

STOIC RATIONALISM

**A Thesis presented to the Faculty of the Graduate School
University of Missouri – Columbia**

**In Partial Fulfillment
Of the Requirements for the Degree**

Masters of Arts

by

DR. HENRY DYSON

Dr. Daniel Hooley, Thesis Supervisor

JULY 2005

The undersigned, appointed by the Dean of the Graduate School, have examined the thesis entitled

STOIC RATIONALISM

Presented by Dr. Henry Dyson

A candidate for the degree of Master of Arts

And hereby certify that in their opinion it is worthy of acceptance.

Dustoby

Paul Sker

David Schenker

Andrew Malyk

ACKNOWLEDGEMENTS

I would like to thank the Department of Classical Studies and Ancient Studies Program for their generous funding and support during my time at the University of Missouri. I am especially grateful to Daniel Hooley for his advice, encouragement, and direction of this thesis. I would also like to thank my departmental committee members, David Schenker and Ray Marks, and external readers, Andrew Melnyk from the Philosophy Department at the University of Missouri and John M. Cooper from the Program in Classical Philosophy at Princeton University, for their helpful comments on the penultimate draft. I owe a special debt of gratitude to Brian Kierland for many hours of engaging conversation that helped me formulate and clarify the main points of my argument. Finally, I would like to thank Osama, Bilal, Issam, and the rest of the crew at Coffee Zone (where the majority of this thesis was actually written). And as always, my greatest thanks go to my wife, Melissa, for her loving support in so many areas of life that make my intellectual pursuits worthwhile.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	ii
LIST OF ABBREVIATIONS.....	iv
ABSTRACT.....	v
Chapters	
INTRODUCTION: EMPIRICISM AND RATIONALISM IN HELLENISTIC PHILOSOPHY.....	1
1. SOME PRELIMINARY DISTINCTIONS CONCERNING EMPIRICISM AND RATIONALISM.....	14
1.1 The Definitions of Epistemological Empiricism and Rationalism	
1.2 The Separability of Psychological and Epistemological Rationalism	
1.3 Criteria for Empiricist and Rationalist Readings of Stoic Epistemology	
2. CRITICISM OF EMPIRICIST READINGS OF STOIC EPISTEMOLOGY.....	28
2.1 Perceptual and Rational Comprehension	
2.2 Refinement of the Criterion for Empiricist Readings	
2.3 Criticism of the Inferential Reading	
2.4 Criticism of the Causal Reading	
3. PROLEPSIS AND A PRIORI KNOWLEDGE IN STOICISM.....	59
3.1 Concepts and Conceptions	
3.2 Concepts and Conceptual Objects	
3.3 The Formation of Concepts, Conceptions, and Conceptual Objects	
3.4 The Tacit Function of Conceptions in Human Rationality	
3.5 Two Conceptions of Conceptions: Prolepses and Suppositions	
CONCLUSION: THE HISTORICAL PLACE OF STOIC EPISTEMOLOGY.....	102
BIBLIOGRAPHY.....	113

LIST OF ABBREVIATIONS

Acad.	Cicero: <i>De Academica</i>
APo.	Aristotle: <i>Analytica Posteriora</i>
CN	Plutarch: <i>De communibus notitiis contra Stoicos</i>
DA	Aristotle: <i>De anima</i>
DL	Diogenes Laertius: <i>Lives of Philosophers</i>
Did.	Alcinous, <i>Didaskalias tôn Platônos dogmatôn</i>
Diss.	Epictetus: <i>Dissertationes</i>
EM	Seneca: <i>Epistulae Morales</i>
Fin.	Cicero: <i>De finibus</i>
Gorg.	Plato: <i>Gorgias</i>
IG	Inwood and Gerson: <i>Hellenistic Philosophy: Introductory Readings</i>
In An.	Simplicius: <i>In Aristotelis De Anima</i>
In Cat.	Simplicius: <i>In Aristotelis Categoriae</i>
In Met.	Syrianus: <i>In Aristotelis Metaphysica</i>
In Tim.	Calcidius: <i>In Platonis Timaeum</i>
Leg.	Cicero: <i>De legibus</i>
LS	Long and Sedley: <i>The Hellenistic Philosophers</i>
M	Sextus Empiricus: <i>Adversus Mathematicos</i>
Met.	Aristotle: <i>Metaphysica</i>
ND	Cicero: <i>De natura deorum</i>
Parm.	Plato: <i>Parmenides</i>
Plac.	Ps-Plutarch: <i>Placita</i>
Phd.	Plato: <i>Phaedo</i>
Phdr.	Plato: <i>Phaedrus</i>
Prot.	Plato: <i>Protagoras</i>
PH	Sextus Empiricus: <i>Pyrrhoniae hypotyposesis</i>
PHP	Galen: <i>De placitis Hippocratis et Platonis</i>
Rep.	Plato: <i>Republic</i>
RN	Lucretius: <i>De rerum natura</i>
SA	Plutarch: <i>De sollertibus animis</i>
Sign.	Philodemus: <i>De signis</i>
Soph.	Plato: <i>Sophist</i>
SR	Plutarch: <i>De Stoicorum repugnantibus</i>
Stob.	Stobaeus: <i>Eclogae</i>
SVF	Von Arnim: <i>Stoicorum Veterum Fragmenta</i>
Theat.	Plato: <i>Theaetetus</i>

ABSTRACT

The prevailing scholarly opinion is that the Stoics are empiricists rather than rationalists. Empiricism is a branch of epistemology that gives priority to sense-perception whereas rationalism gives priority to reason's grasp of necessary truths. One should distinguish, however, between psychological theories of concept-formation and epistemological theories of justification. The Stoics are both epistemological rationalists and psychological empiricists. I support this claim by criticizing various empiricist readings of Stoic epistemology. I argue that these readings do not adequately account for the Stoics' doctrine of rational comprehension. I provide further support by explaining how a particular type of conception, called 'prolepsis,' is both derived from sense-perception and grounds reason's *a priori* comprehension of necessary truths. I conclude by exploring the historical implications of this reading of Stoic epistemology. I argue that, contrary to the prevailing opinion, the Stoics see themselves as belonging to the same rationalist tradition in epistemology as Plato.

INTRODUCTION: EMPIRICISM AND HELLENISTIC PHILOSOPHY

Scholarly discussions of Stoic epistemology generally present their doctrines in the context of their debate with the Academic and Pyrrhonian skeptics. One of the main focal points of this debate is the existence of the so-called “comprehensible presentation” (*phantasia katalêptikê*). This is defined as a presentation that “arises from what is [the case] and is stamped and impressed exactly in accordance with what is [the case], of such a kind that it could not arise from what is not [the case].”¹ In other words, the comprehensible presentation is one that presents the corresponding state of affairs in such a way that its propositional content could not be false. Assent to such a presentation produces the cognitive state the Stoics call “comprehension” (*katalêpsis*) because it allows one to grasp a fact about the world with absolute certainty. Comprehension is the basic unit of knowledge and criterion of truth in Stoic epistemology. By comparison with comprehensions other beliefs may be judged to be true or false; and scientific understanding (*epistêmê*) is defined as a mutually supporting system of comprehensions.²

The Academic and Pyrrhonian skeptics deny that there are any presentations that meet these requirements for comprehension. There is no presentation, they say, which is so clear that it could not come from some other state of affairs.³ In support of this counter-argument they offer the standard skeptical examples of perceptual illusions, hallucinations, and the indiscernibility of twins and eggs. They conclude that certainty is not possible and that knowledge in the strict sense defined by the Stoics does not exist.

¹ Sextus M 7.248. All translations are from LS (1987) unless otherwise noted, although I have made occasional alterations.

² Cf. Stob. 2.73,16-74,3.

³ Cf. Cicero Acad. 2.78 and Sextus M 7.251-2.

Consistent with the Academics' dialectical method, the basis for this skeptical conclusion is one of the Stoics' own arguments. Indeed, it seems to have been one that Zeno originally posed against the dogmatic Platonists of the late 4th century.⁴ According to Zeno, sense-perception is the link between the mind and the world and is thus the source for all knowledge. He then asserted the following counterfactual conditional: if sense-perception were not certain, then no knowledge would be certain. Since the Stoics and Platonists agree that certainty is a necessary condition for knowledge, the consequent amounts to a denial of the existence of knowledge. Of course, both Zeno and his Platonic opponents believe that knowledge and certainty are possible. The Platonists, however, say that only reason's comprehension of intelligible forms by reason is capable of certainty. They relegate the grasp of sensible things by sense-perception to the realm of mere opinion or belief (*doxa*). Zeno used the above conditional to argue via *modus tollens* that sense-perception is indeed capable of certainty.⁵ Arcesilaus, in turn, used the same conditional to arrive at his skeptical conclusion via *modus ponens*. Sense-perception is not capable of certainty, he argues, since there are no comprehensible presentations. Thus, knowledge in the strict sense is not possible.⁶

It has been a commonplace of scholarship for at least the last century that the Stoics are empiricists.⁷ Given the emphasis placed on sense-perception, both by Zeno himself and by his skeptical opponents, this characterization is not surprising. It is especially associated with two aspects of the Stoic doctrine. First, we are told by

⁴ Cf. Cicero Acad. 1.40-1.

⁵ The same argument structure can be observed in Epicurus and has roots in Democritus.

⁶ Cf. Cicero Acad. 2.77-8.

⁷ Cf. in particular Annas (1981, 85 and 93-4), (1990) and (1992, 86-7), Hankinson (2003, 63-4 and 76), Long (1974, 125), LS (1987, 1:239), Schofield (1981, 289), Sedley (1980, 13-4), and Sharples (1996, 11-2). The issue was also debated in the 19th century. Cf. Bonhöffer (1890) for a summary of the various positions.

numerous sources that the Stoics identified comprehension or the comprehensible presentation as the criterion of knowledge. Both the skeptics' attacks and Stoic defenses take sense-perception as the paradigm for the debate over the existence of the comprehensible presentation. Thus, it seems that the Stoics took sense-perception to be the criterion by which all other beliefs must be judged to be true or false. Even more important, however, is Zeno's claim that all knowledge is derived from sense-perception. Two texts have been especially influential. At Plac. 4.11.1 we are told by Ps-Plutarch that the mind of the newborn is a *tabula rasa* and that sense-perception is the first way in which conceptions are written upon it. Similarly, Sextus claims at M 8.56 that "every conception comes either from sense-perception or not without sense-perception." He supports this with a list of the various associative processes by which conceptions are derived from sense-perceptions. He concludes at M 8.68 that "there is nothing in our conceptions that is not known by direct experience." On the basis of these texts the Stoics are often compared with Locke and Hume.

Empiricism is something that the Stoics are often said to share with Aristotle and the other Hellenistic schools. Indeed, the turn toward empiricism is an integral part of the wider narrative that scholars tell about the development of Hellenistic philosophy.⁸ According to this narrative the common denominator among the Hellenistic schools is their rejection of Platonic rationalism and idealism in favor of empiricism and materialism. In both ontology and epistemology Aristotle represents a middle position and bridge between Platonism and the other Hellenistic schools. In ontology, for example, Aristotle merely rejects the transcendence and priority of incorporeal forms and

⁸ Again, this narrative can be found in a number of sources. Perhaps the clearest statement is at Sedley (1980, 13-4). Cf. also Zeller (1892), Long (1974), Sharples (1996).

universals. The Stoics and Epicureans, on the other hand, reject the existence of such forms and universals altogether. Their primary objection is the causal and explanatory role that is assigned to incorporeals by Plato and Aristotle. According to the Stoics, the criterion for existence is the ability to enter into causal relations. Thus, they argue that only corporeal bodies and their various modifications exist.⁹ The Stoics do hold that there are certain incorporeals such as time, the void, and ‘the sayables.’ Incorporeal things, subsist (rather than exist) and have no causal efficacy. Moreover, the Stoics assert that all things, corporeals and incorporeals, are particular. They deny that there are any shared or common universals. The Stoics suggest that Platonic and Aristotelian ontology is misled by language into positing such universals.¹⁰ Specifically, Platonists and Aristotelians mistakenly believe that appellatives – i.e. general terms denoting genera, species, and properties, and relations – are names for reified forms and universals. The Stoics hold that the causal functions of Platonic and Aristotelian forms can be explained by the ways that particular corporeal entities are modified. The logical and semantic functions of forms, on the other hand, can be explained by particular conceptions generated by the mind. The Epicureans offer a similar account on the basis of their atomistic ontology.

According to the standard narrative, there is a parallel movement away from Platonic rationalism in Hellenistic epistemology. Plato limits knowledge in the strict sense to reason’s comprehension of intelligible forms. This is because, as Parmenides originally showed, only intelligible forms possess the universality and stability that allow

⁹ Brunschwig (1994b) has shown that the Stoics’ causal criterion of existence is actually derived from Plato’s *Soph.* The Stoics do include certain incorporeal entities in their ontology, but hold that they merely subsist rather than exist and deny that they have any causal efficacy. Cf. LS (1987, 1:162-83) for texts and commentary on Stoic ontology.

¹⁰ Cf. Caston (1999).

them to be grasped with certainty. Deficient sensibles, since they are always shifting and perspectival, can only be grasped by opinion or mere belief. According to the doctrine of recollection, this comprehension is made possible by the recollection of reason's direct acquaintance with the forms in its prenatal existence. Again, Aristotle's epistemology represents a compromise between Platonic rationalism and Hellenistic empiricism. With his doctrine of immanent universals Aristotle re-establishes the ontological sufficiency of particulars. He thus rejects recollection as the basis for knowledge of universals. Since universals only exist in combination with matter in composite entities, they are originally known to us through sense-perception. For this reason, Aristotle is often himself called an empiricist. This claim is further supported by his advocacy of detailed observation in science and, in general, by his preference for the natural sciences over mathematics and astronomy. Aristotle's Platonism re-emerges, however, when we consider his doctrine of the intellect. Intellect is essentially the ability to take on intelligible form without the matter. This is possible because intellect alone among all human faculties is immaterial. Although Aristotle holds that all knowledge originally depends on sense-perception, he denies that sense-perception is a form of knowledge properly speaking. The truth of sense-perception, memory, and experience is always tied to the contingent existence of particular material things. Knowledge proper is limited to intelligible forms for much the same reason as in Platonism, namely only relations between intelligible forms and universals can be grasped as universal and necessary. Moreover, this knowledge comes about through demonstration from self-evident first principles. In this sense, Aristotle's epistemology is clearly a form of rationalism.¹¹

¹¹ Cf. Frede (1996a).

The Hellenistic schools are supposed to offer a purer form of empiricism. Since the Stoics and Epicureans hold that only corporeal entities exist and have causal efficacy, they reject Aristotle's immanent forms and incorporeal intellect as well as the Platonic doctrines of transcendent forms and recollection. According to the Epicureans and Stoics the mind is corporeal and the senses provide the link between it and corporeal objects. Thus, in their epistemologies knowledge of particulars becomes paradigmatic and knowledge of universals becomes problematic. The Stoics and Epicureans compensate in two ways. First, they hold that the mind is able to abstract universal conceptions from presentations of particulars. Second, they widen the scope of sense-perception to include objects that Plato and Aristotle take to be incorporeal. The standard explanation is that the Stoics take qualities like virtue, moral obligatoriness, and even extrinsic relations to be identical with corporeal modifications of bodies.¹²

The rise of skepticism is thought to be a natural consequence of this turn towards empiricism and thus to be something of a watershed between the 4th century and Hellenistic philosophy.¹³ It is now widely accepted that Plato and Aristotle do not think of knowledge as justified true belief. Indeed, they are largely unconcerned with issues of justification. Such issues only gain prominence in response to skeptical challenges, whereas Plato and Aristotle are famously dismissive of such challenges and take for granted that knowledge and certainty are possible. This is often attributed to their belief in natural teleology. Their primary concern, rather, is with knowledge as an explanatory understanding of the essential causes of things. Their epistemological discussions focus

¹² Cf. Annas (1990). The Epicureans, on the other hand, explain these qualities as supervening on the primary qualities of atomic composites.

¹³ Cf. Burnyeat (1981).

less on knowledge of particular propositions than on demonstration and the systematic structure of the sciences.

Zeno's epistemology seems to have begun with many of the same presuppositions about the nature and possibility of knowledge. As with Plato and Aristotle, this is presumably due to his strong commitment to providential teleology.¹⁴ In his later years, however, Zeno was forced by the skeptical attacks of Arcesilaus to give closer consideration to issues of justification. And among later Stoics such as Antipater of Tarsus interest in justification took on a life of its own. By the time we arrive at the reliabilist theories of the later Academic skeptics justification has clearly become the center of epistemological discussion.

This standard narrative about the development of Hellenistic philosophy is certainly correct as a general sketch. Like all such narratives in the history of philosophy, however, it contains the inherent risk of anachronism and over-simplification. In particular, I will argue in this thesis that placing too strong an emphasis on the Stoics' rejection of Platonism has obscured a certain rationalist streak in their own epistemology. Indeed, I believe that it is misleading to characterize the Stoics as empiricists without making certain qualifications about what this claim entails.

Let me introduce my argument by briefly comparing the narrative sketched above about the development of Hellenistic philosophy with the standard division between British Empiricists and Continental Rationalists in the Early Modern period. Indeed, the frequent comparisons of the Stoics to Locke and Hume suggest that this latter narrative has had a formative influence on our view of the Hellenistic period. According to what

¹⁴ Epicurus, on the other hand, is concerned with skeptical challenges from the beginning because of his Democritean heritage.

Louis Loeb calls “the standard theory” Descartes introduces the basic principles of Continental Rationalism in his rejection of scholasticism in favor of a geometrical approach to knowledge.¹⁵ Descartes holds that the incorporeal mind possesses innate ideas. Thus, reason is able to intuit certain necessary truths about the world with absolute certainty. These intuitions provide the first principles for demonstrations that extend certainty to derived theorems through a step-wise procedure in which each step of the deduction can be grasped as self evident. Beginning from the first principles of metaphysics, this method of deduction is capable of extending certainty to the natural sciences and morals. Descartes holds that intuition and demonstration are the only faculties capable of certainty and thus the only sources of knowledge proper. In particular, he rejects the reports of the senses as inherently confused and indistinct. According to the standard narrative, these doctrines set the epistemological agenda for other Continental Rationalists such as Malebranche, Spinoza, and Leibniz. The epistemological agenda of the British Empiricists, on the other hand, is set by Locke’s rejection of Cartesian rationalism. Locke’s *Essay* begins with his famous rejection of innate ideas. Instead, he holds that sense-perception is the source of all ideas and therefore of all knowledge of the world. Beginning from this starting point, the doctrine of empiricism is refined and advanced until it arrives at its natural consequence in Hume’s moderate or “academic” skepticism.

Recent scholarship on Early Modern philosophy has largely rejected this narrative as an historical description of the period.¹⁶ It has been recognized that the division between Continental Rationalists and British Empiricists does not accurately represent

¹⁵ Loeb (1981, 25-75).

¹⁶Cf. Curley (1992) for a discussion of the relevant issues and literature.

the actual lines of influence and often obscures thematic similarities across the Channel. Loeb offers one example that will be particularly relevant for my own discussion of Stoic epistemology. As part of his critique of “the standard theory” Loeb argues that it does not account for the extensive Cartesian influence on Locke’s epistemology. In brief, Loeb argues that “if Descartes is a Rationalist, so is Locke.”¹⁷ His strategy is to identify a list of features that individually or jointly qualify Descartes as a rationalist and then examine whether Locke’s epistemology also has these features. “The standard theory would lead us to expect considerable divergence in the view of Descartes and Locke on these issues. This expectation is not fulfilled.”¹⁸ Rather, Loeb argues that Locke also holds (a) that certainty is the standard for knowledge, (b) that the truths known by intuition are self-evident, (c) that demonstration is a progression of intuitive or self-evident steps, (d) that intuition and demonstration are the sole sources of knowledge in the proper sense, (e) that intuitions do not allow support by arguments, but are rather the foundations of knowledge, and (f) that the sciences of metaphysics, natural philosophy, and ethics susceptible to same degree of certainty as arithmetic and geometry. Indeed, he argues that although Locke identified sense-perception as a type of knowledge, he relegates it to the lowest form of knowledge. Loeb concludes that, despite his rejection of the doctrine of innate ideas, “Locke can be classified as an Empiricist only at the cost of considerably obscuring and distorting the Cartesian epistemology that is prominent in the *Essay*.”¹⁹ Rather, he suggests that the best overall description of Locke’s epistemological project is as an attempt to show that the Cartesian standards for demonstrative knowledge are consistent with a certain kind of naturalism.

¹⁷ Loeb (1981, 36).

¹⁸ Loeb (1981, 36).

¹⁹ Loeb (1981, 57-8).

My argument in this thesis is that the description of the Stoics as empiricists, and the standard division between Hellenistic empiricism and Platonic rationalism, has had a similarly distorting effect on our view of Stoic epistemology as a whole. Specifically, it has led scholars to overlook an aspect of the Stoic doctrine that can only be described as rationalist and which shows considerable Platonic influence. Rather than viewing the Stoics as concerned with a different epistemological view altogether, or as offering an account of knowledge that is entirely opposed to Plato's, I will argue that we should view the Stoics as attempting to show that the Platonic theory of knowledge can be explained without appeal to the existence of either transcendent or immanent incorporeal forms.

The characterization of the Stoics as empiricists is misleading largely due to an ambiguity in the term itself. The first chapter thus makes a distinction between two types of empiricism. Psychological empiricism is the doctrine that all concepts are derived from sense-perception. Epistemological empiricism, on the other hand, is the claim that all knowledge of the world is a posteriori. It is clear that the Stoics are psychological empiricists. It would be incorrect, however, to infer that they are epistemological empiricists. Rather, I argue in the subsequent chapters that the Stoics retain the Platonic view of scientific understanding (*epistêmê*) as primarily consisting of a demonstrative structure of necessary and universal truths that are grasped by reason. By the criteria set out in chapter one, therefore, they must be considered epistemological rationalists.

The second chapter gives the negative argument against regarding the Stoics as empiricists. The empiricist reading must show either that comprehension is a species of sense-perception itself or that its justification is dependent upon sense-perception. Neither is the case. The Stoics make a distinction between perceptual and rational

comprehension. Perceptual comprehension is limited to particular, contingent truths. Rational comprehension is the grasp of universal, necessary truths. Specifically, it includes the comprehension of self-evident definitions and axioms, and the propositions that follow deductively from them. Since the Stoics criticize the Epicurean attempt to justify necessary truths by empirical induction, this cannot be their own position. Nor is it the case that rational comprehension is justified non-inferentially by the causal history that links it, via the senses, to objects in the world. Rather, it is sufficient for rational comprehension to count as knowledge that reason be able to grasp certain propositions as necessarily true based on the understanding of their component terms and logical connectives. This is possible because reason is defined as the collection of implicit conceptions – called prolepses – that provide the essential definitions of such terms. Since rational comprehension is a priori, the Stoics are rationalists. The development of prolepses on the basis of sense-perception should not be regarded as an epistemological justification, but rather as a psychological explanation of how rational comprehension is possible without recollection of Platonic forms.

The third chapter offers a positive account of prolepsis as the source of a priori knowledge. My discussion begins with a consideration of the Stoics' psychological terminology. I show that for the Stoics concepts are mental items that represent general qualities and provide the meaning of appellatives such as 'human.' Conceptions, on the other hand, are dispositional connections between concepts. Finally, prolepses are a species of conceptions that come about naturally on the basis of experience and represent necessary conceptual relations. Concepts, conceptions, and prolepses should each be distinguished from *ennoêmata* which are the objects of general conceptions and are

paradigmatically thought of as mental images. I suggest that the early Stoic theory of Zeno and his immediate followers emphasized the role of these conceptual objects as replacements for the Platonic forms. In response to skeptical criticism, however, Chrysippus reformulated the Stoic theory around the incorporeal propositions that supervene on the physical structure of prolepses. These propositions express the relation between qualities as conditionals (e.g. ‘if something is human, it is mortal’). Such propositions are universal and necessary. Their content is not reducible to individual experience. Rather, the development of concepts and conceptions from sense-perception merely explains how the mind is organized in such a way that these particular propositions come to supervene on its structure. Finally, I discuss the role of prolepses in human rationality as the basis for transitions between thoughts. Inference and demonstration are the articulation and refinement of these thought-patterns. Similarly, prolepses provide implicit definitions of words in ordinary discourse. Progress towards wisdom is made through the articulation and refinement of these definitions and their linking together into a mutually supporting system of knowledge through demonstration.

The conclusion returns to the question of the relation between Platonic and Stoic epistemology. I argue that Stoic epistemology should be viewed in the context of a number of late 4th and early 3rd century philosophers that offer a two-fold criterion of truth. These include the Platonists Speusippus and Xenocrates. I conclude that, despite their criticism, the Stoics see themselves as belonging to the same Socratic tradition as the Platonists. We can see a pattern of Stoic doctrines in ethics, psychology, and even ontology that reply to specific arguments in Plato’s dialogues. In each case the Stoics defend what they take to be the authentic ‘Socratic’ position against later Platonic

deviations. This also seems to be the case with Stoic epistemology. I suggest that the Stoic doctrine of prolepsis was offered as a ‘Socratic’ answer to Meno’s Paradox and an alternative to recollection. The Stoics hold that Socrates’ ethical practice requires attributing a tacit knowledge of moral truth to his interlocutors. They also accept many aspects of the Platonic account of universal knowledge. Their doctrine of prolepsis is a naturalized account of how this a priori knowledge can be explained without recourse to Platonic forms or recollection.

CHAPTER ONE: SOME PRELIMINARY DISTINCTIONS CONCERNING EMPIRICISM AND RATIONALISM

Epistemology was dominated for most of the 20th century by various forms of empiricism. In recent years, however, rationalism has made something of a come back in the works of philosophers like Laurence BonJour and Christopher Peacocke.²⁰ This has sparked an attempt to more clearly demarcate the boundary between empiricism and rationalism. The focal point of this discussion is the possibility of a priori knowledge, i.e. knowledge that is justificationaly independent of sense-perception. Historically, the justificatory independence of a priori knowledge has often been associated with claims for causal independence from sense-perception. Thus, some rationalists (e.g. Plato, Descartes, and Leibniz) have held that a priori knowledge is grounded in the existence of innate ideas; others (e.g. Frege, Gödel, and Roger Penrose) have grounded a priori knowledge in a faculty of rational intuition. Recent proponents of a priori knowledge, however, emphasize its consistency with naturalist psychology.²¹ Instead of claiming that a priori knowledge is justificationaly independent of sense-perception because of its causal independence, they stress the importance of maintaining a distinction between psychological and epistemological dependence. Contemporary rationalists like BonJour and Peacocke claim that a priori knowledge can be explained in terms of concepts are psychologically derived from sense-perception and operate in common psychological functions. Indeed, this is a key part of their ‘moderate,’ naturalist approach to rationalism.

²⁰ Cf. in particular BonJour (1998), Peacocke (2000) and (2004).

²¹ Cf. especially BonJour (1998, 106-110) and Peacocke (2000, 256-8).

This distinction between psychological and epistemological dependence on sense-perception is not limited to contemporary philosophy. Leibniz and Kant famously made similar distinctions and recent scholarship has highlighted the hermeneutic importance of this distinction for understanding Locke.²² I propose that the same is true for ancient philosophy. In the next chapter I will argue that the Stoics cannot properly be considered empiricists because they hold that a priori knowledge plays a necessary role in the development of knowledge proper. This chapter provides the background for that argument. Section 1.1 sets out a number of definitions and distinctions as a basis for discussion. The most important of these is the distinction between psychological and epistemological empiricism. The former is the doctrine that all concepts are derived from sense-perception. It is thus opposed to theories of innate ideas. The latter is the doctrine that all knowledge of the world is justificationaly dependent upon sense-perception. It is thus opposed to rationalism. Section 1.2 argues one can consistently maintain both psychological empiricism and rationalism. My initial illustrations are drawn from Peacocke. I also argue, however, that this distinction was recognized in the ancient world. Indeed this distinction is the key to understanding Aristotle's discussion of first principles in the *Posterior Analytics*. In Section 1.3 a brief discussion of Stoic epistemological terminology translates these definitions and distinctions into a set of criteria for determining whether the Stoics are epistemological empiricists or rationalists.

²² E.g. Loeb (1981, 36-70) and Lowe (1995, 31-2).

1.1 The Definitions of Epistemological Empiricism and Rationalism

Let us call the doctrine that all concepts are derived from sense-perception ‘psychological empiricism.’²³ Various forms of psychological empiricism may differ on the nature of concepts and the various ways in which they are derived from sense-perception. They are all united, however, in their opposition to the existence of innate ideas. Likewise, we should allow that there are various forms of innatism. Indeed, it is likely that psychological empiricism and innatism lie on a continuum along which we might plot a variety of extreme and moderate positions.²⁴ Determining the precise nature of the distinction between psychological empiricism and innatism might, therefore, turn out to be a more complicated matter than our initial distinction suggests. But our initial distinction will be sufficient for the present discussion.

Let us call the doctrine that all knowledge of the world is a posteriori ‘epistemological empiricism.’ The definition of this doctrine depends on that of several key terms. Knowledge is a privileged epistemic state. It is privileged in two senses. First, it is by definition true. In other words, $\Box(x \text{ knows } p \supset p)$. Second, this truth is not merely accidental. It is this second aspect of its privileged status that distinguishes knowledge of lower cognitive states that might also happen to be true (e.g. mere true belief or opinion). Let us call the explanation for the privileged epistemic status that distinguishes knowledge from lesser cognitive states its ‘justification.’ Epistemological theories differ on the nature of justification. One major division is between internalist and externalist theories of justification. Internalist theories require that all justifying factors be cognitively accessible from the perspective of the knower. Externalist theories

²³ The distinction offered in this section between psychological and epistemological empiricism can be found under a variety of names in many sources, e.g. Wolterstorff (1992) and Noonan (1999, 39).

²⁴ Cf. Scott (1995, 91-5; esp. 91n.2).

allow that at least some justifying factors are not cognitively accessible – they are external to the knower’s perspective.²⁵

A posteriori knowledge can be defined as a true cognitive state the justification of which includes the fact that it stands in an appropriate relation to sense-perception. Various forms of epistemological empiricism will differ in their accounts of justification and specifications of what counts as standing in an appropriate relation to sense-perception, including whether they are internalist or externalist. These various theories are united, however, in their opposition to rationalism. Rationalism can be defined as the doctrine that some knowledge of the world is a priori; in other words, there is some knowledge of the world the justification of which does not include the fact that it stands in an appropriate relation to sense-perception. As in the case of epistemological empiricism, various forms of rationalism will differ according to the scope and explanation they give to a priori knowledge. They are united, however, by the claim that this knowledge is about the world. This specification leaves open the possibility that an empiricist may accept that there is a priori knowledge of certain statements or propositions, but hold that these do not constitute knowledge of the world. Rather, the empiricist holds that they are true by some type of convention and so merely consist of knowledge of relations between ideas or symbols. Indeed, this is position held by Hume and the Logical Positivists.²⁶

²⁵ I borrow this formulation of the distinction from BonJour (1992). There are also famous counter-examples to the definition of knowledge and justified true belief and some contemporary theorists prefer to use different terminology altogether (e.g. ‘entitlement’); however, these definitions are sufficient for our discussion.

²⁶ BonJour (1998, 16-9) distinguishes between ‘moderate’ and ‘radical’ empiricism. The former accepts the existence of some a priori knowledge, but denies that it is knowledge of the world. The latter denies the existence of a priori knowledge altogether.

Defined in this way the terms ‘epistemological empiricism’ and ‘rationalism’ are mutually exclusive and jointly exhaustive contradictories. There is an asymmetry in their definitions. Rationalism is defined as the denial of epistemological empiricism. Likewise, a priori knowledge is defined as knowledge that is not a posteriori. This asymmetry is useful for the sake of precision and can be justified by the fact that almost all rationalists admit that knowledge of particular and contingent facts is a posteriori. Rationalists typically claim that only a subset of truths, usually necessary truth, is known a priori. The initial case for a priori knowledge is, therefore, usually a negative one. It is often claimed, for example, that a posteriori entitlement cannot account for cognitive grasp of necessary truths and that these must be grasped in some other way. Rationalists differ amongst themselves as to the way that such a priori knowledge is to be explained. It is true that some rationalists hold the stronger position that all knowledge is a priori. But this is usually because they distinguish between stricter and looser meanings of ‘knowledge’ and limit the strict sense to knowledge of universal and necessary truths.²⁷ When considering historical examples, we may feel the need to bolster this strict distinction. Rationalists are philosophers who place emphasis on the role of reason – taken as the source of a priori knowledge – as necessary and ineliminable to our understanding of the world.

²⁷ Frede (1996a), for example, argues that this is the case with Aristotle. Aristotle clearly holds that one can only have knowledge in the proper sense of truths that are universal and necessary. Since knowledge proper is exhausted by intuition of first principles and demonstrative understanding of what follows from them, he holds that all knowledge in the strict sense is known a priori. Aristotle’s epistemology is an example of what we might call ‘extreme rationalism.’ It is also clear, however, that Aristotle admits a looser sense of ‘knowledge’ that includes particular and contingent facts known by sense-perception and experience. On the analysis of Aristotle’s epistemological terminology, see Burnyeat (1981).

1.2 The Separability of Psychological and Epistemological Empiricism

In both the *Treatise of Human Nature* and *Enquiry Concerning Human Understanding*, Hume bases his arguments for epistemological empiricism on his doctrine of psychological empiricism.²⁸ As noted above, many rationalists have forged a similar link between their theories of a priori knowledge and innate ideas (or some other faculty of knowledge that is causally independent of sense-perception). Such arguments have led to the expectation that psychological and epistemological doctrines imply one another. This expectation has had a pernicious effect on our understanding of the Stoics: scholars often cite their rejection of innate ideas and Platonic recollection as evidence that they are epistemological empiricists.²⁹ It is critical for my argument, therefore, not only to show that we should make a distinction between these psychological and epistemological doctrines, but also that that they can be held independently of one another.

Recent rationalist proponents place a great deal of emphasis on the consistency of a priori knowledge and psychological empiricism as part of their effort to offer a ‘moderate’ or naturalist version of rationalism.³⁰ Thus, it will be convenient to start with the following example from Paul Boghossian and Christopher Peacocke:

Now consider someone who comes to know a logical truth, $(p \supset q) \vee (q \supset p)$ say, by reading a proof of it. His seeing the lines of the proof, and his seeing the citations of the rules used at each step, cause his belief that $(p \supset q) \vee (q \supset p)$. We must, however, distinguish sharply between the relation of causation and the relation of entitlement. The thinker is entitled to his belief that $(p \supset q) \vee (q \supset p)$ because he has an outright proof of it, resting on no assumptions. The proof itself provides an entitlement to belief in its

²⁸ Cf. Noonan (1999, 39-45).

²⁹ E.g. Hankinson (2003, 63) and Annas (1992, 86).

³⁰ Cf. Boghossian and Peacocke (2000), Peacocke (1998), Peacocke (2000), and Peacocke (2004).

last line. Perception of the written proof gives access to that entitlement, but is not itself a part of that entitlement.³¹

In a separate example Peacocke asks us to consider someone learning – let us call him Dion – for the first time the logical principle $A \supset (A \text{ or } B)$.³² The principle is expressed by the sentence ‘from A, the conclusion A or B can be inferred.’ Peacocke suggests that Dion draws on his understanding of the expressions in the rule and comes to appreciate that the principle is valid. This appreciation provides the justification that makes his cognitive state a form of knowledge – but how shall we explain this? Peacocke rules out from the beginning the possibility that Dion infers the principle from some previous knowledge. The principle is a primitive axiom and so cannot be justified in terms of any other axioms or rules. That the principle is simply a matter of stipulation is also unlikely since the axiom is appreciated as valid upon reflection on expressions such as ‘or’ that are already understood. Nor is it psychologically plausible to hold that this appreciation comes from any explicit inference from the truth-tables for the connectives involved. Rather, the truth tables are recognized as correct based on our understanding of these expressions. Thus, Peacocke offer the following explanation. Dion imagines a situation in which A is true and B is false and recognizes that ‘A or B’ will be true in this case. He then proceeds to a case in which A and B are both true and recognizes that ‘A or B’ will again be true. Finally, he recognizes that there is no case in which the antecedent is true and the consequence false. Thus, he comes to rationally accept the axiom as true and this rational acceptance results in a judgment that has the status of knowledge.

Peacocke gives explanatory priority to Dion’s understanding-based capacity to evaluate particular alterations in everyday situations, a capacity that is exercised prior to

³¹ Boghossian and Peacocke (2000, 1-2).

³² Peacocke (1998a, 44-54).

any reflection upon or explicit knowledge of general logical principles or truth-tables.

This same capacity is run off-line in the simulation as Dion draws upon his understanding of these expressions in coming to recognize the validity of the logical principle. It is a constraint on suppositionally imagining properly that one carry over to the supposed state of affairs the hold of certain transitions that one would be prepared to make in the actual world – this insures that the same understanding-based capacity is exercised in the suppositional case.

Peacocke identifies a thinker's understanding of the expression 'or' with the possession of an implicit conception with the following content:

Any sentence of the form 'A or B' is true iff either A is true or B is true.

Or, at the level of thought:

Any thought (content) of the form A or B is true iff either A is true or B is true.

This implicit conception is influential in the thinker's evaluation of alternations given information about the truth-values of their components. This influence, however, is not a matter of inferring anything from the content of the implicit conception. Nor is explicit knowledge of this content required for such influence. Rather, the thinker's possession of this implicit conception explains his patterns of semantic evaluation of the complex given information about the truth-values of its components. Possession of (at least some) concepts consists in the possession of a corresponding implicit conception. There are many cases, however, in which one has an implicit conception but is unable to make its content explicit. Indeed, Peacocke holds that there are even cases in which thinkers mischaracterize the content of their implicit conceptions. Even the explicit endorsement of an incorrect definition does not mean that they do not have an implicit conception

whose content is the correct definition. The attribution of content to implicit conceptions is fundamentally answerable to its role in explaining the thinker's ordinary application of the concept in question – and not her explicit statements about the matter. Thinkers can be good at classifying cases but bad at articulating the principles guiding their classifications

The crucial point for our present concerns is that the concepts involved in such implicit conceptions are psychologically derived from sense-perception. Nevertheless, the justification for Dion's acceptance of the logical principle is fundamentally a priori. Dion grasps that the principle is necessarily true based on his understanding of its constituent terms. This understanding makes use of the concepts derived from sense-perception; but sense-perception itself does not play a justificatory role in understanding the principle.

I offer this illustration because Peacocke's analysis of the role of implicit conceptions is very close to the Stoic doctrine of prolepsis set out in chapters two and three. Reliance on such a contemporary example, however, may raise concerns about the anachronism of applying to the Stoics this distinction between psychological and justificatory dependence on sense-perception. Such concerns can be dispelled by considering Aristotle's statements about first principles in the *Posterior Analytics*.³³

There is an initial paradox in Aristotle's statement about knowledge of first principles. On the one hand, he claims in APo. 1.18 that all knowledge is dependent upon sense-perception. The argument may be summarized as follows:

- (i) Understanding comes from demonstration.
- (ii) Demonstration depends on knowledge of first principles.
- (iii) Knowledge of first principles comes about through induction.

³³ The interpretation of Aristotle offered here is largely derived from Frede (1996a).

(iv) Induction requires sense-perception of individuals.

Nevertheless, it would be misleading to characterize Aristotle's epistemology as empiricist without qualification since this would imply that he disavows a priori knowledge of the world. This is clearly not the case. Aristotle holds that whereas sense-perception is "more knowable to us," first principles are "more knowable by nature."³⁴ By this he means that, although the particular facts grasped through sense-perception are the first things that we come to 'know' during the course of our cognitive development, first principles are the first objects of knowledge proper.³⁵ This is because first principles are necessarily and universally true. All that is required in order to grasp their truth is a sufficient understanding of their constituent concepts. The cognitive state in which first principles are grasped, which Aristotle calls 'intellect' (*nous*), neither requires nor admits of any further support for its epistemic status. Thus, Frede writes:

Our knowledge of [first principles] is not a posteriori. They owe their status as known truths to the fact that they are seen by reason to be immediate truths. And since he also thinks that whatever else we know we know by deduction from first principles, that is to say a priori, his view is clearly that all knowledge, properly speaking, is knowledge by reason. Things are known a posteriori only in a debased sense of 'knowledge.' That is to say, Aristotle is the paradigm of an extreme rationalist.³⁶

Frede goes on to explain that the solution to the initial paradox is to attribute to Aristotle something like the above distinction between psychological and epistemological dependence on sense-perception. We should understand the argument of APo. 1.18 as indicating psychological dependence only. Induction from perception of individuals is the way that we come to acquire the concepts necessary for grasping first principles as necessary truths. But induction and sense-perception do not play a justificatory role in

³⁴ APo. 1.2 72a1-15.

³⁵ APo. 2.19 99b15-100b18.

³⁶ Frede (1996a, 157-8).

our knowledge of first principles. This is secured by the fact that the principles themselves are immediate, necessary truths. In short, Aristotle is a psychological empiricist, but an epistemological rationalist.

Aristotle is led to this distinction by his desire to account for certain aspects of Plato's epistemology – namely knowledge of universal and necessary truths – while rejecting the recollection of transcendent forms as the psychological basis of such knowledge. I will argue that the same motivations are present in Stoic epistemology. Thus, we should not be surprised to find the same distinction between psychological and epistemological dependence on sense-perception in their account of knowledge proper.

1.3 Criteria for Empiricist and Rationalist Readings of Stoic Epistemology

Having set out these distinctions, my objection to the characterization of Stoic epistemology as empiricist may be summarized as follows: this characterization is misleading since it does not take account of the distinction between psychological and epistemological empiricism. We should distinguish two questions here. Are the Stoics psychological empiricists or innatists? And, are the Stoics epistemological empiricists or rationalists? My discussion will be concerned only with the second of these questions. Although there is some support for the claim that the Stoics are innatists about moral concepts, the majority of evidence suggests that the Stoics are indeed psychological empiricists.³⁷ I am willing to grant this claim for the sake of the present discussion. The above consideration of Aristotle's doctrine of first principles shows, however, that the

³⁷ The innatist interpretation is argued by Bonhöffer (1980, 187-222). The literature on both sides of this topic are summarized by Scott (1995, 201n.24). Scott himself supports a dispositional innatist reading for moral concepts, but notes that the Stoics are most likely psychological empiricists with respect to all other concepts (1988) and (1995, 201-210). Cf. also comments by Sharples (1996,21) and Glidden (1994, 135).

Stoics' psychological empiricism does not imply epistemological empiricism. To establish this claim one would have to show that they also hold that all knowledge is a posteriori.

The evaluating of whether Stoic epistemology is properly considered a form of empiricism or rationalism must take into account their epistemological terminology. The Stoic term that is normally translated as 'knowledge' is *epistêmê*. As with Plato and Aristotle, however, this translation can be misleading.³⁸ *Epistêmê* carries connotations of systematic or explanatory understanding that go beyond the connotations of 'knowledge' in contemporary epistemological discussions. For example, according to Stobaeus 2.73,16-74,3 '*epistêmê*' refers not only to the cognitive grasp of individual propositions, but also to the mind's systematic understanding of a whole body of mutually supporting propositions. I will therefore translate *epistêmê* as 'scientific understanding.' The Stoics distinguish three types of cognitive states that grasp (true) individual propositions: mere belief or opinion (*doxa*), comprehension (*katalêpsis*), and scientific understanding.³⁹ These are distinguished according to the way that the proposition is grasped. When it is possible that the grasped proposition could be false, the cognitive state is a form of mere belief. We might express the epistemic status of mere belief as $\diamond(x \text{ opines } p \ \& \ \sim p)$. The Stoics tend to treat cases of false assent as paradigmatic of mere belief.⁴⁰ In the strict sense, however, assent even to persuasive (*pithanai*) impressions that turn out true are also cases of mere belief.⁴¹ Comprehension requires that the mind grasp an impression in

³⁸ For Plato and Aristotle, cf. Burnyeat (1981). For similar comments concerning the Stoics, cf. Annas (1991, 84-5).

³⁹ Cf. Cicero Acad. 1.41-2, 2.145, and Sextus M 7.151-7.

⁴⁰ Cf. Annas (1991).

⁴¹ Cf. DL 7.75: "A persuasive proposition is one which leads to assent, for example, 'if someone gave birth to something, she is its mother.' But this is false; for the bird is not the mother of the egg." (Trans. IG).

such a way that it is not possible that the corresponding proposition could be false. In other words, $\Box(x \text{ comprehends } p \supset p)$. The Stoics call impressions that are capable of being grasped in this way ‘comprehensible’ (*katalêptikai*). In cases of scientific knowledge the mind also assents to a comprehensible impression. In this case, however, the Stoics say that the mind’s grasp is such that it could not be shaken by any possible argument.⁴² This is because the mind brings to bear on the proposition its comprehensible understanding of the relevant body of knowledge. It thus understands why the proposition is true and could not be otherwise. Whereas comprehension often occurs in all humans, the Stoics limit scientific knowledge to the wise person.

Comprehension is thus the closest Stoic approximation to contemporary conceptions of knowledge. Indeed, LS note that in many cases the Stoic term ‘*katalêpsis*’ could be translated as ‘knowledge.’⁴³ This is true, provided we give a particularly strong reading to justified true belief. The Stoics require that the propositional content of comprehension be causally linked to its corresponding state of affairs in such a way that this state of affairs is itself the explanation for why the comprehension is true and could not be false. This requirement rules out Gettier cases in which a belief is justified in one way and is only accidentally true in some totally unrelated way.⁴⁴ Such cases exploit the fact that according to many modern theories justification and truth are separate requirements for knowledge. Thus, one can be justified in holding a belief that may nevertheless be false. This is not the case for Stoic comprehension. The Stoics do have a category corresponding to a looser notion of justification, namely assent to a reasonable

⁴² Cf. Sextus M 7.151 and Stob. 2.73,16-74,3.

⁴³ LS (1987, 1:257). Cf. also Schofield (1980, 284).

⁴⁴ Cf. Frede (1999, 304).

(*eulogon*) impression. But since a reasonable impression may turn out to be false, this type of grasp does not qualify as comprehension; it is a case of opinion.⁴⁵

In the following discussion I will use comprehension as the basis for translating the above definitions of epistemological empiricism and rationalism. Thus, we can offer the following criteria for answering our central question:

(EC) The Stoics are empiricists iff all cases of comprehension are a posteriori.

(RC) The Stoics are rationalists iff some cases of comprehension are a priori.

The epistemic status of comprehension is: $\Box (x \text{ comprehends } p \supset p)$. I will call the explanation for why this entailment holds the justification of the comprehension.

Thus, (i) implies that sense-perception is an essential part of the justification for all cases of comprehension. Similarly, (ii) implies that for at least some cases of comprehension sense-perception does not play a role in explaining why their propositional content could not possibly be false. In the following chapters I will argue that the Stoics do indeed recognize such cases of comprehension and should thus be considered rationalists

⁴⁵ Cf. DL 7.76: “A reasonable proposition is one which has more chances of being true [than not], such as ‘I will be alive tomorrow.’” (Trans. IG). That assent to a reasonable impression is justified, although fallible, is suggested by the famous story of Sphaerus (reported at DL 7.178). Cf. Brennan (1996) for discussion of the possible interpretations of what is required for such justification.

CHAPTER TWO: CRITICISM OF EMPIRICIST READINGS OF STOIC EPISTEMOLOGY

The analysis of chapter one established the following criterion for an empiricist reading of Stoic epistemology:

(EC) The Stoics are empiricists iff all cases of comprehension are a posteriori.

This claim might be supported in two ways. First, the Stoics might hold that comprehension is a posteriori because it is a species of sense-perception itself. Section 2.1 shows that this interpretation is not correct. The Stoics distinguish two types of comprehension: perceptual and rational. Rational comprehension deals with conceptual relations and clearly extends beyond the scope of sense-perception. A second possible interpretation is that sense-perception plays an essential role in the justification of rational comprehension. In section 2.2 consideration of this possibility leads to a further refinement of the criterion for the empiricist reading. Sense-perception might play this justificatory role in either an inferential or causal justification of rational comprehension. Sections 2.3 and 2.4 argue against these two possibilities respectively. What emerges from this discussion is that the Stoics hold a position very similar to Aristotle's account of first principles. Chrysippus offers two criteria of truth, sense-perception and prolepsis, which correspond to perceptual and rational comprehension. Prolepses allow reason to grasp certain axioms and definitions as necessary truths. These axioms and definitions provide the first principles for valid demonstrations of the other conceptual relations that are grasped by rational comprehension. As in Aristotle's account of first principles, the Stoics hold that the development of prolepses is psychologically dependent on sense-

perception, but that sense-perception does not play a justificatory role in accounting for the privileged epistemic status of prolepses.

2.1 Perceptual and Rational Comprehension

That comprehension is a species of sense-perception might easily suggest itself to a casual reader of the Stoics' debate with the Academic and Pyrrhonian skeptics. I know, however, of no scholar who fully endorses this position.⁴⁶ It is clear from other texts that the Stoics believe certainty is possible outside the scope of sense-perception.

Nevertheless, it is interesting to explore how this interpretation might be plausibly inferred from certain interpretations that are widely accepted. This discussion will set out the groundwork for my own interpretation of the Stoic doctrine by introducing the distinction between perceptual and rational comprehension.

From the reports of Cicero and Sextus it seems that Zeno named comprehension as the criterion of truth.⁴⁷ He claims, in other words, that comprehension is a cognitive state the propositional content of which is guaranteed to be true. Comprehensions can, therefore, be used as 'measuring-sticks' (*kanones*) for judging the truth of other beliefs. Comprehension is defined by Sextus as assent to a comprehensible presentation.⁴⁸ As noted above, this is a presentation the propositional content of which is guaranteed to be

⁴⁶ The closest is perhaps Annas (1991, 185), although she ultimately rejects this interpretation for the reasons cited below. Her position is best interpreted as a version of the reductive account criticized in section 2.2; she writes: "Like all Hellenistic theories, the Stoic theory is empiricist; it focuses on how we acquire information through the senses, assuming optimistically that with this start from the senses the mind can eventually grasp everything that we recognise to be knowledge. The Stoics have no doubt that we do have knowledge of the truths of logic and mathematics, though they put surprisingly little effort into showing how we get to these from the mind's operations on the data of sense." Cf. her similar criticism of the Stoic account of mathematics at Annas (1992, 86).

⁴⁷ Cicero Acad. 1.42 and Sextus M 7.150; cf. Striker (1996b) for commentary on these texts.

⁴⁸ M 8.85-6.

true by the causal history linking the presentation and the corresponding state of affairs.⁴⁹ All of our examples of comprehensible presentations take sense-perception as their paradigm. This is also true of the skeptical counter-arguments. This might suggest that only sense-perception satisfies the requirements for comprehension. This argument is bolstered by consideration of the Stoics' causal account of comprehensible presentations. The Stoics might hold that only sense-perceptions can stand in the appropriate causal relation to the corresponding state of affairs that guarantees them to be true. Thus, Striker has argued that there is no positive evidence for extending the scope of comprehensible impressions beyond sense-impressions.⁵⁰ This conclusion could be combined with Sextus' definition of comprehension to infer that comprehension is limited to sense-perception. The argument can be summarized as follows:

- (1) Sense-perception is assent to a sensible impression.
- (2) Comprehension is assent to a comprehensible impression.
- (3) Comprehensible impression is a species of sensible impression.
- (4) Thus, comprehension is a species of sense-perception.

The Stoic position might be, then, that all other beliefs are (explicitly or implicitly) inferred from sense-perceptions and may be known with varying degrees of plausibility; but none possess the certainty of sense-perception itself. This is why Zeno names sense-perception as the criterion of truth.

The plausibility of this reading might be increased by consideration of the scope of sense-perception in Stoic epistemology. It is often noted that the Stoics extended the

⁴⁹ Cf. Annas (1991), Frede (1986b) and (1999), and Hankinson (2003) for discussion of the standard Stoic definitions of the comprehensible presentation and the skeptical counter-arguments. I accept the causal reading of the Stoic doctrine put forward by Frede and endorsed by Hankinson.

⁵⁰ Striker (1996b, 73-6). The argument is endorsed by Annas (1991, 183n.) quoted below.

scope of sense-perception well beyond what we might expect, including for example ethical properties.⁵¹ Plutarch CN 1042e-f provides textual support for this interpretation:

[Chrysippus] says that good things and bad are perceptible, writing as follows in *On the End* Book 1: "... Not only are the passions, grief, and fear, and the like, perceptible along with [peoples'] appearances, but also it is possible to perceive theft and adultery and similar things, and in general, folly and cowardice and many other vices, and not only joy and benefactions and many other right actions, but also prudence and courage and the remaining virtues.

The standard explanation is that, according to the Stoics' physical doctrine virtues and other ethical properties are corporeal.⁵² The implicit assumption is that all corporeal entities are, at least in principle, perceptible. If this assumption is true, the Stoics give a very wide scope to sense-perception since they hold that all existing entities are corporeal. Indeed, they hold that properties and even extrinsic relations are in some sense corporeal modifications of these entities.⁵³ The Stoics explicitly deny the existence of incorporeal forms and universals, the traditional objects of 'pure thought.' Thus, Annas goes so far as to assert that for the Stoics perceiving and thinking are identical: thought is simply the articulation of perceived content.⁵⁴

One might draw further support for this interpretation from the distinction between sensory and non-sensory presentations at DL 7.49:

⁵¹ E.g. Annas remarks "I agree with Striker that there are no apprehensive appearances that strike the mind without the mediation of the senses. This does not narrow their scope as much as it might in some modern theories: for the Stoics comprehension of value, even of obligatoriness, is empirical, since we perceive that some item is good, or that some action is what we should do. This should not surprise us; there is not need for empiricist theories to be narrow or restrictive, if they accept a natural and intuitive notion of what experience is, rather than one narrowly limited, for example by modern philosophical conceptions of what science requires. (The Stoics have a further support for their empiricism in their materialism: for them virtues and values are, strange as it may sound, really physical. But this is a theoretical backing not really required by the intuitive position.)" (1991, 185n.3). Cf. similar comments at Annas (1992, 80-1).

⁵² E.g. Annas (1991, 185n.3) quoted above.

⁵³ Cf. the texts and commentary by LS (1987, 1:162-79).

⁵⁴ Thus, Annas goes so far as to assert that for the Stoics perceiving and thinking are identical (1992, 75).

[The Stoics] divide presentations into those which are sensory (*aisthêtikai*) and those which are not. Sensory presentations are obtained through one or more sense-organs, non-sensory are ones obtained through thought (*dianôias*) such as those of the incorporeals and of the other things grasped by reason (*tôn logôi lambanomenôn*).

The fact that Diogenes lists the incorporeals as an example of objects of non-sensory presentations might be taken as confirmation that all corporeal things are the objects of sensory presentations. Thus, only knowledge of incorporeal things such as space, time, and the void – things that we cannot perceive and which do not exist, but whose subsistence we can infer – extends beyond the scope of sense-perception. It might be plausibly held that the Stoics believe we can have no certain knowledge of such incorporeals.⁵⁵

The problem with this line of argument is that it does not take into account the distinction between particular and general propositions. Consider for example, the difference between the propositions ‘this (thing) is sweet’ and ‘sweetness is pleasurable.’ The Stoics classify the first as a definite proposition.⁵⁶ It predicates a concept (‘sweet’) of a particular corporeal object indicated through demonstrative reference (‘this thing’). The Stoics say that a definite proposition is true whenever its predicate belongs to the thing that falls under the demonstrative reference.⁵⁷ It is likely that the contents of sense-presentations are definite propositions of this type.⁵⁸ The statement, ‘sweetness is

⁵⁵ This is implied by Annas’ comments on mathematics (1992). She notes that the Stoics maintain that there is certainty in mathematics, but implies that their theory cannot account for this assertion.

⁵⁶ Cf. Sextus M 8.93-8.

⁵⁷ Cf. Sextus M 8.100.

⁵⁸ This is especially clear from Cicero Acad. 2.21 quoted below. Cf. also Calcidius Tim. 220: “[Chrysippus says] The soul as a whole dispatches the senses (which are its proper functions) like branches from the trunk-like commanding-faculty to be reporters of what they sense, while itself like a monarch passes judgment on their reports. The objects of sensation, as bodies, are composite, and the individual senses sense one definite thing, this one colors, another sounds...and in all cases of the present; no sense remembers what is past or foresees the future. It is the function of internal reflection and reasoning to

pleasurable,' on the other hand, makes a statement about a conceptual relation.

According to Sextus M 11.8-11, Chrysippus held that the proper analysis of this type of categorical statement is an indefinite conditional with the form: 'if something is sweet, then it is pleasurable.' This type of conditional acts like a universally quantified proposition – i.e. $(\forall x)(x \text{ is sweet} \supset x \text{ is pleasurable})$ – and so performs the same function in Stoic logic as categorical statements in Aristotelian logic. The conditional asserts that the quality of sweetness is a species of the pleasurable. Although we may arrive at knowledge of this conceptual relation from sense-perceptions of particular things that are both sweet and pleasurable, the presentation of this conceptual relation is not itself a matter of sense-perception. Thus, Ps-Plutarch 4.9.13 states:

Chrysippus [says] that the generic sweet is intelligible (*noêton*), but the specific sweet which is encountered [i.e. in sense-perception] is perceptible (*aisthêton*).

The Stoic position is that the generic sweet does not exist. It is, rather, a conceptual object that subsists in accordance with thought.⁵⁹ The same is true of all species and genera.⁶⁰

It seems that that the distinction at DL 7.49 between sensory and non-sensory presentations corresponds to that between definite and universal propositions. Moreover, it is clear that many propositions that are grasped by comprehension are expressions of conceptual relations. Indeed, this is the case with the most important propositions in Stoic ethics and physics. Consider, for example, the following Stoic arguments at DL 7.103:

understand each sense's affection, and to infer from their reports what it [i.e. the object] is, and to accept it when present, remember it when past, and foresee it when future."

⁵⁹ Their exact ontological status is controversial; cf. Caston (1999). The passage is quoted and discussed below in chapter three.

⁶⁰ Cf. DL 7.60-1 quoted below.

For as the property of hot is to warm, not to cool, so the property of good is to benefit, not to injure; but wealth and health do no more benefit than injury, therefore neither wealth nor health is good.⁶¹

Each of these arguments could be formulated in terms of indefinite conditionals tracing out conceptual relations between the given qualities. The Stoics clearly hold that such propositions are possible objects of comprehension and scientific understanding.⁶²

DL 7.52 reports that the Stoics make a similar distinction between two types of comprehension:

According to [the Stoics] comprehension occurs [a] by sense-perception (in the case of white objects, black objects, rough objects, smooth objects); and [b] by reason (in the case of conclusion drawn through demonstration, for example, that there are gods and that they are provident).⁶³

I propose that this distinction corresponds to that between sensory and non-sensory presentations. Sensory presentations offer to the mind particular propositions (e.g. ‘this is white’). Thus, comprehension of particular facts about the world occurs by sense-perception. We can call this perceptual comprehension. The comprehensible presentation is the criterion of truth for perceptual comprehension because it forms the causal link between the mind and the world that makes it possible to grasp this fact. Non-sensory presentations offer the mind universal propositions (e.g. ‘the divine is provident’ or, more correctly, ‘if something is divine, then it is provident’).⁶⁴ The comprehension of

⁶¹ Trans. Hicks.

⁶² Unlike Plato and Aristotle, the Stoics do not seem to hold that scientific understanding is entirely composed of generic propositions. That it includes at least some particular propositions is made clear by its identification with the mind of the wise person (since it is clear that she will have knowledge of some particular facts) and of god (who knows all particular facts). Nevertheless, the greater and more important part of scientific understanding is the knowledge of necessary conceptual relations by which these particular facts are grasped.

⁶³ Trans. IG.

⁶⁴ It is problematic whether we should analyze the statement ‘god is provident’ as an intermediate proposition like ‘Socrates is a man,’ or the indefinite conditional ‘if something is god, then it is provident.’ The question is whether ‘god’ functions as a name or an appellative with only one possible referent. I believe that the latter interpretation is correct. It is clear from the texts quoted below that we have a

these propositions occurs by reason. Thus, we can call this rational comprehension. The criterion for rational comprehension will be discussed below.

The correlation of these distinctions can be supported by further consideration of the examples that Diogenes offers of rational comprehension. Diogenes says that rational comprehension includes things known by means of demonstration, e.g. that the gods exist and are provident. Comparison with passages from Plutarch that report the actual Stoic arguments show that these propositions are considered to be conceptual truths. Here is Plutarch's statement at CN 1075e:

Moreover they themselves [the Stoics] are unceasingly busy crying woe against Epicurus for ruining the prolepsis of the gods by abolishing providence. For, they say, god is preconceived and thought of not only as immortal and blessed, but also as benevolent, caring and beneficent.

At SR 1051e Plutarch attributes this argument to Chrysippus:

He fights especially against Epicurus and against those who do away with providence, basing his attack upon the conceptions (*apo tôn ennoiôn*) that we have of the gods in thinking of them as beneficent and humane.⁶⁵

A few lines further down at SR 1051f Plutarch offers the following quote from

Antipater's *On the Gods*:

As a preliminary to the whole discourse we shall take a concise reckoning of the clear comprehension (*tên enargeian*) which we have of god. Well then, we conceive (*nooumen*) god to be an animate being, blessed and indestructible, and beneficent towards humans.⁶⁶

The argument in favor of divine providence, for example, might be summarized as follows:

concept of divinity in a way that we do not have of other individuals. I have, therefore, skirted the issue here by translating *to theon* as 'the divine.' Cf. also Schofield (1980).

⁶⁵ Trans. Cherniss (1976). In this passage it is clear that '*ennoiai*' should be taken as '*koinai ennoiai*' which I argue is equivalent to '*prolêpseis*.' Cf. Dyson (2004).

⁶⁶ Antipater fr. 33 (SVF 3.249), trans. Cherniss (1976).

- (1) The gods are beneficent.
- (2) If the gods are beneficent, they care for human affairs.
- (3) Divine concern for human affairs is providence.
- (4) Therefore, the gods are provident.

Diogenes tells us that the conclusion of this demonstration is grasped with comprehension. The conclusion, however, cannot have a stronger epistemic status than its premises. Thus, the Stoics must hold that we have comprehension of the premises. This is also made clear by Antipater's statement that our conception of god is evident (*enargês*), the quality that makes comprehension possible.⁶⁷ Plutarch reports that premise (1) follows from our conception of 'god.' This is also the case with premises (2) and (3): they follow from conceptions of 'beneficence' and 'providence' respectively.⁶⁸

The fact that Plutarch identifies the relevant conceptions of these qualities as "prolepses" is important. DL 7.54 reports that Chrysippus distinguished two criteria of truth. Diogenes writes:

And Chrysippus, at variance with himself, says in the first of his books *On Reason* that sense-perception and prolepsis are the criteria. Prolepsis is a natural conception of universals.⁶⁹

I propose that these criteria correspond to perceptual and rational comprehension respectively. The latter claim is supported by Chrysippus' definition of reason as a

⁶⁷ Cf. Frede (1986b) and (1999) for discussion of the relation between evidence (*enargeia*) and comprehensibility.

⁶⁸ This is especially clear in Epictetus' version of the argument quoted above from DL 7.103. Cf. Diss. 2.11.19-21 and 2.17.5-10 quoted below. The passages are compared by Striker (1996b).

⁶⁹ Diogenes' statement that Chrysippus is "at variance with himself" stems from his statement just above that the comprehensible presentation is the criterion of truth. Striker (1996b) has shown that we can resolve this apparent discrepancy by distinguishing between two senses of 'criterion.' It seems, moreover, that the relevant meaning of 'sense-perception' at DL 7.54 is assent to a comprehensible presentation. Cf. the various meanings of 'sense-perception' listed at DL 7.52.

collection of prolepses and conceptions, a definition that is also attributed to Chrysippus' work *On Reason*.⁷⁰

It seems, then, that prolepses function as the criteria of truth for rational comprehension just as comprehensible presentations function as the criteria for perceptual comprehension. The precise nature of prolepses that allows them to function as the criteria will be the subject of the next chapter. From the above passages, however, we can summarize their criterial function as follows. Reason can apprehend that certain propositions – e.g. ‘if something is divine, it is provident’ or ‘if something is good, it is beneficial’ – are necessarily true based simply upon its understanding of their constituent terms and the way these are semantically linked. The conceptions that make this understanding-based comprehension possible are the prolepses. It is clear that the Stoics think everyone possesses the concept of divinity or goodness – they are among the so-called “common conceptions” (*koinai ennoiai*).⁷¹ Thus, everyone can potentially recognize the truth of these propositions. They only fail to do so if, like the Epicureans, they are confused about the nature of their own conceptions.⁷² Since prolepsis is itself a form of comprehension – this is implied by its status as a criterion of truth – these definitions are guaranteed to be true.

These considerations make it clear that comprehension cannot be regarded as a species of sense-perception. Let me conclude this section by briefly responding to the argument that made this position initially plausible, namely Striker's argument that

⁷⁰ This quote is given by Galen at PHP 5.3.1. Still further support comes from Alexander of Aphrodisias' *Mixt.* 217. He quotes Chrysippus as holding that the common conceptions (*koinai ennoiai*) are most of all the criteria of truth. I have argued in Dyson (2004) that the *koinai ennoiai* should be identified with prolepses.

⁷¹ Cf. Cicero ND 2.13, Epictetus Diss. 1.22, Plutarch SR 1041e, and Sextus M 11.22.

⁷² Cf. Epictetus Diss. 2.17.5-10.

comprehensible impressions are a subset of sensible impressions. I should begin by noting that Striker herself does not endorse the conclusion that comprehension is a species of sense-perception. Rather, she recognizes that the distinction between perceptual and rational comprehension at DL 7.52 could support the following counter-argument:

- (1) Comprehension is assent to a comprehensible impression.
- (2) Comprehension by reason grasps non-sensible impressions.
- (3) Therefore, the scope of comprehensible impressions extends beyond that of sensible impressions.⁷³

In response Striker claims that we should reject (1).⁷⁴ She argues that this definition comes from Sextus himself and not the Stoics. The implication of her argument is that comprehension through reason should not be explained in terms of comprehensible impressions. Striker is correct to point out that the standard definition of the comprehensible impression takes sense-perception as its paradigm and could not easily be extended to the above analysis of prolepsis. We will return to this point at the end of the chapter. This provides a final element of support for my own interpretation that sense-perception (in the strict sense of assent to a comprehensible presentation) is the criterion of truth for perceptual comprehension whereas prolepsis is the criterion for rational comprehension.

2.2 Refinement of the Criterion for Empiricist Readings

We began this chapter by noting that the criterion for an empiricist reading could be satisfied in either of two ways: comprehension might be a posteriori either because it is a species of sense-perception itself or because it is necessarily justified in terms of

⁷³ Frede (1999) offers this argument in favor of non-sensory comprehensible impressions.

⁷⁴ Frede (1996b, 75-6).

sense-perception. We have now eliminated the first possibility by noting the Stoic distinction between perceptual and rational comprehension. On the basis of this distinction we can specify further what is required of an empiricist reading:

(ECii) Stoic epistemology is empiricist iff rational comprehension is a posteriori.

Indeed, our discussion has also shown that rational comprehension consists of (a) the grasp of definitions and axioms known by prolepsis and (b) the grasp of conclusions that follow deductively from such definitions and axioms. Finally, we noted that the epistemic status of these conclusions depends upon that of prolepsis itself. Thus, the criterion for the empiricist reading can be still further refined as:

(ECiii) Stoic epistemology is empiricist iff prolepsis is a posteriori.

The remaining sections will examine this possibility.

That the epistemic status of prolepsis does indeed depend on its relation to sense-perception is the most common interpretation. Scholars recognize that many Stoic doctrines rely on propositions about conceptual relations and that their arguments are based on definitions and common conceptions. Explicitly or implicitly, however, most scholars imply that since these conceptions are derived from sense-perception, the justification for their epistemic status must include reference to sense-perception. For example, it is often suggested that prolepses are true because they develop on the basis of comprehensible presentations. This interpretation is suggested by the following argument by Antiochus of Ascalon, recorded by Cicero at Acad. 2.22. Against the skeptics' denial of comprehensible impressions, Cicero responds: if there were no comprehensible impressions, prolepsis would not be a criterion of truth. Following the above analysis, we can substitute 'comprehension' for 'criterion of truth.' In the

immediately preceding passage Cicero discusses the development of prolepses from sense-perception.⁷⁵ He introduces this discussion with the statement that these conceptions are comprehensible since they are derived from comprehensible impressions.⁷⁶ The implicit assumption seems to be that prolepsis is a form of comprehension iff (i) it is derived from sense-perceptions that are themselves comprehensions and (ii) are derived from them in a way that excludes the possibility of error.⁷⁷ Thus, the argument seems to imply that prolepsis owes its epistemic status to the fact that it is derived from a certain type of sense-perception – in other words, that prolepsis is a posteriori.

The derivation of prolepses from sense-perception can be understood in two ways. First, it might be the case that they are derived via implicit or explicit inference from comprehensible sense-presentations. In other words, one might say that sense-perception supplies something like the initial premises from which prolepses are inferred by means of valid inference. Since this argument supplies the justification for the prolepsis, sense-perception is a necessary element in it. We can call this the inferential reading.

A second possibility is that prolepses come about as the result of some non-inferential cognitive mechanism. Frede, for example, proposes that the human mind has a cognitive mechanism that is only initiated by comprehensible presentations and is teleologically designed such that it does not itself introduce any error in the content of prolepses.⁷⁸ This mechanism, in effect, extends the causal history linking the prolepsis to

⁷⁵ Acad. 2.21, quoted below.

⁷⁶ Acad. 2.21 quoted below.

⁷⁷ Cf. Frede (1999, 319-20).

⁷⁸ Cf. Frede (1999, 320). Frede does not hold that this qualifies the Stoics as empiricists. Rather, his rationalist reading implicitly relies on a distinction between psychological and justificatory dependence similar to my own interpretation (1999, 321-2). Hankinson (2003, 63), however, appeals to Frede's

the world. We might say, therefore, that the prolepsis has the same sort of externalist justification as the comprehensible presentation. We can call this the causal reading.

Sections 2.3 and 2.4 examine the inferential and causal readings respectively.

2.3 Criticism of the Inferential Reading

The most widely accepted view of prolepses is that they are empirical generalizations.⁷⁹ After repeated perception of similar things the mind naturally (i.e. unconsciously) moves to the universal. This might be taken to imply that definitions of natural kinds and other axioms that are known through prolepsis are arrived at through an implicit inductive inference from experience that has the form:

- (1) F(a) and G(a).
- (2) F(b) and G(b).
-
-
-
- (N) $(\forall x)(Fx \supset Gx)$

Here the conclusion (N) represents the content of a certain prolepsis. According to the inferential reading, the truth of premises (1) through (N-1) depends on perceptual comprehension and the argument as a whole provides the justification for the conclusion.

This interpretation is not directly supported by any Stoic text.⁸⁰ Perhaps the strongest argument that can be made in its favor is one that moves backwards from the skeptical argument against induction to the Stoic argument against which it is directed.

At PH 2.201 Sextus explains the argument against induction as follows:

interpretation of prolepses as support for his empiricist interpretation. His position is discussed further below.

⁷⁹ Cf. Sandbach (1930) and Todd (1973). These authors are commonly cited by other scholars who mention prolepses in passing; e.g., most recently, Algra (2003, 157n.13).

⁸⁰ The closest are perhaps Acad. 2.21 and Ps-Plutarch 4.11.1-4, although this is not the most likely interpretation of either.

- (A) An empirical generalization must be based on either a complete or an incomplete survey of particulars.
- (B) A complete survey is impossible since the number of particulars is indefinite.
- (C) An incomplete survey leaves open the possibility of error since some unexamined particular may contradict the generalization.
- (D) Thus, induction cannot provide an adequate basis for comprehension.

In other words, even if we grant that there is perceptual comprehension of premises (1) through (N-1), the above inference is formally insufficient to guarantee the truth of its universal conclusion. One might argue that the very fact that this argument is aimed at the Stoics shows that they claimed that prolepses are empirical generalizations derived by inductive inference from experience. Otherwise the skeptical argument would misfire.⁸¹

Without any further textual support, however, this is an extremely weak historical argument. The assumption is that the skeptics do not put forward arguments of their own, but merely argue from premises their opponents would accept or which can be validly inferred from them. This is a very unreliable strategy for approaching the skeptical arguments. Plutarch and Sextus offer numerous examples of highly uncharitable interpretations put forward by the Academics and Pyrrhonists as the basis for their own arguments. Regardless of the general strategy, however, it should be noted that Sextus does not specify that the argument against induction is aimed against the Stoics in particular. It is addressed to the dogmatists generally (i.e. the Stoics, Epicureans, Aristotelians, and dogmatic Platonists). The term ‘induction’ (*epagogê*) does not appear in any of the Stoic accounts of concept-formation. Since the term is featured prominently in Aristotle’s account of first principles, it is likely that the skeptical argument is primarily aimed at the Peripatetics.

⁸¹ Cf. Annas (1991, 189n.18) for an example of an argument that works backwards from the skeptical position in this way.

Indeed, the argument recorded by Philodemus' reports at *On Signs* 1.2-4.13 provides good textual evidence that the Stoics themselves offered a very similar argument against induction; and this provides the strongest case against taking Stoic prolepses as empirical generalizations. According to Philodemus, the Stoics criticized the Epicureans for relying on inductive inference in their theory of signs. Specifically, they claimed that the following argument is invalid:

- (1) All humans known to me are mortal.
- (2) Thus, all humans are mortal.

Analyzed into its proper logical form, (2) is:

- (2b) If something is human, then it is mortal.

The Stoics analyze signs as having this type of conditional structure.⁸² In other words, the evident fact that something is human is a sign of the non-evident fact that it is mortal. The Stoics agree that (2b) is a true conditional and the object of comprehension. They do not, however, agree that the above argument provides an adequate justification for its epistemic status. They retort that the Epicurean inference relies on the implicit assumption:

- (1b) All humans unknown to me are similar to the ones known to me.

Since future experience may prove (1b) to be false, the conclusion of the argument as a whole is empirically defeasible. If (2b) relied on this inference for its justification, it would not be a matter of comprehension, but rather of mere belief or opinion.

The Stoics propose that a true sign is one in which the elimination of the consequent is *eo ipso* the elimination of the antecedent. In other words, (2b) is true because anything that is not mortal would for that very reason not be human. In other

⁸² Cf. Sextus PH 2.104-6.

words, there is a necessary conceptual entailment between ‘being human’ and ‘being mortal.’⁸³

Comparison with other texts on Chrysippus’ analysis of conditional propositions suggests an even stronger reading. The Stoics offer a stricter and looser analysis of the conditional. The looser interpretation is equivalent to material implication: the conditional as a whole is false only if the antecedent is true and the consequent false. In other words, it is sufficient for the truth of ‘ $p \supset q$ ’ that it be a contingent fact that there is no counter-example such that ‘ $p \ \& \ \sim q$.’ According to the stricter interpretation, the conditional is only true if there is a necessary conceptual entailment between the antecedent and consequence. It must be a necessary fact that there is no counter-example. In other words, propositional content of the conception is empirically indefeasible and would not fall to the argument against induction.⁸⁴

What evidence is there that the stricter analysis of the conditional is appropriate to the propositional content of prolepsis? First, like the doctrine of prolepsis, this analysis of the conditional can be traced to Chrysippus.⁸⁵ Sextus reports at M 11.10-11 that Chrysippus analyzed categorical propositions (e.g. ‘all humans are mortal’), including definitions, as indefinite conditionals (e.g. ‘if something is a human, then it is mortal’). Sextus adds that such conditionals are true iff there cannot be any counter-example, i.e. $\sim \diamond (\exists x)(x \text{ is human} \ \& \ x \text{ is not mortal})$.

⁸³ The Stoics do recognize empirical generalizations of the sort supported by the Epicureans. But they hold that such generalizations are ‘common’ or ‘commemorative’ signs and that conclusions based upon them remain at the level of opinion rather than comprehension. These two types of sign correspond to the stricter and looser interpretations of the conditional discussed below. Cf. LS (1987, 1:263-7) for commentary.

⁸⁴ Cf. LS (1987, 1:210-11).

⁸⁵ Cf. DL 7.71-4 and commentary by LS (1987, 1:210-1).

In conclusion, then, since Chrysippus holds that prolepsis is a type of comprehension, he must have applied the strict interpretation of the conditional to the propositional content of prolepses. And since the Stoics (most likely Chrysippus himself) criticized the Epicureans for relying on empirical generalization to support such conditionals, it is unlikely that they held that prolepses are empirical generalizations or offered induction as the method by which prolepses are derived from sense-perception.

2.4 Criticism of the Causal Reading

The final possibility to be considered is that sense-perception plays an essential role in the justification of prolepsis, but that this justification is causal and non-inferential. The idea that prolepses are guaranteed to be true by the causal processes through which they come about has been most fully developed in several papers by Frede.⁸⁶ This interpretation of prolepses has recently been connected with the empiricist reading of Stoic epistemology by Hankinson.⁸⁷

Frede originally developed his causal reading as an account of comprehensible presentations, taking sense-perception as their paradigm.⁸⁸ He attempts to explain how the Stoics can avoid certain skeptical arguments. The arguments presuppose that a knower must be able to consciously distinguish between comprehensible and non-comprehensible presentations; and, in general, that in order for a presentation to be comprehensible one must actually know that it is comprehensible. Rather, Frede argues

⁸⁶Frede (1986) and (1999). Frede does not, however, link his causal account to an empiricist reading of Stoic epistemology. On the contrary, he explicitly criticizes the empiricist reading and characterizes the Stoics as rationalists Frede (1994, 55-6), quoted below. I think that Frede's interpretation relies on a distinction between psychological and epistemological dependence similar to the one I advocate in this chapter.

⁸⁷ Hankinson (2003, 63).

⁸⁸ Frede (1986b). Frede (1999) holds that there are non-sensory comprehensible presentations.

that comprehensibility is an objective feature possessed by the presentation due to the causal history linking it to its corresponding state of affairs. In short, it is one in which no external or internal obstacle has introduced a distortion or source of error into the phenomenological presentation of the object. Frede argues that the human mind is naturally sensitive to comprehensible presentations and that they produce a certain determinate, causal effect. One effect is that they cause the mind to conceptualize them in a certain way. It is this effect that guarantees that the propositional content of the presentation is true. A second effect is that the comprehensible presentation commands the mind's assent.⁸⁹ The resulting cognitive state is a comprehension regardless of one's reflective awareness of this fact. Indeed, it is most likely the Stoics' doctrine that the majority of our sense-perceptions are comprehensions.

A third causal effect on the mind is that comprehensible presentations activate the cognitive mechanisms that generate prolepses. The primary text is Cicero Acad. 2.30:

The mind itself, which is the source of the senses and is even identical with the senses, has a natural force which it applies to things by which it is activated. So it seizes some impressions in order to make immediate use of them, others, which are the source of memory, it stores away so to speak, while all the rest it arranges by their likenesses, and thereby conceptions of things are produced, which the Greeks call sometimes *ennoiai* and sometimes *prolepses*.⁹⁰

⁸⁹ Sextus M 7.275(?). The caveat seems to be that there are certain situations in which the mind can refuse to assent even to a comprehensible presentation because of its commitment to other, conflicting beliefs. Sextus' example is the myth of Menelaus returning from Troy to find the real Helen waiting in Sparta (the war having been fought over a phantom). He refuses to countenance the presentation despite the fact that there is no external impediment. It is not clear how we should regard this example. The Stoics might hold that it is not a comprehensible presentation at all since there is an internal impediment. Or, the Stoics might hold that although the presentation initially commanded Menelaus' assent, upon further reflection he was dissuaded by the force of his conflicting beliefs. The latter interpretation is supported by the Stoic distinction between comprehension and scientific knowledge: whereas comprehension is a firm grasp, it can be dissuaded by argument.

⁹⁰ Note the similarity of these stages to those presented at Ps-Plutarch 4.11.1-4.

Indeed, Frede proposes that these mechanisms are only activated by comprehensible presentations. In this way they act as a filtering mechanism that guarantees that prolepses only develop on the basis of true presentations. The process, however, should not be reconstructed on the model of deductive inference, with the comprehensible presentations providing the analogue of true premises. Rather, the prolepsis is produced by the mind through an accretion of similar presentations and collation of their common content. This cognitive process is essentially an extension of the causal link between the mind and world mediated by the senses.

One very attractive aspect of Frede's causal reading is that it provides a single account of comprehension that can be applied to both sense-perception and prolepsis. Frede defines comprehension as a cognitive state that is guaranteed to be true by the way that it comes about. Different types of comprehension can be specified by the ways that they come about – let us call these the 'canonical ways' that cognitive states come about. As explained above, unhindered sense-perception is one of the canonical ways. The natural development of prolepses is another. A third is deduction. Frede asserts that theorems are comprehensions because deduction is one of the canonical ways. Sound deductions begin with premises that are themselves either perceptual or rational comprehensions.⁹¹ The steps of the argument are valid and thus do not introduce the possibility of error. The mental process of moving through the steps corresponds to a physical chain of events that produce the mental state which grasps the conclusion. The soundness of the argument corresponds to that of the causal process.

This definition of the canonical ways that comprehensions come about allows us to rephrase the argument against the inferential reading of prolepsis development. The

⁹¹ Cf. Brunschwig (1980).

inferential reading fails because of the formal insufficiency of inductive inference. If we think of this process as being like deduction, where the logical progression of steps provides the justification for the conclusion, we see that it cannot be among the canonical ways that comprehensions come about. This is precisely because it is possible to arrive at a false conclusion even when beginning from comprehensible premises. Even if we construe the premises as perceptual comprehensions (and so as guaranteed to be true in themselves), the inference from these particular facts cannot support comprehension of the universal propositional content of the prolepsis. It is clear from our texts, however, that prolepses are comprehensions. Thus, we must count the process by which they come about as one of the canonical ways and reject the comparison between this and formal deduction.

Frede proposes that one of the reasons that prolepses are guaranteed to be true is precisely because their development is non-inferential. The process is not sensitive to our other beliefs and interests, which may be sources of error in inferential reasoning. When the content of prolepses does go beyond that of the sense-presentations by which they are stimulated, these follow simple and universal patterns (DL 7.53). It is clear that other beliefs and conceptions will be formed by conscious inference. Some of these will be true and others will be false. Their truth or falsity will depend on the cognitive status of the initial premises and whether or not the canons of valid deduction are adhered to. It seems likely that other conceptions will also develop through unconscious accretion, but will lack the status of comprehensions either because they come about from non-comprehensible presentations or because there is some aberration in their formation. Precisely because of this fact, however, their content will be subject to a wide array of

variety. Since prolepses come about naturally, on the other hand, they will be identical in all humans.⁹² The commonality of prolepses is also taken as evidence that the prolepses represent the stock of true conceptions that nature intends for humans to form. Like all causal processes in the world, according to the Stoics, the development of prolepses is providentially guided. Prolepses form the basic set of conceptions that are required for rationality and the development of virtue. It would, thus, be irrational for nature to design human beings in such a way that they naturally went wrong.

Frede specifically opposes this interpretation of prolepses to empiricist readings of Stoics epistemology. He writes:

It is quite true that the Stoics assume that it is ultimately perception which gives rise to the natural notions and the knowledge embodied in them.⁹³ But this knowledge is not arrived at by inference from what we have perceived. Nor does it owe its epistemic status to the fact that it stands in the appropriate epistemic relation of justification or confirmation to the data of observation. It, according to the Stoics, rather owes its epistemic status to the fact that nature has constructed human beings in such a way as to arrive at these notions and the assumptions they involve. So, in this sense, the basic knowledge embodied in the natural notions is not empirical, but a priori. And correspondingly the knowledge arrived at by reasoning from what we know by nature is a priori. So in this sense the Stoic position clearly is rationalist.⁹⁴

Frede's criticism of the empiricist reading, however, seems to unfairly imply that it must offer an inferential account of the cognitive status of prolepses. This criticism does not consider the possibility that the causal process itself may be considered a non-inferential justification for the epistemic status of prolepses. Indeed, this seems to be the position that Hankinson suggests.

⁹² Thus the prolepses are identical with the so-called 'common conceptions' (*koinai ennoiai*) and 'natural conceptions' (*phusikai ennoiai*). Cf. Dyson (2004).

⁹³ Frede provides Sextus M 8.56 as an example.

⁹⁴ Frede (1994, 55-6).

It should be noted that the same argument could be made concerning comprehensible presentations. In other words, one could regard the causal history linking the presentation and the corresponding state of affairs as providing a non-inferential justification of the cognitive status of the resulting perceptual comprehension. This causal history is what distinguishes comprehension from mere true belief and guarantees that its truth is not accidental. This reading takes the Stoics' position to be similar to certain contemporary externalist theories. One interpretation of the Stoics' debate with the Academics is that the latter pressed certain objections that exploited the presumption that a usable criterion of truth must be consciously available to the knower.⁹⁵ In other words, the debate provides an antecedent to contemporary debates between externalists and internalists.

One hindrance for determining whether the Stoics thought of the causal history of the comprehensible impression as a kind of justification is the lack of any explicit discussion of these issues in our sources. The Stoic who seems to have been most interested in justification is Antipater, to whom it fell to respond to the attacks of Carneades. It is interesting to note, however, that some Stoics criticized Antipater for attempting to offer a justification of comprehension. Cicero records the following difference of opinion:

But the undertaking upon which we are now entering, the refutation of the Academics, was entirely ruled out by some of the philosophers, and those indeed men of no inconsiderable standing, and they held that there was really no sense in arguing with thinkers who sanctioned nothing as proved, and they criticized the Stoic Antipater for spending much time in this; and they also asserted that there was no need to define the essential nature of knowledge or perception or (if we wish to give a literal translation) comprehension, the Stoics term *katalêpsis*, and maintained that those who

⁹⁵ Annas (1991) offers this reading of the history of debate. Frede's revised version of the causal reading in (1999) can in many ways be seen as a response to Annas.

tried to prove that there is something that can be grasped and perceived were acting unscientifically because there is nothing clearer than *enargeia* ...; they thought that no argument could be discovered that was clearer than evidentness itself, and they deemed that truths so manifest did not need defining. But others said that they would not have opened proceedings with any speech in defense of this evidentness, but held that the proper course was for argument to be directed to answering the case for the prosecution, so that they might not be somehow taken it. Still a good many of them do not object to definitions even of evident things themselves, and they think that any fact is a suitable matter for investigation and that human beings deserve to have their views discussed.⁹⁶

The Stoics who opposed Antipater complained that comprehensions are self-evident. No further support can be offered of evident facts, they argue, since there is nothing more convincing than evidence itself. Antipater's response seems to indicate that he is not attempting to provide a justification for comprehensions – as least, not if we take a justification to be something like a reason for believing them to be true (either individually or collectively). Rather, he says that he is merely removing skeptical counter-arguments. The Stoics hold that the difference between comprehension and scientific understanding is that the former can be dissuaded by argument whereas the latter cannot. The position seems to be that, although comprehensible impressions command the mind's assent when they are actually received, they may be out-flanked by skeptical arguments that exploit other weaknesses in one's belief system. Scientific understanding is immune to such attacks because it is the sole possession of the wise person, all of whose convictions are comprehensions. Skeptical arguments can thus gain no foothold. Similarly, the sciences are defined as a mutually supporting system of comprehensions in a certain area. Antipater's response seems to be that he is not providing arguments that are supposed to convince us that any given beliefs are

⁹⁶ Trans. Rackham (1933).

comprehensions (and so should be given assent). Their own self-evidence is sufficient to guarantee their cognitive status as comprehensions and thus that one is justified in giving assent to them. Rather, Antipater is removing the possibility that skeptical arguments will out-flank the mind's assent to such evident presentations by exploiting the weakness of our understanding of the physical process of comprehension. He is, in effect, working towards scientific understanding of comprehension.

It is clear from Plutarch SR 1051f that Antipater regarded prolepsis as self-evident (*enargês*) as well. Thus, any attempt to provide a justification for prolepses must face the same criticism. I propose that this shows that we should not take the Stoic account of how prolepses come about from comprehensible presentations as a justification of their status as comprehensions. Rather, we should take this account as an attempt to bolster our understanding by providing an explanation of the relevant causal process. Again, the contrast with deduction is helpful. In the case of deduction the fact that the conclusion can be validly inferred from initial premises that are themselves comprehensions is what provides the reason for holding the conclusion to be true. The grasp of one who understands the deduction is thus a comprehension whereas someone else may have mere belief or opinion about the same proposition. This is not the case with prolepses. The definitions and axioms that are grasped by prolepsis are necessary truths. All that is required for comprehension is that they be grasped in a particular way. Specifically, one recognizes that they are necessarily true because of one's understanding of their constituent terms. One's understanding of these terms is made possible by the possession of the corresponding prolepses; and these, in turn, exist and have the propositional content that they do because they developed from comprehensible presentations. But this

process of development does not explain why the definition or axiom is true. Neither does it provide a reason for believing that it is true. Sufficient reason is provided by the simple fact that one understands its necessity. Rather, the causal process explains how it is possible for a human being to grasp the necessary truth of the proposition – in other words, how one has cognitive access to this truth. Similarly, understanding the causal process or knowing that it is providentially secured does not provide any additional reason for believing that the proposition is true. It may, however, remove possible sources of doubt about the powers of human cognition that would lead one to question what is plainly self-evident.

In summary, then, my response to the causal reading is that this is a correct account of the way that prolepses come about, but this does not support the claim that the Stoics are empiricists. Rather, we should re-assert the distinction between psychological and epistemological dependence. The rational comprehension of definitions and axioms by means of prolepsis is psychologically dependent on sense-perception insofar as this is necessary for the development of prolepsis, but it is not epistemologically dependent since the recognition of a necessary truth is sufficient in and of itself to justify the corresponding cognitive state.

Something like this distinction seems to be presupposed by the numerous Stoic texts that treat prolepses as starting-points for deductive arguments without providing any further justification for their contents. It is admittedly difficult, however, to find a passage that explicitly expresses the distinction between psychological and epistemological dependence. One source of textual support is provided by a survey of

the arguments that follow this introduction in Cicero's text. Many of the arguments share what might be described as a 'transcendental' structure⁹⁷:

- (1) If there were no comprehensible presentations, then cognitive activity X would be impossible.
- (2) However, X is possible.
- (3) Therefore, there are comprehensible presentations.

The argument that was put forward in section 2.2 fits this pattern. The argument is:

- (1a) If there were no comprehensible presentations, the prolepses could not be used as criteria of truth.
- (2a) However, prolepses are used as criteria of truth.
- (3a) Therefore, there are comprehensible presentations.

On our first reading the argument lent support to the thesis that prolepsis is a posteriori because its epistemic status depends upon its being derived from comprehensible impressions. What Cicero argues is that if prolepsis is a form of comprehension, prolepses are derived from comprehensible impressions. In other words, the argument makes the fact that prolepses are derived from comprehensible impressions a necessary condition for prolepsis being a form of comprehension. But this is consistent with the causal history of prolepses being a psychological necessity for prolepsis. More importantly, the actual course of Cicero's argument makes use of the fact that the criterial status of prolepsis is a sufficient condition for the existence of comprehensible impressions. This becomes clearer if we give the contrapositive of (1a):

- (1b) If prolepses can be used as criteria of truth, then there are comprehensible presentations.

Cicero's argument assumes that we are able to grasp necessary truths. He takes it to be self-evident that reason is able to comprehend the truth of certain propositions in a way. The truth of this premise does not require further justification. By making clear the

⁹⁷ Cf. Schofield (1980).

entailment relation between the two doctrines, however, Cicero places them within a mutually supporting system of comprehensions.

We can also build a strong circumstantial case for attributing the distinction between psychological and epistemological dependence to the Stoics. We can begin by noting that this distinction is clearly expressed in Aristotle. Aristotle identifies knowledge properly speaking with the systematic understanding that comes about through demonstration. He is clear that demonstration depends on the existence of primitive and immediate first principles. Since these are the starting-points for demonstration, they cannot themselves be known through demonstration. Thus, he writes at APo. 1.3, 72b24: “we say also that there is not only understanding, but also some principle of understanding by which we become familiar with the definitions.”⁹⁸ Similar statements in APo. 1.9 and 1.10 give as examples the definitions of a line and the theorem, ‘if equals are taken from equals, the remainders are equals’.⁹⁹ In APo. 1.18 and 2.19 Aristotle famously holds that knowledge of first principles comes about from sense-perception. This is clearly a statement of psychological dependence. At APo. 1.31 87b30-35 Aristotle asserts that one cannot know the universal through perception since its scope extends only to individuals. Only a few lines down, however, at 88a9-15 he writes:

So it is evident that is impossible by perceiving to understand anything demonstrable – unless someone calls this perceiving: having understanding through demonstration. Yet some of our problems are referred to want of perception; for in some cases if we saw we should not seek – not on grounds that we knew by seeing, but that we grasped the universal from seeing.

⁹⁸ Similarly at APo. 1.22 84a30-35: “And if this is the case, it is now clear too that of necessity there are principles of demonstrations and there is not demonstration of everything.” All translations from Aristotle’s APo. are from Barnes (1995c).

⁹⁹ APo. 1.9 75b36-40, 76a16-18, and 1.10 76a30-35.

That knowledge of first principles cannot be epistemologically dependent on sense-perception is also clear from the following. Aristotle denies that it is possible to have demonstrative knowledge of individuals since truths concerning them are not necessary, but merely accidental.¹⁰⁰ Knowledge of first principles, however, has an even greater epistemic status than that of demonstration. He writes at APo.1.2 72a25-29:

Since one should both be convinced of and know the object by having a deduction of the sort we call a demonstration, and since this is the case when these things on which the deduction depends are the case, it is necessary not only to be already aware of the primitives (either all or some of them) but actually to be better aware of them.

A few lines down at APo. 1.2 72a36-72b4 he continues:

Anyone who is going to have understanding through demonstration must not only be familiar with the principles and be better convinced of them than of what is being proved, but also there must be no other thing more convincing to him or more familiar among the opposites of the principles on which a deduction of the contrary error may depend – if, that is, anyone who understands simpliciter must be unpersuadable.

Similar statements are repeated in his consideration of the name of the cognitive state that knows first principles at APo. 2.19 100b5-17, which follows immediately after Aristotle's rejection of recollection in favor of a developmental account of concept-formation.

These considerations minimally show that the distinction between psychological and epistemological dependence was present in ancient philosophy. Moreover, it was made in the context of a response to Platonic forms.¹⁰¹ Did Aristotle's distinction influence the Stoics? The availability of Aristotle's works during the Hellenistic period

¹⁰⁰ APo. 1.8 75b21-7: "There is therefore no demonstration of perishable things, nor understanding of them simpliciter but only accidentally, because it does not hold of it universally, but at some time and in some way."

¹⁰¹ Cf. APo. 2.19 99b24-34 which is a clear rejection of Platonic recollection.

is controversial.¹⁰² The similarity between Aristotle's account of concept-formation at APo. 2.19 and the Stoic account at Ps-Plutarch 4.11.1-4 may be textual evidence for direct influence.¹⁰³ It is also possible that Aristotle's views were available to the Stoics through later Peripatetics such as Theophrastus. It is likely that the much more detailed account of concept-formation reported by Sextus at M 7.217-26 – which bears even closer terminological similarities to Stoic psychology – should be attributed to Theophrastus.¹⁰⁴ In both cases, however, it is possible that that these similarities are the result of later doxographical assimilation.

A much stronger possibility is that Epicurus' epistemology was a conduit for these views. The influence of Aristotle on Epicurus is much more securely established and it is likely that this Epicurean doctrine was inspired by Aristotle's remarks on deduction. Similarly, the influence of Epicurus on Stoic epistemology in general, and the Stoic doctrine of prolepsis in particular, is well established. DL 10.37-8 preserves the following quotation from Epicurus' *Letter to Herodotus*:

First, Herodotus, we need to have grasped what is denoted by our words, so that by referring to what they denote we can make decisions about the objects of opinion, investigation, or puzzlement and so that all of these things will not remain undecided, [as they would] if we tried to give an infinitely long demonstration, and so that our words will not be empty. For it is necessary that we look to the primary conception corresponding to each word and that it stand in no need of demonstration, if, that is, we are going to have something to which we can refer the object of search or puzzlement and opinion. Again, it is also necessary to observe all things in accordance with one's sense-perception.¹⁰⁵

¹⁰² Cf. Sandbach (1989), although I think the tide of scholarly opinion has started to turn away from this opinion.

¹⁰³ Cf. LS (1987, 2) and Sandbach (1989).

¹⁰⁴ Cf. Hankinson (2003, 76n.23). For doubts about Theophrastus' influence on the Stoics, however, cf. Long (1996f).

¹⁰⁵ Trans. IG. That the 'primary conceptions' mentioned in this passage are prolepses is made clear by the parallel to DL 10.31-33.

From this passage we can see that Epicurus clearly holds that prolepses are starting-points for deduction that do not admit of further support.¹⁰⁶ Similar views are attributed to “the dogmatists” in Sextus’ discussion of demonstrations at M 8.362-84. Specifically, we are told that demonstrations cannot be infinite, but rather must begin from certain assumptions that are self-evident. It is clear from the context that these remarks are meant to apply both to sensibles and intelligibles. Unfortunately, Sextus does not specify that the doctrines under discussion are specifically Stoic. We can see from the Stoics who criticized Antipater, however, that at least some members of the school were influenced by this position.

Like Aristotle and Epicurus, the Stoics reject Platonic innatism in favor of the psychological development of universal conceptions from sense-perception. The Stoic position, however, seems to more closely resemble Aristotle’s doctrine since the Stoics also emphasize that prolepses are necessary truths. As a final possibility we should consider that the views expressed by Aristotle concerning the starting-points of demonstration were common in the Academy of the late 4th century and stemmed from discussion of Plato’s method of hypothesis. Aristotle makes clear in several parenthetical remarks that he is responding to rival views. Thus, there need not be any direct line of influence from Aristotle to the Stoics. It is likely that the distinction between psychological and epistemological dependence was commonly viewed as a necessary assumption for any philosopher who wished to oppose a developmental account of concept-formation to the Platonic theory of recollection, and yet hold onto the basic view of deduction from necessary first principles. To characterize the Stoics as empiricists obscures the importance of the latter influence in their epistemology.

¹⁰⁶ It is not clear how we should reconcile these views with the inductive account criticized by the Stoics in Philodemus’ *On Signs*.

CHAPTER THREE: PROLEPSIS AND A PRIORI KNOWLEDGE IN STOICISM

The conclusion of my argument in chapter two was that the Stoics must be considered epistemological rationalists since they hold that a priori knowledge is essential to the development of scientific understanding. I argued that the Stoics distinguish between perceptual and rational comprehension. Rational comprehension includes the recognition of self-evident definitions and axioms, as well as the theorems that follow deductively from them. I also argued that Chrysippus names prolepsis as the criterion of truth for rational comprehension. Each of the above types of comprehension involves the recognition that certain propositions are necessarily true in virtue of the meaning of their constituent terms and logical connectives. Prolepsis is a criterion of truth because it provides the definitions of terms and that make this recognition possible.

The purpose of this chapter is to give an account of prolepsis that supports this last claim. I begin in sections 3.1 and 3.2 with a discussion of the Stoics' psychological terminology. I argue that it is important to make a distinction between two senses of the Stoic term '*ennoia*' corresponding to our notions of a concept and a conception. A concept is a mental item that represents a way that a corporeal object may be commonly qualified (e.g. being human or rational). Concepts provide the meanings of appellatives (i.e. terms such as 'human' and 'rational' that may be applied to multiple subjects in speech). Conceptions, on the other hand, are mental states that embody connections between concepts and so have a complex structure that may be expressed in a proposition (e.g. 'if something is human, then it is a rational mortal animal'). Both concepts and conceptions should be distinguished from *ennoêmata* or 'conceptual objects.' Section 3.3

discusses the formation of concepts, conceptions, and conceptual objects. All three are formed as the result of sense-perception. The formation of concepts and conceptions, however, should be distinguished from the retention, reproduction, and manipulation of mental images in the imagination. This is crucial because the scope of the propositional content of conceptions can extend far beyond individual sense-experience. (The conditional proposition cited above, for example, is true for the set of all possible human beings.) I propose that the standard list of ways things are conceived – reported at DL 7.53 – applies primarily to the formation of such mental images.

Section 3.4 discusses the role of conceptions in Stoic psychology. Since they form connections between concepts, conceptions provide the basis for transitions in thought. Deduction and demonstration are species of such transitions. They take as their premises the conditional propositions that express the propositional content of conceptions. The possession of prolepses makes it possible to grasp that certain propositions are necessarily true. Prolepses thus function as a form of tacit knowledge. Although they are functional in the psychology of all humans, their content is often not available to consciousness because of their dispositional nature and the obscuring effects of other suppositions and beliefs. The articulation and refinement of prolepses in the form of essential definitions, their employment in demonstrations, and their criterial use in the removal of false suppositions are essential to the perfection of reason as scientific understanding. The final section 3.5 distinguishes two types of conception. Suppositions are conceptions that express contingent conceptual connections; prolepses are conceptions that express necessary connections. The latter provide the essential definitions of terms in ordinary language.

3.1 Concepts and Conceptions

The terms '*prolēpsis*' and '*ennoia*' are commonly translated as 'preconception' and 'conception.' The English terms connote the type of beliefs or assumptions that one might have of something (e.g. in the phrases 'my conception of goodness' or 'my preconceptions about horses.')

These beliefs and assumptions have as their logical content certain propositions (e.g. I might believe 'pleasure is a good thing' or 'horses are smarter than dogs'). Often, however, scholars regard prolepses and *ennoiai* as general concepts (i.e. the representational items that compose such thoughts).¹⁰⁷ This has led to a controversy concerning their proper logical analysis. Consider, for example, Cicero's statement at Acad. 2.21:

Those characteristics which belong to the things we describe as being cognized by the senses are equally characteristic of that further set of things we said to be cognized not by the senses directly but by them in a certain respect. For example, 'this is white,' 'this is sweet,' 'that is melodious,' 'this is fragrant,' 'this is bitter.' Our cognition of these is secured by the mind, not the senses. Next, 'that is a horse,' 'that a dog.' The rest of the series then follows, connecting bigger items which virtually include complete cognition of things, like 'if it is a human being, it is a mortal rational animal.' From this class conceptions (*notitiae = ennoiai*) of things are imprinted on us, without which [conceptions] there can be no understanding or investigation or discussion of anything.

LS hold that the phrase, 'this class,' refers to the whole series of things that are cognized by the mind.¹⁰⁸ This list, however, includes two very different sorts of mental items. The definite proposition, 'this is a human,' predicates the concept 'human' of an object presented to the mind by the senses. The indefinite conditional proposition – 'if something is human, then it is a rational mortal animal' – on the other hand, sets out the

¹⁰⁷ Cf. Schofield (1980, 293-5), Long (1974, 127-8), Frede (1994) and (1999)

¹⁰⁸ LS (1987, 2)

definition of the concept ‘human.’ The question, then, is whether we should take the *ennoiai* to be the individual representational items that underlie predicates like ‘human’; or, should we say that an *ennoia* is the mental state corresponding to the entire proposition, ‘if something is a human being, it is a rational mortal animal’? The first type of representational item corresponds more closely to our notion of a concept, the latter to our notion of a conception?¹⁰⁹

In the majority of its appearances the term ‘*ennoia*’ refers to a mental item with propositional content and should be translated ‘conception.’ It is clear, however, that Stoic psychology also makes use of representational items answering to our notion of concept. Unfortunately, the Stoic term for such an item also appears to be ‘*ennoia*.’ The Stoics often use a single term for two or more distinct logical notions in this way. This often leads to confusion both in the ancient sources and in contemporary scholarship. It will be convenient, therefore, to use the English terms ‘concept’ and ‘conception’ to translate these two senses of ‘*ennoia*.’

At CN 1084f-1085a Plutarch offers the following definition of conception:

Conception is a kind of presentation (*phantasia*) and presentation is a printing (*typôsis*) in the soul... They define conceptions as certain stored thoughts (*enapokeimenas noêseis*) and memories (*mnêmas*) as permanent and static printings.

‘Presentation’ is the Stoics’ most generic term for a representational item in the mind.¹¹⁰

It is an impression or alteration of the pneumatic tension of the leading-part of the soul.¹¹¹

¹⁰⁹ Cf. Higginbotham (1998).

¹¹⁰ I will use ‘mind’ to translate the Stoic term ‘hegemonikon.’ This is the commanding part of the soul located, as the Stoics infamously claimed, in the heart. The word ‘mind,’ however, should not be taken to imply incorporeality. The Stoics are very clear about the corporality of the mind. Cf. Annas (1996) and Long (1996a).

¹¹¹ Sextus M 7.230: “[Chrysippus] himself, therefore, suspected that the term ‘impression’ (*typôsin*) was used in the sense of ‘alteration’ (*heteroiôseôs*), so that the definition runs like this ‘presentation is an alteration of the soul.’” Trans. Bury (1936).

Plutarch says that conception falls under the genus of presentation, but more specifically under the genus of thought. That thought is itself a species of presentation is made clear by DL 7.51:

Furthermore, some presentations are rational (*logikai*) and others are non-rational (*alogoi*). Those of rational animals are rational, while those of non-rational animals are non-rational. Rational impressions are thoughts (*noêseis*); irrational ones are nameless.¹¹²

At M 8.70 Sextus gives the following definition of a rational presentation:

[The Stoics] say that a ‘sayable’ (*lekton*) is what subsists in accordance with a rational presentation and a rational presentation is one in which what is presented (*to phantasthen*) can be exhibited in language.¹¹³

Since presentations may be true or false, it is clear that the type of ‘sayable’ to which Sextus refers is a proposition (*axiôma*). Every presentation that is received in the mind of a rational animal (i.e. humans and gods) has as its logical content a proposition. Thus, all rational presentations are also thoughts. Nevertheless, the Stoics more commonly use the generic term ‘presentation.’

At CN 1084f-1085a Plutarch distinguishes conceptions and memories as stored thoughts (*noêseis*) and stored impressions (*typôseis*) respectively. Comparison with M 7.227, however, makes it clear that all presentations – and thus all thoughts – are impressions (*typôseis*).¹¹⁴ Moreover, we have already seen that all rational presentations – and thus all memories – are thoughts. This may be why Plutarch says that conceptions are “a kind of stored thought” (*enapokeimenas noêseis tinas*). It is likely that by

¹¹² Trans. IG

¹¹³ Similarly Diogenes Laertius 7.63: “They say that a sayable is what subsists in accordance with a rational impression.” Cf. also Seneca EM 117.13

¹¹⁴ This might also be inferred from Plutarch’s own statement, but the context of Sextus’ remark makes it clear that he means ‘presentation’ in its most generic sense. He writes at M 7.227: “What this [i.e. the apprehensive presentation] is we shall understand when we have first learnt what, in their view, presentation is and what are its specific differences. Presentation then, according to them, is an impression on the soul (*typôsis en psychêi*).”

contrasting them as ‘thoughts’ and ‘impressions’ Plutarch means to distinguish conceptions and memories as generic and particular representational items respectively. As we can see from Ps-Plutarch 4.11.3, memories are presentations of particular objects that have been printed upon the mind by sense-perception and subsequently stored away. Conceptions, on the other hand, are general thoughts stored in the mind as a result of the accumulation of particular memories and experience. In other words, whereas memories represent particular things (e.g. Dion), conceptions represent kinds of things (e.g. human beings). This is consistent with Diogenes’ statement that prolepsis is a natural conception of things “according to the universal” (*ennoia tôn katholou*).

Both memories and conceptions are said by Plutarch to be stored away. This metaphor can be explained by comparison with the distinction that Plutarch makes at SA 961c:

Likewise also, of course, the things concerning thoughts (*noêseis*), which they call ‘conceptions’ (*ennoiai*) when they are stored up and ‘thoughts’ (*dianoêseis*) when they are activated.

Here again Plutarch seems to be using ‘thoughts’ in the sense of ‘generic thoughts.’ The distinction he draws is between an occurrent thought process and the disposition to form that occurrent thought. For example, the present thought – ‘human beings are rational mortal animals’ – and the disposition to form this thought (e.g. in response to someone asking what you mean by the word ‘human’). According to Plutarch, the conception properly speaking is the disposition to form this thought. The same distinction can be made in the case of memories. Comparison with CN 1084f-1085a suggests that the memory is technically the disposition to re-form the original presentation. In practice,

however, the Stoics often refer to occurrent thoughts and presentations formed on the basis of dispositions as ‘conceptions’ and ‘memories.’

A similar ambiguity surrounds the terms ‘prolepsis’ and ‘conception.’ DL 7.54 defines a prolepsis as “a natural conception of things according to the universal” (*ennoia phusikê tôn katholou*). That prolepsis is a species of conception is confirmed by Ps-Plutarch 4.11.2-3.

When a man is born, the Stoics say, he has the commanding-part of his soul like a sheet of paper ready for writing upon. On this he inscribes each one of his conceptions. The method of inscription is through the senses. For by perceiving something, e.g. white, they have a memory (*mnêmên*) of it when it has departed. And when many memories of a similar kind have occurred, we then say we have experience. For the plurality of similar impressions (*phantasiôn*) is experience. Some conceptions arise naturally in the aforesaid ways and undesignedly, others through our own instruction and attention. The latter are called ‘conceptions’ only, the former are called ‘prolepses’ as well.

Here again we see that ‘conception’ is used in two distinct senses: it refers both to the genus of conception and one of its two species, conception and prolepsis.¹¹⁵ To avoid confusion I will translate ‘conception’ in the specific sense contrasted with prolepsis as ‘technical conception.’ The distinction between prolepses and technical conceptions will be discussed below. For now it is sufficient to note that whatever account holds for conception in the generic sense will also hold for prolepsis and technical conception.

Putting all these distinctions together, we get the following division. Presentation is the most generic term for a representational item in the mind. A presentation is an impression or alteration of the mind. Presentation can be divided into rational and non-rational presentation. Thought in the generic sense is identical with rational presentation.

¹¹⁵ Indeed, in many cases the Stoics use the generic term ‘conception’ where ‘prolepsis’ would be more precise. Cf. Cherniss (1976). The terminological issues surrounding the Stoic theory of prolepsis are discussed in greater detail in Dyson (2004).

Thought can be divided into generic and particular thought. Generic thoughts are typically called ‘thoughts,’ whereas particular thoughts are typically called ‘presentations’ or ‘impressions.’ Each of these can be further subdivided into occurrent thoughts and stored thoughts or dispositions. Memories are dispositions to re-form particular presentations. Conceptions are dispositions to re-form generic thoughts. The presentations and thoughts that are formed on the basis of such dispositions are usually themselves called ‘memories’ and ‘presentations.’

This division of the Stoics’ psychological terminology provides the basis for thinking that prolepses have propositions rather than predicates as their content. Our analysis has shown that conception falls with the genus of thoughts or rational presentations. As we noted above, presentations can be either true or false depending on the truth or falsity of the sayable (*lekton*) that supervenes upon them.¹¹⁶ Thus, it is clear that this sayable is a proposition (*axiôma*).¹¹⁷ Whereas the presentation itself is corporeal, the proposition is incorporeal.¹¹⁸ I will refer to the incorporeal sayable that supervenes on a presentation as its propositional content. Since conception falls under the genus of rational presentation, it follows that a conception has propositional content.

Indeed, these distinctions give us good ground for thinking that the propositional contents of conceptions will take a very specific logical form. Since conceptions are generic thoughts, this content will take the form of a generic or universal proposition (*to*

¹¹⁶ Cf. Sextus M 7.244-6 and 8.11. The Stoic theory of sayables is discussed in greater detail below.

¹¹⁷ Cf. DL 7.63-6 for division of types of sayables.

¹¹⁸ Cf. Seneca EM 117,13: “There are [the Stoic says] bodily substances: for instance, this is a man and this is a horse. These are accompanied by movements of thought which can make enunciations about bodies. These movements have a property peculiar to themselves, which is separate from bodies. For example, I see Cato walking: sense-perception has revealed this, and my mind has believed it. What I see is a body, and it is to a body that I have directed my eyes and my mind. Then I say, ‘Cato is walking.’ What I now utter (Chrysippus says) is not a body, but a certain enunciation about a body which some call a proposition, others a thing enunciated, and others a thing said.”

katholikon). As noted above, this is what Diogenes means when he defines a prolepsis as a natural conception of things according to the universal (*katholou*). This is confirmed by several texts that associate conceptions with definitions.¹¹⁹ Definitions are often expressed as categorical or universal statements (e.g. ‘all human beings are rational mortal animals’). Sextus M 11.8-11 tells us that Chrysippus gave the following analysis of universal statements:

For the definition, according to the authors of technical handbooks, differs from the universal statement in nothing by syntax, and is identical in meaning. This is reasonable. For whoever says, ‘Man is a rational mortal animal’ says the same thing in meaning as whoever says ‘If something is a man, that thing is a rational mortal animal,’ although it is verbally different. That this is so is clear, because not only does the universal statement range over all particular cases, but the definition also extends to all the specific instances of the thing represented – that of man to all specific men, that of horse to all horses. And both the universal statement and the definition are vitiated by the subsumption of a single false instance.¹²⁰

That this analysis of the definition is the proper logical form of the propositional content of conception of a human being is confirmed by above quote from Cicero’s Acad. 2.21.

In summary, then, a conception is the representational mental item (specifically a dispositionally stored thought) with an indefinite conditional proposition as its logical content. Since prolepsis is a species of conception, it will also have this type of

¹¹⁹ For example, at Med. Def. 19.348,17-349,4 Galen defines a definition as “that which by a brief reminder brings us to a conception (*ennoian*) of the things underlying words.” Similarly, at CD 8.7 Augustine writes: “[The Stoics say that from the senses] the mind forms conceptions – *ennoiai* as they call them – of those things, that is, which they articulate by definition. The entire method of learning and teaching, they say, stems and spreads from here.”

¹²⁰ That this is Chrysippus’ doctrine is made clear in the continuation of the passage: “Now just as these differ verbally but are identical in meaning, so too, they say, the complete division is universal in meaning but differs from the universalized proposition in syntax... The statement ‘Of existing things, some are good, some bad, some intermediate’ is, according to Chrysippus, in meaning a universalized proposition of the form ‘If somethings are existents, they are either good or bad or indifferent.’ Such a universalized proposition is, however, false if a single false instance is subsumed under it.”

propositional content. Thus, it is proper to take prolepses as generic thoughts and not as general concepts.

3.2 Concepts and Conceptual Objects

Having determined the nature of a conception, let us now proceed to the nature of the concept. This requires that we examine more closely the structure of the various levels of thought and speech in Stoic psychology. Sextus M 8.11-2 reports that the Stoics make the following divisions:

[The Stoics say that] that three things are linked together, ‘the signification,’ ‘the signifier,’ and ‘the name-bearer.’ The signifier is an utterance, for instance, ‘Dion’; the signification is the actual state of affairs revealed by an utterance, and which we apprehend as it subsists in accordance with our thought, whereas it is not understood by those whose language is different although they hear the utterance; the name-bearer is the external object, for instance, Dion himself. Of these, two are bodies – the utterance and the name-bearer; but one is incorporeal – the state of affairs signified and sayable, which is true or false.

Consider the following example. Theon sees Dion walking towards him in the street and utters aloud the sentence, ‘Dion is a human being.’ In this passage the Stoics distinguish between three levels:

- (1) The utterance, ‘Dion is a human being,’ is a corporeal modification of the air exhaled from Theon’s mouth.
- (2) The signification or meaning is the incorporeal sayable that supervenes on the physical structure of the utterance. This is what is grasped by the hearer when his mind receives the report of the utterance from his ears.
- (3) The name-bearer is the corporeal object, Dion, who is the referent of the utterance.

It is clear from other passages that we should add to this division a fourth level.

- (4) Theon’s thought that Dion is a human being is the corporeal modification of Theon’s *pneuma* that produces the utterance.

The same incorporeal sayable that supervenes on the physical structure of the utterance also supervenes on the physical structure of the thought. Indeed, the thought has this propositional content whether it is actually voiced in speech or not. When it is spoken the utterance has the meaning that it does because it is imprinted with the same physical structure as the thought. Galen, reporting the views of Diogenes of Babylon, writes at PHP 2.5.9-13:

But this too is certainly true, namely that language has its source in thought; for some people actually define language as meaningful utterance sent out from thought. It is also credible that language is sent out imprinted, and stamped as it were, by the conceptions present in thought (*dianoia*), and that it is temporally co-extensive with both the act of thinking and the activity of speaking.

Similarly, as we have seen from M 8.70 quoted above, the corporeal thought has the propositional content that it does because its internal structure – what is presented in the presentation – has a structure that is capable of being expressed in language. In other words, the thought is compositional: it is composed of parts that are isomorphic with the parts of the corresponding proposition. These parts will, in turn, be functionally similar to those which compose the utterance.¹²¹ We can learn about the components of propositions at level (2) and thoughts at level (4) by studying the structure of language at level (1). Finally, note that the thought is a representation of a certain states of affairs (e.g. the fact that an object is qualified in a particular way). This representational relation is possible because the components of the thought stand in the same relation to one

¹²¹ I say ‘functionally similar’ because, as we can see from Sextus M 11.8-11, utterances with different syntactical structure can express identical propositions. Indeed, utterances in different languages can convey the same proposition. I think in this case we should say that the thought and the proposition have the same structure and that different utterances are capable of conveying this meaning to the hearer. Indeed, what it means to say that syntactically different sentences mean the same thing is that competent language-speakers will understand the same thing – i.e. form thoughts with the same propositional content – upon hearing each of them.

another as the corresponding aspects of the object's physical structure. In other words, the same structure observed on levels (1), (2), and (4) will also exist at level (3).

At level (1) Theon's utterance is composed of the following parts: a name ('Dion'), the copula ('is'), and an appellative ('human being'). Since the utterance is declarative, at level (2) the corresponding sayable is a proposition. It is composed of the incomplete *lekton* or predicate 'is a human being' and a logical analogue to the name.¹²² At level (3) the referent of the utterance is Dion himself. He is a corporeal entity qualified in various ways. The correspondence between levels (1) and (3) is given at DL 7.58:

According to Diogenes [of Babylon] an appellative is a part of language which signifies a common quality, e.g. 'man,' 'horse.' A name is a part of language which indicates a peculiar quality, e.g. 'Diogenes,' 'Socrates.'

The Stoics say that every entity is peculiarly qualified in a way that makes it the unique substance that it is.¹²³ This peculiar quality is a particular configuration of the pneumatic tension that makes the substance a unified thing persisting through time. In the utterance, 'Dion is a human being,' the name 'Dion' refers to him as this particular peculiarly qualified thing. There are all sorts of other ways in which Dion is qualified, each of which is likewise a configuration of his pneumatic tension. One way is as a human being. The Stoics say that considered in this way Dion is a commonly qualified thing. In the utterance, 'Dion is a human being,' the appellative 'human being' refers to Dion as something qualified in a way similar that in which all other human beings are

¹²² Cf. Shields (1993).

¹²³ Simplicius In An. 217,36-218,2: "...if in the case of compound entities there exists individual form – with reference to which the Stoics speak of something peculiarly qualified, which both is gained, and lost again, all together, and remains the same throughout the compound entity's life even though its constituent parts come to be and are destroyed at different times."

qualified.¹²⁴ In other words, all human beings have a certain similar pneumatic tension in virtue of which they display similar characteristic functions and activities. For this reason humans form a natural kind.¹²⁵

The Stoics say that the predicate ‘is a human being’ supervenes on Dion’s physical structure. This predicate is the incomplete sayable that corresponds at level (2) to the appellative at level (1).¹²⁶ This predicate supervenes on Dion’s physical structure even if there is no human mind present to form the thought or utterance with the corresponding propositional content. Just as Theon’s thought has its propositional content regardless of whether this actually voiced in speech, so too Dion’s body has a complex structure that is capable of being expressed in language independently of whether it is actually expressed. Indeed, at any give time Dion’s body is qualified in an indefinite number of ways. Thus, the Stoics say that there is an indefinite number of other predicates that also supervene on his physical state at any given moment. Theon’s statement in the above example is true because it expresses one of these predicates.¹²⁷ The same is true at level (4). Theon’s thought is true because it has as its content a proposition that predicates of Dion ‘this is a human being.’ Furthermore, both at levels (1) and (4) the utterance and thought are capable of expressing this proposition because

¹²⁴ Cf. Simplicius In Cat. 222,30-2 and Syrianus In Met. 28,18-9.

¹²⁵ The Stoics speak of the kind ‘human being’ as a set of commonly qualified things because they deny that there is any universal quality that is identical in each of member of the species. Only individual human beings exist; the species is a grouping created by the mind based on the objective similarities of humans as commonly qualified things. The same is true of all other species and genera. Cf. DL 7.60-1.

¹²⁶ DL 7.64: “A predicate is what is asserted of something, or a state of affairs attachable to something or some things, as Appollodorus says, or an incomplete sayable attachable to a nominative case for generating a proposition.” Cf. Frede (1994).

¹²⁷ Sextus writes at M 8.100: “The definite proposition such as ‘this one is sitting’ or ‘this one is walking’ is said by [the dialecticians] to be true whenever the predicate, such as ‘sitting’ or ‘walking,’ belongs to the thing which falls under the demonstrative reference.”

they are compositional: they have parts that are arranged in such a way as to represent the fact that Dion is qualified in this way.

With this analysis of the compositionality of utterances, propositions, and objects we can give the following specification of what a concept is in Stoic psychology. A concept is the compositional representational element of thought at level (4) that corresponds to an appellative at level (1) and the predicate at level (2). It is thus the element of thought that represents the way that something is commonly qualified at level (3). Because it represents a way of being commonly qualified, the concept can represent any commonly qualified thing falling under the corresponding natural kind.¹²⁸

The Stoic term '*ennoêma*' is often translated as 'concept.'¹²⁹ It is clear, however, that the Stoics draw a distinction between *ennoiai* and *ennoêmata*. The two most important passages on the *ennoêmata* are from Stobaeus and Diogenes Laertius.

Stobaeus writes at 1.136,21-137,6:

(Zeno's Doctrine) They say that *ennoêmata* are neither somethings nor qualified, but figments (*phantasmata*) of the soul which are quasi-somethings (*hôsanei tina*) and quasi-qualified (*hôsanei poia*). These, they say, are what the old philosophers called Ideas.¹³⁰ For the Ideas are of the things which are classified under the *ennoêmata*, such as men, horses, and in general all the animals and other things of which they say that there are Ideas. The Stoic philosophers say that there are no Ideas, and that what we 'participate in' is the *ennoêmata*, while what we 'bear' is those cases which they call 'appellatives.'

Similarly, Diogenes Laertius writes at DL 7.60-1:

A genus is a collection of a plurality of inseparable *ennoêmata*, such as animal. For this embraces all the distinct animals. An *ennoêma* is a figment of the mind (*phantasma tês dianoias*), which is neither something

¹²⁸ Again, the Stoics deny that there is any incorporeal thing – either a transcendent Platonic form or immanent Aristotelian universal – that is present in each corporeal object and which is represented by the concept.

¹²⁹ E.g. by Schofield (1980), LS (1986, 169 and 179) and Caston (1999).

¹³⁰ Cf. also Ps-Plutarch 1.10.5: The Stoics of Zeno's school said that the Ideas were our own *ennoêmata*.

nor qualified, but a quasi-something and quasi-qualified, in the way that the pattern (*anatyphôma*) of a horse arises even though none is present. A species is that which is contained within a genus, as man is contained within animal.

These passages show that an *ennoêma* is not a concept in the sense of a component of thought. Rather, the parallel with the Platonic forms shows that *ennoêmata* are the objects of thoughts about natural kinds. It is the parallel to the corporeal object of a particular sense-impression. I will translate the term as ‘conceptual object.’

Consider, for example, the following utterance: ‘Dion is a rational mortal animal.’ The Stoics claim that the meaning of this utterance is an intermediate proposition.¹³¹ It can be analyzed into the following definite propositions: (a) ‘This is Dion’ and (b) ‘This is rational and mortal and animal.’ Proposition (a) expresses the fact that Dion is a certain peculiarly qualified thing. Proposition (b) expresses the fact that he is also commonly qualified in each of these ways. Consider, however, the statement ‘Man is a rational mortal animal.’¹³² We might offer a similar analysis: (c) ‘This is Man’ and (d) ‘This is rational and mortal and animal.’ According to the Platonist, proposition (c) names the form of Man. Indeed, the form of Man is the proper name-bearer of ‘man’ even in the sentence ‘Dion is a man.’ The Platonist explains this predication as Dion being called by the name ‘man’ because he participates in the form of Man. Similarly, proposition (d) states that the form of Man displays the qualities of rationality, mortality, and animality. According to *Soph.* 252b, the form of Man bears the names ‘rational,’ ‘mortal,’ and ‘animal’ because it participates in the forms that are their proper name-bearers. The demonstrative form of the sentence reflects the fact that the mind has some

¹³¹ Cf. Sextus M 8.93-8.

¹³² I use the gender-specific term ‘man’ here for ‘human being’ since it more closely matches the semantics of the Greek.

faculty corresponding to sense-perception by which it has direct acquaintance with the forms. The Platonist holds that the definition of ‘man’ is known by recollection from the soul’s prenatal existence. At *Phdr.* 250b-c, however, the soul’s prenatal knowledge is explained in terms of its direct acquaintance with the form of Man in the intelligible realm.

The above passages suggest that Zeno and the early Stoics offered a similar analysis.¹³³ Instead of a transcendent form, however, the Stoics hold that the conceptual object Man is something that the mind itself generates and exists only in thought.¹³⁴ It is clear that the conceptual object does not have the same sort of existence as the corporeal object of a sense-perception.¹³⁵ Rather, it is only ‘as if’ (*hōsanei*) there were an object answering to the name ‘Man.’ Likewise, the conceptual object is not really commonly qualified in same way as a real human being (i.e. by having its pneumatic tension modified in a certain way). One merely pretends ‘as if’ the object one is thinking about displays the characteristics and functions associated with human beings. The conceptual object has no causal efficacy and so does not play the explanatory role which Plato assigns to forms. What makes Dion a human being is that his pneumatic tension is qualified in this way. And his being qualified in this way is explained in terms of a series of antecedent physical causes and not by his participation in a metaphysical form of Man. The role of the conceptual object is limited to logical and semantic functions of Platonic

¹³³ Caston (1999) argues that the doctrine of *ennoēmata* was held by Zeno and his followers, but rejected by Chrysippus and the later Stoics because of its inherent logical and ontological difficulties. In the first place, it is not clear whether we should regard the *ennoēma* as a corporeal or incorporeal entity. In either case, Caston argues, Chrysippus would have to reject it since as a generic object propositions concerning an *ennoēma* would provide counter-examples to the principle of bivalence.

¹³⁴ Caston (1999) suggests that this is derived from the young Socrates’ suggestion at *Parmenides* 132b.

¹³⁵ It is unclear what ontological status should be assigned to conceptual objects. Seneca EM 58 lists them among the incorporeal; however, they do not appear on other standard lists of incorporeals (e.g. DL 7.53) and the orthodoxy of Seneca’s position has been questioned by Caston (1999). This issue is discussed in more detail below.

forms. The *ennoêma* of Man is that which stands as one-over-many to all the various commonly qualified things of which it is true to say ‘this is a man.’ This relationship of being named after the conceptual object is the Zenonian account of ‘participation.’

Diogenes offers as an illustration of a conceptual object the way that an image (*anaturôma*) of a horse arises before the eyes even when none is present. It is unlikely that Zeno limited conceptual objects to mental images since it is difficult to see how this account could be extended to appellatives such as ‘just’ or ‘good.’ Nevertheless, it seems that mental images provided a paradigmatic example. This suggests that Zeno also believed that appellative such as ‘man’ are defined by direct acquaintance with the corresponding conceptual objects. This is certainly the case with Epicurus, from whom Zeno seems to have borrowed his account. Consider the perceptual language used in Diogenes’ account of the Epicurean doctrine of prolepsis at DL 10.33:

For as soon as ‘man’ is uttered, immediately one has an idea of the general outline of man, according to our prolepsis, following the lead of our senses. Therefore, what is primarily denoted by every word is something clear; and we could never have inquired into an object if we had not first been aware of it. For example, ‘is what is standing far off a horse or a cow?’ For one must at some time have been aware of the shape of a horse and cow according to prolepsis. Nor would we have given a name to something if we had not first learned its general outline according to a prolepsis. Therefore, our prolepses are clear. And an object of opinion depends on something prior and clear, by referring to which we speak [of it], for example, ‘on what basis do we know if this is a man?’

Again, it is unlikely that Epicurus limited his notion of mental representation to images. But, as with Zeno and the early Stoics, sense-perception seems to have provided the paradigmatic example. Both philosophers hold that, just as names denoting peculiarly qualified things are known by direct acquaintance with their objects, so too appellatives denoting kinds of things are known by direct acquaintance with conceptual objects.

In summary, then, it seems that *ennoêmata* should be taken as the objects of conceptual thoughts and not as concepts themselves. Conceptual objects do represent commonly qualified things in a way, namely as the objects of statements about the corresponding kind. This is not the type of representation, however, that corresponds to the role of the appellative at level (1) or predicate at level (2). As stated above, the Stoics seem to use the term ‘*ennoia*’ to refer to the representational items that play this compositional role at level (4).

3.3 The Formation of Concepts, Conceptions, and Conceptual Objects

The interpretation of *ennoêmata* as conceptual objects is supported by the fact that both Stobaeus and Diogenes identify them with figments of imagination. The best evidence for figments comes from Ps-Plutarch 4.12.1-5:

Chrysippus says that these four [i.e. impression (*phantasia*), impressor (*phantaston*), imagination (*phantastikon*), figment (*phantasma*)] are all different. An impression is an affection occurring in the soul which reveals itself and its cause. Thus, when through sight we observe something white, the affection is what is engendered in the soul through vision; and it is this affection which enables us to say that there is a white object which activates us. Likewise when we perceive through touch and smell. ...The cause of an impression is an impressor: e.g. something white or cold or everything capable of activating the soul. Imagination is an empty attraction, an affection in the soul which arises from no impressor, as when someone shadow-boxes or strikes his hands against thin air; for an impression has some impressor as its object, but imagination has none. A figment is that to which we are attracted in the empty attraction of imagination (*eph' ho helkometha kata ton phantastikon diakenon helkusmon*); it occurs in people who are melancholic and mad.

In the example given above, Dion is that impressor at level (3) of Theon's impression at level (4).¹³⁶ The Stoics extend a similar analysis to cases of imagination. The imaginary opponent is the figment or presentational object (*phantasma*) of the shadow-boxer's act of imagination at level (4). It is not clear if we should say in this scenario that there is a real shadow that exists at level (3) as an impressor, but that the shadow-boxer pretends as if the shadow is a real human being; or if we should say that there is no impressor at all in this case, but only the mind-generated figment of a real human opponent. The following examples from Sextus at M 7.246 suggest that both interpretations are possible:

True and false [presentations] are ones like the presentation Orestes had of Electra in his madness: in so far as he had an impression of an existing thing it was true – for Electra existed –but in so far as he had a presentation of a Fury it was false – for there was no Fury. So too a dreamer's false and vacuous attraction (*pseudê kai diakenon helkusmon*) when his presentation of Dion, who is alive, of Dion's actual presence.

The case of Orestes' madness suggests the first interpretation. It is clear that there is clearly a real object at level (3) – Electra herself – that stands as impressor of an impression that is received by Orestes' senses. Due to his distorted state, however, Orestes' mind misinterprets the report of the senses and he sees Electra as if she were a Fury. The image of a Fury thus interposes itself as the immediate object at level (3a) of Orestes' act of imagination at level (4).

The example of the dreamer's image of Dion suggests the latter interpretation. Sextus clearly adds that Dion is alive in order to provide an example of a presentation that is true in one way, but false in another. Sextus says that the presentation is true in that it does have an existing entity as its mediate object, namely Dion; it is false in its

¹³⁶ In the following paragraphs I translate *phantasia* as 'impression' since in the case of actual sense-perception the *phantasia* is a *typôsis* or 'printing.' I take this to mean that it is a physical representation of the object's being qualified in certain ways. Cf. Sextus M 7.228ff. for a warning against taking the metaphor of printing too literally.

representation of the object, namely that Dion is actually present. The scenario differs from the case of Orestes' madness in that Dion is not the immediate impressor at level (3) to an impression received by the dreamer's senses. Rather, due to his relaxed state of mind, the dreamer conjures up a figment of the Dion as a spontaneous object of his imagination. Presumably this is possible because the dreamer has at some point actually perceived Dion. The materials for his imagination are memories, i.e. stored impressions that had Dion as their impressor. This is the sense in which the figment is an imagination *of Dion* and the explanation for why Dion is the mediate object of the dreamer's act of imagination. It is clear that the same analysis could be given for the scenario in which Theon dreams of Dion after his death. In this case the figment of Theon's imagination is also generated by his mind on the basis of stored impressions of Dion while he was alive. In this scenario, however, there is no actually existing object that is the mediate object of Theon's dream-image since Dion himself is now dead.

DL 7.52-3 gives a list of ways that things are conceived. The list is repeated in several places with only minor variations and seems to have been standard in the Stoa.¹³⁷

Diogenes writes:

For of the things that are conceived (*tôn nooumenôn*), some are conceived on the basis of direct experience (*kata periptôsin*), some on the basis of similarity, some on the basis of analogy, <some on the basis of transposition>, some on the basis of composition and some on the basis of opposition. Sensibles are conceived on the basis of direct experience; on the basis of similarity are conceived things [known] from something which is at hand – as Socrates is conceived of on the basis of his statue; on the basis of analogy things are conceived by expansion, for example, Tityos and the Cyclops, and by shrinking, for example, a Pygmy. And the centre of the earth is conceived through analogy with smaller spheres. On the basis of transposition, for example, eyes in the chest. On the basis of composition the Hippocentaur is conceived of; and death on the basis of

¹³⁷ Cf. Sextus M 3.40-2, 8.56-60, 9.393-6, 11.250-2, and Cicero Fin. 3.33-4. The same basic list also attributed to Epicurus at DL 10.32.

opposition [to life]. Some things too are conceived of on the basis of transference, for example, the things said (*lekta*) and place. And there is a natural origin too for the conception of something just and good. Also on the basis of privation, for example, a man without a hand.¹³⁸

Each of the examples in this list conforms to one of the models sketched above. In the case of sensible things, the mind conceives of them by way of an impression (*typôsis*) formed by direct contact (*kata periptôsin*). Such cases conform to the impressor-impression model. The remaining ways things are conceived deal with objects with which the mind does not have direct contact. Various reasons might be offered for this lack of direct contact: either because they never existed (e.g. Tityos, the Cyclops, and the Hippocentaur), or because they no longer exist (e.g. Socrates), or because they are corporeal objects that are inaccessible to the senses (e.g. the center of the earth), or because they are incorporeal and so incapable of any causal interaction (e.g. void and sayables), or simply by accident (e.g. a man with no hands). It seems that the objects of such acts of conceiving must be considered figments. The sense of conceive (*noein*) in these cases is, therefore, ‘to imagine.’

As with Diogenes’ illustration of an *ennoêma*, the paradigm seems to be the formation of a mental image. Thus, for example, Theon can conceive of Socrates in the sense that he forms a mental image of Socrates by analogy to a bust that he presently sees. The scenario might be analyzed as follows. The statue is the impressor at level (3) of Theon’s sense-impression at level (4); however, Theon forms in his mind an image of Socrates as if he really existed. This act of conceiving is an imagination and takes as its object a *phantasma* at level (3a). A similar analysis can be given in terms of mental images for the Cyclops, Hippocentaur, Tityos, the Pygmy, men with eyes on the chests,

¹³⁸ Trans. IG.

and a man without a hand. In each case the mind forms a mental representation of these non-existent objects by re-arranging the memory images that it has stored up from sense-perception. The paradigm of mental images does not fit quite as well with other examples offered, such as death, sayables, something just, and something good. Here the act of conceiving is the formation of a mental representation, but not one that is readily explained in terms of mental images.

The standard view is that conceptual objects are incorporeal.¹³⁹ The identification of conceptual objects and mental images, however, provides at least some reason for thinking that they may be corporeal. It is clear that impressions and memories are physical modifications of the pneumatic tension of the hegemonikon and so exist on level (4). This is also true of the mental acts by which things are conceived based on the re-arrangement of mental representations. The mind stores away memories which represent particular objects that are peculiarly and commonly qualified in various ways. The elements of these memories represent the various ways that their objects are qualified. The mind conceives of new things by re-arranging the elements of these representations to form new representations. In some cases the elements of these memories will be readily represented in terms of images. The standard view might be maintained by making a distinction between the incorporeal memory-image and the corporeal act of remembering. On this interpretation when the mind recalls such things it generates a figment as the intentional object of the memory. A more ontologically conservative interpretation would identify the physical memory-image with the corporeal act of remembering. In either case, it seems that a similar analysis should be give to acts of conceiving by means of analogy, similarity, etc. When Theon conceives of Socrates or

¹³⁹ E.g. Seneca EM 58.

the Cyclops he re-arranges the elements of his stored mental representations in such a way that on the basis of the new mental representation his mind is able to generate a figment of Socrates or the Cyclops.

It was noted above that this list of ways things are conceived is cited in numerous texts. The most frequent and most important citations occur in Sextus.¹⁴⁰ He uses the list to support the assertion that every presentation occurs either from sense-perception or not without sense-perception. At M 8.56-60 the list is cited in support of the assertion that it is impossible to conceive of anything without some prior sense-perception. This is one of the texts most often cited in favor of empiricist readings of Stoic epistemology.¹⁴¹ Sextus uses the list to show that presentations that are not derived directly from sense-perceptions are nevertheless dependent upon sense-perception for their materials.

Thinking of representation in terms of mental images provides Sextus' argument with the greatest intuitive appeal. It is at least *prima facie* plausible that we cannot form a mental image of anything except by recombining images stored up from past experience. Past experience thus puts a limit on what can be conceived in this way. It is clear from certain passages that Sextus relies on this very literal way of understanding the standard list as a basis for his criticism.¹⁴² Specifically, his criticism takes aim at the Epicurean and Zenonian doctrine that appellatives are defined by direct acquaintance with *ennoêmata*. This type of definition assumes that conceptual objects are logically prior to the corresponding conceptions. Since the resources by which the mind generates such

¹⁴⁰ Cf. Sextus M 3.40-2, 8.56-60, 9.393-6, and 11.250-2.

¹⁴¹ E.g. by Hankinson (2003, 64) who identifies it with the medieval slogan '*nil in intellectu quod non prius in sensibus*.'

¹⁴² Cf. especially his criticism of geometrical definitions at 3.40-2 which depend on the assertion that we cannot image 'breadth without width' but only 'breadth with the smallest imaginable width.' The arguments bear interesting comparison with parallel arguments by Hume in the first book of the *Treatise*.

ennoêmata are limited by the materials provided by sense-perception, the Stoics cannot account for the type of conceptions upon which their theories depend.

It seems that Chrysippus originally introduced the Stoic doctrine of *prolepsis* in response to the criticisms of Arcesilaus because he realized that the Zenonian account was insufficient. I propose that Chrysippus' response included a move away from the imagistic notion of conception towards a model that focuses on the propositional content of presentations. This non-imagistic way of conceiving of things can be called 'rational conception' since it places emphasis on the propositional content that is unique to rational presentations. It is in the context of rational conception that the sense of *ennoia* as a concept proper (i.e. a representational component of propositional thought) first emerges and replaces the Zenonian emphasis on conceptual objects.

In one way rational conception is also limited by the scope of sense-perception. The concepts that represent the ways that things are commonly qualified are derived either (a) from sense-perceptions of things that are qualified in this way, or (b) by performing one or more of the listed mental operations on items that are derived in this way.¹⁴³ The concept of death is a good example. It seems from DL 7.54 that the Stoic position is that this quality is represented as 'not-alive.' Whereas our concept of what it is to be commonly qualified as 'alive' is taken from our sense-experience of various living things, our concept of what it is to be dead is simply the negation of the former representation.¹⁴⁴

¹⁴³ This seems to be Frede's understanding of the list at (1999, 320).

¹⁴⁴ I must admit that I am not certain why the Stoics hold that death must be represented in this indirect way and not derived directly from our experience of various dead things. The idea may be, however, that 'being dead' is not a genuine way of being commonly qualified since there is no particular pneumatic tensioning that corresponds to this state of affairs. Rather, dead things are only a kind insofar as they all like the requisite pneumatic tension for 'being alive.' In other words, the kind is the class of things that are all 'not-alive.'

There is another sense, however, in which rational conception is not limited by past sense-perception – namely, our powers of conception are not limited by our ability to form a mental image. For example, it is possible to form a distinct conception of a line by understanding the definition ‘width without breadth’ even if it is not possible to form an entirely accurate mental image of a line (i.e. because every imaginable line will have some degree of breadth). It is likely that some mental image will be associated with this act of conception. But this does not undermine the definition of the line because there is a way of defining the conception that is prior to the mind’s generation of the mental image.¹⁴⁵ It is not the case, as Sextus seems to hold,¹⁴⁶ that the mind must first generate a mental image and then define the appellative by direct acquaintance with a conceptual object. The same is true of other conceptions. Each will presumably be associated with some mental image. These will either be drawn directly from past experience or be composed by the mind’s associative powers. Such mental images, however, do not put a limit on the range of things that can be defined by rational conception.

Rational conception depends essentially on the relation between compositional mental items and the propositional content of the resulting mental state. The mind is able to functionally arrange concepts in such a way that the supervening proposition provides the definition of the corresponding kind. For example, the mind is able to arrange the concepts that represent the ways of being commonly qualified as a human being, a rational being, a mortal, and an animals so that the proposition – ‘if something is human, then it is a rational mortal animal’ – supervenes on the resulting mental state. The

¹⁴⁵ Similarly, it is possible to form distinct representations of a 100-sided geometrical figure and a 99-sided geometrical figure by combination of the mental representation of ‘multi-sided geometrical figure’ with that of ‘100’ and ‘99’ respectively, even if it is not possible to form mental images of them that are accurate enough to be distinguished.

¹⁴⁶ E.g. at M 3.40-2.

individual concepts from which the conception is composed are derived from sense-perceptions representing objects that are commonly qualified in each of these ways. Such sense-perceptions have definite propositional content (e.g. ‘this is human,’ ‘this is rational,’ etc.). The form of the indefinite conditional, however, acts like a universal quantifier and gives the propositional content of the conception itself a scope that extends far beyond the limits of past sense-experience. It is in virtue of being able to arrange concepts in such a way as to support the supervenience of such propositions that the mind is able to conceive of things beyond the scope of sense-perception.

Our texts on the Stoic theory of concept-formation do not clearly distinguish between the ways that things are imagined and the ways that things are rationally conceived. Acad. 2.21 is perhaps our only textual account that clearly represents this Chrysippean account of rational conception (although it is likely that Acad. 2.30 and Ps-Plutarch 4.11.1-4 should be read in this way as well). We can offer the following explanation for this lack of distinction. Even after Chrysippus developed this more sophisticated account of concept-formation, the standard list of ways things are imagined continued to be used in the school. The passage on *phantasmata* from Ps-Plutarch 4.12.1-5 shows that Chrysippus continued to appeal to mind-dependent mental objects as one element of psychological explanation. Chrysippus’ position allows that even abstract thoughts defined in terms of indefinite conditional propositions may have some associated mental image.¹⁴⁷ This will be derived from memory images in the way described by the standard list. What Chrysippus denies is that the concepts that underlie

¹⁴⁷ The separation of such mental images from the act of definition removes the indefiniteness of such mental objects. Chrysippus’ definition of a human being may be mentally associated with the image of a Greek man, for example, without undermining the universal scope of its propositional content. The accidental nature of this association removes the logical difficulties that Caston attributes to universal conceptual object, namely that they would generate exceptions to the principle of bivalence.

appellatives are defined by direct acquaintance with such mental images, or indeed with any conceptual object.

In summary, then, concepts are mental items that stand for ways that things are commonly qualified. They are naturally formed by the mind as the result of repeated sense-perception of things that are qualified in this way. Conceptions are mental states that conjoin concepts in certain ways. They are formed either naturally by experience of the relations between ways that things are commonly qualified in the world (e.g. the fact that everything that the mind encounters that is human is also mortal); or by natural associative processes; or by intentional efforts to define things outside the realm of experience (e.g. mathematical objects). Thus, concepts have the reference that they do in virtue of their causal history. Their meaning, however, comes from the incomplete sayable that supervenes upon them as the result of the way they are combined with other concepts. The presentation that expresses this meaning is a conception. Its propositional content is an indefinite conditional in which the *defeniendum* is the predicate in the antecedent and the *definiens* is the conjunction of predicates in the consequent. The mind also stores up images from sense-perception. These may be combined in various ways to produce new mental images called figments. Figments may be associated with general concepts; however, the concepts are not defined by direct acquaintance with such images. Since concepts are defined by the propositional content of their corresponding conception, their scope is able to extend beyond that of sense-perception.

3.4 The Tacit Function of Conceptions in Human Rationality

In the previous sections of this chapter we have distinguished conceptions (i.e. generic thoughts with propositional content) from concepts (i.e. the representational items from which conceptions are composed). Concepts are formed on the basis of sense-perceptions of the way things are commonly qualified. Conceptions are formed by dispositionally linking together concepts in such a way that an indefinite conditional proposition comes to supervene on the resulting structure. To have a conception of a natural kind is to have disposition with this propositional content. We called the formation of such conceptions rational conception. This was distinguished from conceptions in the sense of imagination. The materials for the formation of mental images are also drawn from sense-perception, but these images should not be identified with concepts. I suggest that Zeno (following Epicurus) thought of natural kinds as being defined by direct acquaintance with a conceptual object and treated the formation of mental images as paradigmatic. In other words, he failed to clearly distinguish between imagination and rational conception. At the very least, he left this distinction vague enough to be exploited by the Academics. In responding to Arcesilaus, Chrysippus more clearly distinguished rational conception and imagination and gave priority to the former.

In the following sections I will briefly explain how conceptions function in Stoic psychology. Specifically, I will show how they provide the meaning for appellatives in ordinary discourse and how this understanding is related to the rational comprehension of certain a priori truths. Let me begin with a very short thematic sketch and then examine the textual evidence in more detail.

According to Galen at PHP 5.3.1, Chrysippus defined reason as “a collection of prolepses and conceptions.” Frede has shown that this definition implies that reason is constituted by the possession of a sufficient stock of general concepts to account for the production of rational impressions.¹⁴⁸ Rationality requires that humans have the ability to recognize individual objects as falling into natural kinds or as being commonly qualified. This ability is accounted for by their possession of concepts that are representational items of these common qualities. The presentation of an object that is commonly qualified in a particular way will stimulate the mind to represent the object in terms of the corresponding concept. This causal interaction between the initial presentation from the sense-organ and reason gives rise to a rational presentation with propositional content (e.g. ‘this is human’). Frede also claims that the possession of reason implies a certain tacit knowledge of the essential relations between natural kinds. Our previous analysis explains why this is the case. Reason is not only the possession of a stock of concepts, but the possession of certain conceptions – in other words, an interlocking web of dispositional connections between concepts. Conceptions are links between two or more concepts that can be expressed as conditional propositions. In virtue of these connections, the mind is disposed to make certain transitions in thoughts. In other words, just as the presentation of an object that is commonly qualified in a certain way stimulates the mind to apply the corresponding concept (e.g. ‘this is human’), so too the application of this concept stimulates the mind to apply one or more of the many other concepts with which it is dispositionally linked (e.g. ‘this is mortal’ and/or ‘this is rational’ and/or ‘this is animal’). Some of these connections are essential in the sense that they hold true of every possible object that falls under the initial concept; other

¹⁴⁸ Frede (1994) and (1999).

connections will be accidental and only apply to some objects. We may think of the concept as being defined by its place in the overall web of essentially connected concepts. In virtue of its possession of these defining conceptions, reason has a tacit knowledge of the necessary truths (e.g. that all humans are rational, mortal, and animal). One of the chief ways that one progresses towards scientific understanding is through the articulation and systematization of these dispositional conceptions.

Textual evidence for this interpretation can be found in Sextus at M 8.275-6:

They [the dogmatists] say that it is not uttered speech but internal speech by which man differs from non-rational animals; for crows and parrots and jays utter articulate sounds. Nor is it by the merely simple impulse that he differs (for they too receive presentations), but by presentations produced by inference and combination. This amounts to his possessing the conception of ‘following’ and directly grasping, on account of ‘following,’ the idea of a sign. For sign is itself of the kind, ‘if this, then that.’ Therefore, the existence of signs follows from man’s nature and constitution.

According to our previous analysis, conceptions are essentially disposition connections between concepts that are expressed by conditional propositions. The Stoics identify these conditional propositions with signs. Sextus tells us that what distinguishes rational and non-rational animals is the ability to link together concepts to form the mental states upon which signs supervene. The possession of these signs, in turn, gives rational animals the ability to form new presentations that are not immediately tied to sense-perception. In terms of our previous example, when Theon sees Dion in the street and forms the thought ‘this is human,’ he has a disposition to form the thought ‘this is mortal.’ This disposition is explained by Theon’s possessing a dispositional conception with the form ‘if something is a human, then it is mortal.’

We can set out the propositional contents of such transitions as syllogistic arguments. Thus, consider the following passage from Epictetus:

Proleptics are common to all humans and one prolepsis does not contradict another. For, who of us does not assume that the good is advantageous and what we should choose and in all circumstances seek and pursue? And which of us does not assume that justice is fair and becoming? Whence, then, arises the conflict? In applying these proleptics to particular cases. As when one person cries, 'He acted well, he is a courageous man' and another 'No, he is out of his sense.' Here arises the conflict of men with one another. This is the conflict between Jew and Syrians and Egyptians and Romans, not whether holiness should be honored above all else and pursued in all circumstances, but whether eating swine's flesh be consistent with holiness or not.¹⁴⁹

The scenarios that Epictetus presents can be analyzed into a number of separate presentations. Take the scenario of a Roman and a Jew who disagree over whether or not it is pious to eat pork. We can very roughly characterize their disagreement as follows.

The Roman believes:

- (1a) Eating pork is pious (i.e. consistent with piety).
- (2a) If something is pious, then it is appropriate.
- (3a) Thus, eating pork is appropriate.

The Jew believes:

- (1b) Eating pork is impious (i.e. inconsistent with piety).
- (2b) If something is impious, then it is not appropriate.
- (3b) Thus, eating pork is not appropriate.

Of course, an accurate description of their thought process would involve a much more detailed analysis. Epictetus' point is that both the Roman and Jew are essentially in agreement about the second premise. Indeed, premise (2a) and (2b) could be derived from the following bi-conditional:

- (2c) Something is appropriate iff pious.

¹⁴⁹ Trans. Hard (1995).

A great deal more could be said about this very interesting passage. It is sufficient for our present purposes, however, to note that the transitions in each person's thoughts can be explained in terms of their possession of general conceptions with conditional content. The Stoic position is that such transitions are the real mechanism of human psychology. Although these transitions can be articulated as syllogistic arguments, the vast majority of them take place below the level of conscious awareness. The conscious consideration of such arguments and argument-types is a process in which humans articulate their own thought processes.

Next, consider the following objection by Sextus at M 8.269-70:

To these [objections] it should be added that those who champion this opinion are in conflict with evident facts. For if the sign is a proposition and an antecedent in a sound conditional, those who have no conception at all of a proposition and have made no study of logical technicalities ought to have been wholly incapable of interpreting by signs. But this is not the case; for often illiterate pilots and farmers unskilled in logical theorems interpret by signs excellently – the former on the sea <prognosticating> squalls and calms, stormy weather and fair, and the latter on the farm <foretelling> good crops and bad crops, droughts and rainfalls.¹⁵⁰

Sextus' objection turns on the implicit assumption that if signs have the logical structure that the Stoics' propose, then the ability to articulate the Stoics' logical doctrine is a necessary condition for sign-inference. The Stoic answer is suggested by M 8.275-6. The Stoics hold that a natural conception of following possessed by all humans as the basis for transitions in thought. The Stoics logical doctrine of the sign is a set of technical conceptions which articulates the nature and function of this natural conception of following. It is the natural conception of following that is the basis for sign-inference in everyday thought. The ability of sailors and farmers to predict the weather is just one manifestation of this general ability. It might take something like the following form:

¹⁵⁰ Trans. Bury (1936).

- (1) There is a ring around the moon tonight.
- (2) If there is a ring around the moon at night, then there will be rain the next day.
- (3) Therefore, there will be rain tomorrow.

The Stoic first indemonstrable form – i.e. $[(P \supset Q) \& P] \supset Q$ – is the articulation of the type of valid transition embodied in such thoughts. The Stoic doctrine is an articulation of this natural ability. It is clear, however, that the natural ability does not rest on being able to articulate or defend such logical doctrines.

The Stoics hold a similar position with regard to the meaning of terms. Consider the following objection considered by Epictetus at Diss. 2.17,5-10:

But the mass of people are deluded in the same way as Theopompus the orator, who goes so far as to reproach Plato for wishing to define each individual term. Now what did he say? – ‘Did none of us before you came along use the words ‘good’ and ‘just,’ or did we utter them as empty and inarticulate sounds, without understanding what each of them meant?’ Why, who told you, Theopompus, that we did not have natural ideas and prolepses of each of these? But is it not possible to adapt prolepses to the corresponding realities, without having minutely distinguished them, and having examined precisely which reality is to be ranged under each prolepsis. You could, for instance, make a similar remark to the physicians. For who of us did not use the words ‘healthy’ and ‘unhealthy’ before Hippocrates was born? Or did we utter them as empty noises? for we have some prolepsis of the healthy too; but we are incapable of applying it. This is why one person says, ‘Eat no food’ and another, ‘Give him food’; one says ‘Let him be bled,’ and another, ‘Apply cupping-glasses.’ And what is the reason, except an inability to apply the prolepsis of the healthy to particular cases? Thus, too, in life; who of us does not talk of good and evil, advantageous and disadvantageous: for who of us has not a prolepsis of each of these? But is it properly classified and complete? ... In general, then, if none of us who use these terms, either utter them without meaning, or need to devote any care to differentiating our prolepses, why do we differ? Why do we engage in polemics and criticize one another?

Theopompus’ objection is that inquiry into the definitions of appellatives is unnecessary. People already understand the meanings of these words, as we can see from the fact that they use them competently in everyday speech. It is important to note that Epictetus

agrees with this last statement. Indeed, Epictetus himself cites linguistic competence as evidence for the universal possession of prolepses. Prolepses are the conceptions that provide the definitions of these appellatives. As suggested above, we can think of these as nodes in a web of interlocking conceptions. The concept, and thus the appellative, is defined by the conjunction of conceptions that express its necessary connections to other concepts. For example, ‘human’ is defined by a necessary relation to ‘rational,’ ‘mortal,’ and ‘animal.’ According to several texts, ‘good’ is at least partially defined by a necessary connection with ‘beneficial.’ Epictetus holds that all humans possess the same basic web of conceptions. This can be observed by their natural tendencies to make certain assumptions and transitions in discourse. Despite the universal possession of these prolepses, however, very few people have the ability to articulate or defend an accurate definition of these terms upon demand.

The metaphor of the web is taken from contemporary philosophy. We do find the notion of reason as an interlocking structure, however, expressed in Seneca by the metaphor of an arch. At EM 118.16 Seneca writes:

There are other [things], however, which, after many increments, are altered by the last addition; there is stamped upon them a new character, different from the one they possessed before. One stone makes an archway – the stone which wedges the leaning sides and holds the arch together by its position in the middle. And why does the last addition, although very slight, make a great deal of difference? Because it does not increase; it fills up. Some things, through development, put off their former shape and are altered into a new figure.¹⁵¹

In this passage Seneca is searching for an adequate metaphor by which to explain a *prima facie* difficulty concerning the growth of reason. The Stoics hold that there is a qualitative difference between rational and non-rational beings. It seems that a

¹⁵¹ Trans. Gummere (1920).

qualitative change between two mutually exclusive states must come at an instant. The Stoics also hold, however, that children develop rationality over time through the formation of concepts and conceptions on the basis of experience. Seneca explains that in certain cases the final addition to a series makes a qualitative change to the whole. His example is that the stones of an arch are laid one after another, but that it is only with the addition of the capstone that the whole structure is transformed into an arch properly speaking. Similarly, children progress towards rationality by forming concepts and conceptions one after another on the basis of sense-perception. It is only with the addition of the last connection that completes the interlocking structure of mutually defining conceptions that the child may be called rational.

Further support for this interpretation can be found in the Stoics' odd doctrine that children do not really possess language until the age of fourteen. This doctrine is reported at DL 7.55:

While the voice or cry of an animal is just a percussion of air brought about by natural impulse, human voice is articulate and, as Diogenes puts it, an utterance of reason, having the quality of coming to maturity at the age of fourteen.¹⁵²

As they develop, children learn to use the words associated with them with certain concepts. The meanings of these words, however, are the propositions that supervene on physical structure of the mutually defining web of conceptions that constitutes reason. This physical structure is not complete and does not have its essential character – i.e. the supervenience of propositional content – until the last conceptual element is put into place. With the addition of this element the character of the youth's soul is radically altered and her use of words takes on meaning. This radical transformation is not always

¹⁵² Trans. IG.

apparent. Most children learn appear to use language competently before their speech technically has meaning. Similarly, most adult humans use words competently in discourse, but they are for the most part unaware of the real meanings of these words. That they have the natural conceptions that provide these meanings can be inferred from their use. In virtue of their position of these conceptions they may even be said to have a certain comprehension of these meanings, just as one may assent to comprehensible sense-presentations without being reflectively aware of them. In most adult humans the comprehension of the meanings of words is tacit because of the dispositional status of these conceptions has not been brought to conscious awareness. As Epictetus explains, Inquiry into essential definitions is necessary, in order to articulate and perfect one's understanding of these terms. Once articulated, further progress towards scientific understanding can be made by mutually linking them together into deductive systems. Before turning to the Stoics' account of this process, however, we must pause to make one final set of distinctions between types of conceptions.

3.5 Two Types of Conceptions: Prolepses and Suppositions

My examples of conceptions in the previous sections were all definitions and axioms. It is clear, however, that the scope of conceptions extends beyond such essential conceptions. This seems to be entailed by the way that conceptions come about.¹⁵³ Conceptions are initially formed by contiguity in perception. As we have noted, concepts are caused by the perception of commonly qualified things. Given that objects commonly qualified in one way are also commonly qualified in other related ways, the perception of them causes the mind to perceive these qualities as themselves connected.

¹⁵³ Cf. Sandbach (1930).

Given that things do possess objective similarities, some of these conceptual connections will be founded on necessary connections between ways that objects are qualified in nature. Other conceptual connections will be culturally determined, and still other will be purely idiosyncratic and the result of one's personal experience and character. For example, the conception of a human being is often taken to include perceptual predicates such as 'two-legged.' We can imagine also that children growing up in certain geographical regions will believe that all humans are dark-skinned. Such conceptions will have the conditional structure of 'common' or 'commemorative' signs.¹⁵⁴ In other words, 'if something is a human being, then it is two-legged and dark-skinned.' In a loose sense, we might say that one's conception of a human being is the sum total of such thoughts one is disposed to think about humans. These dispositions are grounded in stronger and weaker conceptual connections in the total web of one's conceptions.

This looser sense of conception corresponds to the looser sense of the meaning of a term. This might be identified with what the speaker consciously intends by the term or, perhaps, what the speaker is disposed to say when asked she means. Conceptions in this looser sense are not essential to the corresponding natural kind. Nor are they the essential meaning of the term. We can realize this by a kind of off-line reflection of the type described by Peacocke in his account of a priori knowledge.¹⁵⁵ Reflecting on certain hypothetical situations in which the antecedent is true and consequent false – e.g. if one were to see a one-legged or light-skinned man – reveals that neither of these ways of being qualified is essential to being human. We might say that they are 'not truth-conducive' in the sense that given the input of true premises from sense-perception, they

¹⁵⁴ Cf. Philodemus 1.2-4.13.

¹⁵⁵ Cf. Peacocke (2000), described above in chapter one.

will not always yield true conclusions.¹⁵⁶ At best such conceptions hold for the most part; at worst they are purely idiosyncratic and misleading. In either case they are open to empirical falsification.

This is not the case with propositions such as ‘if human, then rational mortal animal.’ The Stoics hold that it would be impossible for the counter-example – i.e. ‘this is immortal and human’ – to obtain (*huparchein*) since the very fact that something is immortal is sufficient to disqualify it from being human. Moreover, this is not merely a matter of the conventional meanings of the words ‘human’ and ‘mortal’ or stipulated by our conceptions. Rather, the Stoics hold that it is an objective reality that something’s being commonly qualified as human is inconsistent with its being qualified as immortal. Thus, it is necessarily the case that anything that is qualified in such a way that it displays the characteristics of being human – i.e. it has this particular pneumatic tensioning – will die. The fact that we possess certain conceptions that are related to one another in a particular way merely allows us to grasp this necessary truth about the world. We have, then, two types of conceptions: those with propositional content that is necessarily true and those with propositional content that is contingently true or false. The first type of conceptions is called ‘prolepses’ by the Stoics. It seems that the term for the second type of conception is ‘supposition’ (*hupolêpseis*). Stobaeus defines supposition as “weak assent because it accepts as true a proposition that may be either

¹⁵⁶ The Stoic position seems to be that the truth value of such conditionals changes: they are false when a counter-example obtain and true when it does not. This might be accounted for by distinguishing between propositional types and tokens. Cf. Shields (1993). I thank Brian Kierland for the much more convenient description of them as non truth-conducive.

true or false.”¹⁵⁷ This use of the term can also be found in Epicurus. Consider the following passage from his *Letter to Meneoceus* (quoted at DL 10.123-4)

First, believe that god is an indestructible and blessed animal, in accordance with the general conception of god commonly held, and do not ascribe to god anything foreign to his indestructibility or repugnant to his blessedness. Believe of him everything which is able to preserve his blessedness and indestructibility. For the gods do exist since we have clear knowledge of them. But they are not such as the many believe them to be. For they do not adhere to their own views about the gods. The man who denies the gods of the many is not impious, but rather he who ascribes to the gods the opinions of the many. For the pronouncements of the many about the gods are not prolepses by false suppositions (*hupolêpseis*).

In this passage we observe the criterial use of prolepses familiar from Stoicism.¹⁵⁸

Indeed, it is commonly accepted that the Stoics (most likely Chrysippus) adopted this criterion from Epicurus. Epicurus and the Stoics face the same criticism from the skeptics, namely that many people do not consciously agree with the conception of the gods that he claims to be universal.¹⁵⁹ It is clear from the passage that Epicurus does not back down from this claim. Rather, he claims, such people are at odds with their own beliefs. They possess the prolepsis that the gods are blessed, but they fail to realize that their own beliefs about the gods are at odds with this prolepsis. Epicurus claims, moreover, that they would agree with his position if they articulated their own prolepses

¹⁵⁷ Cf. the Epicurean description of supposition at DL 10.34: “And they also say that opinion is a supposition (*hupolêpsis*), and that it can be true or false. For if it is testified for or not testified against, it is true. But if it is not testified for or is testified against, it turns out false. Hence they introduced the idea of ‘what await confirmation.’ For example, one awaits confirmation of and comes nearer to a tower, to learn how it appears up close” (Trans. IG).

¹⁵⁸ In this passage suppositions are equated with pronouncements. Presumably, however, such pronouncements are grounded in dispositional conceptions about the gods. Indeed, it precisely because such beliefs are so deeply ingrained that the Epicurean therapy of fear of the gods is both necessary and difficult. We can observe a similar ambiguity concerning the status of supposition in Stoicism. Assent to such presentations is the source of the contingent and misleading conceptions identified as suppositions above. Here again we see the Stoic tendency to call dispositional and occurrent presentations by the same name.

¹⁵⁹ Cf. Sextus M 8.331a-332a. Numerous examples of this argument pattern can be found in Plutarch’s CN.

and distinguished them from such suppositions. Again, we can see a parallel with the criterial use of prolepses in Epictetus.

Epicurus distinguishes prolepses and suppositions as natural and artificial conceptions. The assumption is that conceptions that come about naturally will be true and common to all humans, whereas artificial conceptions will not be universal and liable to error. We have already seen that the Stoics also adopt this language and often refer to prolepses as natural conceptions. The distinction between prolepses and suppositions, however, should not be confused with the distinction between prolepses and technical conceptions reported at Ps-Plutarch 4.11.3-4. Prolepses and technical conceptions are distinguished by the way that they come about. Prolepses come about ‘naturally and without design’; technical conceptions come about ‘through our own effort and learning.’ Epictetus seems to have this latter distinction in mind in the following passage at Diss.

2.11,2-6:

For we came into the world without any innate conception of a right-triangle, or of a quarter-tone or half-tone; but we learn what each of these is by some kind of systematic instruction, and for that reason those who have no knowledge of them do not imagine that they know what they are. But whoever came into the world without an innate conception of what is good and evil, honorable and base, becoming and unbecoming, what happiness and misery are, and what is appropriate to us and forms our lot in life, and what we ought to do and ought not to do? ¹⁶⁰

Epictetus’ point is that geometrical and musical conceptions do not come about naturally. Rather, they are stipulated and learned first through conscious awareness and only later internalized. They are contrasted with our natural conceptions of good and evil, etc. which are first learned unconsciously and only later articulated as precise definitions. It

¹⁶⁰ Trans. Hard (1995). The innatist description of prolepses in Epictetus is criticized by Sandbach and widely taken to be un-orthodox. Minimally we should take it as indicating that such prolepses are naturally formed and universally possessed.

is clear, however, that geometrical and musical notions can be given precise and essential definitions. In this sense they do not answer to suppositions. Nor can it be the Stoic position that all the conceptions that we form unconsciously are prolepses. Thus, it seems that the distinction between prolepses and suppositions cuts across that between prolepses and technical conceptions.

Finally, it is clear that both the Stoics and Epicureans identify prolepses with common conceptions (i.e. those possessed by all humans). The skeptics point out that there is much disagreement about what is commonly believed, that many people have no explicit conceptions whatsoever of the matters the Stoics discuss, and that the Stoics doctrines are highly revisionist. As we can see from the above passages from Epicurus and Epictetus, the agreement here is tacit and ideal.¹⁶¹ All humans really do have these conceptions, but they are not articulated.

The need to articulate one's prolepses is a constant theme in Epicurus. He assumes his reader's familiarity with the doctrine and does not elaborate on the procedure. Although prolepses tacitly function as a criterion of truth even without one's conscious awareness of them, they must be articulated and refined in order to be more effectively used to judge the truth and falsity of presentations. At Diss. 2.11.19-21 Epictetus explains the basic procedure. The argument assumes that we have comprehension of the propositions (a) 'good \supset trustworthy' and (b) 'trustworthy \supset stable.' For those familiar with the writings of the ancient moralists, such statements sound like platitudes. In one sense the Stoics agree. All humans make such assumptions in their everyday use of moral terms. Just as often, however, they rely on other

¹⁶¹ Cf. Obbink (1992) and Brittain (forthcoming).

assumptions that would appear to be platitudinous, e.g. ‘healthy \supset good.’ The Stoics hold that this belief is a supposition because it does not always hold true. There are cases in which health does harm rather than benefit.¹⁶² And since ‘good \supset beneficial’ is a prolepsis, we can recognize that ‘healthy \supset good’ does not always hold true. Rather, the proposition is plausible since health is a something to be preferred and sought when rationally appropriate. The explanation of this distinction requires further articulation of the definitions of ‘good,’ ‘beneficial,’ ‘appropriate,’ etc. It also requires that we be able to test our intuitions about various cases in a kind of off-line simulation. The possession of prolepses explains how these activities are possible. The testing of various intuitions by simulated scenarios brings to conscious awareness the dispositions that guide one’s actions in everyday life.

The same is true for testing the linguistic boundaries of the terms used in moral discourse. Our intuitions about the circumstances in which it would or would not be appropriate to use a particular term reveal the various connections between this and other concepts. The articulation of these connections and distinction between prolepses and suppositions is how one makes progress towards knowledge. The possession of prolepses insures that humans have the basic starting-points that insure the success of such inquiry. All humans possess the correct intuitions, although these are often obscured and easily confused with suppositions. It is clear that this search for the essential definitions of moral terms is fundamentally a priori. Although occasional appeals to experience may be practically beneficial, humans already possess the basic

¹⁶² Cf. DL 7.103.

stock of implicit conceptions necessary that make the process possible and constitute its final court of appeal.

CONCLUSION: THE HISTORICAL PLACE OF STOIC EPISTEMOLOGY

Epictetus connects the articulation of prolepses with Socrates' search for universal definitions.¹⁶³ The Socratic element of his doctrine has recently been elaborated by Long who suggests that Epictetus is attempting to account for what Vlastos calls the "problem of the elenchus."¹⁶⁴ The problem, in brief, is to explain how the apparently purely negative practice of refuting others' views provides Socrates with grounds for asserting that his own views are true. According to Vlastos, Socrates assumes that his interlocutors already have a tacit knowledge of moral truth. This knowledge is operative in their actions, in their everyday use of moral terms, in the answers they feel inclined to give when questioned, and even in non-verbal manifestations such as blushing.¹⁶⁵ Their awareness of this knowledge, however, is obscured by lack of reflection and other false beliefs. The purpose of the elenchus is to jar them out of their complacency, remove the obscuring false suppositions, and stimulate them to articulate this tacit knowledge and "tie it down" with an account. According to Long, Epictetus offers prolepsis as the explanation for the universal possession of this tacit knowledge.

The standard interpretation holds that the doctrine of prolepsis that we find in Epictetus should not be attributed to the early Stoics.¹⁶⁶ In perhaps the most influential article on Stoic prolepsis Sandbach gives an extended criticism of Bonhöffer on precisely this point. Sandbach's primary objection is that Epictetus' innatism is inconsistent with

¹⁶³ E.g. *Diss.* 2.12.5-11.

¹⁶⁴ Long (2002, 80-5) and Vlastos (1991).

¹⁶⁵ The most important passage is *Gorg.* 474b where Socrates tells Polus: "For I do believe that you and I and everyone else consider doing what's unjust worse than suffering it, and not paying what is due worse than paying it." Cf. Kahn's similar analysis of the role of shame in the dialogue (1996, 138-42).

¹⁶⁶ Cf. Long (2002, 83), Dobbin (1998, 188-94), and Sandbach (1930).

the psychological empiricism espoused by Zeno and Chrysippus; however, he also rejects the idea that prolepses embody a tacit or latent knowledge of essential definitions. Rather, he holds that prolepses are “preconceptions” that correspond to nominal definitions or empirical generalizations.¹⁶⁷ These preconceptions make further inquiry possible by insuring that our words have some meaning; but essential definitions are gained only as a result of empirical investigation. Like his innatism, Sandbach argues, Epictetus’ appeal to tacit knowledge is due to influence from the Platonic theory of recollection. During the first century BCE the orthodox theory of prolepsis and Platonic recollection were syncretically assimilated by Platonizing Stoics such as Posidonius and Stoicizing Platonists such as Antiochus of Ascalon. The influence of these figures can be observed in Cicero.¹⁶⁸

Sandbach’s preconception reading of Stoic prolepsis has been very influential upon the empiricist readings of Stoic epistemology. I have argued on textual grounds that Sandbach’s interpretation of prolepsis is not correct and that we should regard the Epictetan doctrine as orthodox.¹⁶⁹ The most important pieces of evidence are a number of texts linking articulation (*diarthrôsis*) to the early Stoics in general and Chrysippus in particular. For example, Augustine CD 8.7 reports:

[According to the Stoics] “the mind forms conceptions – *ennoiai* as they call them – [from the senses] of those things, that is, which they articulate by definition. The entire method of learning and teaching, they say, stems and spread from here.

¹⁶⁷ Sandbach (1930, 49). For prolepses as nominal concepts, cf. Hankinson (2003, 83). For prolepses as empirical generalizations, cf. Todd (1973).

¹⁶⁸ E.g. Tusc. 4.53, Off. 3.76 and 3.81.

¹⁶⁹ Cf. Dyson (2004).

Augustine does not attribute this doctrine to any particular Stoic.¹⁷⁰ At DL 7.199 Diogenes connects the term directly with Chrysippus. He lists a number of Chrysippus' treatises under the heading "Ethical theory concerning the articulation of ethical conceptions." The list includes treatises with such titles as *An Outline Account of Reason, Definitions of the Intermediates, Definitions of What Belongs to the Superior and Inferior Person*, as well as what appear to be technical treatises *On Definitions, On Genera and Species*, and *On Etymological Matters*. A similar heading at DL 7.201 – "Ethical Topics Concerning the Common Reason and the Science and Virtues that Arise from It" – contains treatises such as *On Reason* (to which the definition of prolepsis at DL 7.54 and of reason at PHP 5.3.1 are attributed), *How We Name Each Thing and Form a Conception of It, On Conceptions, On Suppositions*, and *On Comprehension, Scientific Understanding, and Ignorance*. One can imagine that much of the technical theory that we must piece together from the remaining fragmentary evidence of this thesis was spelled out by Chrysippus in such treatises.

The most important piece of evidence, however, comes from Plutarch CN 1059c.

He writes:

One Stoic said that in his opinion it was not by chance but by divine providence that Chrysippus came after Arcesilaus and before Carneades, the former of whom initiated the violence and offence against common sense, while the latter was the most productive of the Academics. For by coming between them, Chrysippus with his rejoinders to Arcesilaus also fenced in the cleverness of Carneades; he left sense-perception many reinforcements, for it to stand siege as it were, and entirely removed the confusion regarding the prolepses and conceptions by articulating each one and assigning it to its proper place.

¹⁷⁰ The statement is reminiscent of Cicero's report at Acad 1.41 that according to Zeno the conceptions developed from sense-perception provide "not only first principles, but also certain broader roads to the discovery of reasoned truth" (Trans. Rackham, 1933).

Recognition of the importance of this passage has been undercut by a misinterpretation by Sandbach. He interprets Plutarch as saying that Chrysippus made a distinction between the technical definitions of a prolepsis and a conception.¹⁷¹ The correct reading of the passage, however, is given by Cherniss.¹⁷² Plutarch is not saying that Chrysippus distinguished the technical definitions of prolepsis and conception (although he certainly did this as well). Rather, the passage says that Chrysippus responded to Arcesilaus' skeptical attack by articulating each one of our prolepses and common conceptions, assigning each of these conceptions to its proper place in the web of essential definitions that constitutes reason. The Stoic claim, in short, is that we can find in Chrysippus' works the kind of articulation and refinement that Epictetus claims is necessary for prolepses to function properly as a criterion of truth.

The attack by Arcesilaus to which Chrysippus responded was presumably similar to the one given by Sextus at M 8.331a-332a:

It is agreed that a prolepsis and conception must precede every object of investigation. For how can anyone even investigate without some conception of the object of investigation? ... We grant this, then, and are so far from denying that we have a conception of the object of investigation that, on the contrary, we claim to have many conceptions and prolepses of it, and that we come round to suspension of judgment and indecision owing to our inability to discriminate between these and to discover the most authoritative of them.

Humans possess so many conceptions about things, the Stoics argue, that even if it granted that some of them meet the Stoic requirements for prolepses, others will surely be suppositions and it is impossible to adequately distinguish one from another. This argument parallels the skeptical argument that, even if comprehensible sense-

¹⁷¹ Sandbach (1930, 44). Sandbach cites the passage as evidence against the orthodoxy of Epictetus who apparently identifies prolepsis and common conception (e.g. at Diss. 1.22.1). Cf. Dyson (2004) for the contrary argument that the early Stoics did identify prolepses and common conceptions.

¹⁷² Cherniss (1976, 664-5n.a)

presentations exist, they cannot be adequately distinguished from similar non-comprehensible ones. Chrysippus' response seems to have involved (a) actually distinguishing various definitions and (b) developing strategies for identifying these with the prolepses all humans naturally form. One common strategy was to point to the universality of such beliefs as evidence of their natural origin. Like Socrates, Chrysippus does not believe that all people are consciously aware of such beliefs. On the contrary, they often espouse contradictory beliefs because they are confused about the nature of their own conceptions. Nevertheless, their true views can be inferred from their statements and actions.¹⁷³ Here we see the same style of argument that is found in the Epictetan doctrine of prolepsis and associated with his reading of Socrates.

The similarity between the Epictetan and Chrysippean doctrines has unfortunately been obscured by several skeptically influenced texts. As we can see from Plutarch's CN, Carneades' response to the above arguments was to point out that in many cases the Stoics' articulated definitions are in conflict with what the majority of humanity believes. This argument relies on uncharitably interpreting Stoic prolepses as equivalent to beliefs that are consciously held by all humans. This seems to be the origin of the later view that prolepses are identical with nominal definitions.¹⁷⁴

Sextus' presentation of the Stoic doctrine of the criterion has had a similarly obscuring effect. Comparison with the survey of views on the criterion of truth at Sextus M 7.46-262 shows that Stoic epistemology clearly belongs to a family of dual-criteria

¹⁷³The extent to which Chrysippus was willing to take such arguments are reported by Galen in PHP 3.1. Chrysippus argues that we can infer the universality – and thus the naturalness and truth – of the belief that the heart is the seat of the soul from people's common sayings and even from the tendency to gesture towards the chest when referring to one's self.

¹⁷⁴ Cf. Brittain (forthcoming) on the origins of common sense in Cicero's adaptation of this doctrine in his rhetorical works.

theories in the late 4th and early 3rd centuries. Sextus' discussion is organized around the following distinction at M 7.46: some of the dogmatists say that the criterion of truth belongs to reason, other to the evidence of irrational sense-perception, and others to both. Unfortunately, Sextus' actual presentation is not well organized and often derailed by historical tangents. He begins with a long discussion of those who rejected the existence of a criterion altogether (7.48-88). He then turns to the early Physicists who rejected sense-perception in favor of reason (7.89-140). With Plato he begins the discussion of those who posit both reason and sense-perception as criteria of truth. He writes:

Plato, then, in his *Timaeus*, after dividing things into intelligibles and sensibles and stating that the intelligibles are apprehensible by reason whereas the sensibles are the objects of opinion, plainly specified reason as the criterion of the knowledge of things, though he included along with it the clear evidence (*enargeian*) of sense-perception.¹⁷⁵

In the views of Speusippus and Xenocrates the emphasis on two criteria of truth becomes even more prominent. Sextus then breaks off this line of discussion to give an account of the views of the Academic skeptics starting with Arcesilaus (7.150-189). After this long digression he begins his account of those who place the criterion in irrational sense-perception alone, beginning with the Cyrenaics (7.190-201). Sextus implies that the Epicureans (7.203-16) also belong to this camp (although from Epicurus' statement that prolepsis and sense-perception are both criteria of truth it is clear that his doctrine more accurately falls within the dual-criterion division). By the time Sextus returns to the Peripatetics at 7.217-226 it is clear that his discussion is back to this division.

Theophrastus is said to have admitted "a two-fold criterion, sense-perception of things sensible and thought (*dianoia*) of things intelligible, which common to both, [he says] is the self-evident (*to enarges*)."

¹⁷⁵ Trans. Bury (1935).

listed at DL 7.49-52: between sensory and non-sensory presentations (closely associated with the incorporeals and said to be grasped by thought), between perceptual and rational comprehension, and between sense-perception and prolepsis. That the Stoics themselves would have associated these distinctions with a division between the sensible and intelligible is suggested by Chrysippus' own distinction between the sensible particular sweet and the intelligible generic sweet.

It is clear, then, that the Stoics also belong to the tradition of those who posited a dual criterion of truth. Unfortunately, this fact is obscured by yet another digression in Sextus' presentation. He begins his account of the Stoic doctrine at 7.227 by stating that the comprehensible presentation is their criterion of truth. Sextus then embarks on an extended discussion of the definition of presentation that lasts until 7.247. He returns to the comprehensible presentation at 7.248-60 and provides a sketch both of the Stoic doctrine and of the skeptical counter-arguments. Sextus' account ends without specifying to which division the Stoic doctrine belongs. Throughout both his discussion of presentation and the debate concerning the comprehensible presentation, Sextus uses sense-perception as the paradigmatic example. He does not mention, as he does elsewhere, the criterion of prolepsis or the skeptical attacks on the Stoics' use of common conceptions. This has given the misleading impression that the Stoics belong to those who place the criterion of truth in sense-perception alone.

It might be objected that the outlines of Stoic epistemology in Cicero and Diogenes Laertius also places heavy emphasis on sense-perception. It makes a great deal of difference, however, if we view this emphasis with the context of the other dual-criteria theories of the late 4th and early 3rd centuries. As we can see from Aristotle, these

dual-criteria theories balance the claim that sense-perception is the source of conceptions with the distinction between psychological and epistemological dependence. In epistemology they continue to operate with largely Platonic assumptions about the systematic nature of knowledge, the requirements for deductive certainty, and comprehension of universal and necessary first principles by reason itself. In short, they view universal knowledge of the world as being fundamentally a priori. I have suggested that the same is true of the Stoics' notion of scientific understanding. In keeping with their ontological rejection of Platonic forms, the Stoics offer a naturalized account of how such understanding is possible that avoids such metaphysical excesses. Nevertheless, they see themselves as belonging to the same tradition as the Platonists. Even Zeno's insistence that sense-perception must be counted as a form of comprehension, although it clearly contradicts the views put forward by Plato in the *Republic*, nevertheless had predecessors within the Platonic school.

The standard division between Hellenistic empiricism and Platonic rationalism gives the impression that the Stoics belong (and see themselves as belonging) to a separate tradition that is consciously opposed to Platonism, that they have more in common with the Epicureans and Academic skeptics than with Plato.¹⁷⁶ A more accurate description is that the Stoics see themselves as rivals to the Platonists within a common Socratic tradition. Despite their ontological differences, the Stoics see themselves as having more in common with the Platonists than the other philosophers with whom we group them as "Hellenistic philosophers."

¹⁷⁶ Frede has remarked that "the Stoics are primarily trying to account for the type of knowledge that Socrates sought. If we keep this in mind, an empiricist reading is highly unlikely."

Long has shown that the best way to understand Zeno's doctrine is in the context of competing claims about the legacy of Socrates in the late 4th century.¹⁷⁷ This context includes self-proclaimed Socratics on the one hand (i.e. Plato and Cynics) and critics of Socrates on the other (i.e. Peripatetics and Epicureans). In matters of ethics and moral psychology, Zeno tends to side with the Cynics. His view of Socrates is in this respect heavily influenced by such as Antisthenes and Xenocrates. In viewing theoretical knowledge in physics and dialectic as necessary for ethics, however, Zeno sides with Plato and against the Cynics. He even carries on an internal debate with one of his Cynicizing students, Aristo of Chios, on precisely this topic. In drawing evidence for Socrates' views about physics and dialectic Zeno often turns to the Platonic dialogues.

This ambiguity towards the Platonic Socrates leads to the following strategy. Zeno and the Stoics often read Plato dialogues for philosophical inspiration and hints about Socrates' views. They make a distinction, however, between Socrates as he speaks for himself in the dialogues and Socrates as a spokesperson for Plato. Where Plato's doctrines seem to differ from those of the historical Socrates – either as portrayed in other Platonic dialogues or in authors such as Antisthenes – the Stoics attempt to reformulate an argument to defend the 'authentic' Stoic position. Recent scholarship has traced a number of Stoic doctrines to specific passages in Plato's dialogues. Perhaps the most perspicuous is the Stoics' rejection of the Platonic tripartite soul in favor of a unitarian, intellectualist psychology. This seems to be a defense of the views attributed to Socrates in a number of early Platonic dialogues including the *Prot.* 329d-333e and 345e-358d¹⁷⁸

¹⁷⁷ Long (1996b).

¹⁷⁸ Cf. Frede (1994) and Striker (1994).

The same is true of many of the Stoics' famous paradoxes in ethics.¹⁷⁹ Nor are the examples limited to moral philosophy. Brunschwig has convincingly argued that in postulating their causal criterion for existence the Stoics are self-consciously taking the side of the Giants against the Friends of the Forms at Soph. 246a-248a.¹⁸⁰ Caston has similarly argued that Zeno's doctrine of *ennoêmata* is derived from the suggestion of the young Socrates at Parm. 132b that the forms are thoughts and exist only in the soul.¹⁸¹ Finally, Long has argued that Chrysippus drew his understanding of dialectic – defined as the science of what really is – from the *Republic*.¹⁸²

I suggest that the doctrine of prolepsis is similarly derived from consideration of a Platonic passage. Specifically, it seems to be derived as an alternative 'Socratic' response to the paradox of inquiry presented in *Meno* 80d-e. Textual indications that the Stoics thought of prolepsis as a solution to Meno's paradox can be found in several sources – most importantly Plutarch Fr. 115f.¹⁸³ Plutarch indicates that a number of Hellenistic schools offered solutions to this paradox. His suggestion is supported by textual hints in both Aristotle and Epicurus.¹⁸⁴ It is likely that the paradox had a general circulation and even a number of different formulations. On the basis of the pattern of appropriation illustrated above, however, it seems reasonable to believe that the Stoic version is very closely tied with the version presented by Plato. Indeed, I propose that the doctrine of prolepsis which I have reconstructed in this thesis can be viewed as an attempt to reformulate much of what Plato says about knowledge, both in the *Meno* itself

¹⁷⁹ Cf. Striker (1994) and Long (1996b).

¹⁸⁰ Brunschwig (1994b).

¹⁸¹ Caston (1999).

¹⁸² Long (1996d).

¹⁸³ Cf. also Augustine CD 8.7, Cicero Acad. 1.42, and Sextus M 8.331a-332a.

¹⁸⁴ Cf. Aristotle APo. 2.19 99b25-35 and DL 10.33.

and in other dialogues, in terms of this naturalistic explanation for knowledge of universals.

Finally, we should note that recognition of the extent to which the early Stoics were already influenced by Plato also affects the way we view the assimilation of Platonism and Stoicism in the 1st century BCE. Certainly Antiochus' claim that there is no real deviation between the Stoics and Plato is an exaggeration. There are important differences between the Stoics and Platonists in ethics, ontology, and epistemology. I believe that Antiochus is correct, however, to see these differences as akin to a family squabble. The Stoics and Platonists, for all their differences, fundamentally belong to the same tradition. It is instructive to see how smoothly Antiochus is able to incorporate Stoic epistemology into a Platonic framework.¹⁸⁵ The analysis of prolepsis presented here suggests that he was able to do so with much less violence to the orthodox Stoic positions than is generally assumed.

¹⁸⁵ Cf. Dillon (1996, 63-9 and 91-6).

BIBLIOGRAPHY

- Algra, K. (2003). "Stoic Theology" in Inwood (2003), 153-78.
- Algra, K et al. (1999). *The Cambridge History of Hellenistic Philosophy*. (Cambridge: Cambridge University Press).
- Annas, J. (1992). *Hellenistic Philosophy of Mind*. (Berkeley, CA: University of California Press).
- Annas, J. (1990). "Stoic Epistemology" in Everson (1990), 184-203.
- Annas, J. (1980). "Truth and Knowledge" in Schofield, et. al. (1980).
- Audi, R. (ed.) (1999). *The Cambridge Dictionary of Philosophy, 2nd Edition*. (Cambridge: Cambridge University Press).
- Barnes, J. (1980). "Proof Destroyed" in Schofield, et. al. (1980).
- Barnes, J. (ed.) (1995a). *The Cambridge Companion to Aristotle*. (Cambridge: Cambridge University Press).
- Barnes, J. (1995b). "Life and Work" in Barnes (1995a), 1-26.
- Barnes, J. (1995c) *The Complete Works of Aristotle: The Revised Oxford Translation*. (Princeton, NJ: Bolligen Series LXXI -2).
- Berti, E. (1981). *Aristotle on Science* (Padua).
- Boghossian, P. and C. Peacocke (eds.) (1998a). *New Essays on the A Priori*. (Oxford: Clarendon Press)
- Boghossian, P. and C. Peacocke (1998b). "Introduction" in Boghossian and Peacocke (1998a), 1-10.
- BonJour, L. (1998). *In Defense of Pure Reason*. (Cambridge: Cambridge University Press)
- Bonhöffer, A. (1890). *Epictet und die Stoa: Untersuchungen zur Stoischen Philosophie*. (Stuttgart)
- Boudouris, K. (ed.) (1999). *Hellenistic Philosophy, Vol. 2*. (Athens: International Center for Greek Philosophy and Culture), 50-63.

- Brittain, C. (forthcoming) "Common Sense: Concepts, Definitions, and Meaning in and out of the Stoa"
- Brunschwig, J. (1980). "Proof Defined" in Schofield, et. al. (1980).
- Brunschwig, J. (1994a). *Papers in Hellenistic Philosophy*. Trans. J. Lloyd. (Cambridge: Cambridge University Press).
- Brunschwig, J. (1994b). "The Stoic Theory of the Supreme Genus and Platonic Ontology" in Brunschwig (1994a), 92-157.
- Burnyeat, M. (1981). "Aristotle on Understanding Knowledge" in Berti (1981).
- Cassam, Q. (1998). "Rationalism, Empiricism, and the A Priori" in Boghossian and Peacocke (1998a), 43-64.
- Caston, V. (1999). "Something and Nothing: The Stoics on Concepts and Universals," *Oxford Studies in Ancient Philosophy*, 17, 145-213.
- Curley, E. (1992). "Rationalism" in Dancy and Sosa (1992), 411-15.
- Dancy, J. and E. Sosa. (1992). *A Companion to Epistemology*. (Cambridge, MA: Blackwell Publishers, Ltd.)
- Dillon, J. (1996). *The Middle Platonists*. (Ithaca, NY: Cornell University Press).
- Dobbin, R.F. (1998). *Epictetus: Discourses Book I*. (Oxford: Clarendon Press)
- Dyson, H. (2004). *Prolepsis and Koinai Ennoiai in the Early Stoa*. A Doctoral Dissertation for Emory University (Ann Arbor, MI: University Microfilms, Inc.).
- Everson, S. (1990). *Epistemology. Cambridge Companions to Ancient Thought 1* (Cambridge: Cambridge University Press)
- Everson, S. (1994). *Language. Cambridge Companions to Ancient Thought 3*. (Cambridge: Cambridge University Press)
- Frede, M. (1999a). "Stoic Epistemology" in Algra, et al. (1999), 295-322.
- Frede, M. (1999b). "The Stoic Conception of Reason" in Boudouris (1999)
- Frede, M. (1996a). "Aristotle's Rationalism" in Frede and Striker (2000), 157-74.
- Frede, M. (1996b). "Introduction" in Frede and Striker (2000), 1-28.

- Frede, M. (1994). "The Stoic Notion of a *Lekton*" in Everson (1994), 109-29.
- Frede, M. (1986a). *Essays in Ancient Philosophy*. (Minneapolis, MN: University of Minnesota Press).
- Frede, M (1986b). "Stoics and Skeptics on Clear and Distinct Impressions" in Frede (1986a), 151-78.
- Frede, M (1986c). "Principles of Stoic Grammar" in Frede (1986a), 301-37.
- Frede, M. and G. Striker. (eds.) (1996). *Rationality in Greek Thought*. (Oxford: Oxford University Press).
- Garber, D. (1999). "Rationalism" in Audi (1999), 771-2.
- Glidden, D. (1994). "Parrots, Pyrrhonists, and Native Speakers" in Everson (1994), 129-48.
- Glidden, D. (1985). "Epicurean Prolepsis," *Oxford Studies in Ancient Philosophy*, 3, 175-215.
- Hankinson, R.J. (2003). "Stoic Epistemology" in Inwood (2003), 59-84.
- Hicks, R. D. (1910). *Stoic and Epicurean*. (New York: Charles Scribner's Sons)
- Higginbotham, J. (1998). "Conceptual Competence" in Villanueva (1998), 149-62.
- Inwood, B. (ed.) (2003). *The Cambridge Companion to the Stoics*. (Cambridge: Cambridge University Press).
- Ierodiakonou, K. (ed.) (1999a). *Topics in Stoic Philosophy*. (Oxford: Clarendon Press)
- Ierodiakonou, K. (1999b). "Introduction. The Study of Stoicism: Its Decline and Revival" in Ierodiakonou (1999a), 1-22.
- Loeb, L. (1981). *From Descartes to Hume*. (Ithaca, NY: Cornell University Press)
- Long, A.A. (1974). *Hellenistic Philosophy: Stoics, Epicureans, and Sceptics*. (London: Gerald Duckworth & Company)
- Long, A.A. (1971). *Problems in Stoicism*. (London: Athlone Press).
- Long, A. A. (1996a). *Stoic Studies*. (Berkeley, CA: University of California Press).
- Long, A. A. (1996b). "Socrates in Hellenistic Philosophy" in Long (1996a), 1-34.

- Long, A. A. (1996c). "The Logical Basis of Stoic Ethics" in Long (1996a), 134-55.
- Long, A. A. (1996d). "Dialectic and the Stoic Sage" in Long (1996a), 85-106.
- Long, A. A. (1996e). "Soul and Body in Stoicism" in Long (1996a), 224-249.
- Long, A.A. (1996f). "Theophrastus and the Stoa" in Raalte and Ophuijsen (1996):
- Long, A.A. (2002). *Epictetus: A Stoic and Socratic Guide to Life*. (Oxford Press)
- Long, A. A. and D. N. Sedley (1987). *The Hellenistic Philosophers*, vols. 1 and 2 (Cambridge: University of Cambridge Press).
- Lowe, E.J. (1995). *Locke on Human Understanding*. Routledge Philosophy Guidebooks. (New York: Routledge Press)
- Noonan, H.W. (1999). *Hume on Knowledge*. Routledge Philosophy Guidebooks. (New York: Routledge Press)
- Obbink, D. (1992). "What All Men Believe – Must be True: Koinai Ennoai and Consensio Omnium in Aristotle and Hellenistic Philosophy," *Oxford Studies in Ancient Philosophy*, 10, 193-231.
- Peacocke, C. (1998a). "Implicit Conceptions, Understanding, and Rationality," *Philosophical Issues*, 9: 45-88.
- Peacocke, C. (1998b). "Implicit Conceptions, the A Priori, and the Identity of Concepts," *Philosophical Issues*, 9: 121-41.
- Peacocke, C. (2004). *The Realm of Reason*. (Oxford: Clarendon Press)
- Raalte and Ophuijsen (eds.) (1996). *Reappraising the Sources for Theophrastus*. (New Brunswick/London)
- Rackham, H. (1933). *Cicero: De Natura Deorum and Academica*. Loeb Classical Series. (Cambridge, MA: Harvard University Press).
- Sandbach, F.H. (1930). "Ennoia and Prolêpsis in the Early Stoic Theory of Knowledge" *Classical Quarterly*, 44-51. Reprinted in Long (1971)
- Schofield, M. (1980). "Preconception, Argument, and God" in Schofield, et. al. (1980).
- Schofield, M., M.F. Burnyeat, and J. Barnes (eds.) (1980). *Doubt and Dogmatism: Studies in Hellenistic Epistemology*. (Oxford: Clarendon Press)

- Scott, D. (1995). *Recollection and Experience: Plato's Theory of Learning and its Successors*. (Cambridge University Press)
- Sedley, D. (1985). "The Stoic Theory of Universals," *Southern Journal of Philosophy*, Suppl. 23, 87-92.
- Sedley, D. (1980). "The Protagonists" in Barnes, et. al. (1980)
- Sharples, R.W. (1996). *Stoics, Epicureans, and Skeptics: An Introduction to Hellenistic Philosophy*. (New York: Routledge)
- Shields, C. (1993). "The Truth-Evaluability of Stoic *Phantasiai: Adversus Mathematicos* VII, 242-26," *Journal of the History of Philosophy* 31(3): 325-47.
- Smith, R. (1995). "Logic" in Barnes (1995a), 27-65.
- Sorabji, R. (1993). *Animal Minds and Human Morals*. (Berkeley, CA: University of California Press).
- Sosa, E. (1999). "Justification" in Audi (1999), 457-8.
- Striker, G. (1996a). *Essays on Hellenistic Epistemology and Ethics*. (Cambridge: Cambridge University Press)
- Striker, G. (1996b). "Kriteria tês Alêtheias" in Striker (1996a), 22-76.
- Striker, G. (1994). "Plato's Socrates and the Stoics" in Vander Waerdt (1994).
- Todd, R. (1973). "The Stoic Common Notions: A Re-examination and Reinterpretation," *Symbolae Osloenses*, 48, 47-75.
- Vander Waerdt (1994). *The Socratic Movement*. (Ithaca, NY: Cornell University Press).
- Vlastos, G. (1991). "The Socratic Elenchus: Method is All." *Socratic Studies*. Ed. Myles Burnyeat. (Cambridge: Cambridge University Press)
- Villanueva, E. (1998). *Concepts. Philosophical Issues*, 9. (Atascadero, CA: Ridgeview Publishing Company).
- Watson, G. (1966). *The Stoic Theory of Knowledge*. (Belfast: The Queen's University)
- Wolterstorff, N. P. (1999). "Empiricism" in Audi (1999), 262-3.
- Zeller, E. (1892). *The Stoics, Epicureans, and Skeptics*. Trans. O. J. Reichel. (London: Longmans, Green, and Co.)