part of the testing process, since it is in the light of test results that we decide what to give up and how to revise our theories. Here is where issues of justification arise, which means that the revision of theories also falls within the realm of justification. For our purposes, however, I will accept Foley's characterisation of Quine's position.

[32] Foley, R. *Quine and Naturalized Epistemology*. p. 252

constructing theories that can be confirmed or disconfirmed by observation (where even physical objects are irreducible posits), is a normative position; it tells us to do science insofar as we are interested in truth. We are thus to formulate empirically testable hypotheses and if these hypotheses together with our other beliefs generate faulty predictions, we are obliged to change something. As such, we are being provided with particular prescriptions within the theoretical realm. Beyond the simplicity and non-mutilation norms, Quine therefore also endorses an empiricist norm which is identical with the scientific method broadly conceived. On this account the norms of rational belief just are the norms of science broadly conceived.

But how do the sciences generate the most fundamental norms Quine mentions? How, if at all, are these norms revisable? The deviation from traditional epistemology becomes clear: Quine is seeking a posteriori justification for the norms he discusses. Science itself generates these norms by means of experience where one proposes certain standards of assessment and by means of test results monitor which standards must be met in order to give rise to theories that accurately predict; every time a standard is made use of in assessing and adjusting a theory and the theory yields accurate predictions justification, or support, is provided for the standard or norm. Quine argues for the empiricist norm as follows: It is a finding of science that our information is gathered by means of our five senses, which thus becomes a normative point because it causes us to be suspicious of information that cannot be traced back to observation, such as information acquired by means of telepathy.

But empiricism now seems to be a presupposition of science rather than a finding of it. Foley argues that Quine would have to answer that empiricism is a presupposition and a finding of science. It is a presupposition, since science is defined by its empirical methods, and it is a finding of science since science tells us that our most reliable information about the world comes to us through our senses. Our only reliable access to the world is through our senses since we are not telepathic or clairvoyant and have no non-observational access to the world. Empiricism is also a finding of science because the more successful science is in constructing theories that yield accurate predictions the better it is confirmed as a means of attaining knowledge about the world. Scientific method is confirmed as a result of its positive instances which prove that it is successful.

Does this proposal not generate circularity? It does, but this circularity, according to Foley, is not vicious. Foley states that when we are concerned with our most fundamental methods of

inquiry, we should expect some circularity. If these are genuinely the most fundamental methods then they can only be defended by means of the results that are obtained. It is possible for methods to generate evidence that undermine their own reliability, which accounts for the revisability of the empiricist norm. A method of science can be shown to be unsatisfactory on empirical grounds in which case one can discover this in an a posteriori manner. Though it would take much to convince us that clairvoyance is a more reliable means of accessing the world, Foley maintains that this is conceivable, and if this were to turn out to be the case then even the empiricist norm would need to be rejected. The norm is derived from science, and as such remains fallible. In the next section I will argue that this defense is not tenable by making it clear that the circularity which threatens is a genuine concern which cannot be so easily dealt with.

The second defense of Quine is presented by Rosenberg who argues for normativity conceived of in a naturalized way by drawing on evolutionary theory. On this interpretation justification is not abandoned but naturalized. The normativity that Rosenberg defends seems to be predominantly descriptive, which I will discuss in more detail in the next section. It will be seen, however, that in principle Rosenberg's thesis can yield empiricist norms or prescriptions within the theoretical realm. The difficulty is the fact that the thesis does not provide prescriptions within the relevant domain, i.e. that of practical reasoning. Both Foley and Rosenberg, therefore, address Kim's criticism to a certain extent because they reveal that prescriptive normativity can be had within a purely a posteriori thesis. The Quinean project is, however, not vindicated in its entirety because the accounts presented by Foley and Rosenberg fail to provide prescriptions in the context of practical reasoning.

According to Rosenberg's account of Quine's project the goals of inquiry are prediction and control; and inquiry's immediate goal is instrumental for the long-term "intrinsic goal" of fitness maximization. The goal of fitness maximization displaces the traditional goal of truth, since acquiring truths does not ensure survival, though it is instrumental to it. Truth is important in so far as it is one factor amongst others that is conducive to fitness maximization. Rosenberg argues that according to Quine's Naturalized Epistemology there is only one intrinsic goal: fitness maximization. If Darwin is right then our functional traits are geared towards this fundamental goal. And given this, we are now able to grade the ways in which organisms attain this goal in terms of efficiency – that is, instrumental rationality. Normativity is captured, since some means are more rational than others in that they are more efficient means to attaining the goal of fitness maximization.

So what is the immediate goal of our cognitive economy? According to Rosenberg, these would have to be those cognitive states that facilitate survival. Many of these states will be truths, but some may be falsehoods if they increase the chances of survival given the organism's environment. I take it that Rosenberg is claiming that certain falsehoods that are of the cautious sort can help ensure survival and fitness maximization despite being false. For example, it seems that if a herbivore were to believe that ten different plants in its immediate environment were poisonous, when in fact only seven are, it would still be conducive to its fitness to rather have this false belief because it would mean that the animal would not eat the poisonous plants which would be fatal to it. It also seems to be the case that many truths are useless until they acquire survival value due to the change of environment. For example, it might be true that a particular plant is poisonous, but this truth is not necessary to the survival of some herbivore in an environment where the plant is not to be found. But, should the circumstances change and the herbivore were forced to relocate to this area where the poisonous plant is to be found because the water in its current environment is contaminated by pollution, it would become a belief worth acquiring.

Rosenberg argues that nature will select beliefs which attain truth in the long run or successively closer approximations of truth, though it is not entirely clear what he means by this since he does not supply any examples to demonstrate his claim. He also argues that evolution will favour cognitive systems that are capable of detecting salient features in the environment that are conducive to survival. The basic epistemic goal of our cognitive apparatus is prediction, and beliefs are justified to the extent that they meet this goal. I will show that this account is only partially successful because it does not capture all that is required of normativity. I will develop this criticism in the next section.

Given these accounts it would seem that we have been given some reason to suppose that there is a specific sort of normative dimension to Quine's thesis where we are being presented with a standard according to which beliefs may be evaluated. It will be made clear in the next section, however, that each defense trades on a particular understanding of normativity and that these notions are not the same. This will cause difficulties for the various accounts. I would now like to start fleshing out a particular notion of normativity that I will argue is essential to a theory of knowledge and which has been neglected, namely, prescriptive normativity in the domain of practical reasoning. In principle the accounts presented by Foley and Rosenberg can yield particular prescriptions in the theoretical domain given the fact that there are norms in virtue of which science is successful. But even if it can

be maintained that there is a standard of evaluation present, it has not been shown that reason-guiding norms have been generated that are applicable to our daily activities. Quine's thesis as presented and developed by Foley seems to be focusing on the norms relevant to the formation of theoretical beliefs and concerns empiricist norms, but, as we have established, there are other sorts of beliefs that must also be considered and another sort of normativity that must be developed. Foley and Rosenberg's accounts do not provide us with the necessary norms that would guide our reasoning activities. In providing a substantive account of prescriptive normativity in the context of practical reasoning I now wish to present Bishop and Trout's thesis. Their thesis will show that the normativity specific to the context of practical reasoning can indeed be accommodated by a naturalized epistemology. At a later stage, however, it will also be seen that the rationality condition or norm captured by Davidson's principle of charity cannot be accommodated within a naturalized epistemology due to the a priori nature of this norm. So even though Bishop and Trout will successfully flesh out prescriptive normativity in the domain of practical reasoning, which I am predominantly concerned with, they still fail to vindicate the Quinean project in its entirety as a result of the purely a posteriori approach of the account.

One of the reasons why I believe that a prescriptive normativity in the context of practical reasoning must be preserved is due to its relation to beliefs of the third type, that is, those beliefs that result from processes of deliberation. What I have in mind are certain sorts of judgements that we make in difficult cases where the evidence is not as conclusive as we would wish, and where perhaps there is not enough evidence to be had in order to easily determine whether one's belief is justified or should be abandoned. But it seems that tricky cases of this sort are the interesting ones for any epistemic theory because the difficult cases are usually the ones we encounter most often:

> Judgement problems great and small are an essential part of everyday life...Is this book worth reading? Is the boss in a good mood? Will the bungee cord snap? These and other common judgement problems share a similar structure: On the basis of certain cues, we make judgements about some target property. I doubt the integrity of the bungee cord (target property) on the basis of the fact that it looks frayed and the assistants look dishevelled and hungover (cues). How we make and how we ought to make such evidence-based judgements are interesting issues in their own right. But they are particularly pressing because such predictions often play a central role in decisions and actions. Because I don't trust the cord, I don't bungee jump off the bridge.[33]

[33] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 24

If we are to make better judgements then we need advice as to how this can be accomplished, and this seems to be the essential value inherent in epistemology: in guiding our deliberations and judgements these can be improved which lead us to reason more effectively and achieve better results that improve our lives. *Ameliorative Psychology* is an expression coined by Bishop and Trout, and refers to the empirical world concerned with judging reasoning strategies and prescribing better reasoning strategies. They argue that the epistemological framework that guides the recommendations of Ameliorative Psychology, which they have called Strategic Reliabilism is not concerned with epistemic justification as understood by traditional epistemologists. Since justification is a property of belief tokens and Ameliorative Psychology is not preoccupied with belief tokens but with identifying the ways in which we should assess reasoning strategies, it abandons the notion of justification:

> Strategic Reliabilism is not a theory of justification...Reliabilism recommends reasoning strategies. And reasoning strategies typically produce beliefs. So Strategic Reliabilism recommends beliefs at one move.[34]

The epistemic framework that guides the prescriptions of Ameliorative Psychology is rather captured by the notion of *epistemic excellence*. They consider various reasoning strategies and argue that empirical investigations have rated these strategies based on certain normative assumptions that have not been fully articulated. They state, though, that "it is not uncommon for scientists to usefully employ a theoretical notion without having fully articulated it."[35] Bishop and Trout have, however, been able to identify three factors that enhance the quality of the reasoning strategy in the sense that it achieves better results. They argue that the epistemic quality of a reasoning strategy is a function of (1) the strategy's *reliability* on a wide range of problems, where the reliability must be robust such that (a) the rule makes accurate predictions for the various natural partitions of the rule's range and (b) the rule has a wide range[36]; (2) the strategy's *tractability*, which concerns how difficult it is to employ; and (3) the *significance of the problems* the strategy is meant to solve.[37] In understanding the notion of reliability that Bishop and Trout argue for it becomes clear that reliability is a resource-dependent notion: "How reliable a reasoning strategy is depends on the resources

[34] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 116
[35] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 54
[36] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 75
[37] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 54-55

expended on it."[38] Its reliability is a function of the amount of resources expended on it. This point is captured by the following example:

> Suppose there are three strategies available to Test Taker for solving the quantitative problems on the aptitude test. Among these three strategies, which is the most reliable? At low costs, D [for example] is the most reliable strategy; at high costs, E is the most reliable strategy. In this case, there is no strategy that dominates all other strategies. There is, in short, no strategy that dominates all other strategies.[39]

Here it becomes clear that they make use of an economic approach: they attempt to spell out the normative framework that supports the prescriptions of Ameliorative Psychology in terms of cost-benefit curves, start-up costs, and marginal expected reliability.[40] An important consideration of Bishop and Trout's supports Rosenberg's thesis in arguing that good reasoners do not just aim for truth but for *significant* truths. Bishop and Trout conceive of significant truths in terms of that which is non-accidently related to the requirements of human well-being, which, contrary to Rosenberg, encompasses more than mere survival. Clearly, their account will have to include ways in which to assess the degree of significance, and they propose the following view: *The significance of a problem for S is a function of the weight of the objective reasons S has for devoting resources to solving that problem.*[41] Bishop and Trout, therefore, accept a view from another normative domain, namely, that we have objective reasons for action that stand independently of whether subjects recognise them as such, and that these reasons can be compared.

Ameliorative Psychology thus presents us with various reasoning strategies that have been assessed in terms of their ability to promote epistemic excellence, and these reasoning strategies are to be understood as rules for making judgements based on certain cues. These strategies can be understood in terms of four elements: (a) the cues used to make the

[38] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 61
[39] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 61
[40] Cost-benefit analysis is a reasoning strategy according to which one estimates the desirability of various trade-offs that are available to one. It allows one to identify the option that would provide the greatest total benefit. For example, suppose that Test Taker is taking an aptitude test, and he decides to employ two different reasoning strategies on the two parts of the test. In this case the epistemic benefit would be correct answers and the epistemic cost would be elapsed time. His reasoning regarding the test is that it is better adopt a strategy where he gets more right answers in a shorter amount of time. The cost-benefit curve has a particular shape where there is a rapid increase in benefits with a steady levelling off. The levelling off represents a reasoning strategy's *diminishing marginal utility*, where increasing reasoning resources devoted to the reasoning strategy will steadily bear fewer benefits. Test Taker should ask himself what would be the best way to distribute his finite resources to the two reasoning strategies. The best allocation, or the one that would maximize expected reliability (or accuracy), would be the one that makes the marginal expected reliability of both reasoning strategies equal. (Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 60)
[41] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 95

prediction; (b) the formula for combining the cues to make the prediction; (c) the target of the prediction (i.e. what the prediction is about); and (d) the range of objects (states, properties, processes, etc.), defined by detectable cues, about which the rule makes judgements that are thought to be reliable.[42] Consider, for example, the Goldberg Rule which predicts whether a psychiatric patient is neurotic or psychotic based on an MMP1 profile. The rule made more accurate predictions than 29 clinical judges. The rules goes as follows: where L is a validity scale and Pa, Sc, Hy, and Pt are clinical scales of the MMP1[43]:

$$x = (L + Pa + Sc) – (Hy + Pt)$$

If $x < 45$, diagnose patient as neurotic.

If $x >$ (and equal to) 45, diagnose patient as psychotic.

When the rule was tested on a set of 861 patients it was 70% accurate, whereas the clinical judges achieved an accuracy of between 55 – 67%. So in thinking about the strategy in light of the four elements mentioned above one can set it out as follows:

Cues: 4 MMP1 personality scales (Pa, Sc, Hy, Pt) and one validity scale (L)

Formula: If $[(L + Pa + Sc) – (Hy + Pt)] < 45$, diagnose patient as neurotic; otherwise diagnose patient as psychotic.

Target: Neurosis or psychosis

Range: All psychiatric patients (assumed to be either psychotic or neurotic).[44]

These useful reasoning strategies are dubbed Statistical Prediction Rules, and the strategies that have been shown to yield better results in terms of being more reliable according to certain considerations are recruited.

The motivation behind Bishop and Trout's project stems from a rejection of what they call *Standard Analytic Epistemology* (SAE), which includes foundationalism, coherentism, other reliabilist accounts as well as contextualism (or, in other words, any epistemology which has traces of an a priori approach). The specific concern which they have regarding SAE is whether such theories offer explicit advice regarding reasoning procedures. In commencing the investigation into what we know, Trout and Bishop argue that we must adopt The

[42] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 71
[43] Bishop and Trout fail to specify what the different clinical scales (Pa, Sc, Hy, Pt) actually are.
[44] Bishop, M.A. and Trout, J. D. *Epistemology and the Psychology of Human Judgement.* p. 72

Aristotelian Principle, according to which *poor reasoning tends to lead to worse outcomes than good reasoning in the long run.*[45] This principle serves the function of providing a guideline by means of which the deliverances of our prior epistemic judgements can be tested. And if we think that the Aristotelian Principle is right then we will want to investigate how the people who lead flourishing lives reason, which Bishop and Trout argue is an empirical matter. They maintain that SAE only captures "the reflective epistemic judgements of a group of idiosyncratic people who have been trained to use highly specialized epistemic concepts and patterns of thought."[46] They argue that, as such, SAE is in fact a descriptive endeavour, since one is in effect providing an account of the considered epistemic judgements of academics. They also endorse Stich's claims that, given a different culture, the epistemic judgements could in fact differ quite drastically and, according to them, tests have been conducted involving non-Western communities in support of this thesis. SAE therefore seems to amount to a peculiar sort of cultural anthropology since it seems to involve constructing theories according to the ways in which a particular group of people, namely Western philosophers, epistemically assess judgements.

They are arguing that the theories which philosophers in the SAE tradition have articulated do not yield genuine standards of assessment, but rather provide a descriptive account of what they, as Western academics, take to be the conditions for knowledge. Those who endorse reliabilism or the transformational thesis, for example, take seriously the Gettier-type problem which causes them to focus on setting out the conditions under which a belief must be generated in order to amount to knowledge. But, according to Bishop and Trout, such an epistemic theory simply captures what *they* take to be the conditions for knowledge. In the study conducted by Weinberg, Nichols, and Stich (2001) it was found that different cultural and socioeconomic groups make significantly different epistemic judgements. A group of Western subjects and non-Western subjects were given the following Gettier-style example:

> Bob has a friend, Jill, who has driven a Buick for many years. Bob therefore thinks that Jill drives an American car. He is not aware, however, that her Buick has recently been stolen, and he is also not aware that Jill has replaced it with a Pontiac, which is a different kind of American car. Does Bob really know that Jill drives an American car, or does he only believe it?[47]

[45] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 20
[46] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 107
[47] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 107

As opposed to a majority of Western subjects who would answer that he only believes, a majority of East Asians and subjects from India answered that he really knows. According to Bishop and Trout, these studies show that SAE only captures the epistemic judgements of a specific group of people, and the question becomes whether what they are capturing reflects a normative standard that can be said to apply cross-culturally. Bishop and Trout think not, and this position is also informed by the fact that even amongst philosophers there is so little agreement in terms of how one must, for example, respond to Gettier–type examples. Given this, Bishop and Trout argue that it becomes difficult to maintain that the approach that these philosophers have adopted, i.e. an a priori approach, genuinely yields conditions for knowledge.[48] However, in response to the study above, it can be argued that the conclusion to be drawn is not that different responses to Gettier-type examples imply that an accurate conception of knowledge cannot be had, but rather that the different responses are simply guided by different conceptions of knowledge and it is up to philosophers to determine which conception is in fact the correct one to employ. As to whether philosophers are more competent in determining what the correct conception of knowledge would amount to, I would have to assert that indeed they are, which is an issue I will address in a moment.

What becomes clear is that Bishop and Trout are arguing that SAE yields nothing of significance: whatever the conditions for knowledge might be, what we are really interested in is how to achieve better results which can only be done by means of better or more accurate reasoning strategies. According to them, our intuitions in response to Gettier-type examples are essentially irrelevant if they do not assist us in coming up with better reasoning strategies or recommend prescriptions according to which we can make more accurate judgements. For Bishop and Trout SAE in fact lacks the normativity it supposedly espouses and is thereby descriptive in a decidedly unhelpful way. I take the point that the conditions for knowledge might not yield the necessary prescriptions in the domain of practical reasoning, and if theories from the SAE tradition fail to show how their theories can yield

[48] Bishop and Trout provide a list of various responses given by philosophers of the SAE tradition to Gettier-type examples: (1) "Even if S correctly predicts that he is going to lose, we would deny that he knew he was going to lose if the only basis he had for this belief was the fact that his chances of winning were so slight." (Dretske 1971, 3.) (2) "The situation is a peculiar one, and my intuitions, and I would suppose other people's, are not completely clear on the matter. But it seems, on the whole, that we ought not to speak of knowledge here..." (Armstrong 1973, 181) (3) "But, to make such an assumption is counterintuitive. In everyday situations we do not regard deception as precluding rationality. Likewise, we do not regard the fact that we have been deceived, or will be deceived, or would be deceived, as precluding rationality." (Foley 1985, 192) Each passage captures various conclusions to examples where it is shown that justified true belief might not be enough for knowledge, or Gettier-type examples, and in each case we are encouraged to share the philosopher's considered epistemic judgements about the imagined scenario. (Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement*. p.10)

prescriptions of this sort then I would agree that the particular value that epistemology can bring to our lives in terms of allowing us to make better decisions has been lost. This is something we should avoid especially if we are being provided with a means of gaining reasoning advice through the findings of science. I do, however, think that SAE has the resources necessary for prescriptive normativity in the context of practical reasoning. And given the ways in which I will show a naturalized epistemology to be unsuccessful as a result of its inability to accommodate the principle of charity, it would be best to preserve SAE with its a priori component.

Also, if Bishop and Trout's account rests on the notion of generating the normative from the descriptive, and according to them SAE is descriptive, then surely one can generate the necessary norms from SAE in the way that they have from Ameliorative Psychology? It must first be asked how this task would proceed, and Bishop and Trout do not think that SAE is capable of doing justice to prescriptive normativity in the domain of practical reasoning. They ask us to imagine that we come to establish that foundationalism, for example, captures what knowledge amounts to. In what way does it now provide us with the necessary guidelines that would drive our belief-formational activities? Presumably the advice would be that we must aim to adopt empirical beliefs that are basic or appropriately related to basic beliefs. Is this enough? Does this assist us in specific scenarios where we must solve problems the way we do on a daily basis? The first criticism of SAE is, therefore, that it can offer no determinate guidance regarding our reasoning strategies. I agree with Bishop and Trout that what they ask us to imagine above does not seem to offer us much in the way of advice within the context of practical reasoning. An epistemology that disregards the findings of science would indeed be impoverished. But if we were to turn to reliabilism, which Bishop and Trout count as part of the SAE tradition, then prescriptions with regard to practical reasoning could be provided since reliabilism incorporates scientific findings. As such, SAE is in a position to offer determinate guidance.

Another criticism from Bishop and Trout is that the standards of assessment generated in the SAE tradition are adopted in virtue of conforming to our considered epistemic judgements (or our *prima facie* intuitions about what constitutes knowledge), and we might want to ask ourselves why these judgements are so esteemed to begin with. That is, do we merely insist on endorsing an epistemology from the SAE tradition because it squares with our epistemic intuitions, rather than because it offers us definite advice as to our reasoning activities which might show that our previous reasoning strategies were quite poor. This second line of attack,

therefore, is that even if SAE could provide us with determinate prescriptions in the context of practical reasoning it can still be argued that the justification for these prescriptions is not adequate because these prescriptions have not been tested by means of a posteriori evidence. Bishop and Trout are effectively attempting to undermine the relevance that we believe a priori reasoning to have. According to their view, a priori reasoning seems to be too greatly influenced by what we would like to believe and what our *prima facie* (and uninformed) epistemic judgements are to begin with.[49] For them it is results that matter, and only the empirical sciences can test whether our reasoning strategies are effective or not and how they must be adjusted. Again, by appealing to reliabilism one allows for a posteriori justification and the findings of science, while allowing for an a priori component when it comes to conceptual analyses. Bishop and Trout do not seem to make allowance for theories of this sort that seem to achieve what they have in mind without dismissing an a priori component.

Proponents of SAE might also respond to the above criticism in the following way:

> We can connect the descriptive results of SAE with normative prescriptions by noting that normative, epistemic claims are *a priori*. It is natural, therefore, to suppose that figuring out the truth about epistemology will involve close analysis of our epistemic concepts. To characterize SAE as a descriptive endeavour might be correct, but it is misleading. The theories of SAE aim to describe an essentially normative concept (or sets of concepts). And that's why SAE is normative. To put it crudely, discovering conceptual truths involves the accurate description of epistemological concepts. And this is precisely what SAE does. And so even though this endeavour is descriptive (it involves describing our concepts), it nonetheless yields normative, a priori, prescriptions. It tells us what it *really is* for a belief to be justified, and so what we *ought to* believe.[50]

The idea captured in the above passage is that SAE can acknowledge that in a certain sense they are engaging in a descriptive activity: one articulates what it would mean to have knowledge and insofar as our beliefs meet the specified conditions we have knowledge. But what one might describe as descriptive is in fact normative because an analysis of the necessary concepts will generate specific standards according to which beliefs are assessed. The normative character of epistemology and an a priori component cannot be done away with because in characterising a theory of knowledge one is inevitably looking towards an analysis of particular concepts which will generate particular standards to be met and which can only proceed in an a priori fashion.

[49] I will go on to challenge this criticism of SAE and a priori reasoning.
[50] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 112.

For example, in analysing the concept of knowledge one might, through a process of a priori reasoning and consideration of Gettier-type examples, arrive at the conclusion that knowledge arises from beliefs being caused in the right sort of way. Because one is dealing with concepts such as *justification*, *rationality*, *knowledge*, *warrant*, when doing epistemology one is in effect dealing with particular concepts that must be unpacked. That is, we must not only grasp how we use these concepts (where the analysis must at least party capture the way in which we implement the concept) but also what the concept in fact means. Once the concept has been analysed and it is determined what justification, for example, amounts to one is in a position to assess beliefs according to this standard. This accounts for the normativity implicit in SAE.

Bishop and Trout wish to assert that a priori reasoning can only yield a descriptive account of what a particular group of people take knowledge to be, thus lacking normativity. Clearly, this is not the case, since a theory of knowledge necessarily involves particular concepts that are of a normative kind, and the analyses of these concepts proceeds in an a priori manner. In response to Bishop and Trout's criticism of SAE as purely descriptive, it can now be seen that SAE is normative and that normativity can in fact be had by a priori means as well. Even though a naturalized epistemology will be able to provide us with prescriptive normativity in the context of practical reasoning it is clear that in virtue of dealing with particular concepts and engaging in conceptual analyses, one will inevitably generate particular standards by means of a priori reasoning. Bishop and Trout's thesis is moving in the right direction in terms of the prescriptive normativity it espouses in the domain of practical reasoning. It still faces significant difficulties, however, that stem from the dismissal of an a priori component; given the concepts one engages with when doing epistemology one will inevitably have to include an a priori component. Bishop and Trout present several objections to the position that an a priori component inevitably presents itself.

If one accepts that an a priori approach *does* yield normativity then Bishop and Trout's criticism will only go through if they can show that the normativity implicit in SAE is not robust enough to amount to *prescriptive* normativity regarding practical reasoning. It may be thought that the minimal sort of normativity specified in the passage above seems to be only of the descriptive sort, and therefore not robust enough: what justification *in fact* is, is specified, and for a belief to be justified it must meet the specified conditions. We could look to our beliefs and, therefore, determine which ones are justified and which ones are not. This does not, however, give us instruction in terms of how to be epistemically more responsible

or how we should go about processes of deliberation and reasoning in order to judge more accurately and achieve better results. I take the point that this is a genuine concern, but one that I believe can be overcome. Also, I am not forwarding the claim that normativity will only be had by a priori means, but that an a priori component cannot be dismissed. I am not suggesting that we disregard the findings of science. I am attempting to articulate the reasons why an a priori component must remain, and as we have seen it cannot be dismissed on the grounds that it fails to give rise to normativity. There is another reason why an a priori component becomes essential to a theory of knowledge which I will address in the next section.

An alternative criticism proposed by Bishop and Trout, which I do not find very convincing, is to deny the normativity implicit in SAE by means of conceptual analyses by suggesting that we need not preoccupy ourselves with notions such as *justification*. They speak of *epistemic excellence*, which is concerned with the degree to which a reasoning strategy is robustly reliable and thus allows us to make accurate judgements to be determined in a purely empirical manner. But to use the term *epistemic excellence* as opposed to *justification* is simply to exchange one term for another, rather than showing that a conceptual analysis is no longer being conducted. It rather seems that when Bishop and Trout are speaking of *epistemic excellence*, they are in fact speaking of justification, since a belief is justified, or epistemically excellent, to the extent that it leads to accurate judgements. Since it is clear that an a priori approach cannot be so easily dismissed, we would do better to examine the ways in which prescriptive normativity in the context of practical reasoning can be drawn from SAE (as can be seen in the case of reliabilism).

A final criticism of the claim that norms can be generated a priori from Bishop and Trout is that even if we were to grant that epistemic claims are a priori, it still does not mean that in virtue of this SAE is in a position to discover a priori truth. The proponents of SAE disagree about what justification amounts to, and since these accounts cannot all be true, it must mean that we can distinguish between *a priori beliefs*, which can be true or false, and *a priori knowledge*. What grounds are there for suggesting that SAE gives us a priori knowledge? According to Bishop and Trout, a case can be made for the fact that a priori truths are very difficult to access, as the history of mathematics demonstrates. This relates back to the point made earlier where Bishop and Trout express skepticism regarding the supposed relevance of a priori reasoning since it gives rise to such different responses and results (even amongst philosophers who often come from the same culture).

An example of this is what one's response should be to Gettier-type examples. Beyond philosophers one must also consider the responses of others if the stasis requirement is to be adhered to, and, once again, Bishop and Trout express skepticism given the investigations of Weinberg, Nichols, and Stich which illustrate significant intercultural and intracultural differences regarding epistemological expressions.[51] According to Bishop and Trout we need some reason to suppose that the conceptual analyses proposed by philosophers are in fact the right ones. Bishop and Trout ask what reasons we have to suppose that philosophers are experts in this matter, especially if what they investigate operates within a bubble that is isolated from what we might have learned to be the best ways to reason according to, for example, Ameliorative Psychology. Of course, the philosopher's expertise might be demonstrated if it can shown that they have had clear success in reaching truth. But, according to Bishop and Trout, this is certainly not clear.

I have to step in on behalf of philosophers at this point. Bishop and Trout seem to be asserting that because a priori reasoning has yielded such different responses and because a priori knowledge is so difficult to access, it clearly indicates that an a priori approach should be abandoned in favour of a purely a posteriori one. But this sort of argument cannot be maintained. It is clear that a priori reasoning is fallible, as can be seen in mathematics, but what of it? This does not mean that a priori reasoning has not been successful or that it hasn't managed to yield knowledge. If mathematics and its methods are to be dismissed on the basis of past failures then one can equally dismiss science and its method of justifying by means of experience due to past failures, which have also been extensive.

The reason why we also think that philosophers are more equipped in determining what knowledge would be within the SAE tradition is because they have developed a particular skill which others have not. Bishop and Trout's discussion of why we should consider the epistemic judgements of philosophers to be the right ones, or as more esteemed, when other cultures might have different epistemic judgements, seems to suggest that there is no standard of assessment over and above that which cultures consider to be accurate provided that both achieve good results. But this is just not the case, and it is something which Quine's thesis also brings to light. What we *are* and *should* be interested in is attaining is truth, and the most successful way of reaching truth is by means of evidence. Evidence, therefore, is the all-

[51]However, as I have indicated elsewhere, we seem perfectly entitled to draw different conclusions based on the studies done by Weinberg, Nichols and Stich to those drawn by Bishop and Trout. The different responses to Gettier-type scenarios can be explained by arguing that the subjects in question are simply working with a different conception of knowledge.

encompassing standard, and here philosophers can be said to claim a certain amount of expertise in virtue of being better reasoners; scientists equally claim expertise given the nature of their endeavour. Being able to reason accurately is a skill like any other and is something one develops over time and can attempt to improve. Philosophers presumably take it as a given that what they are in the business of doing is reasoning well, in the way that a ballet dancer is in the business of dancing well. It seems that in order to reach truth one must be able to reason effectively, especially if one is not a skeptic regarding a priori truth, and this is precisely why philosophers can claim expertise in this matter; reasoning well is the specific skill that they have aimed to develop.

What is clear concerning Bishop and Trout's account is that they believe that their theory is more successful in bridging the is-ought gap, in virtue of the Aristotelian Principle. One should follow the prescriptions of Strategic Reliabilism because over the long run these will lead to better outcomes than contravening them would. Very importantly, Bishop and Trout deny that the normative is some entrenched domain occupying our consciousness to be brought out be my means of deep reflection and lengthy reasoning. For them:

> ...our access to the normative comes from what we can infer about the regularities in the world that are responsible for the success of certain reasoning strategies. It is indirect and empirical – and so subject to standard sceptical concerns. But our access also relies on the powerful methods of contemporary science.[52]

It seems that Bishop and Trout have successfully served to articulate prescriptive normativity in the domain of practical reasoning that a theory of knowledge must capture. That is, in providing prescriptions that instruct our reasoning and problem-solving activities they are unearthing precisely that which we value in constructing a theory of knowledge. We are being presented with the tools to form judgements and to reason better in order to live better and more productive lives. Bishop and Trout provide an account of how theory is to be applied which becomes significant for beliefs of the third type. But if this is their success, then it does not automatically imply that we now have a successful theory of knowledge, since the other components cannot be ignored. How successful is this purely a posteriori account really? Can the Quinean project stand up to scrutiny?

[52] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 115-116

V

The Inadequacy of the Defenses

In the previous section I discussed the various ways in which proponents of the Quinean project have aimed to answer Kim's normativity charge, and it is clear that Foley, Rosenberg, and Bishop and Trout do so by appealing to different notions of normativity.

Foley defends Quine by arguing that science itself can generate particular norms and that the circularity inherent in this approach is not crippling to the thesis (which I will discuss more carefully in a moment). Foley, therefore, incorporates and accommodates normativity in terms of empiricist norms where prescriptions are being provided within the theoretical domain. Foley's account does not, however, accommodate prescriptive normativity in the domain of practical reasoning.

Rosenberg naturalizes justification by drawing on evolutionary theory. According to his account beliefs are graded according to how successfully they allow us to achieve fitness maximization without seeming to provide us with particular advice regarding our reasoning activities. In principle one could generate particular prescriptions with respect to the theoretical domain despite the fact that the account seems to trade more extensively on a descriptive formulation of normativity. However, even if these empiricist norms could be brought to bear, the account would still not be fully vindicated because (as I have mentioned) it fails to generate prescriptions regarding practical reasoning.

Bishop and Trout defend the Quinean thesis by emphasizing the value of prescriptive normativity in the context of practical reasoning and how science can yield these particular prescriptions. Bishop and Trout's thesis is successful in this respect while Foley and Rosenberg's accounts are not. What the all the defenses successfully show though is that normativity of a particular sort is indeed defensible within the framework of a Quinean thesis. The defences are successful to a certain extent as they have accommodated at least some formulation of normativity. The bigger question is whether these defenses are able to accommodate all the different formulations of normativity and whether it presents a problem if they cannot. Clearly Foley and Rosenberg's accounts flounder because prescriptive normativity in the context of practical reasoining has not been accommodated, whereas Bishop and Trout's account is successful in this regard. But does this mean that Bishop and

Trout's account is completely successful in accommodating all the different formulations of normativity?

In this section I will bring to light the reasons why a naturalized epistemology cannot be vindicated in its entirety. I will begin by raising specific objections regarding each defense in isolation which will highlight the extent to which a naturalized epistemology can be deemed successful. I will then proceed to argue that though the normativity charge can be dealt with to a certain extent, any naturalized epistemology will still be problematic as a result of its purely a posteriori nature. It will be seen that a naturalized epistemology is methodologically unsound in virtue of adopting a purely a posteriori approach, and that an a priori component must be included if a theory of knowledge is to be successful. The defenses of the Quinean project allow us to identify the components of Quine's thesis that are of value and must be preserved, while the criticism to follow will suggest the ways in which Quine's thesis must be adjusted in order to accommodate all that needs to be included.

The Circularity Criticism

The one concern regarding a naturalized epistemology is the circularity which seems to threaten. The empiricist norm which Foley mentions seems to be a presupposition of science, and is assumed to be legitimate, rather than a finding of it. Recall that Foley argues that Quine would have to answer that empiricism is a presupposition and a finding of science. It is a presupposition, since science is defined by its empirical methods, and it is a finding of science since science tells us that our most reliable information about the world comes to us through our senses. Our only reliable access to the world is through our senses since we are not telepathic or clairvoyant and have no non-observational access to the world. It is also a finding of science because the thesis gets confirmed by its positive instances, and experience shows us that scientific method is the best way of generating theories that provide accurate predictions. The circularity here is, according to Foley, not vicious. Foley states that when we are concerned with our most fundamental methods of inquiry, we should expect some circularity. If these are genuinely the most fundamental methods then they can only be defended by means of the results that are obtained. It is possible for methods to generate evidence that undermine their own reliability, which accounts for the revisability of the empiricist norm.

Foley, therefore, argues that the circularity which arises is not problematic. He states that the evidence that keeps coming in serves to sustain the empiricist norm and continuously

strengthens it, since presumably it could be defeated by the discovery that clairvoyance is more reliable, and this is a conceivable event. That is, if we could determine by means of experience that clairvoyance is more reliable than science then the empiricist norm would be undermined.

Of course, this seems somewhat paradoxical. The way in which we would confirm that clairvoyance is more reliable and makes more accurate predictions is also through experience. It is not entirely clear precisely how the empiricist norm is being undermined under these circumstances. Another concern is whether it is genuinely conceivable that clairvoyance could be more reliable than science. Would we say that psychics have *reliable* beliefs even if they had true beliefs all the time? One might insist that in the case of psychics their beliefs could not be reliably produced because there would be no mechanism that we could point to in order to explain the process by which the belief was formed. It seems that we would rather say that the psychic happened to acquire a true belief but that it does not amount to knowledge because it is not the result of reliable belief-forming process. There is no mechanism or process which can be identified, and as such the true belief is coincidental. The reliability of the belief consists in a connection between getting it right and that which makes it true. If we understand the psychic as having a true belief in the absence of any mechanism or process which ensures the belief is acquired because it is true then it fails to count as a reliable belief because the requisite connection is lacking. Given these considerations, it seems clear that the psychic would in fact not function as a possible defeater for the empiricist norm and, lacking this, the Quinean would have to concede that the empiricist norm is in fact not revisable. Consequently, the Quinean approach is flawed since, according to the position of fallibilism which is a doctrine of science, every belief is revisable. But the principle of empiricism is not open to revision on a posteriori grounds, for the very principle will need to be used in order to refute or revise it.

Perhaps Bishop and Trout can mount a more convincing defense of a purely a posteriori approach. After all, it does seem that the development of science from a regulative principle, that guides in terms of what must be done, to a substantive principle, where a posteriori justification is constantly being provided because scientific methods allow us to generate more accurate theories, is enough to sustain these methods of inquiry as genuine sources of knowledge. Bishop and Trout discuss the circularity criticism and a defense in more detail. The objection that Bishop and Trout must respond to can be restated in the following way: if science is to guide our reasoning and we begin with descriptive claims that might be

generated by psychology, presumably we must still make decisions about which empirical claims we should trust. It certainly seems to be the case that the empirical sciences do not generate particular claims which are unanimously agreed upon. There is just as much disagreement amongst, not just those in the empirical sciences, but more specifically in the case of Quine's project, those involved in the natural sciences. There are choices which must be made regarding which methods might be better and whether the tests were accurately conducted in terms of not being contaminated by previous assumptions and subjective perspectives regarding what the outcome will be.[53] And according to Quine's thesis of the underdetermination of theory, it becomes evident that the matter cannot always be decided based on observation, since two incompatible theories can both be equally compatible with observation. For example, we might employ standards that consist in logical relations and degrees of coherence. So in choosing between two incompatible theories that are both supported by observation we might select the theory that allows for greater coherence amongst our theories in general and 'fits' better with the other theories that have been developed. We are, therefore, continuously making judgements and employing standards of assessment according to which we select one scientific theory rather than another. These standards do not seem to result from experience or the natural sciences; they seem to be removed from it.

The objection can be filled out even further by considering the fact that we consult our intuitions regarding what we take knowledge and justified belief to consist in, and many of these intuitions do not stem from experience but from consideration of certain circumstances. Gettier-type examples immediately come to mind. These intuitions are significant because we assess whether certain epistemological theories are to be accepted or rejected based on the degree of fit between these intuitions and the theory at hand (as Kim has made apparent by means of the *stasis requirement*). And, given these intuitions which are based on the ways in which we use particular epistemological concepts such as *knowledge* and *justification*, it seems that we already have an epistemological theory in mind apart from the results science yields. It seems that epistemology cannot proceed from descriptive claims because the only way in which to generate a theory of knowledge, which concerns *ought* claims, is to step out

[53] There is extensive literature discussing the fact that the sciences lack the objectivity we would expect. Test methods and results are often distorted and contaminated by the results a scientist expects and wishes to produce. I do not, however, wish to suggest that science is completely subjective. Even in cases where tests have been contaminated it is clear that scientific method provides the means to identify errors that have been made. I only wish to make the point that since science is practiced by people errors are bound to creep in given our fallible natures.

of science; within the framework of science there are no standards since whatever it yields only gains legitimacy in terms of the methods of science – but how do we know that these methods are legitimate? The support generated for science in virtue of scientific practice is vacuous without prior standards. Bishop and Trout proceed to respond to this objection.

They argue that the objection makes the mistake of supposing that normativity presents itself in one go; it's all or nothing. Either we have a standard of assessment or we do not. Either we have a complete theory and can therefore make judgements or no theory and no judgements. As such, one cannot begin with that which is descriptive and progress to normativity, since knowledge of the normative is had in one move. But Aristotle argued that there are certain moral and intellectual virtues that are related in such a way that they are mutually supportive. It is at this stage that Bishop and Trout also make use of the Aristotelian Principle, which states that *in the long run, poor reasoning tends to lead to worse outcomes than good reasoning*.[54] The principle licences the empirical determination of the best ways of reasoning though this can never be done with certainty. In order to begin the empirical investigation one adopts certain normative epistemological judgements as *prima facie* true and then proceed to unearth the assumptions that support such judgements. They propose to creep up on normativity by means of the results that science gives rise to, so an example of how our norms will be altered would be to consider what we take to be a good reasoning strategy before being properly informed by psychology.

For example, if we return to the case of the psychiatric patients, one might initially think that using clinical judges in order to assess whether the patient is neurotic or psychotic would be a more legitimate procedure and would be epistemically more responsible. Presumably making use of professionals who are highly trained in detecting subtle signs, such as expression and body language, would be the more responsible course of action. Employing a Statistical Prediction Rule seems irresponsible because humans seem to be sensitive to certain cues that the rule cannot capture, which would make it less accurate. But according to the success rates of these two strategies the Goldberg Rule is in fact the one which is more accurate and achieves a higher degree of epistemic excellence.[55] No matter how counterintuitive, the research would recommend this as a reasoning strategy in that particular case because it is more reliable and therefore ought to be adopted. In conducting investigations of this sort one

[54] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 20

[55] Bishop and Trout also include investigations that explain why the rule is more reliable by discussing the ways in which humans are fallible when it comes to detecting and processing cues. See "The Foibles of Human Prediction", p. 37.

will presumably attain closer approximations of which reason-guiding norms promote better results conceived of in terms of, and as the result of, scientific investigation. These findings will then prompt one to revise or accept one's initial normative epistemological judgements.

Bishop and Trout argue that the Aristotelian Principle is an empirical, probabilistic claim which means that it is easy to imagine a world in which the principle fails: in some world, for example, there is an evil demon that punishes excellent reasoners. Practically speaking, however, it seems that any normal functioning, reflective person committed to doing epistemology must accept the principle since "it is a necessary precondition for the practical relevance of epistemology."[56] The Aristotelian Principle captures the importance of epistemology since it becomes practically valuable in virtue of guiding our reasoning to achieve better lives. Epistemology only becomes useful if the principle is true, and it seems that in accepting the Aristotelian principle we can creep up on normativity via descriptivity: one commences the investigation by utilising normative epistemological judgements that are *prima facie* true and which presumably are also in accordance with the Aristotelian Principle. This allows one to get a foot in the door, but in utilising empirical investigation one tests and rejects these assumptions until one generates norms which empirical findings yield, as I have illustrated with the Goldberg Rule.

As it stands, Bishop and Trout have given us reason to suppose that the circularity is not vicious and has the potential to yield norms in a way that I find convincing, where these norms will be related by being mutually supportive. With regard to the circularity concern they successfully vindicate the Quinean project. The naturalized epistemologist is, therefore, in a position to respond to the circularity objection in the way that Bishop and Trout have argued. I now proceed to a criticism of Rosenberg's thesis which stems from his appeal to evolutionary theory.

Evolutionary Theory

Rosenberg draws extensively on evolutionary theory in filling out his argument. His account is unconvincing because instrumental rationality is not enough to capture prescriptive normativity within the domain of practical reasoning. For Rosenberg, beliefs are graded according to how successful they are at allowing us to achieve fitness maximization, but his

[56] Bishop, M.A. and Trout, J.D. *Epistemology and the Psychology of Human Judgement.* p. 20

argument suggests that in virtue of the kinds of systems that we are, we will gradually adopt the right kinds of beliefs in the long run. This fails to capture the conscious reasoning and evaluative activities that we engage in on a daily basis and which traditional epistemology has presumably aimed to identify and clarify. The argument seems to trade on the idea that we become habituated to forming certain beliefs and rejecting others based on gradual successes and failures. This neglects to shed any light on the reasoning processes that we engage in and how these are to be evaluated because we only seem to be looking backward at our past successes and failures in order to gauge what maximizes fitness. It is in this respect that Rosenberg's thesis seems to capture descriptive normativity rather than prescriptive normativity. As I have mentioned, in principle one could generate empiricist norms even though Rosenberg has not done so, but the thesis would still be incomplete due to a failure to generate prescriptions in the context of practical reasoning.

Bishop and Trout effectively illustrate the fact that reasoning, though it may at times seem instantaneous and non-reflective, is in fact a conscious procedure that we engage in under certain circumstances. In providing prescriptions regarding which reasoning strategies to adopt they are supposing a certain amount of conscious agency by means of which we choose to take on and implement certain strategies of reasoning based on their reliability in producing better results. Bishop and Trout's account is successful in terms of meeting the practical demands that a theory of knowledge must meet: providing reason-guiding norms or advice. Rosenberg's thesis fails in this respect given the backward-looking nature of the account where conscious reasoning seems to be dismissed.

Given these specific objections to Foley and Rosenberg's accounts I now wish to consider the general methodology of naturalized epistemology and how this will prove to be problematic. I have made it clear that throughout most if this paper I will be considering a robust form of naturalism, and according to such a robust form of naturalism the role that philosophy can be said to play in accounting for knowledge has effectively been eliminated. According to Quine, and robust naturalism, any theory must be subjected to the demands of natural science if it is to stand up to scrutiny and be considered legitimate. But does Quine's naturalized epistemology meet the demands of natural science?

The Place of Philosophy

Given the points that Foley has made, there is reason to think that Quine is not able to practice the naturalism that he preaches. The norms he mentions seem to lack the empirical evidence that the natural sciences demand. That is, there is reason to think that Quine's thesis is self-defeating. Quine cannot dismiss the strictly philosophical in favour of science because his argument for epistemology naturalized is itself philosophical, and its general conclusion is not properly testable under the methods of the natural sciences. If we consider his conclusion that there is no 'first philosophy' as a hypothesis then it becomes apparent that it has no statable sensory test implications that would allow us to confirm it positively. The answer provided by naturalized epistemologists concerning the question of whether there is knowledge beyond science cannot be established by appeal to its positive instances under the methods of testing and confirmation proper to the natural sciences. The thesis does not seek to solve any empirical problem that practising scientists would recognize.

In response to this objection concerning the theory as a whole it might be argued that the thesis can be tested if psychics presented themselves and showed that empiricism is false. But, given the points made earlier, it seems clear that psychics would fail to function as a possible defeater in light of the fact that their beliefs would not be considered reliable in the absence of a process or mechanism. Also, the only way in which we would determine that their beliefs yield more accurate predictions is through experience, in which case the empiricist norm seems unrevisable. Even if we were to grant that psychics could function as a possible defeater it cannot be argued that since psychics have not presented themselves empiricism must be true. The fact that it has not been falsified is not sufficient evidence for the confirmation of the hypothesis. According to the tenets of scientific method, the replacement thesis requires severe testing which it has not been subjected to. Quine's naturalized epistemology, therefore, fails on methodological grounds in this respect.

Having shown that Quine's thesis is inconsistent because it fails to meet its own demands, I now wish to argue that an a priori approach cannot be completely dismissed in light of the third formulation of normativity, i.e. the rationality condition. Consequently, any epistemology that proceeds in a purely a posteriori manner will be methodologically unsound.

The a priori element in Quine

There is reason to believe that Quine's own thesis is not without appeal to an a priori element. The most damaging example of an a priori component in Quine's thesis, but which will be true of any naturalized epistemology, was alluded to in Kim's discussion. In his discussion of the way in which we interpret cognizers, he highlights the fact that Quine himself argues that we have no choice but to assume that persons function according to a minimal sort of rationality. Quine argues that there are constraints on how poorly a person can reason and denies the *doctrine of prelogical mentality*[57]. He argues that we should not accept a scheme of translation that would allow us to attribute silly beliefs to people as it is unlikely that they would be so silly. Is this not an a priori stand taken ahead of the empirical evidence? For something to count as a belief it must manifest the requisite interactions with other beliefs such that rationality, or this sort of coherence, becomes a conceptual requirement on beliefs. But how is this "anti-silliness" principle generated? Its conceptual nature not only demonstrates a priorism in Quine's thesis, but the fact that it seems to be a fundamental principle, or assumption, also tempts us to interpret it as a foundational principle.

Janvid develops this objection further in terms of Davidson's principle of charity in his theory of radical interpretation, and argues that since the principle cannot be denied it effectively blocks the naturalization of epistemology. According to Davidson's principle of charity we must assume that the person to be interpreted is at least minimally rational if we are to gain a foothold in interpreting her. Beliefs form part of a network, and that which grounds the network is the evidential relation which regulates the beliefs that are adopted in order to maintain stability and minimal coherence for this network. We can only say that a person possesses beliefs in the first place if this minimal coherence is in place since, lacking this, we would not say that the subject in question possesses beliefs; a failure to exhibit minimal rationality entitles us to disregard her as a cognizer. We are constrained by the norms of rationality since the adoption of beliefs entails an interconnectedness between them that is governed by norms. Kim and Davidson, therefore, claim that an essential norm for having beliefs is the goal of having justified beliefs and in speaking of beliefs one unavoidably appeals to these norms. The principle of charity is normative:

> The reason mental concepts cannot be reduced to physical concepts is the normative character of mental concepts. Belief, desires, intentions and intentional actions must, as we have seen, be identified

[57] Stich, S. *The Fragmentation of Reason.* p. 30

> by their semantic content in reason-explanations. The semantic contents of attitudes and beliefs determines their relations to one another and to the world in ways that meet at least rough standards of consistency and correctness. Unless such standards are met to an adequate degree, nothing can count as being a belief, a pro-attitude, or an intention. But these standards are norms – *our* norms – there being no others.[58]

It becomes apparent that the norms of rationality referred to above cannot be dispensed with. A normativity of this kind is implicit in speaking of beliefs since it presents itself by means of the conceptual analysis of what a belief amounts to, and functions as a precondition to being able interpret another or view them as a cognizer. And in conducting a conceptual analysis of this sort, and ascertaining this fundamental norm, one is engaging in a priori reasoning. Also, in speaking of beliefs we are speaking of states that bear particular relations to each other, and bearing these relations is constitutive of the belief state itself. For example, if I hold the belief that *if it is raining then I will get wet if I go outside* and I come to believe that *it is raining*, then, given the relationship between my various beliefs, I will come to believe that *I will get wet if I go outside*. To speak of a belief is to automatically usher in normativity in virtue of the logical relations that beliefs bear to one another, since this is part of what we take a belief to be. Throw out this interrelatedness between beliefs and one is no longer speaking of a belief. The central claim of a naturalized epistemology is that since epistemology is theoretical and descriptive, normativity does not present itself in virtue of our a priori reasoning but is established by means of experience. A priori justification is rejected on the basis that it would have a status that is not empirical, and if epistemology is to be naturalized then it must preclude the non-empirical. But it seems that such a purely a posteriori approach cannot be maintained if we are to speak of beliefs at all. There are, of course, those who contest this claim (such as Levin and Stich) and assert that it is a purely empirical question as to whether we are rational or not. The point, however, is not that the thesis cannot be confirmed a posteriori but rather that we know beforehand that for a creature to be ascribed beliefs at all he must have states that conform to the minimal rationality condition. Janvid develops this argument on different, but no less relevant, grounds.

Janvid's account deviates from the substantive criticism of naturalized epistemology that has been made. He does not think that the fundamental difficulty that naturalized epistemology faces is of the normative kind. It is not normativity which is the concern here because, according to him, there is nothing essentially normative to be read into the principle of

[58] Davidson, D. *Problems in the Explanation of Action.* 1987. p. 46

charity, which is what Kim and Davidson wish to argue. Janvid makes the claim that the principle is descriptive since it specifies a standard of minimal rationality in order for interpretation to become a possibility. But in specifying the standard we are recognising the conditions under which correct interpretation can take place and saying "what the correct interpretation *is* rather than what it *should be* like."[59] Moreover, as intentional creatures we must meet this standard which means that no normativity is in fact involved. Davidson himself makes the point that it is not possible to reject what the standard demands. The disagreement that Janvid has with Davidson is not all that clear, and it will be seen in a moment that the substantive point they make is the same: the rationality constraint is an a priori principle. Consequently, a naturalized epistemology will not be successful in its entirety because it does not allow for an a priori component.

Janvid makes use of the principle of charity as a criticism of naturalized epistemology in the following way. Davidson claims that the principle is constitutive of the mental realm and as such it has a different epistemic status:

> Since charity is not an option, but a condition upon having a workable theory, it is meaningless to suggest that we might fall into error by endorsing it. Until we have successfully established a systematic correlation of sentences held true with sentences held true, there are no mistakes to make. Charity is forced on us; whether we like it or not, if we want to understand others, we must count them right in most matters.[60]

This means that there is no empirical data that could count against the principle of charity since the principle functions as a condition for the very possibility of conducting empirical tests in the mental realm. Janvid elucidates the constitutive nature of this principle by contrasting it with regulative rules. Constitutive rules are those rules that are required for the very meaning of the activities that they govern. In playing basketball the rules constitute the game since it is only in virtue of these rules that, for example, throwing the ball into the hoop counts as making a 3-point shot. Regulative principles, on the other hand, are prescriptions, such as rules of etiquette at the dinner table. One would still be able to eat without these rules but one might choose to be guided by the rule in order to be polite and meet other norms of society. The principle of charity is constitutive and acquires the Kantian function of being a condition for the possibility of empirical knowledge regarding the mental realm. The question of belief only arises when the principle of charity holds, and as such an empirical inquiry

[59] Janvid, M. *Epistemological Naturalism and the Normativity Objection.* 2004. p. 44
[60] Davidson, D. *On the Very Idea of a Conceptual Scheme.* 1984. p. 197

presupposes the principle. The principle of charity is, therefore, not empirically defeasible which makes it an a priori principle and has a different epistemic status to that of empirical knowledge-claims. Contrary to the gradualism which characterises naturalized epistemologies – where the status of knowledge-claims are not different in kind only in degree – it has been shown that there is at least one principle which is a priori and has a different epistemic status, and is not subject to empirical inquiry. This objection not only serves to block Quine's Naturalized Epistemology but any epistemology that endorses gradualism.

It becomes evident that the defenses serve to vindicate the Quinean project to a certain extent. Clearly Kim is mistaken in suggesting that a naturalized epistemology completely dismisses normativity and is no longer in the business of doing epistemology. Foley, Rosenberg and Bishop and Trout clearly accommodate normativity though not always the same formulations of it. Foley and Rosenberg successfully accommodate empiricist norms though they fail to generate prescriptions in the domain of practical reasoning. Bishop and Trout fare better by also developing prescriptive normativity in the context of practical reasoning and also successfully demonstrate how one might respond to the circularity criticism. Despite these successes it becomes evident though that all the defenses ultimately fail to vindicate the Quinean project in its entirety because they adopt a purely a posteriori approach with the consequence that the rationality condition as an a priori principle cannot be accommodated. What this section has revealed is that the most promising component that must be salvaged from naturalized epistemology is the preservation of prescriptive normativity in the domain of practical reasoning in the way that Bishop and Trout have done. But, given the failure of the replacement thesis on methodological grounds, it might be thought that a thesis which includes an a priori component will fare better. Let us examine whether the transformational thesis, which forms part of SAE in virtue of including an a priori component, is more successful. Does it integrate an a priori component in an appropriate way while also preserving prescriptive normativity, and does it accommodate all the various sorts of beliefs?

VI

Adjusting Quine's Thesis

Transformational epistemology aims to transform traditional epistemology by including the findings of science while still including an a priori component. It involves a departure from naturalized epistemology by allowing for an a priori component but can be argued to salvage that which is of value in the Quinean project. Transformational epistemology acknowledges that there are legitimate philosophical questions that capture traditional epistemological concerns such as conceptual analyses of basic epistemological concepts, for example explaining what knowledge is, but holds that the question of whether the proposed conditions are satisfied is an empirical question to be determined by psychologists, neurobiologists, or cognitive scientists.

Reliabilism holds that whether anybody knows that *p*, or whether anybody is completely justified in believing that *p*, depends on whether his belief that *p* is the product of a reliable belief-making mechanism, process or method functioning normally in its usual setting. Such mechanisms, processes or methods are reliable if they tend to produce true beliefs rather than false beliefs. Philosophers who adopt reliabilism fall into two distinct groups: those who adopt a reliability theory of justification and those who adopt a reliability theory of knowledge. I will only discuss the former position.

The first group asserts that the reliability condition is a justification condition for knowledge, or forms part of the justification condition for knowledge. An externalist theory of justification holds that if one's belief is reliably produced, then it is justified even if the subject is not internally or reflectively aware either that it is reliably produced or of what justifies it. One need not give reasons or be able to give reasons in order to be justified in one's belief.

The a priori element of this approach to philosophy presents itself when reflecting on that which is required for knowledge. Clearly it would consist in true belief, but consideration of the possibility of a true belief which has been acquired accidently and would not be considered knowledge makes it apparent that something else is also required. Justification is traditionally considered to be the missing component. However, further consideration of Gettier-type examples, where one has justified true belief but still lacks knowledge, leads one

to the condition that for a belief to be justified it must be non-accidently true, or must be the result of a reliable belief-forming process or mechanism. And when one comes to this realisation a division of labour presents itself, since it becomes the task of science to determine which belief-forming processes or mechanisms are reliable. Science is now in a position to tell us whether we have reasoned reliably and can in turn advise us about how to improve our reasoning. Having formulated the criteria for justification in terms of reliability by means of conceptual analysis we then determine what we in fact know given these conditions by means of scientific investigation. The important point is that an a priori element has not been relinquished and still features in our theory of knowledge, if only in this minimal way of specifying the conditions for knowledge a priori.

In order to clarify this approach to epistemology it would be useful to consider a particular thesis which will allow us to assess the success of such an approach. To this end, I will proceed by sketching the views of Alvin I. Goldman from his book *Epistemology and Cognition* (1986), since he is one of the most prominent proponents of reliabilism and also, I believe, presents us with one of the most convincing accounts of this kind. The work in *Epistemology and Cognition* is very useful for the point that needs to be made though it must be recognised that *Epistemology and Cognition* does not constitute Goldman's last words on his approach to epistemology.

Goldman firstly states that epistemology can be said to divide into two parts. *Individual epistemology* is one aspect of epistemology and includes *primary* and *secondary* epistemology. In his book Goldman is specifically concerned with *primary* epistemology where the cognitive sciences must be consulted because here epistemology concerns itself with the "architecture of cognition", or the intrinsic properties of the mind, and the assessment of the strengths and weaknesses of these native cognitive mechanisms. The objects of epistemic evaluation are cognitive processes, structures, and mechanisms. *Secondary* epistemology, which is not the specific concern of Goldman's book, concerns itself with acquired methods which will include algorithms, heuristics, skills and techniques of various sorts. This would include the assessment of particular theoretical approaches in psychology or cognitive science and concerns itself with the properties of methods. According to Goldman the second part of epistemology is *social epistemology* and he makes it clear that this is also not the focus of his book. Social epistemology is

> Concerned with the truth-getting impact of different patterns and arrangements of social intercourse. For example, there are different possible forms, or styles, of interpersonal argument, debate, or controversy. How would these affect the resultant beliefs of the participants?... Interwoven in such structures and acts of communication, various positions and patterns are found. There are positions of power and authority, and patterns of cooperation and conflict. The task of social epistemology, as I conceive it, is to evaluate the truth-conducive or truth-inhibiting properties of such relationships, patterns and structures.[61]

In his book Goldman is focusing on *primary* epistemology which falls within the purview of individual epistemology. Goldman argues that within this domain *reliability* is one standard of evaluation, where

> [a]n object (a process, method, system, or what have you) is reliable if and only if (1) it is a sort of thing that tends to produce beliefs, and (2) the proportion of true beliefs among the beliefs it produces meets some threshold, or criterion, value. Reliability, then, consists in a tendency to produce a high truth ratio of beliefs.[62]

To clarify this notion of reliability, Goldman distinguishes between error and ignorance. Error is false belief, whereas ignorance is the absence of true belief. A reliable process, method, or procedure will act as a remedy to error, since methods that are more reliable will ensure fewer errors. But this does not mean that reliability will ensure a lack of ignorance, because a method or process can be completely reliable by means of extreme caution or conservatism. That is, beliefs are only produced in extremely 'safe' circumstances where there is virtually no chance of getting them wrong. Of course, the price of such caution is ignorance since if hardly any beliefs are produced then it also means that hardly any true beliefs are produced. It can therefore be said that just as reliability decreases the chances of error, so *intellectual power* ensures a lack of ignorance. And here intellectual power, which is the second standard of evaluation according to Goldman, is to be understood as the capacity of a process, method, or system to produce a large number of true beliefs, or "the capacity to produce true beliefs in answer to a high ratio of questions one wants to answer or problems one wants to solve."[63] Goldman focuses specifically on this problem-solving variant. A third standard of evaluation is the *speed* with which one gets a true belief or answer (within the context of problem-solving), since it is often the case that after a specified deadline information will lose its value. Problem-solving speed can be considered to be a virtue of a

[61] Goldman, A.I. *Epistemology and Cognition.* p. 5
[62] Goldman, A.I. *Epistemology and Cognition.* p. 26
[63] Goldman, A.I. *Epistemology and Cognition.* p. 27

cognitive system which is also linked with intelligence since it features as one of the considerations when assessing the strengths and weakness of the human cognitive system.

The further distinction that Goldman draws is between *first-order* reliability and *second-order* reliability. The former is a property of belief-forming processes, methods or systems, while the latter concerns processes that produce or modify belief-forming processes or methods.

> A second-order process may be called second order reliable if the processes it tends to produce are reliable, or, alternatively, if the modifications it introduces tend to increase reliability. Analogous notions of second-order power and second-order speed are readily introduced.[64]

A point of clarification. Second-order processes are not only relevant to secondary epistemology because a second-order process is a kind of basic process for Goldman, which means that it falls within the purview of primary epistemology. Here we are still concerned with the properties of second-order processes, rather than the properties of methods which is the concern of secondary epistemology.

The distinction between first-order and second-order processes is important due to Goldman's consideration of the following. It might be said that whether one has knowledge or not depends not only on the immediate causes of a belief but also on remote cognitive ancestry. If a person infers *p* from a set of antecedently held beliefs, then his knowledge of *p* will not only depend on the reliability of the final inference procedure but also on the antecedent beliefs and how these were derived. For *p* to amount to knowledge, these antecedent beliefs must themselves be the product of reliable belief-forming processes. It can also be seen that knowledge depends on cognitive ancestry by considering second-order processes, or processes used in acquiring processes. To illustrate,

> suppose our friend Humperdink has attended a series of talks on mathematics by a certain Elmer Fraud. These talks are not under the auspices of any certified educational institution, and Humperdink has been warned that Fraud has no credentials in mathematics. Humperdink hears Fraud enunciate numerous principles and algorithms, almost all of them defective. Nonetheless, being a complete novice – and a gullible one at that – Humperdink blindly accepts and applies them all. In one case, however, Fraud happens to teach a perfectly correct algorithm. Humperdink internalizes this one along with the others, and applies it to a relevant class of problems. In using this algorithm to solve a

[64] Goldman, A.I. *Epistemology and Cognition.* p. 27

> problem, Humperdink gets the answer right and forms a true belief in the answer. This belief is the result of a reliable process, namely, the algorithm.[65]

Yet clearly, we would not ascribe knowledge to Humperdink since he accidently acquired a reliable algorithm. A further requirement for knowledge is, therefore, necessary. The belief must not only result from a reliable process, or method, but the process or method must itself have been acquired (or sustained) by a second-order process which is reliable.[66] And in ascending to the level of second-order processes Goldman believes that we are approaching the "architecture of cognition" because, whereas many first-order procedures used to form beliefs are learned algorithms that are not deep-seated psychological processes, second-order processes clearly seem to be deep-seated psychological processes.

Goldman's thesis centres around the notion of justification conceived of in terms of a rule framework. That is, a belief's being justified carries with it a proper doxastic attitude where the cognizer has an epistemic right to hold the belief. Given this it seems to be the case that one is appealing to the notions of being *permitted* to or *prohibited* from holding a belief, thus guiding us towards a rule formulation.[67] Goldman warns that the rules he will be discussing are not to be seen as decision guides or recipes for making doxastic choices. The rules specific to primary epistemology are not rules that a person must understand, though Goldman thinks that rules which act as decision guides may be appropriate to the field of secondary epistemology. Goldman presents and endorses the following principle as the framework principle for justification:

> S's believing p at t is justified if and only if
>
> (a) S's believing p at t is permitted by a right system of J-rules, and
> (b) this permission is not undermined by S's cognitive state at t.

This provides us with a formal principle of justifiedness, but what we are interested in are substantive standards on which epistemic justifiedness supervenes; we want to know under what conditions a belief is justified. That is, as specified by the principle, we need to determine what system (or systems) of J-rules is right. This can be accomplished by, firstly,

[65] Goldman, A.I. *Epistemology and Cognition.* p. 52

[66] Here we can opt for strong reliability, where the ratio of reliable processes among the processes it generates must be very high, or weak reliability, where the second-order process need only acquire processes that are more reliable than previous ones used in the same contexts. (Goldman, A.I. *Epistemology and Cognition*. p. 52-53)

[67] Also, according to Goldman, a rule framework assists with the formulation of a comprehensive classification of theories of justification, since it offers a neutral structure within which competing conceptions can be articulated. (Goldman, A.I. *Epistemology and Cognition.* p. 59)

establishing a criterion of rightness and, secondly, by determining which system of J-rules in fact satisfies the specified criterion. A criterion of rightness would be a very general set of conditions that are necessary and sufficient for a system of J-rules to be right. Quite importantly, this is also not the level at which psychology must be consulted. Goldman considers various examples of criteria for rightness of J-rule systems. Possible criteria include:

(C1) R is a system of rules derivable from logic (and probability theory).
(C1*) R is the system of rules that would be chosen by someone who believes all truths about logic (and probability theory), but is ignorant of all contingent facts.
(C2) R is the system of J-rules accepted by the players of one's language game (Wittgenstein).
(C2*) R is the system of J-rules accepted by members of one's disciplinary matrix (Kuhn).
(C2**) R is the system of J-rules accepted by one's peers (Rorty).
(C3) Conformity with R would guarantee a coherent set of beliefs.
(C4) R permits doxastic attitudes proportioned to the strength of one's evidence.
(C5) Conformity with R would maximize the total number of true beliefs a cognizer would obtain.[68]

In identifying an acceptable criterion, Goldman proposes to employ a strategy captured by the Goodman-Rawls conception of "considered judgements in reflective equilibrium."[69] That is, we examine the rules that each candidate criterion is likely to generate and look at the implications of these rules for particular judgements and whether they would be considered justified or not. We then consider whether the results that it yields accord with our pretheoretic intuitions such that the criterion is strengthened to the extent that it accommodates these intuitions and weakened to the extent that it does not. Of course, our initial intuitions do not function as the final arbiter; these are adjusted and revised based on our consideration of the candidate criterion. The adequacy of the criterion can also be determined by considering whether it would generate a complete rule system that would indicate justifiedness or unjustifiedness for all cases of belief and all doxastic attitudes.

As can be expected, Goldman opts for a criterion of rightness construed in terms of reliability, where a justificationally permitted process must yield a high (more than .50) truth ratio. Reliabilism can be supported by considering what we take to be prototypical cases of

[68] Goldman does not endorse any of the candidate criteria on this list and is using them only for the purposes of illustrating what one might have in mind. (Goldman, A.I. *Epistemology and Cognition*. p. 66)
[69] Goodman, N. *Fact, Fiction, and Forecast*, 2nd ed. (Indianapolis: Bobbs-Merrill, 1965), and Rawls, *A Theory of Justice*, p. 20-21, 46-51.

justification-conferring processes, such as (1) forming beliefs by standard perceptual processes, (2) forming or retaining beliefs by memory, and (3) certain patterns of deductive and inductive reasoning, as opposed to prototypical cases of non-justification-conferring processes, such as (1) wishful thinking, (2) sheer hunch or guesswork, and (3) failure to take account of all one's relevant evidence. The former processes have a reasonably high truth-ratio in common whereas the latter share a low truth-ratio. Reliabilism also gains plausibility since in speaking of justification we have in mind the notion of *degrees* of justification which can equally be captured by reliabilism: not all perceptual processes or memory processes, for example, confer equal degrees of justification. Beliefs based on a hazy recollection are less justified than those involving vivid memory, and this can be accommodated in terms of reliability since vivid recollections are more likely to yield truth, and therefore have a higher truth ratio, whereas hazy recollections are less likely to yield truth and are therefore less reliable.

Once the criterion for rightness has been decided upon, one must choose particular J-rule systems, and this is the point at which psychology becomes relevant and must be consulted. Here Goldman adopts an intrapersonal approach to J-rules where "J-rules permit beliefs only as a function of some properties intrinsic to the cognizer himself."[70] One might wonder at this stage why it is necessary to go beyond the criterion of rightness to identify the J-rules (or J-rule systems) that in fact satisfy the criterion. One reason, according to Goldman, is that epistemology does not seem to simply concern itself with abstract criteria for good methodology and procedure, but also with advocating specific methods and procedures. The thesis would also seem incomplete if one were to fail to specify which J-rules in fact satisfy the condition, and once the criterion has been chosen it also seems to be an open question whether any J-rules *in fact* satisfy it. After all, it could be the case that no human psychological processes are sufficient to meet the criterion, and this would leave us with skepticism since it becomes impossible to have justified beliefs.

[70] As opposed to an interpersonal approach where "J-rules should permit a person to believe things as function of some relation to other persons" (Goldman, A.I. *Epistemology and Cognition*, p. 75) An interpersonal approach focuses on the activity of reason-giving, where a person is justified to hold a belief insofar as she can give other people reasons for holding it if she were asked to do so. This consequently implies that one is justified insofar as one is able to access this justification by means of being able to provide reasons. Goldman discusses various arguments that speak in favour of an intrapersonal approach which I will not discuss for the purposes of this paper.

Goldman argues for a process format regarding J-rules where J-rules at the primary level must only permit basic cognitive processes. J-rules must, therefore, be process rules rather than state-transition rules[71] and this constraint on J-rules is essential to his claim that psychology must be consulted. If right J-rules must specify basic psychological processes, and if it is the business of cognitive science to investigate and assess these basic processes, then it is incumbent on us to consult the findings of this discipline. "Unless and until these processes are identified, no selection can be made of the ones that should be licensed by a right rule system."[72]

Goldman's thesis can therefore be seen to capture various elements that are essential to an epistemic theory. He allows for an a priori element in terms of our conception of what knowledge would amount to, but equally paves the way for science to play its role. What is also attractive about Goldman's thesis is the fact that he explicitly delineates the various domains of an epistemic theory by specifying the difference between individual and social epistemology as well as primary and secondary epistemology, thus capturing the complexity of epistemology which I have argued we must pay closer attention to. It would now seem that the transformational thesis, and specifically Goldman's version of it, has the potential to offer us all that we could want in an epistemic theory. There are, however, certain difficulties that must be dealt with. Again, we must consider whether the account accommodates the various sorts of beliefs that I have specified and we must also determine whether the right sort of normativity is being preserved.

The first criticism of this version of the transformational thesis, and the appeal to a reliabilist account of justification, stems from its preoccupation with the generation of beliefs in order to accommodate Gettier-type examples. Though it is true that the way in which a belief is caused is an important consideration, it is, as we have established in the introduction, not the

[71] At one point Goldman considers a format involving cognitive state transitions, where a J-rule permits transitions from prior states to beliefs. For example, a J-rule may say that a person is permitted to make a transition from a prior state of being appeared to in such-and-such a way to a successor state of believing that p. Goldman rejects this format because, if we conceive of the transitions in terms of logic, the J-rule permits any transition that conforms to valid inference patterns without placing a restriction on *how* the transition is made. It does not require the cognizer to understand why the inference is valid, nor to see the connection between premises and conclusion. No constraints are being placed on the process which produces the target belief or the particular causal path by which the belief is formed. State transitions imply nothing about causal processes since in speaking of state transition we are speaking only of states arrayed in time without looking to the causal processes that are operative in giving rise to this array. Due to this consideration Goldman endorses a conception of J-rules where they specify cognitive processes; by 'process' Goldman means a determinate kind of causal chain. And this is precisely why we must turn to psychology. (Goldman, A.I. *Epistemology and Cognition.* p. 84-85)

[72] Goldman, A.I. *Epistemology and Cognition.* p. 96

only consideration. Reliabilism is convincing and successful when it comes to beliefs such as *There is a sheep in the field*, but how does it accommodate other sorts of beliefs? The *Standard Practice Argument* discussed by Almeder undermines reliabilism by arguing that, according to common scientific practice, the ways in which our beliefs originate is irrelevant to the question of their justification. When one forwards a theory about the physical world, the justification for that theory is a function of whether, given certain standard provisos and initial probabilities, we have reasons to believe that what it virtually predicts, by way of its test implications at the sensory level, does, or would occur to warrant accepting that claim as true. An example is the way in which the belief in the benzene ring was formed. The scientist Friedrich August Kekulé had a dream in which he saw a chain of carbon atoms rotating in a circle and thus conceived of the existence of the benzene ring.[73] To establish its existence the scientists had to provide tests results that would support a belief in this theory. Only then was it considered justified. The way in which the belief was generated was irrelevant to whether the belief could be considered justified.[74]

This objection highlights the fact that the account does not accurately address other kinds of beliefs. Reliabilism gets something right by responding to Gettier-type examples in an appropriate way: we do think that when it comes to singular beliefs that the way in which the belief is generated is significant. But when we consider theoretical beliefs it seems that the generation is not important when it comes to determining whether a belief in the theory is justified, which is when we must appeal to evidence and the norms that govern the ways in which we assess this evidence.

Our second concern now becomes whether the account preserves the right sort of normativity. It seems clear that in providing prescriptions for reasoning there is a conscious process in operation, though at times this does not seems apparent, as we reason so speedily or without attentively focusing on these processes. But this does not mean that these processes are not conscious. Consider this example of the long-distance truck-driver from Armstrong:

> After driving for long periods of time, particularly at night, it is possible to "come to" and realize that for some time past one has been driving without being aware of what one has been doing. The

[73] Richmond, R.L. *Dreams and their Interpretation in Clinical Psychology.* www.guidetopsychology.com

[74] But of course, given the tests that would serve as evidence for the theory, one's belief in the theory would only be justified if it was caused or was based on that evidence. The point here is that in the case of theoretical beliefs one must be able to give reasons and provide the evidence in favour of the theory, thus suggesting an internalist component.

> coming-to is an alarming experience. It is natural to describe what went on before one came to by saying that during that time one lacked consciousness. Yet it seems clear that, in the two senses of the word that we have so far isolated, consciousness was present...That is to say, there was minimal consciousness and perceptual consciousness. If there is an inclination to doubt this, then consider the extraordinary sophistication of the activities successfully undertaken during the period of "unconsciousness". [75]

Armstrong proceeds to describe the various activities that the driver engages in, such as purposefully driving the car along the road which required using the break and the clutch at appropriate times etc. So what kind of consciousness is missing in such cases? Armstrong states that the truck driver lacks

> ...an additional form of perception, or, a little more cautiously, it is something that resembles perception. But unlike *sense*-perception, it is not directed toward our current environment and/or our current bodily state. It is perception of the mental. Such "inner" perception is traditionally called introspection, or introspective awareness...Introspective consciousness, then, is a perception-like awareness of current states and activities in our own mind.[76]

Though the truck-driver lacks this sort of consciousness it does not mean that he is not conscious. Similarly, when we engage in certain activities that we have become habituated to and perform as matter of routine we are able to engage in these activities of reasoning and making judgements without having this added awareness. This does not mean that we cannot be instructed to direct our attention more reflectively in order to take cognisance of the ways in which we reason and the way in which we do so fallaciously; the truck driver might get a fright in realizing that he was not paying enough attention and has the capacity to focus his attention on his driving with greater awareness.

This issue raises a significant point. The notion of normativity that I have sketched so far contains an implicit assumption that I have mentioned but not discussed. The idea that epistemology provides prescriptions for reasoning implies that we must at times have access to our reasoning strategies and must be able to adjust these accordingly in light of advice. This means that at times we must be able to reason in a reflective way in order to implement these prescriptions in order to determine when a belief is justified given the reasoning strategies that were employed. This accessibility is also part of how theoretical beliefs are justified, since we must be able to give reasons for why a belief is justified and must, therefore, be able to access this justification and what it would take for a belief to be justified.

[75] Armstrong, D. *What is Consciousness?* p. 723
[76] Armstrong, D. *What is Consciousness?* p. 724

Reliabilism is an externalist theory according to which one does not have to know when one's belief is justified or what it would take for it to be justified. One need not be able to supply reasons for why one knows something. But clearly there are times when justification demands this, as in the case of theoretical beliefs. In the case of normativity as prescriptivity, it is also clear that we *must* and *do* require the accessibility of our reasoning processes, where we are able to judge these processes as more or less successful and, as such, more or less justified. It is only in light of this accessibility that we would be able to follow guidelines and be able to adjust our reasoning strategies accordingly. Thus, it becomes clear that internalism, where one must be able to provide reasons and be able to know whether one's beliefs are justified in order for them to be justified, cannot be dismissed. Almeder also makes the point that reasons are only required when the question 'How do you know?' is appropriate. This provides us with the necessary leeway. One must not always be able to answer this question, which means that in the case of straightforward beliefs, such as perceptual beliefs under normal conditions, the way in which the belief is generated is sufficient for knowledge. But when it comes to other beliefs, such as theoretical beliefs or beliefs that result from reasoning strategies when making judgements, the generation of the belief is not all that matters. Here the subject needs to be aware of the reasons that justify her belief, in which case the justification is accessible to her.

The objection regarding the externalistic nature of reliabilism equally applies to naturalized epistemology given its externalistic approach and indicates that if we are to maintain and develop the prescriptive normativity which I have argued is of primary significance, then it would seem that internalism must be incorporated. The question now becomes whether this internalism is of the robust sort to be found in traditional epistemological theories, such as foundationalism and coherentism, or whether it is of a more modest variety. This question is itself quite complex given the fact that there is extensive disagreement about what precisely constitutes an internalistic as opposed to an externalistic theory. The internalism/externalism divide can be understood in three distinct ways. One can firstly construe the distinction in terms of *accessibility* where, according to internalism, a person does, or can, access that which serves to justify their belief, whereas, according to externalism, this sort of access is not necessary for a belief to be justified. The distinction can also be understood in terms of the *nature of justifiers* where internalists argue that what justifies a belief is a particular mental state of the agent as per the thesis of mentalism, whereas externalists argue that things besides mental states can serve as justifiers. The final way in which the distinction can be

understood concerns the very *concept of justification* where justification, according to internalists, is to be analysed in terms of fulfilling one's intellectual duties while externalists believe that the concept is to be analysed by reference to something other than one's intellectual duties.[77]

The internalism I believe must be preserved in a theory of knowledge is that of *accessibility* since in the case of theoretical beliefs one must be in a position to access and provide the reasons that serve to justify the theory. Lacking this, the theory will not be considered justified. It also seems that in cases where beliefs are formed based on processes of reasoning or deliberation and problem solving a certain amount of accessibility is also required. If I look at something in the distance I engage in a process where I weigh evidence, or when I try to decide whether to believe someone I deliberate about the evidence I am presented with, in which case I must be able to access the reasons that justify the belief. I am not suggesting that this will always be the case, but at least in certain instances where evidence is more difficult to come by and the problem is more difficult to solve we seem to reason more carefully and more consciously in order to attain the justification we believe to be necessary to hold the belief. The notion of *accessibility* is also paramount when it comes to adjusting our reasoning strategies since we must be in a position to consider the ways in which we currently reason if we are to adjust these strategies in order to reason better in the future. I concede that this accessibility may not apply to justification specifically, since we might adopt a reasoning strategy because scientists tell us to without necessarily being made aware of, or even understanding, the research that serves to justify the adoption of the strategy. I think the strategy would still be justified even if one was not aware of that which justifies it. But in order to adopt the strategy, or in order to determine whether and precisely how one's reasoning strategies should be adjusted in the light of evidence, one must access or be able to access one's current reasoning strategies.[78] As such, there is a modest internalistic component (construed in terms of accessibility) inherent in prescriptive normativity. And even if accessibility internalism regarding justification does not specifically feature with regard to prescriptive normativity it nonetheless plays a significant role concerning theoretical beliefs, in which case this component which is distinctive of traditional epistemological theories must be preserved.

[77] This is a debatable point and is only one species of internalism. There may be others. Pappas, G. *Internalist vs. Externalist Conceptions of Epistemic Justification.* "Stanford Encyclopaedia of Philosophy."
[78] I do not think that internalism regarding the nature of justifiers is required, and I am ambivalent about whether the concept of justification must be analysed in terms of fulfilling one's intellectual duties.

The normativity that I have been arguing for is also of the prescriptive kind, which means that an epistemic theory must generate particular advice and guidelines that can be applied. Goldman specifically states that the J-rules he conceives of are not supposed to guide an agent or provide an agent with a decision procedure. This is precisely what I have argued is a significant aspect of an epistemic theory: its capacity to generate specific prescriptions for an agent. But we must keep in mind that Goldman is focusing only on primary epistemology and allows that prescriptions of this sort can be generated within the domain of secondary epistemology. I also think that there might be separate tasks to be accomplished; one task would be the assessment of particular basic cognitive processes in the way that Goldman proposes. Goldman can therefore allow that prescriptions must be generated but that this is not the particular task that he is presently concerned with as long as this task is eventually taken up, given its importance. It does seem, however, that Goldman takes the assessment of basic cognitive processes to be the most important epistemological endeavour and I worry that he underestimates the significance of secondary epistemology.

This point effectively introduces another criticism from Hatfield. We must consider whether it is in fact possible to clearly separate the task of assessing and epistemically evaluating basic cognitive processes from other epistemic activities that do not take basic processes as their objects of evaluation. Perhaps primary and secondary epistemology are inextricably linked in a way that serves to undermine Goldman's thesis.

Hatfield criticises Goldman's thesis by arguing that belief-forming processes are more complex than reliabilists, such as Goldman, wish to admit. Hatfield believes that Goldman's main error is in assuming that belief-fixation is a well-defined cognitive process. Cognitive science can only contribute to epistemology on the assumption that belief-fixation is determined by a network of basic psychological processes that we all share and that form part of the so-called "architecture of the cognitive system".[79] Hatfield asserts that for Goldman's purposes these belief-fixation mechanisms must not only exist but must consistently influence the truth-ratio of the belief-fixation process by either determining a fixed ratio or systematically having an impact on the direction of the ratio. But consideration of what Goldman considers to be "basic processes" reveals the fact that the background beliefs that a person has acquired will have a significant impact on whether the processes in question are

[79] Hatfield, G. *Cognition and Epistemic Reliability: Comments on Goldman*. p. 313

reliable or not. According to Hatfield, the basic processes that Goldman cites are in fact not basic at all, but highly complex and contextually sensitive.

To illustrate the difficulties involved, Hatfield asks us to consider the following example discussed by Goldman in his book *Epistemology and Cognition* (1986). Goldman examines mechanisms of belief 'perseverance' (as well as the epistemic evaluation thereof), which are mechanisms that retain beliefs even after the evidence supporting those beliefs has been completely undermined. He looks to studies conducted by Ross, Lepper and Hubbard:

> [S]ubjects were given the task of distinguishing authentic from inauthentic suicide notes. As they worked, they were provided with false feedback after each trial. This feedback indicated that, overall, they had performed at close to an average level, at a level much above average (success condition), or at a level much below average (failure condition). This feedback was simply manipulated by the experimenters, and had nothing to do with a subject's actual performance. Subjects were later thoroughly debriefed concerning the random nature of their feedback. They were told that their feedback had been false, and were shown the experimenter's instruction sheet assigning them to the success, failure, or average performance condition. Subsequent to this debriefing, subjects were asked to fill out a postexperimental questionnaire on which they had to estimate their actual performance at the task, to predict their probable success on related future tasks, and to rate their ability both at the suicide discrimination task and at other related tasks involving social sensitivity.[80]

The results of this test revealed extensive post-debriefing perseverance, where subjects continued to rate their performances in accordance with evidence (the false assessment of the experimenters) which had been completely undermined. So why does perseverance of this sort occur?[81] Nisbett and Ross posit two sorts of explanations for this perseverance phenomenon. The first, which is an emotional commitment to one's beliefs, is deemed unsatisfactory. The second is that "subjects search for additional information in memory to support the initial (false) feedback, and such information, once found, continues to support the initial impression even after the feedback is discredited."[82] This can also be described as an instance of *elaboration*, since the subject finds other things in memory that cohere with her apparent good performance on the suicide note task. The cognitive error that is allegedly being made in this case of misplaced confidence in one's ability to evaluate suicide notes is, therefore, a "disinclination of correct errors" which seems to facilitate unreliability. The

[80] Goldman, A.I. *Epistemology and Cognition.* p. 215

[81] Goldman states that the question of why it occurs and how it occurs should be epistemically evaluated as intimately linked given his approach where the evaluation of a belief state is a function of the processes that generate it.

[82] Goldman, AI. *Epistemology and Cognition.* p. 216

"disinclination" is explained by so-called basic processes such as "spontaneous search of memory" for information that is consistent with a newly acquired belief, as well as the inclination to look for causal explanations.

At this stage Hatfield states that if memory can be said to be partly constituted by the integration of new beliefs into old then this spontaneous search for coherence could arguably be said to be a basic process. The further question, however, is whether this spontaneous search can be attributed with a reliability value. Hatfield argues that the truth-ratio of such a process depends on background beliefs that are independent of the process. If the background beliefs are predominantly false then an attempt at coherence would result in unreliability, whereas if they are true it would result in reliability. And coherence considered in itself does not seem to have a reliability value attached to it and does not seem to have a fixed effect on the direction of reliability. This is clear when we consider the standard objection to coherentist theories of knowledge, where two incompatible theories achieve the same level of internal coherence. How reliable the process is will partly be determined by a belief structure that is already in place, where new beliefs will be assimilated in such a way as to cohere with the belief structure entrenched by one's culture or environment. This means that the reliability can only be assessed in conjunction with social epistemics, since in itself it is an incomplete description of the basic processes to be evaluated.

For Hatfield the question becomes whether Goldman is in fact able to identify a basic process that possesses reliability value. Perception seems to be the most likely candidate, and Hatfield considers the example of seeing an object at a distance. Can cognitive science accurately and precisely characterize perceptual reliability and provide the principled limits of perception? Hatfield asserts that

> It [the belief fixation part of perception] has no reliability per se, and sets no limits on reliability for true beliefs about , say, ordinary physical objects. We know that things seen far away are less reliably known than things seen close at hand; this much we can count on, although we don't need cognitive science to inform us of this situation.[83]

As with our previous example, Hatfield argues that in considering standard cases of perception under ordinary circumstances it is also not the perceptual mechanism alone that fixes belief but the mechanism in conjunction with our conceptual scheme. In order to detect a sheep reliably we must possess a sheep-concept. That is, knowledge conceived of in terms

[83] Hatfield, G. *Cognition and Epistemic Reliability: Comments on Goldman*. p. 314

of reliability cannot be captured in virtue of focusing only on (basic) processes in the way that Goldman argues, since we must also take into consideration what the background beliefs of the agent are as well as the particular conceptual scheme of that agent. And in having to consider this when we assess the reliability of the process it becomes clear that the processes cannot be assessed in isolation. Goldman could venture a response by arguing that sheep-concepts and the like are to be included within the cognitive machinery when speaking of the basic process of belief formation. There concepts are, however, not basic and are not part and parcel of the "architecture of cognition". Concepts are acquired through learning and this is important because if concepts are not basic constituents of the cognitive system then they fall within the purview of what Goldman calls secondary epistemology.

If basic processes cannot be assessed in terms of reliability without taking the conceptual scheme of the agent into consideration, and the conceptual scheme can be said to form part of the domain of secondary epistemology, then secondary epistemology becomes crucial to epistemology as a whole. And as we have seen, secondary epistemology is the epistemology of methods used by individual knowers. That is, one is concerned with particular standards and norms regarding the methods one should use in proceeding with psychology, for example, which seems to suggest that one is appealing to standards distinct from or outside of the sciences.[84] Consequently, Hatfield asserts that it can now be said that "secondary epistemology is just traditional epistemology itself, with no apparently crucial need for cognitive science."[85] After all, traditional epistemology (understood here as foundationalism and coherentism) proposes to specify the standards for epistemic evaluation in a distinctly a priori manner, and these are the standards we are then to employ in choosing particular methods of investigation. These standards are not generated by means of scientific investigation or in an a posteriori way, since we are proposing to determine whether particular methods used in the sciences are epistemically legitimate, which suggests that we must appeal to standards outside of the scientific domain, or that are not justified by means of scientific practice, if we are to avoid circularity.

Certain points need to be made in defense of Goldman, though I am sympathetic to Hatfield's criticism. Firstly, Hatfield seems to mischaracterise Goldman's view when he seems to

[84] One can, however, still adopt a naturalistic approach by establishing norms through the results that science yields in the way that Bishop and Trout suppose. This sort of circularity is not insurmountable, but again it must be said that one cannot adopt a fully naturalized theory since it is inevitably blocked by consideration of Davidson's principle of charity or Quine's principle of prelogical mentality.
[85] Hatfield, G. *Cognition and Epistemic Reliability: Comments on Goldman.* p. 314

construe Goldman's use of basic processes as processes that lack complexity. Goldman can concede great complexity while still arguing that the process is basic in the sense that it is an intrinsic feature of the cognitive make-up of an agent. Also, even if Hatfield successfully makes his case that the reliability of a process cannot be determined independently of the conceptual scheme of the agent, this would not preclude the relevance of the cognitive sciences when it comes to epistemic evaluation. Though it can be argued that primary and secondary epistemology cannot proceed in isolation this does not mean, I believe, that the two seamlessly join to form one endeavour. It seems that there is still a sense in which it can be argued that there are particular sorts of processes or mechanisms that are "basic", not in the sense of lacking complexity, but in the sense that they are common to normally functioning human beings and which, given a particular conceptual scheme, can be epistemically evaluated in terms of whether they are functioning the way they ought to. The cognitive sciences would be of utmost importance in understanding the mechanisms and the conditions under which they operate normally (where one of the conditions can be a particular conceptual scheme or particular background beliefs).

In an effort to develop more rigorous argument against the notion of belief fixation as a psychologically primitive process, Hatfield discusses Fodor's distinction between *input systems* and *general systems*. Perception can be viewed as an input system with a set of basic psychological processes which include those underlying shape constancy and motion perception. The system's veridicality can be said to be a necessary condition for its reliability in Goldman's sense and this may be granted. But the inclusion of "veridicality" and "reliability", Hatfield says, fails to imply that the basic truthfulness of perception has been epistemically evaluated. In this context "veridicality" can be said to mean "accurate imagistic representation of spatial and chromatic properties", which is to say that circles appear circular. Epistemology, however, is concerned with belief, and beliefs are a function of not only input system processes but central system processes also. There is the having of a spatial representation of a circle and then believing that one sees a circular object. Beliefs formed by the perceiver are highly sensitive to the whole belief system and as such cannot be successfully evaluated in isolation from this network of beliefs. If one is sympathetic to Quine's holistic approach as I am, then this proposal seems to have great intuitive appeal. This is not to say that one's belief system determines the way things look spatially and

chromatically but rather that one's conceptual scheme and background beliefs determine what one *takes* that which one sees to be.[86]

Anthropology, which is one of the social sciences presumably to be consulted according to Goldman, presents evidence which suggests that there may not be a cognitive architecture which is constant across social or cultural contexts. The one claim is that the very notion of a human being independent of culture, or as having cognitive capacities defined in isolation of a context, does not make conceptual sense. Humans are only recognized as human within the context of acculturation since it is only within this context that one can be said to have an articulated set of cognitive capacities ready to be engaged. Placing this in a biological context, the anthropologist Geertz looks to human evolution and makes the claim that contrary to past findings the new research suggests that culture was prior to the biological development of *homo sapiens*.[87] Culture is not something to be peeled off in order to uncover the underlying biology. Our mental formation is not pre-programmed but is determined by acculturation. Of course, there must be a basic architecture in place that can receive such programming, but what this reveals is the plasticity of such architecture.[88] Once again, we are left with secondary or tertiary epistemology which is the evaluation of the individual and socially-structured methods. Hatfield concludes with the following remark:

> Belief-fixation is liable to be most heavily determined by learned methods; while these methods might themselves be made the subject of epistemological investigation, one might well do so without assigning a crucial role to cognitive science. Indeed, the investigation of such methods most plausibly will be regulative as well as descriptive. But such evaluative and regulative activity is the mainstay of present epistemology and philosophy of science. By my lights, Goldman has suggested ways of broadening the standards of evaluation; he has not made the case that cognitive science has an essential, as opposed to a suggestive role to play in the work of epistemology.[89]

Given the criticism above it becomes clear that even in the case of the transformational thesis it would seem that at best perceptual beliefs are being accounted for, while theoretical beliefs, specifically, and arguably also certain beliefs that result from processes of reasoning or deliberation and problem-solving are not successfully accommodated. The thesis is not sufficiently nuanced in order to accommodate all the elements contained in a complete theory

[86] Hatfield, G. *Cognition and Epistemic Reliability: Comments on Goldman.* p. 315
[87] Geertz, C. *The Interpretation of Cultures.*
[88] This point is highly contentious, since in conceding some form of 'basic architecture' one seems to be acknowledging some form of inherent cognitive capacities. Also, the debate concerning how much is nature and how much is culture is a psychological debate that has endured and seems far from being resolved.
[89] Hatfield, G. *Cognition and Epistemic Reliability: Comments on Goldman.* p. 317

of knowledge. Accessibility is implicit in the notion of prescriptive normativity and this indicates that at least a modest form of internalism must be included, while accessibility internalism regarding justification seems to be necessary in the case of theoretical beliefs (and even in the case of some beliefs that result from processes of reasoning or deliberation and problem-solving) which means that internalistc theories from traditional epistemology must be kept on the table. It is this internalistic component construed in terms of accessibility that I wish to retain from theories such as foundationalism and coherentism. Since both the replacement and the transformational thesis have been unsuccessful in certain respects it might mean that we must return to these traditional theories. This, however, is not precisely the position that I wish to defend. My aim is to argue that traditional epistemologies offer something distinctive that cannot be dismissed, but I believe that science still has its role to play and thus wish to forward a more context-driven theory. By context-driven, I mean that the belief that we are considering in any specific context makes its own demands on what is required for it to count as knowledge.

In concluding this section it may be prudent to explicitly articulate that which must feature in a successful theory of knowledge, given the discussion up to this point. A successful theory of knowledge:

(1) Must be normative in an appropriate way.
(2) Cannot be purely a posteriori.
(3) Must be integrated with science.
(4) Must be externalistic with regard to certain beliefs, where the agent can be justified without having to be able to be reflectively aware of or be able to access this justification (reliabilism).
(5) Must be internalistic with respect to certain beliefs, where the agent is only justified if she is reflectively aware of this justification or can provide reasons (foundationalism or coherentism).

Given that both the replacement thesis and the transformational thesis fail on certain grounds it might be argued that traditional epistemology has a significant role to play in terms of its a priori element and its internalistic nature. In order to ensure that we have exhausted all of our naturalized options, it might be argued at this point that Quine can be considered to be a *proto-foundherentist* if one were to adopt a particular interpretation of his thesis in the way that Haack does. In the next section I will consider such a proposal and show that it will not

suffice. I will then attempt to appease those philosophers who are reluctant to include an a priori element in an epistemic theory even though all the arguments I have presented up to this point have made it apparent that an a priori element is necessary.

VII

Turning Away from a Pure Naturalism

Quine's position is not as clear as might be supposed. Quine can be interpreted as forwarding a robust version of naturalism according to which epistemology forms part of the natural sciences, as we have seen in our discussion of the replacement thesis. But naturalism can also be understood more modestly such that epistemology forms part of not only the natural sciences but the general sciences (or empiricism), and is only *continuous* with the natural sciences. That is, epistemology is approached in an a posteriori manner, but the necessary justification is had by means of any science, whether this be evidence presented by the social sciences or the natural sciences. This interpretation allows one to escape the criticism of the robust version of naturalism according to which the thesis is self-defeating because as a theory in its own right it has not been subjected to the severe testing that is the mark of a scientific theory within the natural sciences. Modest naturalism merely forwards the claim that justification is to be had by means of experience where the other sciences can also be appealed to since experiential evidence is equally available within these disciplines. More importantly, as Haack wishes to argue, this modest version of naturalism no longer seems to threaten traditional epistemological concerns. Let us consider Haack's proposal and her interpretation of Quine's thesis.

Haack argues that Quine makes use of the notion of "science" in two distinct ways without always clearly acknowledging this. Sometimes he is concerned with empirical beliefs generally, and at other times he is concerned with the natural sciences exclusively. This possible equivocation gives rise to two versions of naturalism: a modest naturalism, which does not threaten traditional epistemological concerns, and a "scientistic" naturalism, which does.

Modest naturalism can be characterised as follows:

> [An] abandonment of the goal of a first philosophy...The naturalistic philosopher begins his reasoning with the inherited world theory as a going concern. He tentatively believes all of it, but believes also that some unidentified portions are wrong. He tries to improve, clarify and understand the system from within. He is the busy sailor adrift in Neurath's boat.[90]

According to this form of naturalism epistemology simply becomes a part of the whole web of our beliefs without being a purely a priori discipline. This means that science must be integrated into a theory of knowledge, but not that it must replace traditional epistemological pursuits; it must be made consistent with it.

Quine's scientistic naturalism entails that epistemology becomes internal to the natural sciences from which we get the replacement thesis, and, as I have illustrated, this thesis is unsuccessful.

Consider the following passage:

> What reality is like is the business of scientists, in the broadest sense, painstakingly to surmise: and what there is , what is real, is part of that question. The question how we know what there is is simply part of the question...of the evidence for truth about the world. The last arbiter is so-called scientific method, however amorphous...a matter of being guided by sensory stimuli, a taste for simplicity in some sense, and a taste for old things.[91]

Haack claims that in this passage Quine is speaking of the empirical sciences generally. The world and our knowledge of it does not extend beyond the web of belief. The hint supplied by "so-called scientific method" can be taken to refer to our criteria of empirical evidence generally, rather than to any method of inquiry specific to the natural sciences. Consider another passage:

> I see philosophy not as an a priori propaedeutic or groundwork for science, but as continuous with science. I see philosophy and science as in the same boat...[92] (Quine, 1969, p. 126-7)

This shows philosophy to be a *part of* the empirical sciences and *continuous* with the natural sciences, rather than philosophy being part of the natural sciences, which is much more radical and faces the severe difficulties that I have highlighted in Part V.

Another passage reveals Quine's acceptance of the significance of traditional epistemology:

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[90] Haack, S. *The Two Faces of Quine's Naturalism.* p. 335 (Quine, W.V. *Word and Object*, 1960)
[91] Haack, S. *The Two Faces of Quine's Naturalism.* p. 340 (Quine, W.V. *Word and Object*, 1960)
[92] Haack, S. *The Two Faces of Quine's Naturalism.* p. 341. (Quine, W.V. *Natural Kinds*, 1969)

> [T]he story of the origins and intensities of our beliefs, the story of what happens in our heads, is a very different story from the one sought in our quest for evidence. Where we are rational in our beliefs the stories may correspond; elsewhere they may diverge. The former story is for psychology to tell. On the other hand, our present concern is with grounds, with reasons, with the evidential relations which hold among beliefs...[93]

Haack states that according to this passage psychology tells us what a subject's evidence for a belief is, but epistemology must analyse the concept of evidence and provide criteria for evaluating the evidence (The passage above was omitted from the second edition of *The Web of Belief*). In this way, Quine, in spite of himself, seems to be acknowledging the role traditional epistemology has to play. Haack, therefore, argues for an alternative reading of Quine by considering the following.

Quine speaks of *sensory evidence*, of the *information conveyed by one's senses*, of the *surface irritations* which cause a subject to assent to this or that sentence. The evidence is, therefore, not simply a matter of other beliefs, but experiential evidence which is characteristic of foundationalism. Quine also stresses the *interanimation of sentences* and suggests that *there can be mutual reinforcement between an explanation and what it explains.* This shows that the relations of evidential support are not only linear but are a function of mutual reinforcement. This is characteristic of coherentism. One is, therefore, given reason to suppose that Quine can be construed as a *proto-foundherentist*, since he combines elements of both theories. And, according to Haack, this points to a modest naturalism. *Sensory evidence* refers to sensory experiences as supporting a subject's beliefs. An analysis of this concept will therefore be partly causal, which will in turn lead to a preoccupation with the nature and limitations of human beings' cognitive capacities. (Quine subsequently shifts away from this position to the reliability of processes of belief-formation.) These observations made by Haack licence us in construing Quine's thesis as being more moderate, though it is not clear that he would support this reading of his work. What modest naturalism seems to offer us is philosophy as part of the web of belief or the empirical sciences.

One benefit of Haack's reading of Quine stems from the circularity criticism that might still be a concern in the case of the replacement thesis. According to the replacement thesis the epistemic status of natural science is privileged due to the rigorous method that it employs. To those who question the replacement thesis, modest naturalism will seem more plausible since it holds that the privileged status of natural science can be questioned. It seems intuitive

[93] Haack, S. *The Two Faces of Quine's Naturalism*. p. 344. (Quine, W.V. and Ullian, 1970. p. 7)

to suppose that the question about the status of science is not empty and that there are standards that transcend the framework of natural science. Haack states that the natural sciences have had great successes but are also fallible. She states that the natural sciences have a *distinguished* epistemic standing, but not a *privileged* one. Using our standards of empirical evidence has been successful but has also proved to be imperfect. When we judge where it has succeeded and where it has failed, and at which stages it is epistemically better and worse, we are appealing to standards that are not fully internal to, or the product of, the natural sciences. Whether these standards and criteria for evidence are themselves satisfactory must also then be investigated within the web of belief. The point remains that there are standards and criteria that escape the natural sciences while forming part of the web of belief.

Haack claims that modest naturalism allows for traditional epistemological concerns, but this is not clear to me. The distinctive feature of traditional epistemology (and here I am speaking of foundationalism, coherentism and reliabilism), is not the notion of basic beliefs in the case of foundationalism or mutually dependent beliefs in the case of coherentism, but rather the notion of a priori beliefs. And if epistemology is to form part of the web of beliefs, according to which all justification is experiential, then it would seem that a priori beliefs are effectively excluded. This suggestion of interpreting Quine's thesis as a form of modest naturalism obviously demands that one either make it clear precisely how a priori beliefs form part of the web of belief or whether a priori beliefs can be dismissed because all beliefs are experientially justified. Given my discussion of Davidson's principle of charity or Quine's principle of prelogical mentality, it seems clear that there is at least one a priori principle that cannot be dismissed, which means that we must make sense of the idea that a priori beliefs somehow form part of the web of beliefs.

But Haack makes it clear that she herself cannot see how this can be done. After introducing modest naturalism she states that a comprehensive defense of modest naturalism must still be provided. She adds in a footnote that to defend modest naturalism adequately one would have to be in a position to repudiate the a priori altogether "by showing how justification of supposedly a priori beliefs fits into one's theory of empirical justification – and that I [Haack] am not able to do."[94] Clearly we cannot dismiss the a priori since even the most adamant naturalist must admit that there is at least one a priori principle, and if this is so then modest

[94] Haack, S. *The Two Faces of Quine's Naturalism.* Footnote 35, p. 355

naturalism can only be defended by showing that this a priori principle is in fact empirically justified. But as I have argued in Part V, the principle of charity can be said to be constitutive of belief and functions as a precondition for the possibility of empirical knowledge regarding the mental realm. The question of belief only arises when the principle of charity holds, which means that an empirical inquiry presupposes the principle. Consequently, even a modest naturalism no longer becomes a possibility.

VIII

The Revisability of A Priori Beliefs

What we do not want, however, is to assert that a priori beliefs are unrevisable. We do not wish to hold that a priori beliefs are isolated and impenetrable, since to conceive of a system of beliefs entails that one's beliefs are interrelated and connected to each other. This means that they must have the capacity to inform and effect each other; if a priori beliefs are immune to revision then it would seem as if they are beyond the pale, and as such not connected to our other beliefs.

Also, the central reason why those sympathetic to the Quinean project reject a priori beliefs and deny that there are beliefs that have a different epistemic status is because they cannot allow for beliefs that are unrevisable, which is what they take a priori beliefs to be. The idea that there are beliefs that entail rational unrevisability opposes the essential nature of their project, since if science must tell us what we know, then there cannot be beliefs which are unrevisable. In fact, their position is bit stronger than this. The Quinean does not just require beliefs to be revisable but holds that all beliefs must be revisable in light of a posteriori evidence.[95] The Quinean rejects a priori knowledge on the basis that they take a priori beliefs to be rationally unrevisable, or at least not revisable in the light of experiential evidence. If it can be shown that a priori beliefs are at least revisable in light of non-experiential evidence then the force of one of the main motivations behind the Quinean project will be somewhat lessened.

[95] The success of mathematics is enough reason to find this position untenable.

Clearly, Quine (and other pragmatists such as Peirce) support the doctrine of fallibilism which is the claim that anything we take to be knowledge can turn out to be false, since it is always possible that we could have been mistaken. For Quine, this doctrine manifests itself in his thesis by means of his dismissal of the distinction between analytic and synthetic truths, in which case every belief can be traced back to observation and depends on observation either directly or indirectly with the result that every belief is in principle revisable. And equally for reliabilists, though an a priori element forms part of their world-view, science is nonetheless our paradigm of knowledge, and the essential characteristic of scientific endeavour is that all statements are subject to rational revision if new evidence is brought to light. For these proponents a statement that is justified (where "justified" designates a degree of justification sufficient for knowledge) a priori is unrevisable.

But is it really the case that a statement which is justified a priori is rationally unrevisable? Albert Casullo unpacks what a priori justification entails and aims to argue that rational unrevisability is not part and parcel of a priori justification. Consider the following line of reasoning:

(1) A priori justification is nonexperiential justification.
(2) The existence of a priori knowledge entails that there is nonexperiential justification sufficient for knowledge.
(3) The general concept of knowledge does not require that justification sufficient for knowledge entail rational unrevisability.
(4) It is not the case that if S is justified in believing that *p* a priori then the statement that *p* is rationally unrevisable.[96]

Quite clearly, a priori justification does not entail rational unrevisability. It must now be shown that a priori knowledge is revisable and how this might be the case. One can distinguish between a *strong unrevisability thesis* (SUT) and a *weak unrevisability thesis* (WUT):

> (SUT) If S is justified in believing that *p* a priori then the statement that *p* is rationally unrevisable in light of *any* further evidence.
>
> (WUT) If S is justified in believing that *p* a priori then the statement that *p* is rationally unrevisable in light of any future *experiential* evidence.[97]

[96] Casullo, A. *Revisability, Reliabilism, and A Priori Knowledge.* p. 189

It seems clear that (SUT) is not plausible since if *p* can be revised in the light of *any* evidence, which includes experiential evidence, then it can be claimed that it is not independent of experience in the appropriate sense and thus not justified a priori. (WUT) is plausible since if *p* is justified a priori then it seems that it can be revised in light of *nonexperiential* evidence without changing its status of being justified a priori. We now need to assess whether revision of an a priori belief in the light of nonexperiential evidence compromises its status as an a priori belief.

Consider this example. Mary is a college student and has some training in logic such that she is able to reliably discriminate between valid and invalid inferences. She thinks about $p \rightarrow q$ and supposes that it entails $\neg p \rightarrow \neg q$ after a process of reflective thought. She then considers the matter more carefully at a later stage and a counterexample occurs to her such that she revises her former belief and comes to believe that $p \rightarrow q$ does not entail $\neg p \rightarrow \neg q$. It seems that, firstly, Mary's initial belief is the result of a nonexperiential process that is reliable but not infallible, and, secondly, that a process of the same type calls her first belief into question and is responsible for its revision. It also seems that both the initial and the revised beliefs are justified and that, more controversially, the initial belief is justified a priori even though it is revised at a later stage and is initially false. One can support the supposition that the initial belief was justified by considering an analogous case. Mary sees a sheet of paper in front of her and based on this evidence she forms the belief that it is a square. She then looks more closely and realises that it is in fact rectangular and revises her belief accordingly. Her initial belief is, however, still justified because the conditions were normal and Mary is a reliable discriminator of shapes. The fact that our discriminatory powers can be fallible at times does not mean that beliefs based on shape perception are no longer justified. Typically such beliefs are justified and we don't seem to think that particular cases where our powers fail us and the belief turns out to be false are unjustified simply because it turns out to be false. For it to be unjustified other factors must be cited: the perceiver was impaired, the conditions were not normal etc. In the same way that Mary's initial belief that the paper is square is not unjustified, so her belief that $p \rightarrow q$ entails $\neg p \rightarrow \neg q$ is also not unjustified.

The next question is whether her initial belief is justified a priori. Recall, that in virtue of its revisability the Quinean has to maintain that it is justified a posteriori. We must keep the distinction between a priori and a posteriori justification in mind; a priori justification is

[97] Casullo, A. *Revisability, Reliabilism, and A Priori Knowledge.* p. 190

nonexperiential while a posteriori justification is experiential. It seems that in the above case Mary's initial justification as well as the conditions under which she revises her belief provide a priori justification since it occurs by means of a process that is nonexperiential. And if this is right, then we seem entitled to reject the (SUT) since clearly we have an example of an a priori belief that is revisable. What seems peculiar is that this is to suppose a priori justification for a false belief. But one can support the rejection of the (SUT) by making use of another example that does not involve this claim:

> Suppose Charlie believes that *p* entails *q* on the basis of a valid proof P_1. Since the proof is the result of a process of reflective thought, Charlie's belief is justified nonexperientially. But now let us suppose that (a) there exists a pseudo-proof, P_2, from *p* to *–q*; and (b) if this pseudo-proof were brought to Charlie's attention, he would not be able to detect an flaws in it or to discount it in any other fashion. Given that the pseudo-proof never comes to Charlie's attention his belief remains justified despite the fact that *were* it to be brought to his attention his justification *would* be defeated.[98]

According to (SUT) Charlie's belief is not justified a priori even though: (1) the belief is justified; (2) the belief is based on nonexpriential evidence; and (3) the possible defeating evidence (were it to become available to Charlie) would also be the product of a process of reflective thought. This makes it clear that (SUT) removes the defining feature from a priori justification, namely, that it is nonexperiential justification. According to (SUT) Charlie's belief is not justified a priori because the justification is defeasible, but this is, as Casullo points out, a thesis regarding the *strength* of the justification, which is not to shed light on the nature of the justification. It fails to consider that the possible defeater is itself of a nonexperiential nature and simply insists that solely in virtue of its revisability the belief is justified a posteriori. As such it becomes clear that a priori beliefs are revisable in the light of nonexperiential evidence, and this should be enough to ensure that a priori beliefs are no longer as unacceptable to the naturalist.

One last consideration. Even if we grant that science can generate norms successfully, it is still the case that this advice, which seems quite specific and complex, must somehow be communicated to the public in order for it to be useful and effective. I think that all the accounts mentioned thus far face the challenge of attending to this social component of epistemology, and since this is the case, and given that I have argued that the application of the theory is the most important component which has been neglected I have decided to pay little attention to this issue. It is still, however, incumbent on any epistemological account to

[98] Casullo, A. *Revisability, Reliabilism, and A Priori Knowledge.* p. 192

address this concern.[99] But let us suppose that there is no way to make this available to the populace, or that it would take a long time and would only be partly successful. Would we want to say that people are generally very poor reasoners and are not employing standards of evaluation on a continual basis? One can argue that the evidence that generates these norms over a period of time is gathered by means of experience in terms of trial and error which means that they are also generated a posteriori, but this surely isn't always the case. In acquiring the ability to reason, one equally acquires the ability to consider and work through problems without any experiential evidence (as mathematics and logic can prove), and it is in virtue of this capacity to reason that one is in a position to generate standards and guidelines in the absence of experiential evidence.

Bishop and Trout argue that we should question why philosophers should be identified as the experts when it comes to determining the status of our epistemic judgements, but it is precisely because philosophers develop the skill to reason in the way that a scientist develops the skill to engage in investigation. Philosophers are not simply attempting to articulate what they take to be the correct epistemic judgements, but aim to access the standards and guidelines that would apply to everyone in virtue of their capacity to reason. This is precisely why principles such as the *stasis requirement* are included; philosophers do not want to fall into the trap of constructing a theory that would only have significance to philosophers, since this would seem to indicate that the theory is faulty in some way. All humans that are functioning normally have the capacity to reason, and it is in virtue of this capacity that we are all able to access certain truths independent of experience; even though this capacity is less developed in some which, unfortunately, will limit them in certain ways. It seems that Bishop and Trout underestimate the extent to which people reason their way to certain standards of evaluation that they continually employ.

Of course, I do not wish to overstate things either. Though we do have this capacity we also remain fallible and are prone to faulty reasoning by distorting the way things are as a result of inclinations and emotions. This is why epistemology is valuable in virtue of generating prescriptions, and particularly to people who have not effectively developed their capacity to reason. Even those who do reason well may not always get it right, which is precisely why the advice provided by a theory of knowledge is significant. It seems that a theory such as coherentism not only has the resources to generate specific advice as to how our beliefs

[99] For a more comprehensive understanding of what this social component entails and ways in which it may be developed, see Kitcher, *The Naturalists Return,* 1992.

should cohere, but also captures many of our own commonsense intuitions about how beliefs should be epistemically assessed. What we should take away from the discussion in this section is that naturalism, either in its robust or modest form, is not successful because it fails to accommodate an a priori element which is necessary. Again, I am not forwarding the claim that science must not be consulted, but rather that an a priori element has its part to play and cannot be dismissed.

Conclusion

The notion of a theory of knowledge is clearly a complex affair. I have aimed to highlight this complexity as well as the fact that a theory which is not sufficiently subtle and nuanced seems doomed to failure. The two notions that become essential to a theory of knowledge are prescriptive normativity and an a priori element. The other two essential considerations to a theory of knowledge is the accommodation of different kinds of beliefs as well as adequately addressing three components to epistemology as a whole: the theory, the application, and the social integration. By articulating and discussing the various approaches to epistemology, from traditional epistemology to the replacement thesis to the transformational thesis and back to traditional epistemology, it becomes clear to me that each approach is successful in certain respects despite failing in others. The popularity of traditional epistemology has seemed to wane in light of the development and advancement of science, but, as I have aimed to show, the dismissal of this approach in its entirety seems premature. The complexity of knowledge has been discussed in order to maintain that traditional epistemology has its part to play in terms of its access internalism, and I believe that epistemology should be approached in a more context-sensitive way by taking into account the particular belief under assessment. Clearly, a naturalized epistemology is not a viable option as a result of its purely a posteriori approach, thus lacking the necessary complexity. In order to incorporate all the elements that must be preserved, I believe that in proceeding with the development of a theory of knowledge we should opt for some form of internalistic externalism, the discussion of which is beyond the scope of this paper, but which I hope to pursue in the future.

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