MAKING SPACE FOR KNOWING:

A CAPACIOUS ALTERNATIVE TO PROPOSITIONAL KNOWLEDGE

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ABSTRACT

This dissertation is an intervention in mainstream western epistemology, especially as it relates to theories of knowledge, knowing, and knowers. Through its focus on propositional knowledge, contemporary mainstream epistemology has narrowed the scope of the definition of "knowledge" to a point where it fails to accurately describe the structure of knowing and prevents a genuine understanding of "knowledge" across cultural boundaries. In the first chapter, I explain how this narrow definition stems from an anachronistic historical narrative that stresses knowledge as justified true belief and focuses principally on propositions. In the second chapter, I illustrate not only how this narrow definition has prevented analytic epistemology from adequately integrating its own accounts of non-propositional knowledge (i.e. skill-based knowledge or interpersonal knowledge), but also on how it fails to account for the structure of propositional knowledge itself. This narrow account prevents propositional knowledge from explaining what it claims it can without the explanatory assistance of a robust, capacious account of knowledges, particularized knowers, and personalized knowing. In the third chapter, I construct an alternative in response to this narrow definition by using resources within hermeneutics and Michael Polanyi's work on tacit knowing. My alternative responds to the inability of proposition-focused epistemology to adequately account for knowing-that, as well as a variety of other kinds of knowing that are irreducible to knowing-that or each other. This reopens the space constrained by a single-minded fixation on propositions in order to better account for knowledge in its various forms. Once this space has been opened up, it makes possible a more cross-cultural,

comparative approach to knowledge because it does not reduce other cultures' and traditions' accounts of knowing or knowledge to a propositional form. I explain this in the fourth chapter by considering the case of the epistemically rich term 知 *zhi* in Warring States era Chinese thought, which I argue is a robust philosophical culture. In short, because a narrow search for explicit principles constricts epistemology, a capacious alternative is required to gain mobility amongst perspectives on knowledge for the sake of understanding the process of knowing.

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INTRODUCTION

At the 2012 Eastern Division meeting of the American Philosophical Association, Linda Martín Alcoff delivered a presidential address titled "Philosophy's Civil Wars." In it, she suggests "a direct connection between philosophy's refusal to engage with its demographic challenges and the West's universalist conceits."[1] This is one of the driving factors in philosophy's intra-disciplinary "civil war":

> Through its civil wars, our discipline has effectively marginalized those subfields that challenge its hubris and that explore its contextual parameters. And it continues today to subordinate those philosophical schools that might put its demographic problems on the table for discussion, such as feminist philosophy, continental philosophy, Latin American philosophy, Africana philosophy, even American philosophy and the philosophy of science.[2]

In order to best respond to these divisions within the discipline, Alcoff urges a reflective awareness of the political and conceptual constructions we engage in as professional philosophers. Her response is not for the sake of permanently ending conceptual conflict and disagreement within philosophy, but to be aware of the impacts the politics of academia can and do have upon philosophical research agendas as well as the professional communities philosophers inhabit (universities, departments, conferences, societies, and so forth).

[1] Alcoff, "Philosophy's Civil Wars" (2013), 36.
[2] Ibid., 37.

In APA president Sally Haslanger's 2013 presidential address at the Eastern Division meeting, she spoke on the connection between the social construction of concepts and the diversity of a research community. In line with Alcoff's point about the universalizing trends of the "West", Haslanger argues that the connections between the moral implications of our conceptual schemes and the "truth" of our conceptual schemes often go unnoticed within the profession. In response to this, she encourages professional philosophers to

> be asking not simply what concepts track truth, even fundamental truth, but rather: What distinctions and classifications should we use to organize ourselves collectively? What social meanings should we endorse? Determining what is required for knowledge, virtue, or autonomy is not just a matter of describing reality for, as noted before, definition is a political act.[3]

In order to take into account the politics of the philosophical act of meaning-making within and beyond the profession, she urges philosophers to adopt a more reflexive and open-ended awareness of their practices.

The importance of the political dimensions of thinking through the division of philosophy into "camps" is at the forefront of both of these professional addresses. They reveal an emerging concern for the epistemological and moral dimensions of the discipline. Often, the methodological and conceptual differences between groups of philosophers result in estrangement rather than engagement. One of the harmful

[3] Haslanger, "Social Meaning and Philosophical Method" (2013), 4. This paper has been made available publicly online until it is printed in the next issue of the Proceedings & Addresses of the American Philosophical Association.

consequences of this estrangement is an ignorance of the resources available in the research of others and a blindness to the problems with one's own assumptions. Alcoff and Haslanger call for self-reflective engagement with the conceptual language philosophers make use of in their work, as well as a more open consideration of the connections such work may have within the broader field of philosophy as it shapes and is shaped within the academy.

This dissertation is a continuation of their concern, especially as it relates to epistemology and theories of knowledge, knowing, and knowers. Contemporary mainstream epistemology suffers from an overly narrow focus on propositional knowledge. With respect to epistemology specifically, Alcoff's and Haslanger's addresses suggest that there is a social inertia that dissuades philosophers from considering the work of those outside of their methodological heritage. This leads to epistemological inertia, an unwillingness to seriously consider alternative accounts of knowledge and what it might mean for such alternatives to be live and useful. In what follows I discuss how this narrowness prevents propositional knowledge from even explaining what it claims it can without the explanatory assistance of a robust, capacious account of knowledges, particularized knowers, and personalized knowing.

The solution to this problem must involve changes in professional culture. However, changes in professional culture, especially within philosophy, must be accompanied by changes in language and methodology. Therefore, part of a solution to the problem of epistemological inertia must also include a sophisticated account of knowledge that makes space for alternatives to interact and presents critiques in a vocabulary that crosses methodological boundaries. Contemporary analytic epistemology,

through its focus on propositional knowledge, has narrowed the scope of the definition of "knowledge" to a point where it fails to accurately describe the structure of knowing. Such an overly-limited definition stems from an historical narrative that stresses knowledge as justified true belief. In this dissertation, I focus on illustrating not only how this narrow definition has prevented analytic epistemology from adequately integrating its own accounts of non-propositional knowledge (i.e. skill-based knowledge or interpersonal knowledge), but also on how it fails to adequately account for the structure of propositional knowledge itself. In response to this narrow definition, I construct an alternative that both solves this initial problem as well as addresses the problems of objectivity and cross-cultural, comparative approaches to knowledge. In this way, I seek to reopen the space closed by analytic epistemology in order to better account for knowledge in its various forms. It is in this space that I hope philosophers, especially epistemologists, can engage one another in practices that lead to the self-reflectivity called for by Alcoff and Haslanger; it is in this way my project is aimed at mitigating the epistemic (and accompanying moral) harms of insularity.

In the first chapter, I explain the historical roots of the contemporary project of epistemology as an investigation into a narrow, propositional form of knowledge. Although the accepted tradition holds that the basic definition of 'knowledge' has been mostly consistent since Plato, I argue that this tradition is anachronistic. Counter to this, I argue that a focus on thought and abstraction over and above particularity is the dominant feature of knowledge throughout the historical canon. To explore this theme, the chapter is divided into three sections, each covering a broad time period and the impacts on epistemology of that period's approach to knowledge.

In the first section I explore the connection between early Greek philosophy's search for a principal material substance and the development of epistemic concerns with Socrates' methodologies, Plato's dialogues, and Aristotle's explicit arranging of knowledge into practical and theoretical components. One major concern in this section is the narrowing of the term 'knowledge', especially by Aristotle's work in separating *epistēmē* from *technē*, followed by a focus on *epistēmē* as knowledge.

The second section begins with the rejection of Aristotelian and Scholastic methodology by early modern period thinkers such as Francis Bacon, René Descartes, and John Locke. Although these modern thinkers often shared some of Aristotle's metaphysical assumptions about the mind and body, as well as a few of his goals regarding scientific inquiry, they purposefully distinguished their methods from Aristotle's. Despite these commonalities, the differences within the modern period are just as important. Therefore, the chapter tracks the changes knowledge undergoes through the rationalist-empiricist debates, focusing on the tension between developing necessary *a priori* structures of knowledge while grounding knowledge in experience, including Immanuel Kant's transcendental reconciliation between the two. The section ends with considerations of what remains consistent from the early Greeks through to the end of the modern period.

The third section briefly considers the move away from Kant towards language and logic that occurs in early Analytic philosophy, as represented in the work of Gottlob Frege, Bertrand Russell, and Ludwig Wittgenstein. This final section of Chapter One explores the conditions that persist from history into what many call the "traditional account of knowledge." At the end of the chapter, I argue that this account is itself a

product of historical accumulation, and that it does not take shape until the twentieth century's attempts at defining the necessary and sufficient conditions of knowledge.

In Chapter Two, I describe the two major problems that lead to analytic epistemology's narrow definition of knowledge: justification and reductionism. I argue, along with some critiques within the tradition, that the focus and preference given to propositional knowledge has led to the inadequacies of any form of knowledge being defined as a justified true belief, even propositional knowledge itself. Additionally, the focus on propositional knowledge also leads to an oversimplification of other kinds of knowing to propositions. This reduction results in an explanatory loss for proposition-based theories of knowledge because they lose the important explanatory power that prompted the conceptualization of other forms of knowledge in the first place

To provide a picture of the problems of justification, I begin the second chapter by rehearsing the classic problem of epistemic regress, focusing on the failures of both foundationalism and coherentism as attempted solutions. Despite a lack of any agreement on how to solve epistemic regress, the inclusion of an ill-defined sense of justification lingers in the analytic definition of knowledge. I argue that this problem comes from the common method of trying to account for justification by making explicit the principles that describe how epistemic properties supervene on non-epistemic properties. The goal of making explicit these principles of justification is an impossible goal due to its creation of a regress that is visible in both foundationalism and coherentism.

The connection between justification and a knower's believing is also problematic for proposition-based epistemology. Although internalist approaches to justification argue that a knower must engage in introspective reasoning, this fails for the same reasons that foundationalist and coherentist approaches fail. Externalism may seem to offer a persuasive alternative, but fails in its various forms to provide a response that does not still seek to make explicit the same principles as internalism. In order to make sense of these problems with externalism, I briefly examine the problem of the epistemic basing relation and how it applies to both internalism and externalism.

At the end of the chapter, I consider problems that arise when propositional knowledge is used to explain forms of knowledge that lie outside of the propositional model. This tends to occur either as a focus on propositional knowledge exclusively by ignoring any role other kinds of knowing may play, or as a reduction of alternative kinds of knowledge such as a knowing-how or knowing-others to propositions. To demonstrate this, at the end of the chapter I consider the work of two philosophers within the analytic tradition who question the effectiveness of a propositional model: Gilbert Ryle with knowing-how, as well as Lorraine Code with knowing-others.

I use Chapter Three to resolve the problems with justification and reductionism in the contemporary analytic approach to knowledge that I raise in the second chapter. Any successful alternative must continue to be descriptively and prescriptively useful, and so I begin the chapter by constructing a short and non-exhaustive taxonomy of knowledges. These kinds of knowledge provide a breadth of variety for the purposes of avoiding reductionism. Additionally, I explain how many kinds of knowledge are actually

interrelated and thus may depend on each other for their prescriptive and descriptive effectiveness.

I then move beyond the taxonomy to the features of knowing and knowers. One of the major features missing from propositional accounts is the function of movement within the process of knowing, a feature which is well accounted for in hermeneutics and the structure of the hermeneutic circle. I draw on the work of Martin Heidegger and Hans-Georg Gadamer to explain the structure of the hermeneutic circle and the socio-historically constituted knower. From there, I turn to the work of Michael Polanyi on tacit knowing, bringing together the language of the process of understanding and the act of knowing into what he calls tacit integration.

I spend the rest of the chapter resolving the problems of justification and reductionism with this account using a spatial metaphor. Specifically, I argued in the second chapter that a propositional account of knowledge and of justification is too narrow and leaves out important aspects of knowing. The hermeneutic-based account of knowing as tacit integration, in contrast, creates space for considering multiple kinds of knowing via integration rather than reduction. Instead of privileging propositions, this makes the personalized nature of knowing central.

In the final chapter, I take 知 *zhi* from the Chinese tradition as a case study to supplement the account of knowledge I articulated in the previous chapter. In particular, the case of *zhi* and Chinese epistemology reveals the dangers of overly simplified conceptual translation, a problem that propositional knowledge does not have resources

to handle. This problem itself structures the first section of the chapter, where I consider and respond to the argument that early Chinese thought is not philosophically relevant.

The second section of the chapter focuses on the important features of the interpretive context surrounding my approach to classical Chinese philosophy and its concerns about knowing. Setting up this context involves understanding features of classical Chinese language and its implicit metaphysics, as well as a an argument by Henry Rosemont, Jr. regarding the role lexical networks play in any philosophically sophisticated vocabulary. Although his argument is made with terms often associated with ethics, his argument is equally persuasive concerning epistemology.

In the third section, I consider the generally accepted development of the philosophical term '知 *zhi*' across five major texts and the schools of thought they represent: the《論語》*Lunyu*, the《墨子》*Mozi*, the《孟子》*Mengzi*, the《莊子》*Zhuangzi*, and the《荀子》*Xunzi*. I end the chapter by arguing that the conceptual space provided by the account of knowing in the third chapter makes possible an analysis of both commonalities and differences that are lost in a simple translation of '*zhi*' to 'knowledge'. This is now possible because the philosophically robust approach to *zhi* within the lexicons developed in early Chinese philosophy need not be reduced by the mainstream propositional approach to a singular, universalist conception of knowledge.

Overall, this project is about opening up space. The mainstream account of knowledge is not a simple explanation passed down since ancient times, but is a historical product of the narrowing focus of one particular part of epistemology. Avoiding the epistemic harms of a confined account requires giving space for productive accounts of

knowing and knowledge, as well as giving space for the complex and personalized relationship between knowing and knowers. This is the space constituted by the back and forth of the hermeneutic circle. Once this space has been opened up, it allows for more accurate and more useful understandings of conceptions of what other cultures and traditions often translate into ‘knowledge’. In short, all of this space is required to gain mobility amongst perspectives on knowledge for the sake of understanding the process of knowing better because a narrow search for explicit principles constricts epistemology.

CHAPTER ONE:

THE HISTORICAL NARRATIVE AND CONDITIONS OF CONTEMPORARY CONCEPTIONS OF ANALYTIC KNOWLEDGE

According to mainstream contemporary analytic epistemology, the traditional account of knowledge has existed since the time of Plato. As Ernest Sosa states, the *Theaetetus* "already contains suggestions about the nature of propositional knowledge, a subject taken up more recently by A. J. Ayer, C. I. Lewis, R. M. Chisholm, and many others. The tripartite account of propositional knowledge–as justified, true belief–was long the received view."[4] In opposition to these figures, however, I argue that this account does not have the long past that is attributed to it. The traditional view is misguided because it misinterprets the historical development of knowledge during the Greek and modern periods. The development of questions and answers about knowledge during these times consists in relevantly different vocabulary and concerns. Instead of supporting a tripartite definition of knowledge where "subject *S* knows that proposition *P* if and only if conditions *x*, *y*, and *z* are satisfied," I argue that the major trends in the history of epistemology favor accounts that focus on the abstract and the theoretical as superior to the particular and the practical.[5] In each section I begin by discussing key thinkers in various historical periods and the important features of their accounts of

[1] Bonjour and Sosa, *Epistemic Justification: Internalism vs. Externalism, Foundations vs. Virtues* (2003), 102. This reference is a portion written by Sosa alone.

[5] By 'abstract' I mean something like a focus on necessary and sufficient conditions or a universal or general principle. This is described with different terminology in different periods (e.g. material principle, essences, or substances), but the consistent feature is its primary position in the metaphysics of knowing. My argument here is not that abstraction remains a constant feature across the history of ("Western") epistemology, but rather that the *primacy* of abstraction is constant.

knowledge. I then note how these thinkers are often understood through the lens of the traditional account of knowledge, despite the fact that the traditional account actually distorts historical approaches it is used to understand. Finally, I conclude each section by noting how epistemology through each period redefines itself against the previous era while still focusing on abstraction and rationality as essential to knowledge.

1. Greek Origins

The ancient Greek conception of knowledge is very different from contemporary propositional knowledge. Despite these differences, it is the Greek period that is taken as the start of the western discipline of epistemology. The development of abstraction begins in this period with the work of the early Greek φυσικοί *phusikoi* and their interest in rational natural law in the form of a material principle that has the power to explain phenomena of the world without reference to anthropomorphic gods. This naturalism is not a radical discarding of the divine in favor of an atheistic science, but rather, as W. K. C. Guthrie notes, a slow emergence of rationality that still holds on to some aspects of cultural myth while abandoning others.[6] Rationality and the importance of understanding and explaining nature pave the way for discussions about opinion, knowledge, abstraction, and reflection. The various approaches to reasoning that emerge out of the arguments of the early Greek philosophers set the stage for the questions asked in Athens during the time of Socrates, Plato, and Aristotle. These questions serve as the bedrock of the theory of knowledge through the Hellenistic and Scholastic periods.

[6] Gutherie, *A History of Greek Philosophy* (1962), 1.

1.1 Milesians and Ionian Phusikoi

Philosophy is customarily said to begin in Greece around the early sixth century with the projects of cosmology and cosmogony – describing the cosmos, how it came to be, and justifying the way it appears to operate. These metaphysical projects say much about the early structure of knowledge. By elucidating a single principle, an ἀρχή *archē* that underlies the multiplicity of things and changes that occur within the world, one could understand how to control and explain one's environment. The world is taken to be intelligible based on its nature rather than on the will of the gods. The primacy of abstraction, in accordance with which the principles that explain particular phenomena are taken to be more real than the phenomena themselves, is seen in this early focus on φύσις *phusis* (nature) and *archē*. The Milesians, specifically Thales, Anaximander, and Anaximenes, provide now classic accounts of monisms designed to explain nature through reduction to a principal material substance. With the fragments of their writing and references to their ideas that still exist, we can sketch their cosmologies. The connection between *archē* and *phusis* is important across all of the Milesian cosmologies, as described by Aristotle:

> Most of the first philosophers thought that principles in the form of matter were the only principles of all things; for the original source of all existing things, that from which a thing first-comes-into-being and into which it is finally destroyed, the substance persisting but changing in its qualities, this they declare is the element and first principle of existing things, and for this reason they consider that there is no absolute coming-to-be or passing away, on the ground that such a nature is always preserved… for there

must be some natural substance, either one or more than one, from which the other things come-into-being, while it is preserved.[7]

First principles (*archē*) are important because in the form of a primary element they provide the substance that which, despite all change, remains constant. Though attributes may change, it is the original substance of nature (*phusis*) in which those changes are grounded, and which also determines how change will unfold. This is the beginning of a systematic project of knowledge through abstraction. The principal material substance is more real than the changes that it explains. It may be worth questioning Aristotle about the fairness of his interpretation of the early Greek philosophers, given that he is situating their work into his own explanations of metaphysics and cosmology, but overall his approach is taken as relatively standard for broad approaches to the history of philosophy such as this.

For Thales, though no text was ever attributed to him by reliable sources, the *archē* is water. Aristotle's description of Thales' *archē* is that it is what supports the earth and is the thing from which all things come to be and return to when destroyed. For instance, the connection between water and air is verified by the evaporation of water, or even between water and earth through the transformation of the banks of a river (such as the Maeander) as pointed out in Edward Hussey's account.[8] The connection between generations of plants and animals is carried out through moisture, and the fluids required for sustaining life such as blood or sap are also liquid; life is visibly grounded in the

[7] Aristotle. *Metaphysics*. A3, 983b6. Translation from Kirk, Raven and Schofield, *The Presocratic Philosophers* (1983), 89. Whether or not this is the way the Milesians perceived their own project, it is the way they are integrated into the post-Socratic narrative. The sketch he provides, therefore, may be a bit of a caricature.
[8] Hussey, *The Pre-Socratics* (1995), 18.

attributes of water. Likewise, divinity is associated with the movement of these bodies, whose source can be traced back to the divinity of the water *archē*.[9]

Water does not seem to provide a perfect explanation for all features of the natural world, however. In possible response to this description of nature, Anaximander, "successor and pupil of Thales,"[10] offers a more difficult description of the material principle: ἄπειρον *apeiron*, "the indefinite" or "the unbounded." The move from a common substance to a spatial or temporal infinite seems dramatic, but the purpose of a primary material principle is to describe the ordering of the κόσμος *kosmos*. Given the various boundaries of the natural world – shores, horizons, stars fixed to the inner-sphere that is the night sky – limits are easy to find. Through the simple addition of a negative prefix, however, the word "*apeiron*" suggests that there is something that is "not *peirar/peiras,*" or "not limited, without end." It is this that serves as the material principle and, in the few direct words of Anaximander, is responsible through interactions with itself for the changes of the natural world. "[Existing things come to be and perish] according to necessity; for they pay penalty and retribution to each other for their injustice according to the assessment of Time."[11] Natural changes are therefore based on necessity, and that necessity takes the same form as the moral guarantee associated with the cosmic enforcement of justice as assessed by the divine (in this case, Time). Night and day, seasons, and other cycles clearly participate in a give and take that is observably ordered rather than random. Finally, his description of the *kosmos* in terms of justice and

[9] Aristotle. *De Anima*. A4, 411a7. Translation from Kirk, Raven and Schofield (1983), 95.
[10] Simplicius. *Physics.* 24,13. Translation Kirk, Raven and Schofield (1983), 106.
[11] Anaximander, from Simplicius.

retribution represents one of the earliest, if not the first, descriptions making reference to the balance of naturally opposing substances.[12]

Shortly after this time, Anaximenes offers a cosmology in which air is the material principle. While water lacks the explanatory power of *apeiron* in accounting for natural cycles of change, the notion of a substance defined only as "unlimited" suffers in its abstract distance from the physical. Anaximenes' air, through its qualities of rarefaction and condensation, however, can account for both the basis of material existence and the processes it undergoes. Changes in quantity affect not only the attributes of an object—extremely dense air would be metal or rock, whereas rarified air would be mist or breath—but they also provide the basis for movements. Anaximander's vortex explained the importance of movement to generating and maintaining oppositions and natural cycles, but it left out the explanation of how that motion occurred. Anaximenes is reported as saying that "As our soul being air holds us together and controls us, so does wind and air enclose the whole world."[13] The material principle is therefore responsible for all of existence and its properties, even those of thought and emotion. Though the world is a system of changes governed by the laws of rarefication and condensation, the similarity between the macrocosm of the world and microcosm of the soul hints at Anaximenes' cosmology being organic.

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[12] See Kirk, Raven and Schofield (1983), 119-120 for a fuller account of opposites in Anaximander. Also worth noting is the way in which Anaximander's account of the *apeiron* in some sense anticipates the rationalistic move that Parmenides makes later, although Anaximander does not argue that the appearance of the world as changing is unreal. Similarly, even though Anaximander is not arguing for a classic material or element, such as water, as his *archē*, he is still in the mode of discussing a physical (in the natural sense) principle as the source of change, even moral change. This similarity in his mode of explanation is what ties him with the early Milesian *Phusikoi*, despite the major differences between *apeiron*, water, and air.

[13] Attributed to Anaximenes by Aetius, but Kirk, Raven and Schofield (1983), 158-159, for the discussion on why this sentence is either a loose quotation or a possible paraphrase.

Milesian *archoi* are not merely mechanical descriptions of the *kosmos*. As Aristotle notes, these material principles are taken by Anaximander and Anaximenes to be infinite as well as divine.[14] Thales, too, is attributed this belief when Aristotle quotes him as stating that "all things are full of gods."[15] As Hussey notes in his description of the Ionian project, there is a connection between the considerations of the natural world and social-political organization.

> What seems especially important for the revolution in thought is the emergence of the concept of *law* as something determinate, impartial, and unchanging, and the spread of political equality. A debate between equals, in the popular assembly or the law-courts, must be conducted by appeals to general, impartial principles of law or reason–otherwise the parties will not be equal. The notion of 'reasoned argument' will begin to develop.[16]

He summarizes this development by using fragments of Xenophanes' writing as an example of the movement away from anthropomorphized descriptions of the divine to more conceptual or thematic descriptions. The divine, as seen by Aristotle in his understanding of the Milesians, is already making this shift when it is identified with cosmological water, the indefinite, primordial air, or any of the Ionian choices for an *archē* that may have been lost to time or unpopularity. With a proper ὑπόθεσις *hupothesis* (initial premise) with which to begin, experience can be organized in fruitful ways that allow for explanation and prediction. However, these explanations never seem to settle all questions about the natural world; primordial air condensed into a stone seems

[14] Aristotle. *Physics*. 4, 203b7. Translation from Kirk, Raven and Schofield (1983), 115.
[15] Aristotle. *De Anima.* A4, 411a7. Translation from Kirk, Raven and Schofield (1983), 95.
[16] Hussey (1995), 14-15.

problematic when there are no apparent qualities of air in the appearance of a rock, yet the primordial is necessarily more real than sensory experience. Popular culture and those who rely on the gods to explain the world will be unwilling to accept such explanations of the natural world, while at the same time others will push more on the disconnect between appearance and reality.

1.2 Appearance, Reality, and Finding the Boundaries of Knowledge

Likely influenced by the Milesians, Pythagoras is famous for his description of the soul and the divine, despite the secretive nature of his political and religious organization. While the century began with the Milesians at work in developing monistic cosmologies around single material principles, Pythagoras' major impact comes at the close of the century, around 530-20 BCE, when he migrates from Samos to Croton. Pythagoras, however, was not a *phusikoi.* Rather than focus on the principle that organized the natural world, his role was that of a religious leader, founder and master of the Pythagorean ἀκουσματικοί *akousmatikoi*.[17]

Though this group was extremely secretive, it was very politically engaged, leading to its downfall around 450 BCE.[18] Though their practices and beliefs were not to be written down by any members, some have been preserved in third party accounts. These reports connect cosmological beliefs and proper ethical action–in one of the

[17] There is also a division that occurs amongst the Pythagoreans between the *akousmatikoi*, "those who hear", and the *mathematikoi,* "those who study". For more on this division and what we can infer from the fragments of information we do have see Gutherie (1962), 191 and 217; Kirk, Raven and Schofield (1983), 234-235; and Hussey (1995), 60-77.
[18] Kirk, Raven and Schofield (1983), 224, Quoting Polybius II, 39.

preserved stories of Pythagoras, one should not kick a dog because that dog may be the re-embodied soul of a friend who has passed and been reborn into a new body.[19]

The major influence of the Pythagoreans (and presumably of Pythagoras himself) on the philosophical tradition is in his approach to the soul and embodiment. The role of the term ψυχή *psuchē* in explaining the soul is suggested by G. S. Kirk, et al, to be first discussed in Pythagorean teachings.[20] The relationship between a body and a life force is also important, for the actions of one life affect the direction of a soul's transmigration.[21] This dualism of soul and flesh is something very much in line with the ordering of contrarieties on the table of opposites, attributed to the Pythagoreans by Aristotle.[22] The influence of this idea is long lasting in future debates about the status of the soul in relation to embodiment and knowing, whether original to Pythagoras or not. The association of infinity, the soul, and abstraction with each other, as opposed to finitude, the body, and particularity, is the context within which Plato and Aristotle argue for the primacy of abstract reason and contemplation. Though Pythagoras, his disciples, and later self-styled Pythagoreans had other important influences on later thinkers, the large body of research that W. K. C. Gutherie refers to as "perhaps the most controversial subject in all Greek philosophy" is not needed for establishing the importance of abstraction as the only way to know what is real in early Greek philosophy.[23]

Meanwhile, back in the coastal areas of Ionia, debates about the status of the divine and the role of the soul continued. Xenophanes and Heraclitus both offer

[19] Ibid., 219, from Diogenes Laertius on Xenophanes' account of Pythagoras.
[20] Ibid., 219-220.
[21] Hussey (1995), 64.
[22] Aristotle. *Metaphysics.* A5, 986a22.
[23] Gutherie (1962), 146.

alternatives to the common Homeric and Hesiodic approach to the gods. Xenophanes argues for a cosmic monotheism, criticizing Homer, Hesiod, and popular traditions for characterizing the divine as having too many human-like characteristics; attributing to gods birthdays, human appearances, and morally inappropriate behaviors–such as stealing and adultery–are all things that made the divine more profane for the sake of explaining natural events and justifying social behavior. [24]

> No man knows, or ever will know, the truth about the gods and about everything I speak of; for even if one chanced to say the complete truth, yet oneself knows it not; but fancy is wrought in the case of all men.[25]

Humans are not capable of complete knowledge of the gods, he argues; they take their experiences of the appearance of the world and use that to explain the divine. Instead of having these human-derived qualities, Xenophanes argues that the divine must be a singular, non-moving entity that causes the events of the world through the power of its mind.[26] The divine is not superior because of immortality or supernatural powers, but because it causes change in the world via its mind, much as the Milesians argued that material principles were superior as the source of all natural changes.

Heraclitus offers a human connection to the divine through the λόγος *logos*,[27] something that is common to all. Despite this commonality, however, few ever make good use of this connection. Whether or not there is an acknowledgment of this connection to the divine, it still is responsible for harmony in all forms of strife, be it in

[24] Kirk, Raven and Schofield (1983), 168-169.
[25] Ibid., 179.
[26] Ibid., 169-70.
[27] *Logos* has various interpretation, many of which Heraclitus plays with. It is commonly interpreted as 'account', 'measure', 'word', 'reason', 'rationality', and so on.

regulating nature (*phusis)* or in accounting for successful common, civic order (νόμος *nomos*). In fact, Heraclitus arguably sees the conventional and the natural as continuous. Charles Kahn notes that, despite the contrast between *nomos* and *phusis* that occurs later in Greek philosophy, "Heraclitus is in this regard a conservative. For him there is no split in principle between *nomos* and nature. As an institution, law is neither man-made nor conventional: it is the expression in social terms of the cosmic order for which another name is Justice ([Δίκη] *Dikē*)."[28] Heraclitus' key criticism of the general population is on their failure to recognize this. He states that "Thinking is shared by all,"[29] yet laments that, "although the Logos is common, the many live as though they had a private understanding."[30] There is a syntactic play in ambiguity at work here that supports a reading of Heraclitus where *logos* is the connection between *nomos* and *phusis,* viz. the 'all' can be interpreted either (inclusively) as share by all persons or shared by all things.[31] Reason, the key to understanding nature, civic duty, and Justice, is humankind's connection to the *logos*, a connection which allows self-understanding through an understanding of one's social-natural environment, but many fail to see this. This does not make rational humans on par with the gods, however. Though there is a human connection to the divine *logos* that organizes strife into a harmony, Heraclitus still holds humans to be childlike in comparison to gods, who are less susceptible to ignorance because of their more divine natures.[32]

Xenophanes and Heraclitus are important for their approaches to the relationship between humanity and the divine because they begin to lay out the boundaries of

[28] Kahn, *The Art and Thought of Heraclitus* (1979), 15.
[29] Diels fragment 113, translation from Kahn (1979), 43.
[30] Diels fragment 2, translation from Kirk, Raven and Schofield (1983), 187.
[31] Kahn (1979), 118-119.
[32] Diels fragment 79, translation from Kahn (1979), 55.

knowledge. The Milesian projects were focused on explaining the principle behind *phusis*, but by Heraclitus' time the project now also must explain the varying limits and degrees of knowledge. Perception and reality are divided and the divine plays a role in human access to reality. Abstraction is tied to the divine portion of humanity–the mind.

Xenophanes and the Pythagoreans have an influence on the early fifth century thinker Parmenides, who brings the idea of a monistic reality to its apex.[33] Arguably taking Xenophanes' ideas of monotheism to an extreme, the first Eleatic philosopher is famous for the originality of his thoughts rather than for being a student in any particular genealogy. In his hexameter poem, he argues for the necessity of reality being singular and unchanging.[34] Of course, this is problematic for any audience: the experience of reading such a poem occurs in a spatial situation where letters, words, and sentences are all separate and could be changed around. If one hears the poem recited aloud, there is clearly a difference between speaker and listener. With this being the case, how could everything be "one"? Given the necessity of his reasoning, however, Parmenides argues with conviction against perception because the senses merely provide chimerical experience.[35] The use of reason leads to a distrust of sensory experience, which does not provide direct knowledge about reality, but rather leads to divergent and subjective opinion. The requirement of rationality as a condition for knowing reality lays the groundwork for Plato's theory of forms. As one follows an argument to the abstract truth, it is then possible to access primary reality from which experience is ultimately derived.

[33] See Gutherie (1962), 2-3. Also, Kirk, Raven and Schofield (1983), 240-241. These associations come to use from the later tradition surrounding Parmenides.
[34] Kirk, Raven and Schofield (1983), 245, fragment 291.
[35] Ibid., 248, fragment 294.

Therefore, the ability to abstract and reason theoretically through an argument to its conclusion is valued more than simple reliance on the senses.

1.3 Epistēmē *and the Focus on the Theoretical*

The role of experience in understanding reality still remains important for early philosophy, but the approach to knowledge that develops out of the 6th and 5th century BCE Greece focuses on what initial principles can be known about nature and following those principles to their conclusions. In his introduction to *Companions to Ancient Thought I: Epistemology*, Stephen Everson briefly considers the development of ἐπιστήμη *epistēmē* that draws on the importance of initial premises.

> [I]t is commonplace in the Socratic dialogues of Plato that Socrates will only allow that someone has *epistēmē* of something if he is able to give a definition of it. In the *Meno*, we are told that what turns true belief into *epistēmē* is an *aitias logismos* – the working out of an explanation… *Epistēmē*, here [in the *Theaetetus*] at least, is not justified true belief but true belief which is *understood*.[36]

The consistent item in the definition of *epistēmē* as Plato develops it from an early, likely Socratic version into the more rational and reflective form that it takes in his later work and in that of Aristotle, is a set of beliefs whose truth allows for consistent successful action. In the case of the Socratic version, the successful action will be to provide a correct definition. For instance, in the *Euthyphro*, which does not take *epistēmē* as its focus, knowing the definition of the pious is needed to justify Euthyphro's decision to

[36] Everson, *Companions to Ancient Thought I* (1990), 4.

charge his father with a crime as well as to justify the advice he gives to Socrates, despite the difficulty he faces in pinning down a neat, working definition. When Socrates asks if Euthyphro knows (ἐπίσταμαι *epistamai*) of piety with such surety that he would take his own father to court, Euthyphro responds with confidence.[37] Both start their inquiry off with the assumption that knowledge entails having the right definition, a definition which is also a strong indicator of success, in this case success in trial.

In the version of knowledge covered in the *Theaetetus* and the *Meno*, a version arguably more Platonic than Socratic, understanding is demonstrated by the consistent ability to act successfully on purpose rather than by accident. The *Theaetetus* opens with the identification of wisdom with knowledge and the express aim of attempting to define knowledge.[38] Although unsuccessful at coming up with a solid definition of knowledge, the dialogue does end on a positive note about the ability to judge one's own knowledge: philosophical inquiry engenders modesty in the belief that one knows something one actually does not.[39] In the *Meno*, Socrates and his interlocutor inquire as to why knowledge is valued more than true opinion when both seem to lead to success. Socrates replies that true opinion can come and go like the statues of Daedalus, but to tether such valuable things and make them reliable greatly increases their worth. Knowledge, therefore, is more valuable because it is the tying down of true opinions through an account of the reasons for its truth.[40] The reason consistency in such a case is so important is because it mitigates τύχη *tuchē*, or chance, especially when passing such true

[37] *Euthyphro,* 4e-5a.
[38] *Theaetetus*, 145d-e. Wisdom is not tied to the kind of knowledge that craftspeople have, however, as Socrates discounts descriptions of knowing how to make shows or furniture as not providing a definition of knowledge itself, as seen in 146d-e.
[39] *Theaetetus*, 210b-d.
[40] *Meno*, 97c-99a.

beliefs on to others. The change amongst definitions of *epistēmē* is in finding the correct distinction between lucky successful actions based on contingency and consistently successful actions based on the qualities of the knower. In the *Meno* and the *Theaetetus*, *epistēmē* is much more developed, specifically through the knower's ability to explain and understand how the initial belief's truth is connected to her successful actions, rather than merely a lucky opinion wherein the belief just happens to be true.

Aristotle separates *epistēmē* from τέχνη *technē* in his analysis of knowledge. Though *technē* does represent another example of true beliefs with some sort of understanding leading to successful actions, it is limited by some particular domain, such as the knowledge required for carpentry or stonework. Though there are disagreements about the role of *technē* in Plato's work–some see him using it as a concept to explore ἀρετή *aretē* while others see him as rejecting it because of its limits—the term is traditionally associated with technical arts and scientific disciplines such as mathematics and carpentry in its most rigid forms and with medicine and rhetoric as more flexible, at times contested examples.[41] Aristotle, on the other hand, emphasizes *technē* as within the realm of particular things, in contrast with *epistēmē* and its connection with the theoretical. As described in the *Nicomachean Ethics,* Aristotle makes a five-fold division of knowledge. The theoretical side of knowledge involves *epistēmē*, σοφία *sophia*, and νοῦς *nous*, while the practical side is divided into *technē* and φρόνησις *phronēsis*.[42] Though there is debate about how to interpret some of Aristotle's system, two features stand out as important for our future discussions of knowledge. First, *technē* is practical

[41] David Roochnik covers the development of *technē*'s definition through time up to Plato's early moral work and the various interpretations of how *technē* is used therein. See for example Roochnik, *Of Art and Wisdom* (1996) and Roochnik, "Socrates' Use of the Techne-Analogy" (1986).
[42] Aristotle. *Nicomachean Ethics*. 1139b15-17.

and *epistēmē* is theoretical. Second, the theoretical is the better form of knowledge. As CCW Taylor notes, summarizing these relationships,

> One should emphasise the continuity of practical and theoretical knowledge, notwithstanding the obvious differences (a) that theoretical knowledge deals with necessary truth, practical with what is capable of being otherwise, (b) that the task of the theoretical intellect is understanding, whereas that of the practical is to initiate action… The two types of knowledge are nonetheless continuous, in that (i) every intellectual faculty has as its function the attainment of truth… [and] (ii) Aristotle seeks as far as possible to fit practical knowledge to the axiomatic model of theoretical knowledge which we have been investigating…[43]

There is a constant attempt to properly integrate the particular and the universal, the inductive and the deductive in Aristotle's theory of knowledge. 'Proper integration' means providing a rationale for acting with the correct end, a goal that is theoretical (the metaphysical status of *the good* and its connection to the true) as well as practical (one can only know the truth through inductive reasoning from particulars, for instance through correct education or exemplars). Even when integrated, however, the emphasis is always on first principle – first because of its logical importance rather than its place in time. This is why Aristotle holds that "in conduct the first principle is the *end*, just as in mathematics the first principles are the assumptions."[44]

[43] Taylor, "Aristotle's Epistemology" (1990), 130.
[44] Aristotle. *Nichomachean Ethics.* 1151a15-20.

Although experience plays a role in Aristotle's inductive move to ground universals or definitions in particulars through processes like induction and sense perception, it is not the only approach to fitting together theoretical and practical concerns in classical Greece. The early developments in medicine illustrate the problems of what counts as a *technē* and whether essence or experience is the source behind a doctor's ability to cure. Thus the interest in experience, *phusis*, and *technē* as ways of mitigating chance (*tuchē*) is not solely determined by philosophers. Early doctors were not the only healing professionals on the market at the time. Mark Scheifsky notes that early systematized medicine was "in direct competition with numerous other kinds of healers, among them root-cutters…, drug sellers…, midwives, and itinerant purifiers…"[45] Whereas these various forms of medicine use practical knowledge accumulated through general trial and error, Hippocratic doctors grounded their methods in systematic theories of human *phusis*. Grounding approaches to health in *phusis* was not purely a theoretical endeavor, however. Disagreements still remained about what it meant to make use of human nature in medicine. One argument in the debate was about taking a cosmological approach that relied on medical explanations using principles such as hot, cold, wet, and dry to diagnose and treat illness based on the genesis of human beings out of the same cosmic components. An alternate approach, presented by *On Ancient Medicine,* which is attributed to Hippocrates, argues that the focus on these features is too reductionistic and that a better understanding of human *phusis* requires an active empirical physiology dedicated to the nuances of the human body instead of reducing it to universal cosmological categories that are less efficacious. The author of *On Ancient Medicine* argues that it is not the kind of human *phusis* discussed by sophists or philosophers that

[45] Schiefsky, *Hippocrates on Ancient Medicine* (2005), 11.

matters to medicine, but rather a more specific, particular account of why something is bad in relation to human nature. This is best captured by an argument made from cheese:

> For this I think is what it is necessary for a doctor to know about nature and to make every effort to know, if he is going to do any of the things that he must: what the human being is in relation to foods and drinks, and what it is in relation to other practices, and what will be the effect of each thing on each individual – not simply that 'cheese is a harmful food, for it causes trouble to one who has eaten too much of it', but rather what trouble, and why, and which of the things in the human being it is inimical to…. For cheese…does not harm all human beings in the same way: there are some who can eat their fill of it without being harmed at all, and it even provides a wondrous strength to those whom it benefits; but there are others who have difficulty coping with it.[46]

Lactose intolerance clearly supports the authors point here; although humans share a nature, they also have *particular* natures that lead to particular illnesses and thereby particular cures. Schiefsky points out the central concern of both sides of this argument. "Both causal reductionism and the attempt to base medicine on a theory of human [*phusis*] that gave an account of the origin of the human being from a small number of elementary constituents resulted from the same impulse: the desire to draw on contemporary cosmology, the inquiry into nature, to give medicine the theoretical foundation it needed to qualify as a genuine [*technē*]."[47]

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[46] *On Ancient Medicine*, 20.3-5. Translation from Schiefsky (2005), 103.
[47] Ibid., 23-4.

The debates amongst doctors who agreed that medicine was a *technē* mostly focused on the role of theory in establishing practice. Rationalist practitioners argued that, whether using a cosmological concept of human *phusis* or some other form of first principles, reasoning moves from the theoretical to the practical and cures were developed and applied in this way. Experience alone was not sufficient for true knowledge of health and proper medical treatment.[48] In response to the various theories developed and argued for amongst these medical practitioners, the Empiricist school arose, holding that "all knowledge, and in particular all medical knowledge, is a matter of mere experience which one only acquires in actual practice; experience in the sense that through long observation we come to know what is harmful and what is beneficial."[49] They justify this using a skeptical method in which they play various theories about the nature of health, sickness, bodies, and souls against each other. This method supports their ultimate conclusion that these various theories are all merely all *ad hoc* efforts used to justify skills acquired through practice, not theoretical education. Methodist doctors seek a middle ground in the now two-sided debate, arguing for a rational approach that is based on experience rather than *a priori* metaphysical knowledge about natures.[50] These arguments all share the common goal of defining medicine as a *technē* but disagree on the status of theory in grounding medicine. The Methodist position is distinct from Aristotle's in that it does not place abstract theory as primary. Instead, it argues that theory arises out of *a posteriori* abstractions based on successful practice, abstractions which themselves could lead to further developments in practice and theory. The

[48] Frede, *Essays in Ancient Philosophy* (1987), 235.
[49] Ibid., 236.
[50] Ibid., 237.

relationship between medicine and philosophy is worked out in more detail elsewhere,[51] but here serves to show that there are conversations outside of philosophy about correctly interacting with the world through *technē* and using theory and reason in various ways to control nature and reduce the influence of *tuchē* or chance.

1.4 The Traditional Account and Greek Epistēmē

One version of the origin of the traditional account of knowledge traces it back to Plato's work, reading into Plato's *Theaetetus* and *Meno* a description of and argument for truth, belief, and justification as the necessary and sufficient conditions for knowledge. In particular, these two works are taken to explore the condition of justification. Theaetetus' various attempts at defining knowledge are specifically cast as a search for ways of describing the process of justifying the claim that one has knowledge. The most advanced of all these definitions is "true belief with an account," and involves various attempts to describe what features the account must have in order for the true belief to qualify as knowledge. Likewise, at the end of the *Meno*, Socrates contrasts knowledge with true opinion through the metaphor of a Daedalus machine that flies away if it is not tethered. The process of tethering true opinions is then interpreted as the process of justifying a true belief.

This reading is anachronistic, however. Plato was not concerned with the necessary and sufficient conditions for a knower to know a proposition. As noted by Stephen Everson, Plato's *epistēmē* is not the concept described in contemporary text books; it "is not justified true belief but true belief which is *understood*."[52] He goes on to

[51] See Schiefsky (2005), chapters on medicine in Frede (1987), and small section on the Hippocratic Writings in Roochnik, Of Art and Wisdom (1996), 42-57.
[52] Everson (1990), 4.

describe the commentarial debates as undecided about whether Plato means "'understanding' rather than 'knowledge'" or "develops from seeing *epistēmē* as knowledge to seeing it as understanding, or whether he simply moves to identifying knowledge with understanding."[53] The important point is that Plato's and Aristotle's approaches are not simply messy renditions of knowledge as justified true belief. The conditions of the soul and its ethical state serve as the context from which the question "What is *epistēmē*?" emerges. This context also determines the standards used to decide which answer is best. For example, the fact that craftsmen in Athens, who relied on *technē* for their trade skills and were frequently slaves, were not allowed to participate in civil government means that politics assumes (and possibly demonstrates that) *epistēmē* is a better form of knowledge than *technē*. Aristotle's focus on the role played by *epistēmē* and contemplation in the making of sound practical choices reflects this prejudice.

Although the traditional account of knowledge may lead to an anachronistic understanding of the history of epistemology, there are a few features discussed above that do illustrate a particular narrowing of the ancient Greek conception of knowledge into the theoretical and abstract. From the Milesians onward, there is a concern for the movement from principles to an explanation of experience. The debates within the medical community about the legitimacy of this movement illustrate how influential metaphysical concerns were on the definition of *epistēmē* and *technē*. Likewise, principles and definitions structure the Socratic and Platonic concern for defining virtues, and in the case of the *Theaetetus* and the *Meno*, for defining knowledge (*epistēmē*). The

[53] Ibid., 4.

use of principles and definitions not only structures the questions, but also the form of the correct answer. Plato takes abstract knowledge of the forms to be the best kind of knowledge because it leads to understanding the essential qualities of the particulars. Likewise, Aristotle takes *epistēmē* and theoretical contemplation to be the most important kinds of knowing and thinking because they best guide practical knowledge and action, especially in the political sphere. The *technē*-knowledge of workers and doctors, however, is secondary.

2. The Modern Rejection of Aristotle

The general trend in historical mainstream Greek philosophy is understanding reality through abstract reasoning, a core component in knowledge of any kind, but especially in the best kind–theoretical. This kind of knowledge provides an understanding of reality and therefore, arguably, the starting point for a lifestyle directed at pursuit of the true, the beautiful, and the good. From this kind of knowledge, *epistēmē*, the primacy of introspective reasoning follows and thus the stage is set for modern period thinkers.

Although René Descartes is credited with being the "father of modern philosophy," he is part of a trend in critiquing the scientific method, a trend that is seen earlier in Francis Bacon's *New Organon.* Bacon has Aristotle's scientific method and its use of essences, qualities, and apodictic proof in mind when he writes "The logic now in use serves rather to fix and give stability to the errors which have their foundation in commonly received notions than to help the search for truth."[54] According to Bacon, this scholastic method is an edification of errors rather than a discovery of truth. The problem comes from the structure of the Aristotelian syllogism itself, which can be analyzed into

[54] Bacon, "New Organon (1620)" (1998), 5.

its layers of components: propositions, words, and finally, most basically, notions.[55] The use of Aristotelian syllogism in Bacon's time is problematic because the source of notions is not necessarily the real world. Terms such as 'substance' or 'essence', or qualities such as 'hot' and 'cold', are all ill-defined. Such notions "which men have adopted up to now are but wanderings, not being abstracted and formed from things by proper methods."[56] Although Aristotle may arguably ground such notions in induction, the method of syllogistic proof relies on the stability of these notions to make its claims. Such proofs thus do not change the notions, but rather reify them. These reified notions then influence the more complex components of the syllogism, distorting human understanding of reality in the process. Bacon's criticism does not claim that the constancy of meaning associated with reification distorts human understanding, but rather that the reification of meaning itself is unwarranted because it prevents notions from being inductively tested against the reality they claim to describe.

Examples of these distortions are classified by Bacon into four types of idols which distort our perception of reality: idols of the tribe, of the cave, of the marketplace, and of the theater. Idols of the tribe are aspects of human nature that affect perception of reality, such as our habit of seeing patterns and looking for agreement rather than disagreement. 'Idols of the cave' refers to those of an individual's own biases and prejudices that distort his or her perception of nature. For example, consider the racist who has never made an effort to search for counterexamples to his stereotypes. When he refers to his own biased experience to justify never interacting with those he claims to know and then universalizes his prejudices to describe the essential features of all persons

[55] Ibid., 5.
[56] Ibid., 5.

of a particular skin color, his perception of reality has been distorted by his biases. Idols of the market place are distortions that come from discourse and the necessity of language, which also distorts perception of nature by leading people to pursue empty ideas. Bacon's examples of ill-defined qualities fall into this category. Lastly, idols of the theater are systemic philosophical modes of thought that prevent self-correction; world-building projects, perhaps like those of Thales or Anaximenes, which falsely represent nature and therefore prevent mankind from asking the right kinds of questions, are examples.[57]

It is important to mention the influence of these idols in order to resist them. Beyond that, if science is to progress then there must be a methodological change regarding the formation of basic notions of nature. According to Bacon, human nature is naturally predisposed to take basic categories, map out a broad structure to its liking, and then posit additional basic notions in order to complete such a mapping. To Bacon, this is the source of outdated Scholastic modes of scientific inquiry. Instead Bacon focuses on induction to provide support for basic notions without fully committing to them on the basis of past successes alone. Counterexamples are at least as important to induction as confirming examples.[58] Because of this, the notions that give rise to linguistic terms and syllogistic argument are to be constantly tested by inductive, and thus more scientific, method.

[57] Ibid., 6-7.
[58] Ibid., 7.

2.1 Descartes and the Rational Foundations of First Philosophy

Descartes participates in the movement away from the Aristotelian understanding of nature. In a letter to Father Mersenne in January of 1641, Descartes says,

> I may tell you, between ourselves, that these six meditations contain all the foundations of my physics. But please do not tell people, for that might make it harder for supporters of Aristotle to approve them. I hope readers will gradually get used to my principles, and recognize their truth, before they notice that they destroy the principles of Aristotle.[59]

It is in this light that Descartes' basic projects must be seen; his two most influential works, *Discourse on the Method for Conducting One's Reason Well and for Seeking Truth in the Sciences* and *Meditations on First Philosophy*, are both directed at providing a foundation for knowledge and the sciences. Properly grounded scientific knowledge must withstand a skeptical challenge. Only after having a firm foundation for principled knowledge, provided by the method of doubt used in first philosophy, is it possible to advance scientific inquiry.[60]

Both Descartes and Bacon make use of the human faculty of reason to ground knowledge, seeing pure rationality as providing better access to natural truths. In Bacon's case, this rationality is inductive reasoning. For Descartes, however, it is the natural light of reason: the thinking activity of the mind that is prior to words and

[59] Descartes, *Philosophical Writings of Descartes, Volume 3* (1991), 173.
[60] Descartes, "Discourse on the Method for Conducting One's Reason Well and for Seeking the Truth in the Sciences (1637)" (1998), 15. "Then, as for the other sciences, I judged that insofar as they borrow their principles from philosophy…"

evaluates truth through mental perception. Ian Hacking elucidates this quality when he describes Descartes' approach to proofs.

> A demonstration used to be a showing: a showing to the eye, the only eye, the inward eye. That which was shown was the principle: namely the origin, the source. The source was the essence, that which made the object what it is. … Descartes taught the older way of contemplating proof. Proof is a device to remove the scales from our eyes, and the thing to do with proofs is not to check the formal steps slowly and piecemeal, but to run over the proof faster and faster until the whole thing is in one's head at once, and clear perception is guaranteed.[61]

The general process of demonstration remains the same, but he changes the metaphysical working conditions involving the input of a proof. Philosophical doubt has undermined what Bacon refers to as the idols, and instead of *essences* Descartes works with essential *substances* – extended material substance, non-extended mental substance, and God.

This shift in focus from essence in Aristotle to the perceptive faculty of the mind in Descartes' *Meditations on First Philosophy* is apparent in his analysis of a lump of wax.

> It remains for me to concede that I do not grasp what this wax is through the imagination; rather, I perceive it through the mind alone. … This inspection can be imperfect and confused, as it was before, or clear and

[61] Hacking, *Why Does Language Matter to Philosophy?* (1975), 162.

> distinct, as it is now, depending on how closely I pay attention to the things in which the wax consists.[62]

Additionally, in Descartes' consideration of substance and the ability of the mind to perceive the properties of extended corporeal substance (in this case the wax), he takes rationality as the natural, God-given ability of the human mind. The process of perceiving the qualities of wax that persist despite all of its physical changes is a rational perception, prior to language and relying on a brute, immediate mental faculty. [63]

It is this mental faculty that prevents a loss of all knowledge to skepticism, Descartes argues. It is necessarily the case that, even if basic rational engagement were merely a deception, the thing that is deceived must be a thinking thing. This guarantees the existence of mental substance and illustrates the power of rationality as a faculty of the mind.[64] The method of philosophical doubt thus changes the project of knowledge in two ways – (1) the shift in the role of necessity and (2) the demand for certainty in the definition of knowledge. Epistemology and metaphysics must be co-investigated and this investigation must occur prior to all other intellectual projects if they are to be grounded in certainty, thus justifying the "first" of "first philosophy." Necessity is the primary tool for grounding knowledge, the world, and experience. Likewise, certainty becomes a required condition for knowledge, since the conditions under which it must be grounded provide no alternatives.

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[62] Descartes, "Meditations on First Philosophy (1641)" (1998), 22.
[63] Notice that this move from essence to substance still preserves the primacy of abstraction. Mental perception plays an important role in seeing beyond the contingent features of sensory experience, even if the sensory experience is imaginary or dream-based. In this way, substances play a role similar to *archē*.
[64] Ibid., 18.

The connection between Descartes' three substances explains the various ways in which certainty escapes human thought. Not all ideas are knowledge and the very faculties of sensory perception can mislead a careless perceiver. However, a *careful*, rational observer using the faculty of mental perception, according to Descartes, will find that there is a hierarchy of objective reality that can be known with varying degrees of certainty.[65] One's own mind is easier to know and is known with more certainty than is extended, corporeal substance. Likewise, God, as an infinite substance and reality is a necessary condition for overcoming skepticism and knowing one's own limited knowledge: in the third meditation, Descartes argues that God's existence and basic features are required for proofs about the both extended corporeal substance and non-extended thinking substance. God's existence is therefore known with more certainty than are mental objects or physical objects. However, while God's existence is known with the most certainty, knowledge of God's infinite substance is not completely understood because of the finitude of human reason. [66] Thus, the hierarchy of substances relies on the clearness and distinctness with which each particular substance can be understood. God is infinite, the most real, and the most true. Additionally, the faculty of rationality comes from his influence, making him the most important substance. The second most important is the thinking substance itself; self-aware and finite, it is capable of knowing itself, and from this self-knowledge, of coming to know God and the qualities of extended substance with certainty. These two substances are therefore necessary in Descartes' metaphysics for the possibility of knowing extended substance, which is the least real. Despite the move away from Aristotelian metaphysics, with its conception of

[65] Ibid., 23. His own (translated) words, despite the problem of certainty and degrees.
[66] Ibid., 31.

essence and syllogism, the primacy of the mental, traceable back to Pythagoreanism, survives the revolution of the modern period.

2.2 Subjects and Objects, Rationalism and Empiricism

The Cartesian self, itself an example of the primacy of abstraction, sets the stage for discussions of knowledge during the modern period in a few ways. First, as a mind, Descartes' self is the subject that perceives ideas. Second, an idea is knowledge when it is clearly and distinctly perceived to be indubitably true. Third, the classification of objects in the external world is based on the features of their extended substance and sensible attributes, but knowledge of objects comes through ideas about them rather than from sensation. Descartes' rejection of scholasticism offers an alternative epistemology that responds to the problem of weak epistemic foundations. Errors produce more errors if there is no foundation, and the *Meditations* replaces the essential natures and dispositions found in Aristotelian science with a metaphysics of impersonal physical substance and rational minds.

With a similar interest in the new scientific method and the activities of the Royal Society, John Locke also criticizes Aristotle and scholasticism. Locke's criticism, however, takes the older science to task for not incorporating the empirical correctly; it relies too much on innate ideas as a source of authority, especially between teacher and student. Discussing the role of innate ideas in contributing to unquestioned philosophical dogmatism in the scholastic education, he says that,

> So much as we ourselves consider and comprehend of truth and reason, so much we possess of real and true knowledge. The floating of other men's

> opinions in our brains, makes us not one jot the more knowing, though they happen to be true. What in them was science, is in us but opiniatrety; whilst we give up our assent only to reverend names, and do not, as they did, employ our own reason to understand those truths which gave them reputation.[67]

Locke therefore spends the first book of *An Essay Concerning Human Understanding* arguing the impossibility of knowledge being grounded in innate ideas; even if they are necessarily true, they fail to capture the process by which human beings acquire knowledge.

This reaction against innate ideas that humans possess from birth also applies to Descartes and his famous *cogito*. Locke states, "To ask at what time a man has first any ideas, is to ask, when he begins to perceive," and he spends a large portion of the first chapter of the second book arguing that the soul is frequently *not* engaged in active thought. Rather, thinking is a faculty of the soul, not an essential characteristic of its substance that manifests through innate ideas that are thought from its first moments of existence.[68] He argues that if knowledge is not a product of innate ideas, then its genesis must be accounted for using experience: namely external, sensual experience and internal, mental reflection.[69]

Locke's account is a general description of the growth of knowledge out of life experiences. One of the constant examples of this project is the development of knowledge in children. In the first book, Locke uses the example of children to express

[67] Locke, *An Essay Concerning Human Understanding* (1924), 40. I.4.24.
[68] Ibid., 47-51. II.1.9-19. The rest of the arguments span from there until section 19.
[69] Ibid., 51-52. II.1.20-25

how innate ideas are not possible; children (who presumably have souls) cannot demonstrate these ideas, even once they learn to speak.[70] They do, however, come to be able to understand and express universal truths that are mistakenly called innate ideas by the scholastics (and Descartes), such as the truth that "it is impossible for the same thing to be, and to not be."[71] Later, when giving his alternative account of empirical experience as the foundation of knowledge rather than innate ideas, he returns to child development for evidence.[72] Knowledge for Locke grows from an accretion of sensory and reflective experience.

This empiricist account of knowledge starts with the same object of thought that Descartes uses–the idea, the "object of the understanding when a man thinks," in Locke's words.[73] Since he has argued that no ideas are innate, Locke must account for their production by other means, and he does this through the second book of *An Essay Concerning Human Understanding*. Instead of presuming that there are any ideas to begin with, he instead supposes "the mind to be, as we say, white paper, void of all characters, without any ideas…"[74] This blank slate is furnished with ideas through the senses and reflection on experience to build complex ideas out of simple ones, but regardless of the level of complexity, the object of thought, and therefore knowledge, is always the idea.

Ideas become knowledge through the use of natural human faculties rather than by starting out as innate. Knowledge for Locke is defined in various places as the

[70] Ibid., 28. I.3.2.
[71] Ibid., 28-29. I.3.3.
[72] Ibid., 51. II.1.20-24.
[73] Ibid., 15-16. I.1.8.
[74] Ibid., 42-43. II.1.2.

perception of agreement or disagreement between ideas, but it is not until the fourth book that he directly provides such a definition.[75] He later organizes agreement and disagreement into four kinds–identity and diversity, or the ability to distinguish things as being the same as themselves or different from others; relation, or the ability to distinguish what kind of relationship differing ideas have with one another; co-existence, or the ability to distinguish ideas that can exist simultaneously with each other without contradiction or a changing from one complex idea to another; and lastly, real existence, or the ability to distinguish what is truly real (Locke's example being God) from what is possible or merely chimerical.[76] All human knowledge is captured by these four perceptions of agreement or disagreement amongst ideas.

One example of the limits of knowledge comes from substance, "something whereof we have no idea, which we take to be the substratum, or support, of those ideas we do know," especially ideas of the external world.[77] Primary qualities, the necessary simple ideas of extended bodies (Locke lists them as solidity, extension, motion, and number), are not experience of objects directly, but are transmitted via organic functions of the senses into the mind where they produce ideas. Thus, substance is not these primary extended qualities themselves, as it is for Descartes' wax and physical bodies in general, but instead it is something that we never directly experience. Secondary qualities of objects arrive as ideas in the same way, through stimulation of the sensory organs and arrival in the mind. However, these qualities are the powers of the objects to produce sensations, rather than actual inherent qualities of the objects themselves. Thus, primary

[75] Ibid., 255. IV.1.2.
[76] Ibid., 255. IV.1.3.
[77] Ibid., 39. I.4.19.

qualities are closer to knowledge of the external world, whereas secondary qualities are subjective in the sense that they are dependent on how the subject experience is affected.[78]

Locke thus describes the certainty required for knowledge as bounded by the scope of intuitive perception:

> [S]ometimes the mind perceives the agreement or disagreement of two ideas immediately by themselves, without the intervention of any other: and this I think we may call intuitive knowledge. … It is on this intuition that depends all the certainty and evidence of all our knowledge…[79]

Knowledge is grounded on a basic human faculty of understanding – the intuitive perception of agreement or disagreement. More complicated grounding is possible through demonstration, which, though not as clear and self-evident as basic intuition, still arrives at its conclusion through intuitive support at the most basic level.[80]

Comparing Descartes and Locke provides a broad-stroke picture of the modern debates surrounding experience and ideas in knowing. Both agree that knowledge is gained through the correct perception of ideas; however, for Descartes this is a clear and distinct perception that relies on the innate presence of ideas, while for Locke ideas are formed from experience and it is the natural faculty of human perception that intuitively recognizes the agreement or disagreement between them. Thus, Locke classifies the world through sensory experience and the rational manipulation of ideas into complex

[78] Ibid., 265. IV.2.13.
[79] Ibid., 261-2. IV.2.1.
[80] Ibid., 263-4. IV.2.4-7.

forms rather than through an *a priori* classification of substances known innately. Where Descartes doubts the reliability of the senses as part of his search for a foundation and finds innate ideas, Locke argues against innate ideas and finds experience to be the only possible foundation for ideas. The perceived relationships between ideas and the mental manipulation of them allows for a limited scope of certainty, as well as an account of degrees of probability. Despite their disagreements about the status of innate ideas, the formation of ideas, and the way in which objects of the external world are known, Locke and Descartes do agree on the status of knowledge as a product of reason. Likewise, they share the goal of accounting for the limits of knowledge by including certainty as a necessary condition, despite their differences regarding its scope.

David Hume's empiricism is of a much stronger variety than Locke's; he goes so far as to doubt metaphysical claims about substance because of the inability to experience it.[81] Although Hume does differ from Locke on the topic of substance, he holds a similar stance on the role of human faculties and experience as the basis for knowledge. Experience is divided by the strength of its vivacity, or proximity to the experience of the natural object in question; the sensory experience of a tree is more vivid than a remembered or imagined tree, the experience of anger is always more forceful than the conceptual analysis of anger, and so on. The original, more vivacious kind of perceptions Hume calls "impressions" and the less vivacious, reflective perceptions "ideas". Because more vivacious perceptions occur first, "all our ideas or more feeble perceptions are

[81] Hume, *Enquiries Concerning Human Understanding and Concerning the Principles of Morals* (1975), 153. Section 119. "It is a question of fact, whether the perceptions of the senses be produced by external objects, resembling them: how shall this question be determined? By experience, surely; as all other question of a like nature. But here experience is, and must be entirely silent. The mind has never anything present to it but the perceptions, and cannot possibly reach any experience of their connexion with objects. The supposition of such a connexion is, therefore, without any foundation in reasoning."

copies of our impressions or more lively ones."[82] Thus, like Locke, Hume contends that all ideas are grounded in experience, though for Hume initial experience is different in its vivacity to such a degree that it is of another kind – impressions. A benefit of this relationship is that obscure ideas can be traced back to their initial impressions in order to clarify them, a process that, according to Hume, can help ground the philosophical use of language.[83]

Ideas associate with each other in three major ways–through resemblance, contiguity in space or time, and cause and effect. The examples he provides–pictures conjure ideas of their subjects through resemblance, discussion of a room in one building can lead to the idea of neighboring rooms due to their spatial proximity, and the idea of a wound leads to the reflection of the painful effects of such a cause–also illustrate the role impression can play in reviving ideas.[84] Walking through a neighborhood brings force back to the idea of one's childhood home because the features of the neighborhood have been experienced together spatial and temporally. This is one way that ideas, the source of knowledge, seem to gain force, vivacity, and clarity.

The cause and effect association does present some problems, according to Hume. The importance of this association is undeniable in connecting past and present matters of fact with future events.[85] However, despite the importance of causal connection to rationality, causal connection itself is not rationally grounded. His argument for this rests on two points. First, all knowledge of cause and effect must come from experience; it is

[82] Ibid., 19-20. Section 14.
[83] Ibid., 21-22. Section 17.
[84] Ibid., 53-55. Section 44.
[85] Ibid., 25-27. Section 21-22.

impossible to know the causes or effects of an object through *a priori* reasoning.[86] Since *a priori* reasoning is no help in this case, only empirical reasoning can be used. This leads him to his second point, the search for the "foundation of all conclusions from experience," a point for which he finds no positive evidence.[87] Instead, all he finds is a viciously circular argument that seems necessary for supporting any inferences from experience. This is because all conclusions deriving from experience must take the form "the future will be like the past." This is problematic when trying to justify the inference itself because the only apparent justification begs the question; it is the same inference that is currently under scrutiny: "in the past, the future conformed to the past." Thus rationally grounding inferences about the future based on the past is impossible.[88]

It is important to note that Hume is not rejecting rationality, but rather arguing that it is impossible to ground causal inference rationally. His argument is instead a criticism of the misuse of the rationality by his peers. Causal connection is not a rational act, but rather a habit of experience, an instinct to expect the future to be like the past because it has been incredibly useful, which further drives our theoretical association of causation between consecutive events.[89] Presupposing that human connections between cause and effect can be known with certainty through a Cartesian faculty like clear and distinct mental perception or the Lockean human intuition of observing sameness and difference is dangerous when drawing inferences from experience because it is actually habit, not certainty. Even though certainty is not possible, such inferences are still

[86] Ibid., 27-29. Section 23-4.
[87] Ibid., 32. Section 28.
[88] Ibid., 35-36. Section 30. Also problematic is the way this problem bleeds into other causal inferences, including the use of more distant past events to justify more recent past events, for instance.
[89] Ibid., 46-47. Section 38. "All these operations are a species of natural instincts, which no reasoning or process of the thought and understanding is able either to produce or to prevent."

necessary for daily life. For Hume, this is a matter of fact about human nature. Even in disciplines like geometry, the role of experience is necessary for discovering the laws and principles that govern it.[90] This critical approach to certainty and rationality leads to a different form of skepticism than Descartes'. Instead of merely an epistemic doubt about what is indubitable, it is a skeptical doubt that is constant and inspires modesty in one's claims and reservation in the confidence one has in the correctness of one's own views as opposed to those of others.[91]

2.3 Kant's Transcendental Resolution

Hume's explanation of why it is impossible to prove by means of reason the existence of causal relationships highlights the conflict between rationalism and empiricism. For Hume, experience really is the source of our ideas; the relationships between ideas are based on the association of their content and not an *a priori* function. For Immanuel Kant, this undermines the possibility of objective knowledge in mathematics and science. In the process of working out this question, he resolves the rationalism-empiricism debate through a "transcendental" argument, and recasts the scope of knowledge while trying to do justice to both rationality and experience.

In Kant's major work on epistemology, the *Critique of Pure Reason*, he structures his project around explaining the possibility of synthetic *a priori* knowledge. The *a priori* aspect of knowledge is at the heart of the empiricist and rationalist debates, *viz.* whether knowledge is only grounded in experience (and thus all knowledge is *a posteriori*) or relies at some basic level on something purely outside or prior to experience. Classically,

[90] Ibid., 31-32. Section 27.
[91] Ibid., 161-162. Section 129.

a priori knowledge is associated with analytic truths, or truths in which the inference does not move beyond the contents of definitions. Hume and Locke, as noted earlier, saw that even though such truths were necessarily true prior to experience, they were only known through experience, and thus such knowledge was grounded in experience rather than prior to it. For Descartes, the problem was reversed: the only apparent way to know was by relying on ideas that were *a priori* by being innate, otherwise knowledge was not a matter of certainty but a matter of possibility. Kant argues that the content of experience must be organized by structures prior to and completely independent of that experience.

In addition to the definition of *a priori*, Kant's essential question also centers on making a distinction between synthetic and analytic judgments. Analytic judgments are those that rely on identity and do not move beyond it when elucidating what is known about an object of knowledge. As Kant states, analytic judgments "do not through the predicate add anything to the concept of the subject," whereas synthetic judgments "on the other hand, could be called expansive. For they do add to the concept of the subject a predicate that had not been thought in that concept at all…"[92] In order for Kant's argument to hold, then, he must show that knowledge requires an *a priori* synthesis. Otherwise, the rationalist-empiricist dilemma forces one to choose between rationalism and the problem of knowing the external world or empiricism and the problem of grounding knowledge of *a priori* principles through induction.

Kant begins his search for synthetic *a priori* knowledge through an argument derived out of a subjective organization of objective experience (the experience of objects). This subjective organization of objective experience must necessarily occur

[92] Kant, *Critique of Pure Reason* (1996), 51-52. A7/B11.

prior to experience, but it is only known through experience – what he calls the intuitions of space and time.[93] These intuitions exist both in a pure form, prior to experience, but also in an empirical form wherein they organize sensory experience. Thus, Kant distinguishes the role of sensations, or what he calls the "matter of appearances," from the role of space and time, which are the "forms of appearances."[94] The organization of experience by the intuitions is the first part of an *a priori* synthesis that is required for the possibility of knowledge.

If the intuitions are an organization of experience in space and time, then the mental organization of those objects of experience into concepts must be deduced by a similar method. Kant begins with an analytic deduction of the table of judgments, which lists the "function of thought in judgment" and is derived by abstracting away the content of a judgment and paying attention to the "form of understanding in it".[95] From here, he makes a move similar to the one he used in discussing the necessity of the intuitions without relying on empirical abstraction. Given that the table of judgments is exhaustive (for which he believes he has argued persuasively), there must be a form of conceptual organization that the pure understanding uses prior to any experience in order to organize such experience. Basing this on the table of judgments, Kant describes a table of categories. These categories, or pure concepts, must organize the objects of experience in order for cognition and knowledge of those objects to be possible. The categories serve a synthetic, not analytic, function because the categories allow for the subsuming of

[93] Kant does this in the Transcendental Aesthetic. Also, the proof of necessity is not one of abstraction from particular experiences of objects, because that would result in falling prey to Hume's skepticism of inductive inference.
[94] Ibid., 72-73. A20/B34.
[95] Ibid., 123. A70/B95.

sensory experience under concepts, experience that is outside of the identity of the concepts themselves.

The logical process of synthesis that must occur for the cognition of an object thus occurs in the following order. First, there must be a manifold of pure intuition – the spatio-temporal framework that is composed of space and time as forms of intuition organizing sensory input. Second, this manifold of intuition needs to be synthesized by the imagination[96] into a particular perceiver's synthesis. Finally, from here, there is a synthesis that unifies the manifold of intuition with concepts, allowing for cognition.[97] Without this process of synthesis constantly occurring logically prior to every instance of experience, then, according to Kant's argument, cognition (and thus knowledge) would be impossible. Synthetic *a priori* knowledge is thus a precondition for the possibility of empirical knowledge, but they cannot be divorced from each other in any way except conceptually through transcendental argument, namely, by arguing for the impossibility of *a posteriori* knowledge without the existence of synethetic *a priori* knowledge.

After such an argument, where does Kant draw the boundaries of knowledge? The structure of the transcendental deduction is designed specifically to avoid relying on the form of empirical induction of which Hume is skeptical. The transcendental deduction does not use the content of experience to justify its conclusion; instead, it is an argument that deduces the necessary structures required for the *possibility* of experience. Kant is addressing Hume's skeptical worry by starting with the same premise – that we *have*

[96] The productive (as opposed to the reproductive) imagination plays the major role in synthesis, not just of synthesizing the manifold of experience into a unified appearance, but also in the synthesis of concepts with intuitions through schemata, as well as in the synthesis of sensations and forms of intuition (space and time) together into appearance.
[97] Ibid., 130-131. A78-79/B104.

experience – and drawing from it the necessity of the *a priori.* However, rather than discussing the *a priori* functions of the mind based on our mental habits, Kant grounds the necessity of these functions as requirements for the possibility of experience. He bridges the gap between empiricism and rationalism by making the starting point experience, but proves the necessity of the *a priori* for the possibility of such experience, as well as an explanation of the inherent rational coherence of such experience.

Another important feature of Kant's description of knowledge is the relationship between subjectivity and objectivity, a relationship that is grounded in experience.[98] All experience is necessarily subjective because it is unified through apperception, the quality all of an individual's experience has of being had by that particular individual. However, this quality of experience does not mean that experience is reducible to relativist subjectivity. Kant avoids such a reduction of the objective external world to a purely subjective world through his refutation of idealism. His argument for the necessity of an objective world once again comes from the structure of experience, specifically from the intuitions of space and time. Taking as his premise the consciousness of temporally ordered experience, he argues that there must be something that allows experience to be organized into its particular temporal order. The only possible explanations of the experience of temporal order are (1) being conscious of temporal experience, (2) direct perception of time, or (3) the objective aspect of experience being reliably permanent and shared. Consciousness of the experience of time is insufficient as an explanation because the consciousness relies on the experience of time to organize it. Likewise, it is impossible to directly perceive time, as Kant states in his argument for the intuitions:

[98] In other words, objectivity is still dependent on *phenomena*, not on the impossible to access *noumena*.

time is an intuition that orders experience rather than some external experience in particular. Thus, the only option left is for the experience of the external world to have an objective quality. However, because this objective quality is unified with the other features of experience via apperception, it is always experienced with the subjective.

2.4 Modern Conditions for Knowledge

Descartes' approach to knowledge is frequently taken to be squarely within the traditional account of knowledge. As Laurence Bonjour notes in *Epistemology: Classic Problems and Contemporary Responses*, Descartes' concept of knowledge is basically the same as the traditional account.

> The Cartesian account of knowledge is in fact one specific version of a more general account of knowledge that has come to be generally referred to as "the traditional conception of knowledge." … Other specific versions of this general account usually share Descartes' truth condition… but differ somewhat in their specification of the belief or acceptance condition… and to a wider and more serious extent in their specification of the reason or justification condition…[99]

The traditional account provides a general description of the necessary and sufficient conditions for knowledge while particular approaches to knowledge just work out the terms – namely, the meaning of truth, belief, and justification. Descartes, for instance, is focused on a definition of truth that involves certainty. Thinkers who reject Descartes' notion of innate ideas and the natural light of reason, such as Locke, are still operating

[99] Bonjour, *Epistemology* (2002), 28.

within the traditional framework and merely differ on their definition of 'truth' or 'justification'. Thus, such historical readings of the traditional account argue that the basic discussion about knowledge has not changed its form from Plato through the modern period and into contemporary debates. It is merely a long chain of arguments about the meaning of those conditions.

It is doubtful that Descartes' position on knowledge mapped onto the traditional account's use of propositions and beliefs. The natural light of reason is used to clearly and distinctly perceive ideas and thereby become certain about their truth. There is no propositional content in the definition of 'idea'. Similarly, later use of the term 'idea' by empiricists evokes a direct connection between experience and simple ideas; however, such a connection is mediated. There is no assent to propositional content involved in these descriptions, but rather a process of apprehending agreement or disagreement between ideas.

Whether or not the traditional account is importing a propositional structure into the epistemology of modern philosophers, it is still the case that these thinkers continue the trend from classical Greek philosophy of focusing on the importance of rationality to knowledge. According to both rationalists and empiricists humans acquire knowledge through their mental functions. These philosophical projects involve understanding how to best explain the relationship between the experience of the world and the organization and evaluation of that experience by the mind. All of these thinkers take as central to their definitions of knowledge the role of the subject, the difficulty in distinguishing between purely subjective experience and an objective external world, and the limits of

knowledge. By answering questions within these areas, they describe the relationships between the mind, experience of the world, and knowledge versus opinion.

3. Modern Ideas and Early Analytic Language

3.1 From a Kantian Inheritance to the Linguistic Turn

Kant's influence on philosophy extends through the era of German Idealism, in which his work is viewed as something to be either reacted against or built upon. Neo-Kantians and early analytic philosophers share in the search for a role for philosophy in the face of scientific advancement, and see logic as a way to interact with the natural and social sciences as sources of empirical knowledge. Gottlob Frege's work on the relationship between arithmetic and logic is part of this process. Frege tries to show that arithmetic is a branch of logic and in the process develops function-based second-order logic. Rather than focus on subjects and predicates, as grammar-based syllogistic logic had up to then, functions take arguments in the form of objects and return a truth-value, the True or the False. It is for this reason that Frege spends time redefining meaning through function and reference, as seen in his consideration of the identity relation. Logical analysis allows one to verify a sentence as true or false, and for Frege a sentence's *meaning* is the conditions under which it is true–a sentence's truth-value and its meaning are the same. Apparent differences in colloquial meaning are defined by Frege as differences in "sense" rather than in "meaning". His classic example of this is the use of 'evening star' and 'morning star' as references to the same object (Venus) with different senses that can elicit separate, conflicting beliefs. This requires an explanation of how language connects with both truth and the world. The foundational role of logic and formal languages in relating meaning and truth becomes the touchstone for both the

productive projects and the critical projects of early analytic philosophy and logical positivism.

Bertrand Russell's paradox[100] famously undermines Frege's project, but the project of trying to unify logic and mathematics for the sake of properly grounding the natural sciences is still continued in Russell and A. N. Whitehead's *Principia Mathematica*. For Russell, logic is a useful tool in clarifying problems of natural language. His development of definite descriptions directly addressed the problem with ontological arguments by clarifying the connection between existence and reference. Declaring something to not exist was problematic within sentential or even predicate logic if existence is taken as a predicate. Instead, when discussing things such as non-existent kings of France, proper analysis of sentences into their logical structure dissolves the problem. Thus, it becomes possible to symbolize universal arguments about entities that do not exist without having to affirm their existence. This has a direct influence on the ability of philosophy to remove unnecessary or confusing metaphysical objects. In attempting to explain the structures necessary for science to make truth claims, either through formal arguments or through corrected natural language, analytic philosophy is motivated by goals similar to those of the neo-Kantians–to avoid speculative metaphysics and make philosophy relevant to the sciences.

Frege and Russell both represent the beginning of a focus on the direct connection between the structure of language and true representations of facts about the world. Ludwig Wittgenstein's *Tractatus Logico-Philosophicus* also continues the project of

[100] "A set of all sets that don't include themselves" paradoxically must simultaneously contain and not contain itself.

connecting language and reality. In it, he identifies logical pictures with thoughts, thoughts with propositions, and propositions with truth functions of elementary units. As descriptions of states of affairs, these logical pictures can be judged as true or false based only on comparison with the world.[101] Therefore, any attempt to know must involve a comparison of the thoughts one has about reality with reality. However, a comparison between thought and reality requires an analysis of the logical structure and therefore involves an analysis of propositions. As Wittgenstein notes, propositions say how things can be, not the way things are, and because of this they "project" a possible state of affairs.[102] This state of affairs can be affirmed or denied in comparison with the world, and it is the project of science to know the body of true propositions. The project of philosophy, however, is the clarification of thought.

The members of the Vienna circle take up this project of understanding the world through a logico-linguistic framework. Like Wittgenstein, its members classically take logic to be a powerful tool in clarifying philosophical problems, especially when it comes to dissolving arguments in speculative metaphysics that can now be labeled as sense-less. As Hans-Johann Glock observes in his historical account of the relationship between early analytic philosophy and logical positivism,

> the logical positivists are best known for verificationism, the view that the meaning of a proposition is its method of verification (the 'principle of verification'), and that only those propositions are 'cogntively meaningful' which are capable of being verified or falsified (the verificationist

[101] Wittgenstein, *Tractatus Logico-Philosophicus* (1961), 12. 2.223-2.224.
[102] Ibid., 13. 3.1-3.13.

> 'criterion of meaningfulness'). On the basis of this criterion, they condemned metaphysics as meaningless, because it is neither *a posteriori* – like empirical science – nor analytic – like logic and mathematics. Metaphysical pronouncements are vacuous: they neither make statements of fact that can ultimately be verified by sensory experience, nor do they explicate the meaning of words or propositions.[103]

Logical positivism puts forward in verificationism an empiricist project that is designed to make clear the grounds and scope of scientific knowledge and in so doing give purpose to philosophy, especially epistemology. Additionally, it accomplishes the critical task of discarding problems that are overly-speculative and that suffer from metaphysical meaningless-ness. Instead, it concerns itself with new issues of meaning, truth, and language.

3.2 The Possibility of Empirical Knowledge and the Traditional Account

Philosophy's role in knowledge production, at least as seen through the lens of early twentieth century analytic philosophy, is to articulate the conditions for the possibility of empirical knowledge. A. J. Ayer notices this change when he observes the need for epistemology to abandon a quest for certainty established with Descartes in the modern period and search instead for the more "scientific" condition: the "right to be sure."[104] Because of the rejection of speculative metaphysics by logical positivism, for empirical knowledge to be useful it must be *a posteriori* and subject to error and correction. Fallibility excludes indubitability , so the "right to be sure" is a search for the

[103] Glock, *What is Analytic Philosophy* (2008), 37.
[104] Ayer, *The Problem of Knowledge* (1956), 7.

conditions that best blend our intuitions about what we do know with our need to be critical of what we *think* we know.[105] However, because epistemology is searching for necessary and sufficient conditions for knowing rather than particular known facts, a theory of empirical knowledge still involves an abstract subject and how his or her abstracted beliefs about propositions are justified. This is what Ayer is referring to when he says that for philosophers, "all the evidence which bears upon their problems is already available to them,"[106] and that "[i]t does not matter whether the examples taken are actual or imaginary. In either case we describe a situation in order to see how it is classified."[107] The knower and the object of knowledge need not even exist because they are abstract tools for investigating the logically necessary and sufficient conditions of knowledge. In such an inquiry, an objective knower is one who fulfills such conditions without the biases of particularity and subjectivity by abstracting himself out of a particular situation into the role of a universalized subject.

The traditional account is heavily indebted to early analytic philosophy for its formula. The traditional account integrates the importance of principles from early Greek philosophy with the abstracted self of the modern period. At the same time, developments in logic and philosophy of language simplify the object of knowledge into a propositional form. These are the resources that organize the traditional account's conception of knowledge: for a subject to know any proposition, the subject must believe the proposition, be justified in believing the proposition, and the proposition must be true. What exactly these particular conditions *mean* becomes the content of much of the

[105] Ibid., 23. "[Our argument] is designed to show, not that we do not have the knowledge we think we have, but only that knowing should not be represented as a matter of being in some infallible state of consciousness: for there cannot be such states."
[106] Ibid., 7.
[107] Ibid., 28.

twentieth century's approach to epistemology, but the focus on truth and justification through logic and language also leads to a recontextualization of the history of epistemology. Past thinkers' approaches to knowledge are appropriated to address contemporary concerns, for better or worse.

Throughout this chapter, I have described the common, "textbook" narrative of the history of knowledge in order to demonstrate that, even though it may not initially start with a particular "traditional account" or "traditional concept" of knowledge, it does tend toward a narrow definition of knowledge by focusing on the theoretical and the abstract while diminishing the explanatory role of the knower and the particularity of the circumstance. The classical Greek period influences later approaches to knowledge in two important ways. First, philosophers of the time place the highest value on rational principles in the form of abstraction from particulars to an *archē*, an ideal form, or the theoretical. Second, there is a focus on establishing *epistēmē* as superior to *technē*, in that epistemic knowledge and contemplation are more noble activities than technical knowledge and skilled labor. Though modern philosophers reject the Aristotelian scholastic sciences, they inherit these two epistemic values. In addition, thinkers from Descartes to Kant are engaged in explaining the possibility of knowledge through the rational functions of the mind. These explanations do not rely on any particular features of a knower, but instead are universal descriptions of an abstract human subject, the self. The object of knowledge is treated similarly by the early analytic tradition: possible states of the world are captured in propositions and epistemology becomes concerned with how belief in propositions can be justified objectively. All of these features contribute to two things. First, there is an historical trend in which the dominant theory of knowledge is

narrowed down to exclude any role for accounts of knowledge that explain the role of the particularity of knowers and situation, such as knowing-how and knowing-others, topics that I cover in chapters two and three. Second, the traditional account simplifies the various ways in which philosophers have historically defined knowledge in terms of abstract principles to a statement about necessary and sufficient conditions ("subject *S* knows that proposition *P* if and only if conditions *x*, *y*, and *z* are satisfied", where '*x*', '*y*', and '*z*' are conditions for 'truth', 'justification', and 'belief'). This is anachronistic however, because it abandons the conceptual complexity the particular thinkers of each period had when constructing their own lexicon of how to approach knowing. Epistemology therefore has been narrowed by the actual arguments that are taken up as canonically relevant *and* by the "traditional account" lens that further simplifies these accounts.

CHAPTER TWO:

CONTEMPORARY ANALYTIC EPISTEMOLOGY AND THE PROBLEM OF JUSTIFICATION

The previous chapter discussed the historical narrative of the traditional theory of knowledge up to the mid-twentieth century. The general notion of a proposition that motivates mainstream contemporary analytic epistemology operates with a working definition whereby a proposition *p* is a claim about the status of the world with a truth-value. In this chapter, I argue that the narrowness of an epistemology centered on propositional knowledge arises in the form of two major problems: first, such an epistemology gives an inadequate account of the structure of propositional knowing; and second, it encroaches on other kinds of knowledge and attempts to reduce them to its inadequate account.[108] I consider the inadequacies of the central arguments within analytic epistemology's approaches to justification. The two aspects of justification I investigate are the competing accounts of what structure amongst beliefs provides justificatory force, and competing accounts of the relationship between the knower and the basis of justification that makes his or her claim to know reasonable. In the second half of the chapter, I provide examples from within the analytic tradition that illustrate some ways propositional knowledge distorts non-propositional knowledge. Both of these

[108] There are trends within the history of analytic epistemology that present other significant problems for proposition-based epistemologies. Frequently, these arguments lie more within the domain of logic or philosophy of language, dealing with things such as the metaphysical status or truth of propositions. For the sake of brevity, the argument I construct in this chapter is focused on exploiting a series of problems associated with the process of justifying propositional knowledge.

arguments rely on observations made within the discourse of analytic philosophy, and together they prompt a search for an alternative account of knowledge.

1. **The Problems with Justification**

1.1 Epistemic Regress

A common approach to discussing the justification of knowledge involves limiting the discussion to beliefs about propositions, such as "The snow is white" or "Washington, D.C. is the current capital of the United States of America," after which one must explain how such beliefs are justified.[109] The first attempt at a solution is usually to refer to other beliefs that are taken as premises that demonstrate or strongly imply the belief in question.[110] For instance, "I have the visual sensation of seeing white snow" or "I remember learning the capitals of various countries in grade school," might be cited in order to justify my beliefs. Skeptical doubt then calls into question these justifying beliefs in the same way, asking for an explanation as to how the beliefs that justify the initial belief are themselves justified, rather than merely taken for granted. How does my awareness of my visual sensation justify my belief? Why am I justified in believing that I learned the capitals in grade school? This is the classic problem of epistemic regress, a problem that seems to have four possible answers:

1) The skeptic is right, there is no justificatory force beyond the first round of justification.

[109] For some examples of influential texts that take propositional knowledge as the starting point, see Ayer (1956), Feldman, *Epistemology* (2003), Bonjour (2002), and Lehrer, *Theory of Knowledge* (2002). See also Hetherington, *How to Know* (2011), 1-25, where he considers the few attempts in analytic epistemology to find alternatives to propositions. More is said about the significance of mainstream status of this approach to knowledge in the second half of this chapter when discussing propositional encroachment.

[110] Depending on the strength of justification sought, which I will not deal with here. Ayer considers this problem in the first chapter of Ayer (1956), as does Hetherington in the first chapter of Hetherington (2011).

2) The regress extends on in an infinite chain of beliefs.
3) The regress forms a circle as the justificatory chain returns to a previously referenced belief that is still awaiting justification.
4) Justification is grounded in some kind of belief that does not need to be justified by another belief.

To accept the first option, the skeptic's account of justification, is to discount the possibility of knowledge. If it is impossible to justify a belief, then there can be no true justified beliefs, and therefore no knowledge. There is nothing wrong with this option if one is willing to discard knowledge all together.

The second option seems problematic because the process of transferring justificatory responsibility goes on without resolution. If the first belief in question is waiting for the second belief for its justificatory reputation to "check out," and likewise the second belief is waiting for the third, and so on, then the chain (or tree) of beliefs will never be justified. A similar problem exists for the third option, but, rather than each additional justificatory step being a new unique belief, the structure instead returns to a belief already awaiting justification. As long as there is no successful justification then the same problem as an infinite regress occurs: even though the beliefs in question are not *unjustified*, they are still lacking justification and cannot support a knowledge claim.

The fourth option holds that the justificatory chain does succeed by ending with a basic belief, some kind of belief that does not need to be justified through an inference from another belief. Often, this kind of belief is explained as self-justifying, or somehow internally justifying. This, however, also seems problematic. If 'self-justifying' means that such beliefs are necessarily true and therefore justify themselves in the minds of

those who believe them, then they may provide a limited foundation. Analytic truths ('All bachelors are unmarried men') and vacuous tautologies ('All men are either married or unmarried') are possible candidates for such a foundation. Despite this, there is a problem connecting beliefs about *un*necessary things, such as basic empirical knowledge about the contingent features of the world.[111] For example, such self-evident claims would not be able to support the belief that 'John is a bachelor' rather than married. Such a small scope for knowledge is unacceptable to many, since knowledge about the contingent features of the world seems to be a basic part of everyday life.

1.2 Foundationalism

Instead of being self-justifying, such a belief may instead be supported by something that is not a belief and therefore not in need of justification. Analyses of knowledge that take this as the only approach are generally labeled as foundationalist: the justification of beliefs rests on beliefs that are not justified by other beliefs, but are justified in some other way. The most common form of foundationalism secures the justificatory chain in sense data. If the features of the world produce data in one's sensory apparatuses and immediately afterwards one has a belief about the world that matches that data, then beliefs seem to be grounded in causation. If I have the experience of seeing the color white then I believe I have the experience of seeing something white. Depending on the justificatory strength desired as a standard for knowledge, further

[111] Sellars mentions this when he discusses intrinsic credibility. "The credibility of *some* sentence types accrues to them by virtue of their logical relations to other sentence types, thus by virtue of the fact that they are logical consequences of more basic sentences. It would seem obvious, however, that the credibility of empirical sentence types cannot be traced without remainder to the credibility of other sentence types." Sellars, "Does Empirical Knowledge Have a Foundation?" (2000), 121.

inferences beyond finding a foundation in sensation need not be necessarily true but perhaps only probable.[112]

Securing the justificatory chain in the immediate experience of sense data suffers from a fatal problem, however. Any use of sense data as a foundation must include a description of how immediate experience through sense data is parsed into beliefs about truth while avoiding the problem of misrepresentation that is frequently associated with pre-inferential experience. For instance, the experience of seeing a circular table top as an oval from the side, the experience of a yellow object appearing green under a blue light, or any other of a number of examples where sense data alone is misleading, all illustrate that sense data do not come pre-packaged with some inference that automatically interprets the experience for a subject and transforms it into a justified belief. This is a problem because foundationalism attempts to articulate how beliefs are justified by making the chain of justification explicit. Merely making a connection between the content of sense data and beliefs about sensation explicit, however, does not entail having made explicit how that sense data is organized, or perhaps even should be organized, to justify beliefs. Although the sense data may be a secure foundation for knowledge, the *way* in which beliefs are justified by sense data still requires explanation.

Not only is such an explanation lacking, it also seems that providing it is impossible. The purpose behind finding a foundation in sense data is to avoid a regress, but attempting to bridge the divide between sense data and belief reveals another regress. Specifically, when describing the justificatory chain that supports each belief, the

[112] For instance, a more limited definition of 'knowledge' might involve something closer to certainty as a requirement for justification. I have in mind here the difference between a Cartesian approach to certainty and A.J. Ayer's notion of "the right to be sure" in Ayer (1956).

justification is in an inferential form: "If belief *a* is true then belief *b* is true" and so on for each link. However, when arriving at the terminating belief, it is no longer a statement about the truth of the sense-data: "If sense-data x_1 and x_2... and x_n are had in the right way, then belief *a* is true." "In the right way" in this context cannot simply mean "are true statements about the world" for two reasons: first, sense-data are not statements, otherwise our first regress would continue again with sense-data just being a new term for beliefs; and second, if sense-data were simply the content of the belief in question its justification would be circular. Another possible route is to describe "in the right way" as a set of standards about belief-justifying sense perceptions (versus non-justifying). This route reveals another structural problem. The application of a standard to the connection between sense perception and belief itself requires reference to some sort of knowledge. How do we know which standard is the correct one to apply? Furthermore, what standard is used to justify such a meta-standard? Any attempt at securing such standards must avoid vicious circularity and question begging in their justification. In trying to secure the foundations of knowledge in order to provide a standard for what counts as good justification, foundationalism creates a regress of inferential standards.

1.3 Coherentism

Coherentism resolves the epistemic regress by offering a different approach to the structure of justification. Often times, this approach is described as selecting option three above to avoid the regress and arguing for a circular approach. This would be a very uncharitable reading, however. A more accurate understanding of coherentism is to see it as disagreeing with the conditions of the regress altogether because it disagrees with the assumption that justification is linear. Rather than assessing the justification of a belief

on a chain of other beliefs in succession, a belief is justified by the coherence of that belief in relation to all or most of the other beliefs held by the knower. An example of this sort of justificatory structure is Neurath's analogy of a boat at sea: the planks (beliefs) of a boat are repaired individually rather than all at once, so the boat continues to float (retain its justificatory force) by relying on the buoyancy of the rest of the boat (the coherent reinforcement amongst other beliefs).[113] In other words, it is the set of all the beliefs that provides justification, allowing individual beliefs to be changed piecemeal without a complete rejection of all associated beliefs.

There are some problems that any form of coherentism must address if justification is not linear. One of the most pressing is the problem of integrating experience and justifying empirical knowledge: if sets of beliefs are justified based on their relationships with each other, then how is knowledge connected to the world? This is referred to as the isolation objection, where a set of beliefs is coherent, and therefore justified, but isolated from experience; this is intuitively problematic if those beliefs are *about* particular experiences. For example, if one were to look at a car and form the belief "That car is red," the justificatory force that supports the belief would come not from the experience of looking at the car but from one's whole set of beliefs. Coherentist theories therefore face a dilemma: a theory must either (a) incorporate some kind of empirical

[113] See Quine, *Word and Object* (1960), 3. "Neurath has likened science to a boat which, if we are to rebuild it, we must rebuild plank by plank while staying afloat in it. The philosopher and the scientist are in the same boat. If we improve our understanding of ordinary talk of physical things, it will not be by reducing that talk to a more familiar idiom; there is none. It will be by clarifying the connections, causal or otherwise, between ordinary talk of physical things and various further matters which in turn we grasp with help of ordinary talk of physical things." Because of the relationship between language and conceptualization of experience, Quine is arguing that things like justificatory force can only be grounded in the success and failure of our language's ability to capture experience conceptually. Individual instances of belief can be assessed based on their relationship with the whole, but humans are already afloat as it were, so the whole vessel of beliefs cannot be assessed all at once.

foundationalism into their description of coherence, thus suffering from the same basic problem of accounting for the justificatory inference regress mentioned above, or (b) fall victim to a form of coherence where sets of beliefs are isolated from experience when it comes to justification. Such isolation is connected with the problem of hard relativism, where the comparison of the justified-ness between coherent sets of beliefs is based entirely on the relationship of the beliefs in the set and not on the relationship between the features of experience and the belief that is an account of that experience.

To make clear the particular problem of the second horn of the dilemma, where coherence is not empirically grounded, consider two sets of beliefs, set A and set B. The beliefs within both sets are internally consistent and coherent relative to their respective set but mutually exclusive between the two sets. Furthermore, assume that set B contains all false beliefs, where contingent features of the world are false, such as the colors of objects of experience. The beliefs within set B can still be justified under a non-empirically grounded definition of coherence because they would still be a legitimate description of some world, just not the actual one the knowing subject experiences. Even though this definition of coherence can explain the successfully justified beliefs in set A, it cannot explain why the beliefs in set B are not justified. Thus the account of justification using this definition of coherence has failed to connect justification to truth, even probabilistically, because the justification of the beliefs is formed outside of any connection to empirical experience.

An additional problem for a coherentist account is the inability to address falliblism. Assuming the coherentist does not make a foundationalist move to ground beliefs at least partially in experience, then any changes in a set of coherent beliefs rest

on maintaining coherence, not on accounting for why a particular belief should or should not be incorporated based on the interpretation of experience. Such a set of beliefs could therefore be completely static despite experience, since experience would lack justificatory force. In the opposite direction, the same set of beliefs could be in constant flux as they change without any justificatory check from empirical experience.

1.4 Coherentism and Foundations, Foundationalism and Coherence

In his article "The Raft and the Pyramid," Ernest Sosa problematizes the overly neat contrast between foundationalism and coherentism by examining the structural importance of both coherence and empirical foundations to justification. After describing the two approaches, he differentiates formal foundationalism from substantive foundationalism. Substantive foundationalism is the kind of account of justification motivated by the regress argument above, illustrated by the metaphorical superstructure of a pyramid. Beliefs are justified by other beliefs, by reliance on sense-experience or analytic truth, or not at all. Formal foundationalism, however, is shared by both coherentism and substantive foundationalism because of a common explanatory feature they share: the assumption that epistemic justification supervenes on non-epistemic features. He further distinguishes three grades of formal foundationalism:

> This deeper foundationalism is applicable to any normative or evaluative property Φ, and it comes in three grades. The *first* or lowest is simply the supervenience of Φ: the idea that whenever something has Φ its having it is founded on certain others of its properties which fall into certain restricted sorts. The *second* is the explicable supervenience of Φ: the idea that there are formulable principles that explain in quite general terms the

> conditions (actual and possible) within which Φ applies. The *third* and highest is the easily explicable supervenience of Φ: the idea that there is a *simple* theory that explains the conditions within which Φ applies. We have found the coherentist and the substantive foundationalist sharing a primary goal: the development of a formal foundationalist theory of the highest grade.[114]

The common assumption that both forms of justifcatory superstructure rely on is that justification supervenes on something else. Specifically, both substantive foundationalism and coherentism operate under all three assumptions about the relationship of supervenience between epistemic and non-epistemic states: (1) supervenience is the case, (2) supervenience is explicit, specifically in the form of principles, and (3) a simple theory explains it.

In one sense, this language is simply explaining the logical structure of formal foundationalism. An explicit set of principles that explain the conditions of supervenience requires that there be supervening relations in the first place. Similarly, a simple theory that explains the relevant conditions covered by such explicit principles requires that it is possible to make those principles explicit. However, in noting that there are these three levels of supervenience, Sosa also uses the hierarchical language of 'higher' and 'lower.' In evaluative terms, a theory is better if it can make explicit the principles of justificatory supervenience, and even more so if that theory explains the principles of this supervenience with a simple organizational structure.

[114] Sosa, "The Raft and the Pyramid" (1998), 200.

Although it may be more convenient to assume that such principles can be made explicit, and further that they can be accounted for in a simple theory, these assumptions are themselves unjustified. The existence of supervenience seems unproblematic—the epistemic status of beliefs as being justified or unjustified seems to be based on the non-epistemic features of those beliefs. Take, for example, the belief that I am having the sensation of seeing a white object in my field of vision. The justification of this belief cannot rely on its epistemic properties, i.e. that it is a belief, or that it is justified, or that it is a true proposition, because this would be circular. If a belief were justified because of its status as a belief, then all beliefs would be justified. Defining 'justification' as justification is question begging. Relying on the truth of propositions to justify beliefs opens the way for the classic problems of "lucky guesses" where a person seems to have a true belief but the having of the belief is unrelated to the truth of the belief. The supervening of epistemic traits on non-epistemic traits is therefore a safe assumption.

The second level, the possibility of making explicit the principles of the supervenience of the epistemic on the non-epistemic, is the most problematic to justify. There are certainly *some* principles that can be made explicit. For instance, consider a man named Geoffrey stating that he is still a bachelor. Citing Geoffrey's statement that he is a bachelor and the definition of a bachelor as an unmarried man, the belief that Geoffrey is an unmarried man seems to be justified. The skeptic pushes the argument to the evidence used in the justification and begins the regress: How is the belief that Geoffrey stated he was a bachelor justified? Ignoring this and other possible side branches, the solutions to the regress problem all operate with this principle about justification in mind: *If a set of justified beliefs act as a set of assumptions that support*

another belief as their conclusion in the right way (for instance, a sound deductive argument or a strong inductive argument) then that conclusion is a justified belief.

Being able to make a single principle explicit does not imply that all of the principles of justification can be made explicit. In fact, this is the problem drawn out for foundationalism and coherentism above. In the case of substantive foundationalism, the attempt to make explicit a principle of justification that describes how sense data is interpreted in a way that appropriately justifies foundational beliefs leads to a new regress. For coherentism, any attempt to make explicit a principle that describes how coherence justifies beliefs, either as single beliefs or sets, faces a dilemma that either reverts to the foundationalist problem of accounting for a connection between sense data and beliefs, or loses its connection to empirical experience and intersubjectivity.

These problems associated with the second level of formal foundationalism (which both coherentists and foundationalists must accept) pre-empt any attempt to provide a simple theory that accounts for the principles of supervenience and justification. The "simple theory" which each account provides over-simplifies because such accounts do not, and cannot, make explicit all principles associated with justification. Because the standards of formal foundationalism are basic assumptions about a sufficient account of the required superstructure of beliefs but are impossible to fulfill, the mainstream approaches to propositional knowledge that rest on foundationalism will always be inadequate.

1.5 Internalism and Externalism

Up to this point, I have considered versions of justification that are internalist – the versions of coherentism and foundationalism I have described all assume that justification is related to an internal, mental analysis by which the subject explicitly engages (or at least necessarily could engage) in justifying his or her beliefs. Internalist foundationalism holds that a knowing subject engages in (or, if pushed, could engage in) explicitly grounding his or her beliefs in experience. Internalist coherentism holds that a knowing subject engages in (or, if pushed, could engage in) explicitly grounding beliefs in the coherence of a network of beliefs. It is worth considering briefly what kind of alternative externalism provides and to what extent it may avoid the various problems suffered by internalist accounts of justification.

Externalism's alternative is a simple denial of the claim that all justification is (or can be) something of which the knower is explicitly aware. Relying on the knower's awareness puts a limit on justification that leaves out cases that intuitively seem to be knowledge. For example, small children have knowledge of their immediate environment without needing to appeal explicitly to the justificatory chain that supports their true beliefs. This discounts the stronger internalist requirement that knowledge must be made explicit. Similarly, a monolingual person may know that '*agua'* is Spanish for 'water' without knowing why this belief is justified. Perhaps her memories of where this information comes from, be it a dictionary or the testimony of a relevantly bilingual friend, are lost to her. Despite not having the justificatory grounds explicitly available, she feels that she is justified in saying she knows that '*aqua'* is Spanish for 'water' because of her past experience, despite not remembering the experience in particular.

Although these examples are similar to cases of "lucky true belief" in that the knower cannot account for the knowledge, they have some kind of causal connection to truth that is not simply luck. Therefore, alternatives to internalism offer accounts of how knowers such as small children and our monolinguist are justified, accounts that usually ground justification of a belief in its causal origins.

1.6 Process Reliabilism

The most popular form of externalism that grounds justification in its causal origins is reliabilism, made popular by Alvin Goldman in his paper "What is Justified Belief?"[115] In this essay, Goldman discusses differences between "time-slice" theories and historical theories. In "time-slice" theories, justification is defined in terms of the state of the knower only at the time in which a belief is evaluated. This is usually also accompanied by the necessary condition that the knower has access to the justificatory status of the belief. In contrast, Goldman defines his reliabilism as a historical theory, where the historical process of justification upon which a belief rests must be produced through a reliable causal history.

This leads to two major differences between historical reliabilism and "time-slice" internalist theories. The first is that in historical reliabilism the knower need not be aware of the justificatory status of his beliefs for them to be justified.

> There are many facts about a cognizer to which he lacks "privileged access," and I regard the justificational status of his beliefs as one of those things. This is not to say that a cognizer is necessarily ignorant, at any

[115] Goldman, "What is Justified Belief?" (2002).

> given moment, of the justificational status of his current beliefs. It is only to deny that he necessarily has, or can get, knowledge or true belief about this status. Just as a person can know without knowing that he knows, so can he have justified belief without knowing that it is justified (or believing justifiably that it is justified).[116]

As evidence for this claim, Goldman uses the example of forgotten evidence mentioned earlier. If a knower comes to a true justified belief about something but at a later time forgets the justificatory chain then he or she may no longer be said to have access to the justification of the belief. Despite this, the belief is still justified because its justification originated by way of a reliable process.

The second difference is in Goldman's approach to introspection. When considering an objection that claims his reliabilist approach to justification does not account for direct experience of phenomenal states or the awareness of intuitions that comes from introspection, he responds by re-articulating introspection.

> Introspection, I believe, should be regarded as a form of retrospection. Thus, a justified belief that I am "now" in pain gets its justificational status from a relevant, though brief, causal history. The apprehension of logical or conceptual relationships is also a cognitive process that occupies time. The psychological process of "seeing" or "intuiting" a simple logical truth is very fast, and we cannot introspectively dissect it into constituent parts. Nonetheless, there are mental operations going on, just as there are mental

[116] Ibid., 142.

> operations that occur in *idiot savants*, who are unable to report the computational processes they in fact employ.[117]

Historical reliabilism provides an alternative account of justification that does not deny the validity of introspection in justification, but instead denies the necessity of introspection for justification. Introspection is only one of many possible reliable ways to justify beliefs.

But what exactly is 'reliability'? Goldman defines a reliable cognitive process as one for which the number of true beliefs formed is much higher than false beliefs formed. The subject need not know the reliability of the process, but Goldman does impose a condition that if the knower has any evidence about the unreliability of the process, even if ultimately false evidence, then the process cannot provide justification.[118] In other words, knowers need not believe that the process they use is reliable for the belief it produces to be justified, but they must not doubt its reliability. This condition is used in place of the stronger internalist condition that requires the knower to be aware of both the belief and its justificatory status. At the same time, it also avoids the intuitively problematic case Goldman presents about Jones, a hypothetical subject who has legitimate memories about his childhood (beliefs formed by a reliable process) but has been lied to by his parents who told him he suffered from amnesia and his beliefs are imaginary. Because of this situation, he doubts the veracity of memories he has from his childhood, even though they were reliably formed. Because of his doubt, Goldman argues, it seems inappropriate to say he is justified because he does not himself believe the

[117] Ibid., 144.
[118] Ibid., 145-6.

beliefs are justified.

A thought experiment against process reliabilism presented by Laurence BonJour reveals the problem of examples that rely on intuitions about justification. The example is of a man named Norman who possesses clairvoyance but has no evidence for or against his ability.[119] Despite this lack of evidence (and perhaps even a lack of belief about whether he has such a power), he still has the unshakeable clairvoyantly caused belief that the President is in New York City. Intuitively, BonJour says, this belief seems unjustified because Norman is "subjectively irrational" in holding it; why would he have such a belief if he could not explain, even to himself, why he had such a peculiar belief?[120] Goldman holds that his weaker condition—the defeater condition of evidence against reliability—is sufficient for getting around BonJour's example, but the arguments themselves bottom out on the persuasiveness of the example relative to individual reader's intuitions.[121]

Up to this point, process reliabilism may appear to avoid the problem of an infinite regress of explicit standards for justification, but this appearance of avoidance is mistaken. It is important to keep distinct the two ways in which a standard needs to be explicit. On the one hand, process reliabilism does not require the subject to be explicitly aware of the standards he or she uses in justification, in this case, the standards of

[119] Bonjour, "Externalist Theories of Empirical Knowledge" (1980).
[120] Ibid., 62-63. BonJour argues about Norman that "From his standpoint, there is apparently no way in which he *could* know the President's whereabouts. Why then does he continue to maintain the belief that the President is in New York City? Why is not the mere fact that there is no way, as far as he knows or believes, for him to have obtained this information a sufficient reason for classifying this belief as an unfounded hunch and ceasing to accept it? And if Norman does not do this, is he not thereby being epistemically irrational and irresponsible?" Present in his analysis is the reliance on what he takes are common intuitions about whether or not this borderline case is epistemically justified or unjustified. Goldman argues in response by trying to shore up his intuitions about epistemic justification.
[121] Goldman, "Reliabilism" (2014).

reliability. However, for an assessment of reliabilism as a theory of justification, it has to differentiate between what is reliable and what is not in order for normative distinctions to be made about what counts as knowledge and what does not.

1.7 Virtue Reliablism

In a different approach taken by Goldman, he bases reliability on the attribution of justification to a knower, rather than the actual fact of the justification of a belief. He does this by connecting attribution of justification to the epistemic virtues and vices of the knower.[122] This changes the context of the internalism-externalism debate in a few ways. First, it distinguishes between the attribution of justification and the fact of justification. The attribution of justification is a consideration of whether or not others would be willing to say a knower is justified in believing something, and therefore also includes *philosophers'* analyses of thought experiments (e.g., Jones and Norman above). Investigating *why* epistemologists argue for one "intuitive" reading of a thought experiment and not another reveals things about their interpretation of the features of the knowers within those thought experiments. This makes appealing to intuitions problematic because they may differ due to background variations from person to person, especially from non-academics to specialists-in-epistemology. If part of philosophy is adjusting intuitions in order to accomplish the normative task of providing a principled account of knowledge that trumps a layman's self-understanding of knowledge, then intuitions are an inadequate stopping point. The intuitions themselves must also be justified in some way.

[122] Goldman, "Epistemic Folkways and Scientific Epistemology" (1993).

Second, it places a description of the attribution of justification prior to the fact of justification. Internalism and its reliance on the classically Cartesian assumption about the centrality of rationality and introspection places epistemology in the role of "first philosophy." The historical tendency in philosophy has been to search for objective standards of justification through impersonal, rational inquiry. Because Goldman is investigating the virtues and vices related to knowing, his approach first examines the attribution of justification to a subject. This is a fundamental change in the structure of epistemology, especially since the modern period. By focusing on virtues and vices, this approach looks at the subjective standards applied by an epistemic community when it deems something a good or bad process for having a justified belief, rather than searching exclusively for justification in the necessary features of purely rational minds.[123]

Goldman's virtue-reliability theory approaches knowledge attribution in stages. First, a subject, either individually or through inheriting a set of values from the epistemic community, establishes a mental list of belief-forming processes as epistemic virtues and vices, based on the reliability (or unreliability, if vicious) of the processes on the list. After this stage, the subject applies this list to instances of beliefs to determine whether or not they should be deemed justified, where processes believed to be more reliable are more justified and vice versa. He states that,

> In short, the two-stage process employs reliability considerations at the first stage, the norm-selection stage. But in the second stage, the judgment or attribution stage, no recourse is taken to considerations of reliability.

[123] This is a point Ernest Sosa also seems to be making at the beginning of "The Raft and the Pyramid" when he describes the methodological differences between starting with what is known and developing standards of knowledge versus standards of knowledge and then establishing what is known.

> There is simply a "matching" process (perhaps more constructive than this term suggests) that references the stored list of virtues and vices.[124]

By arguing that the attribution of reliability takes place in the normative stage, Goldman thinks the theory of attribution allows for approaching the fact of justification in a new way.

> First, there is a right system of epistemic norms or principles, norms that govern which belief-forming processes are permissible (or mandatory). These norms are grounded in considerations of reliability or truth-conduciveness. The right set of norms is "made" right by the true facts of reliability pertaining to our cognitive processes and the actual world. Since the ordinary person's set of virtues and vices may be at variance with the right norms, there can certainly be a difference between what are *judged* or *considered* virtuous belief-forming processes and what are in fact virtuous belief-forming processes. Finally, a belief is *really* justified if and only if it is arrived at (or maintained) in conformity with the right set of norms or principles. … Furthermore, the system that is right in the actual world is right in all possible worlds. In other words, epistemic rightness is *rigidified*.[125]

The reliability of a process in a particular world does not matter, allowing Goldman to avoid thought experiments where clairvoyance does work reliably, or where benevolent demons arrange the world around subjects' wishful thinking.

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[124] Goldman, (2014).
[125] Ibid.

There are a few problems with this picture of virtues and vices, however. Goldman's description of a "simple matching process" where a subject matches a particular belief-formation with his list of virtues and vices is lacking in important details. If this process is an explicit and introspective process, he seems to be reverting to a form of internalism, including the problems associated with the infinite regress of standards. On the other hand, if the list is kept subconsciously or unconsciously, then the problem is whether or not the standards for reliable versus unreliable attribution can be made explicit. The usefulness of reliability as a standard for attribution of justification or of factual justification is no longer present because the process is not completely accessible to us. There is no way to check whether or not a subject's normative standards match the "rigidified" norms.

1.8 Virtue Perspectivism

One possible way around this could be Ernest Sosa's attempt at integrating internalism and externalism into an account he calls virtue perspectivism. In "Reliabilism and Intellectual Virtue" he defines an intellectual virtue as "a competence in virtue of which one would mostly attain the truth and avoid error in a certain field of propositions F, when in certain conditions C."[126] Sosa uses this model to blend together internalism and externalism as a solution to problems such as possible worlds arranged by wishful thinking or arranged by evil demons, while simultaneously providing an intuitive account of justification for such thought experiments. He does this by relying on two different aspects of knowing – the "assumed nature of the subject and the assumed character of the

[126] Sosa, "Reliabilism and Intellectual Virtue" (2001), 153-4.

environment."[127] The nature of the subject includes things such as sensory perception, mental faculties, and physical and mental dispositions. The character of the environment includes aspects such as the factual status of the external world and the way in which the environment affects the subject (stimulation of a brain in a vat, or evil demons affecting sensation in other mental entities). This account provides more flexibility when describing how justification can fail. Sosa states that the formation of a belief "can be defective either in virtue of an internal factor or an external factor (or, of course, both)."[128] If a subject lacks the appropriate natural faculty or disposition, then it is a failure internal to the subject's nature.[129] If, however, the natural faculties are operating as they are supposed to and the subject has a virtuous disposition, external factors may still prevent justification. Such a case, according to Sosa, is the intuitive solution to the problem of an accidentally coherent, randomly generated demon world, where a subject's experience is generated by demons' rolling dice instead of by an external world.

The term 'justification' is, however, too vague here. It is unclear exactly what the appropriate relationship between a subject's internal nature and the environment must be. He does not explain why an intellectually virtuous subject is necessarily a justified believer. To address this, Sosa makes a distinction between 'justification' and 'aptness'.

> [A] belief is apt if it derives from a faculty or virtue, but is justified only if it fits coherently within the epistemic perspective of the believer – perhaps by being connected to adequate reasons in the mind of the believer in such

[127] Ibid., 153-4.
[128] Ibid., 159.
[129] Ibid., 159.

> a way that the believer follows adequate or even impeccable intellectual procedure…[130]

Sosa makes this distinction in part because he wants to preserve justification's status as a reflective process. Justification therefore requires that beliefs be internally connected to an intellectual procedure. Aptness, which at minimum requires mere faculty, is a state lower than, but still required for, justification. Because of the low minimum requirements for aptness, "higher animals" can also be said to possess it. An animal's faculty or dispositions are still dependent on an environment. For instance, animals in the wilderness may easily be frightened by loud hikers because it is not something within the scope of their intellectual virtues – they do not know how to identify the sounds. On the other hand, animals in developed areas where humans do not pose any threat may seem unnaturally brave, foraging through garbage for food. When the experience of identifying hiker noise is outside of an animal's intellectual virtues, it is not apt. On the other hand, when animals are familiar with humans and identifying them is within the environmental scope of their intellectual virtues, they may be said to be apt. However, internality requires a certain amount of complexity and reflectivity for it to become justification, going so far as to require a knower to gauge the reliability of his or her beliefs by way of epistemic principles relative to his or her environment and circumstances.

Sosa's approach to virtues seems to provide a way around the problem of rigid norms seen in Goldman by involving the relationship between a subject's faculties or dispositions and the environment. For Sosa, someone who is operating in a demon world may have unjustified beliefs but still be operating in such a way that they *would* be

[130] Ibid., 161.

intellectually virtuous were they in an environment such as ours (which is presumably not organized by an evil demon).[131] This comparison can be made because the internal dimension of epistemic standards is available for analysis. Even though the given standard may change from environment to environment, believers can be judged by both an internally consistent application of standards and by the reliable tendency of their virtues and dispositions to produce true beliefs. Thus a subject from a demon's world is just unlucky; her ability to know in her own world is dramatically undermined, even though in the actual world she would be an exemplary knowing subject.

Virtue perspectivism has several problems it must resolve when trying to integrate reliabilism and internalism. First, Sosa's definition of virtue describes the role virtue plays in integrating the internal, reflective aspect of knowing with the environmental conditions that a knower takes advantage of, or is undermined by, when coming to know something. Despite this starting point, he does not make use of virtues as a way in which a subject picks out important particularities of the environment without necessarily needing a deeply reflective system, even though their virtue is a result of an internalized disposition. Such a disposition may be seen in the development of knowing how tight to turn a screw without stripping it, where reflection upon some set of principles is not invoked by the knower to justify knowing the screw is tight enough and will risk losing its holding power if turned any further. By requiring reflection as a condition of justification, this aspect of training (rather than mere conditioning) is left out of his model.

Second, the distinction between aptness and justification seems to smuggle in an internalist notion of justification. Even though justification may rest on aptitude within an

[131] Ibid., 160.

environment, this does not distinguish his model from internalism. Internalism frequently assumes that some processes of experiencing the world, at least within certain "normal" condition, are reliable. These processes must be reliable for knowledge to be possible, although they are insufficient for and not necessarily the source of justification. They act as pre-conditions for knowledge, much in the same way that the subject must have basic capacities for forming a belief or introspection.

Third, although he states that justification is "relative to environment," his idea of justification is still based on some sort of standard across environments.[132] This is at its clearest when Sosa compares a victim of a demon-world with a subject in the actual world.

> Relative to our actual environment A, our automatic experience-belief mechanisms count as virtues that yield much truth and justification. Of course, relative to the demonic environment D such mechanisms are not virtuous and yield neither truth nor justification. It follows that relative to D the demon's victims are not justified, and yet *relative to A their beliefs are justified*. Thus may we fit our surface intuitions about such victims: that they lack knowledge but not justification.[133]

The reason such victims do not appear to lack justification based on the intuitions of those who reside in the actual world is that in the actual world, such beliefs would be justified. The actual victim, as he or she resides within the demonic world, is not justified relative to his or her environment. This creates a problem for standards for justification

[132] Ibid., 159.
[133] Ibid., 159.

because justification itself requires an application of epistemic principles within the knower's mind, yet at the same time the standard for what counts as a good set of epistemic principles seems to change from world to world. In other words, the reason the demon's victims should seem justified based on the intuitions of inhabitants of the actual world is because the standards of justification and aptness in the actual world are being used to evaluate the justificatory status of the victim's beliefs. This leads to the problem of deciding which standards are the correct standards to apply–those of the world inhabited by the victim or by the evaluator?

Lastly, there is the continuing problem of an infinite regress of standards. Sosa has given a description of how intellectual virtues arise out of a combination of success relative to some particular environment and some particular kinds of beliefs. However, he lacks an account of what standards should be used for justification beyond an internally reflective and consistent set of principles. The requirement that the subject apply his own epistemic principles coherently, consistently, and internally leads to the problem of the infinite regress of standards of justification associated with internalism. What these standards are, or should be, is never stated.

1.9 Explicitness and the Basing Relation

Despite all the attempts to locate justification in either reliability or in some combination of reliability and intellectual virtue, externalism fails to overcome the fatal issue also faced by internalist foundationalism and coherentism—a regress of explicit standards. Although these standards need not be available to the subject, on the contemporary, mainstream search for a theory of justification, they still need to be made

explicit. In the debate between internalism and externalism, this is framed in terms of the epistemic basing relation.

The basing relation is the relationship between the good reasons that can justify a belief and the belief they justify. For justification to be possible, a belief must actually be based on the good reasons that support it. In other words, for a belief to be justified, it is a necessary condition that it be properly based on reasons that do justify it. Just the possession of the reasons and believing the belief they could support is insufficient. For instance, understanding the premises "All men are mortal," and "Socrates is a man," as logically entailing their conclusion "Socrates is mortal" is required for the premises to justify the belief in the conclusion. Simply believing all three statements alone does not entail that the proposition "Socrates is mortal" is justified.

In the case of reliabilism, justification occurs when a belief is correctly based on reliably produced reasons. Using Goldman's historical reliabilism, if sensory experience within particular parameters is reliably produced, then the sensory data provides a correct basis on which to have a justified belief about the object of sensation, even if the subject is unaware of the epistemic basis of his or her beliefs. When describing his virtue-reliability theory, Goldman adds conditions to what counts as good basing for a belief by including rigid standards that virtuous knowers reliably apply when they identify instances of belief formation as vicious or virtuous. Sosa's blended account of intellectual virtues and internalism relies on the aptness of belief provided by the truth-conduciveness of intellectual virtues, be they natural faculties or habituated dispositions. Since his definition of intellectual virtue relies entirely on reliability (conducive to truth and

avoidant of error), this kind of intellectual virtue is very close to Goldman's process reliabilism.

The problem with accounting for the epistemic basing relation in terms of reliability is explained by evidentialism internalists Earl Connee and Richard Feldman in their article "The Generality Problem for Reliabilism". In it, they point out that it is not possible to track what aspects of a token event embody the reliable process type.

> As many reliabilists have recognized, each token process that causes a particular belief is of numerous different types of widely varying reliability. The token event sequence in our example of seeing the maple tree is an instance of the following types, among others: visually initiated belief-forming process, process of a retinal image of such-and-such specific characteristics leading to a belief that there is a maple tree nearby, process of relying on a leaf shape to form a tree-classifying judgment, perceptual process of classifying by species a tree located behind a solid obstruction, etc. The number of types is unlimited. They are as numerous as the properties had by the belief-forming process. Thus, process reliability theories confront the question of which type must be reliable for the resulting belief to be justified.[134]

They label this "the generality problem" because there are too many features available respective to a particular token in order to know which of those features are the bases of the token's reliability. If the necessary and sufficient conditions of justification are to be

[134] Conee and Feldman,"The Generality Problem for Reliablism" (1998), 2.

accounted for in terms of the reliability of a process, then the features that make a process-type reliable must be made explicit. This, they argue, is impossible, and so the project of reliabilism falls short of explaining how justification occurs.

However, the infinite regress of standards creates a similar problem for internalism.[135] The basing relation between whatever counts as good reasons (a strong linear foundation, a cohesive coherence, high-quality evidence) and the belief they justify requires an explicit standard that the subject applies in order to determine whether or not they are basing their beliefs on good reasons *in the right way*. "In the right way" here again assumes meeting some standard that can be made explicit *and* justified explicitly, if not completely for the knower, then at a minimum by the epistemologists who are trying to account for how justification works. But justifying such a standard becomes problematic. The standard itself must *also* be justified at some point in order to determine whether or not it is a correct account amongst the many competing accounts of what is a good basis for justifying beliefs.

The requirements for justification, driven by the bogeyman of skepticism, are based on an assumption that all of the necessary and sufficient conditions by which a knower knows something can be made *explicit.* This assumption is problematic for (1) arguments about the proper relationship amongst beliefs that provide justificatory force, and for (2) arguments about whether or not a knower needs to be able to account for the justification of his knowledge and to what extent. Despite different arguments about the

[135] For a debate about whether or not evidentialism suffers from the generality problem, see Comesaña, "A Well-Founded Solution to the Generality Problem (2006) and Matheson, "Is There a Well-Founded Solution to the Generality Problem?" (2014). The issue I raise here regarding explicitness and basing relations is a different problem, however, and still problematic for evidentialism and analytic propositional epistemology in general.

superstructure of beliefs, any account of justified beliefs requires grounding the justification of those beliefs at least in part in experience. However, interpreting experience involves applying standards in order for the content of beliefs about experience to be justified so that the rest of the superstructure can be supported. Because mainstream epistemology assumes that these standards can be made explicit, an infinite regress of standards occurs, whether foundationalist or coherentist. Similarly, it is impossible to determine all of the features of a subject that contribute to justification, because the details of the relationship between the subject, the environment, and the belief in all of the various accounts of justification suffer from an infinite regress. Basing beliefs on good reasons in the right way involves applying a set of standards, whether as an introspective subject or as an observing third party. Since accounts of the basing relation must give an exhaustive description of the necessary and sufficient conditions by way of an explicit principle, the problem of weighing competing standards and justifying the use of one account over another leads to an infinite regress of meta-accounts. Propositional knowledge requires some sort of account of justification. Despite this need, the self-dictated task of making explicit the principles required for evaluating whether or not the structure of a subject's beliefs or the basis of a subject's beliefs leads to justification is impossible. Because of this, current accounts that focus on propositional knowledge are inadequate to the task of describing propositional knowledge.

2. Propositional Encroachment in Epistemology

In the first half of this chapter, I argue that analytic propositional epistemology does not give an adequate account of propositional knowledge. Despite these shortcomings about theories of propositional knowledge, an entirely different set of

problems also exists, as knowing-that encroaches into the domain of other kinds of knowledge. The rest of this chapter provides an argument detailing why this kind of encroachment is problematic for an accurate account of propositional knowledge, followed by specific examples of how such encroachment occurs in the domains of knowing-how and knowing-by-acquaintance. Included in these examples are additional arguments about why non-propositional knowledges are conceptually rich and suffer when reduced or subsumed into propositional form.

Evidence for the encroachment of propositional knowledge is easily found in the pedagogy of epistemology. Introductions to the theory of knowledge often begin with an approach based on linguistic usage of the verb "to know," featuring statements such as "Mary knows Lansing is the capital of Michigan," "Bill knows how to drive a car," and "Carole knows her daughter Eve." Like any good examples, the sample statements are chosen for a reason, *viz*. to show the variety in usage of "knows". Mary's knowledge is propositional: it does not admit of degrees, makes a claim about the world that is either true or false, and has a justification that can be evaluated as sufficient or insufficient. Bill's knowledge, however, does not meet these same criteria: it does admit of degrees, because his knowledge of driving a car can improve or decline over time, and does not seem to fit the same system of justification. A driving test measures the successfulness of Bill's driving, but not how he came to such knowledge. Lastly, Carole's knowledge of her daughter certainly does admit of degrees, but unlike knowledge of a skill, covers the domain of person instead of an action.

Distinguishing the usage of the verb "to know" into these categories does not necessarily mean that they are separate and distinct kinds of knowledge. There are two

common approaches to these separate kinds of usage, both of which assume that separate usage means separate kinds of knowledge. The first approach leaves each separate and focuses on propositional beliefs, thereby implicitly giving them the status of the most basic or important in terms of knowledge. The second approach bases knowledge of skills and relations on propositions through some kind of reduction.

Assuming that the distinctiveness of these three particular kinds of knowledge means they can be considered separately is a problem. When trying to give a full account of propositional knowledge, other kinds of knowing are brought into the account because the experience of coming to know propositions does not always occur separately from other kinds of knowing. These other kinds of knowing, such as the skill of correctly applying a standard, are marginalized as areas of investigation while simultaneously subsumed into some kind of propositional form in any areas in which the two kinds of knowledge interact. It is an encroachment by way of marginalization. This trend is noticeable as early as the *Theaetetus*, in which Socrates compares his search for the definition of knowledge to the definition of clay: he is not interested in the technical knowledge of clay associated with different professions and their kinds of clay, but instead in the essential characteristics of clay-ness that all clays possess.[136] This trend continues into the twentieth century. For instance, A. J. Ayer briefly investigates the differences between knowing-that, knowing-how, and knowing-by-acquaintance, only to limit his discussion to knowing-that and, for no stated reason, never returning to skill or

[136] Theatetus, 146-147d.

acquaintance, thereby implicitly privileging propositional knowledge.[137] It is this loss of resources that leads him into his consideration of skepticism, when he states that the skeptic's "disagreement is about the application of the word ['to know'], rather than its meaning."[138] Correctly using language, correctly choosing and applying relevant standards of evaluation to a claim to know, is precisely the area where knowing-how and knowing-that overlap. In contemporary epistemology, BonJour offers a more extreme example in his text *Epistemology*, where he does not even consider non-propositional forms of knowing. His examples of knowledge only include kinds of facts.[139] This means that he follows the tradition and leaves knowing-others and knowing-how out of areas in which it is extremely relevant, such as the problem of other minds or the role of skill in developing scientific knowledge.

The second common approach, encroachment by reduction, reduces knowing-how and knowing-by-acquaintance to forms of propositional knowing. For instance, a skill is described in terms of following rules. 'Bill knows how to drive a car' is true because Bill exhibits consistent behavior that follows a set of rules for driving. Similarly, knowing another person is described in terms of knowing their behavior in the world. 'Carole knows her daughter Eve' is true because Carole can provide a set of propositions about what Eve has said and done and what Eve tends to do in certain situations. This leads to the same problem of a loss of explanatory resources because the features of knowing-how and knowing-by-acquaintance are lost. Additionally, if these other forms of knowing are

[137] "But suppose that we confine our attention to the cases in which knowing something is straightforwardly a matter of knowing something to be true, the cases where it is natural in English to use the expression 'knowing that', or one of its grammatical variants." Ayer (1956), 14.
[138] Ayer (1956), 35.
[139] Bonjour (2002), 2-4).

not considered in their own right, then normative standards for determining whether or not a subject is successful in knowing will be inaccurate.

2.1 The "Intellectualist Legend": Propositional Knowledge in the Domain of Knowing-How

In Gilbert Ryle's *The Concept of Mind*, he describes the attempt to give a propositional account of knowing-how as part of the "intellectualist legend".[140] The "intellectual" part of this title comes from the necessity of the rational, mental portion of any action that is performed intelligently. Basic beliefs are easy to capture in this system because they are simply rationally weighed propositions. Not all intelligent actions appear to be intellectually backed; theoretical knowledge of riding a bike does not entail knowing how to ride a bike. Those who hold to the legend attempt to explain this apparent shortcoming away in order to maintain the primacy of propositions. "Champions of this legend are apt to try to re-assimilate knowing *how* to knowing *that* by arguing that intelligent performance involves the observance of rules, or the application of criteria," Ryle writes. Both forms of encroachment, whether by marginalization or by reduction, engage in this method of trying to assimilate knowing-how, in the first case by going to what resources are available from epistemology sans knowing-how, since it has been pushed to the periphery, and in the second case by directly reducing all 'how' to 'that'.

Assimilation faces two serious logical problems. The first is an historical objection: the theoretical codification of rules implies that intelligent, skillful performances always exist prior to the rules that are abstracted from them. Even though such rules may be used to teach those who are unskilled, the development of the original

[140] Ryle, *The Concept of Mind* (2000), 27.

skillful performance had no such rules. Returning to the bike example, children's bikes are often equipped with training wheels for the sake of helping the child learn to balance, without the more severe consequences of unforgiving gravity. A parent who has never learned to ride a bike may force their child to rely on training wheels and trial and error, but this does not mean the child needs to refer to a set of rules of bicycling written by Tour de France rider Lance Armstrong or professional BMX rider Mat Hoffman to ride a bicycle intelligently.

The second problem is the incoherence of basing skilled action on the application of rules. Ryle states it succinctly:

> The consideration of propositions is itself an operation the execution of which can be more or less intelligent, less or more stupid. But if, for any operation to be intelligently executed, a prior theoretical operation had first to be performed and performed intelligently, it would be a logical impossibility for anyone ever to break into the circle.[141]

With any application of rules that justify an action as skilled (or intelligent), a skilled action is already occurring, *viz*. *applying* a rule. This illustrates that, at bare minimum, it is not *necessary* for skilled actions to be based on the following of a set of propositional rules, even if a set of theoretical rules may be useful for reflecting on and improving a particular knowing-how. Instead of reducing the intelligence of skilled action to the intellect and its consideration of propositions, Ryle argues that status of an action as intelligent is a quality of how it is performed rather than the result of an additional action

[141] Ryle (2000), 30.

carried out simultaneously. Judging whether or not someone is riding a bike intelligently or stupidly is based on how they ride the bike, not the addition of a second performance called "following the rules of cycling".

2.2 P as Propositions versus P as Persons: Propositional Knowledge in the Domain of Knowing-others

Lorraine Code, in her article "Taking Subjectivity into Account," argues that mainstream analytic epistemology encroaches on knowledge-by-acquaintance by establishing as the paradigm a positivist-empiricist definition of knowledge.[142] Mainstream epistemology is motivated to reduce knowing-others to knowing-that because of the central role facts play in the contemporary account of knowledge. Facts serve as

> distilled, simplified observational knowledge claims that are objectively derived, propositionally formulable, and empirically testable. The detail of the role they play varies according to whether the position they figure in is foundational or coherentist, externalist or internalist.[143]

The popularity of this approach to knowledge can be seen in the appeals made by both epistemologists and laypersons alike to positivist accounts of natural science as epistemically exemplary.[144] Science takes a place in the public eye as it drives technological advances in medicine and gadgets, while simultaneously proving the

[142] Knowledge-by-acquaintance here is a reference to the primary notion of acquaintance as a personal or interpersonal knowledge, not Bertrand Russell's conception of knowing-by-acquaintance as a direct awareness in Russel (1910/11). Following the point Code is about to make, this kind of knowing-by-acquaintance is more closely related to knowing-others.
[143] Code, "Taking Subjectivity into Account" (1993), 18.
[144] Ibid.

existence of things like the Higgs-Boson particle. Despite the success of the natural sciences, especially in the realm of technology, Code argues that the positivistic account of knowledge associated with the natural sciences' popularity (regardless of whether or not science actually operates in a positivist way) is an inadequate explanation of knowing other persons because it fails to account for the importance of either the subjectivity of the knower or of persons as objects of knowledge.

The paradigm example of knowing-that relies on an abstracted, value-free, and objective subject in its account of knowledge. Subjectivity is a source of bias that distorts the information gathered about whatever object is to be known. At first glance, this seems to remove any mystery behind knowledge-by-acquaintance, since clearly it is possible to know facts about other persons. Code has this in mind when she notes that, by reducing it to knowing-that, "[k]nowledge of people could be scientific to the extent that it could be based on empirical observations of predictable, manipulable patterns of behavior."[145] With the qualities of value-neutrality and objectivity, the reductive definition of knowing-others claims that any subject, despite his or her particularities, could know a person merely by knowing the facts about that person.

However, attempting to be value-neutral and objective in relationships undermines the extent to which a subject can know another person. In the case of knowing others, a knower's subjectivity plays a positive role in making knowledge accurate and reliable. The features of a subject's mood, his emotional and intellectual character, as well as his material, historical, and cultural context are all particular and essential features that contribute to knowledge. Although knowing particular facts about

[145] Ibid.

a person is important to knowing him or her, knowledge of facts alone does not provide a full explanation of knowing-by-acquaintance. When Code argues that "even knowing all the *facts* about someone does not count as knowing her as the person she is," it is because any disembodied objective collection of facts does not include the knower's continual restructuring and re-interpreting of those facts. To demonstrate this, she uses the example of developing an epistemic history to introduce the importance of knowing-others. Growing up involves coming to know one's parents and any immediate family, extended family, and so on, well before any explicit knowledge of propositions occurs. This epistemic history is never exhausted. Knowledge of one's parents changes over time, even after they have passed, because additional life experience provides more information to draw on in order to understand the significance of their lives. Even when one's expectations are violated, perhaps by the betrayal of a friend or unexpected compassion of an antagonist, the facts provided by observation still require integration into the larger set of facts and an ensuing interpretation of the person that set of facts relates to. Developing social skills and understanding the (in principle) infinite task of interpreting and re-interpreting others are not accounted for when knowledge-by-acquaintance is reduced to the positivistic, propositional account of knowing-that. Knowing others occurs prior to any kind of objective, value-neutral knowing of facts. Such a process of interpretation is not done by rejecting the subjectivity of knower, but rather occurs within the intersection of the particular and essential features of a subject's context mentioned above, factors that contribute for-better-or-worse to the knower's subjectivity and knowledge of others.

Additionally, the relationship between the knower and the object of knowledge in the positivistic knowing-that paradigm comes up short when that object is a person. Knowledge of facts and propositions admit of no degree in the positivist account, but knowledge of other persons must. The process of knowing a person is inclusive of his or her subjectivity as well as one's own. Having more facts about a person, as well as better integrating those facts in an attempt to understand the subjective side of another person always improves the degree of knowledge, but it never exhausts it. In order to have this "thicker" knowledge of a person, rather than a collection of facts, the subjectivities of both the knower and the person known must be taken into account.

> In knowing other people, a knower's subjectivity is implicated from its earliest developmental stages; in such knowing her or his subjectivity is produced and reproduced. Analogous reconstructions often occur in the subjectivity of the person(s) she or he knows. Hence such knowledge works from a conception of subject-object relations different from that implicit in simple empirical paradigms. Claims to know a person are open to negotiation between knower and 'known,' where the 'subject' and 'object' positions are always, in principle, interchangeable. In the process, it is important to watch for discrepancies between a person's sense of her or his own subjectivity and a would-be knower's conception of how things are for her or him; neither the self-conception nor the knower-conception can claim absolute authority, because the limits of self-consciousness

> constrain the process as closely as the interiority of mental processes and experiential constructs and their unavailability to observation.[146]

This context is not only important to defining him as a subject, but when it comes to knowing another person these details help determine the degree to which he can be said to know someone.

When knowing-others is reduced to knowing-that, then, it suffers on two fronts. First, the reduction of the knower to an objective subject prevents consideration of the subjective features of the knower that contribute to knowledge. Second, reducing persons to objects of knowledge does not account for the fact that knowing persons admits of degrees, something that is covered over when knowing-by-acquaintance is reduced to knowing-that. These side effects of propositional encroachment therefore detract from a robust account of both knowing-that and knowing-by-acquaintance.

Despite the proliferation of theories of propositional knowledge in the twentieth century, they have been inadequate at providing a full account of knowledge in a few ways. First, even when limited to the domain of propositions, accounts of knowledge fail to comprehensively lay out the structure of justification. Second, when taken as accounts of a single kind of knowledge amongst others, theories of propositional knowledge tend to at best overlook, and at worst reduce, knowledge that is dramatically different in kind, such as knowing-how or knowing-by-acquaintance.

Both of these problems are a result of the narrowing focus of the dominant account of knowledge and are brought up here to motivate a different conception of the

[146] Ibid., 38.

task of epistemology. Instead of focusing on individual kinds of knowledge as singular, a normatively and descriptively useful account of knowledge will be comprehensive and pragmatic while still avoiding a reductive theory. In the next chapter, I sketch a taxonomy of knowledges and draw upon insights from hermeneutics that provide an account of what such a capacious epistemology looks like.

CHAPTER THREE:

THE HERMENEUTIC STRUCTURE OF KNOWING

For any theory of knowledge to successfully describe the process of knowing, it can neither be limited to propositions nor grounded in propositional accounts of justification. The reason these two categories have been so useful in the past is because they provide a theory that is both descriptive and prescriptive, allowing for judgments to be made about knowledge claims. Any alternative I provide must also allow for epistemology to continue serving these functions. With this in mind, I organize propositional and other kinds of knowledge into a taxonomy of knowledges, with the most central kind of knowledge being knowledge-by-acquaintance. Despite this central importance of knowledge-by-acquaintance, this taxonomy also illustrates the irreducible yet layered relationships amongst kinds of knowing. It does this by examining the domains they cover, the activity by which a knower gains knowledge within such a particular domain, and how they organize concepts like truth, success, experience, and admission of degrees. In an attempt to give an accurate theory of knowledge that still allows for judgments about knowledge claims, I organize these different kinds of knowledge into a unified-yet-provisional epistemic theory by arguing that the structure of all knowing is hermeneutically circular, a process linked very closely to becoming acquainted with the world. This circularity is always moving from a background of past experience and conditioned understanding to an interpretation of immediate experiences of the world, and likewise such experience is always acting as a check against which to test the organization of such past experience. After laying out the basic structure of

hermeneutic understanding I conclude the chapter by describing how such an alternative theory of knowledge avoids the problems raised in chapter two. I do this by providing an accurate description of the process of knowing while still leaving space for the various kinds of knowledge without reducing them to a single kind of knowledge.

1. A Taxonomy of Knowledges

Despite the shortcomings of proposition-focused theories of knowledge discussed in the last chapter, propositional knowledge is still relevant as one kind of knowledge. I have already discussed three different kinds of knowledge—propositional knowledge or knowing-that, skill-based knowledge or knowing-how, and knowledge of other persons or knowing-by-acquaintance—but only in the context of the reductivity of proposition-centric theories of knowledge. In order to sketch areas of concern for an encompassing theory of knowledges, I will briefly engage in a taxonomic organization of kinds of knowledge discussed broadly. I use the term 'taxonomy' because this is not an in-depth treatment of each individual member, but rather an attempt to illustrate the differences between kinds while simultaneously organizing the kinds around a common feature. The reason for emphasizing these differences is to avoid any sort of hasty reduction, but it also reveals the complex interdependence that occurs in the process of knowing because the act of knowing is constituted by interwoven kinds of knowing. The size of this taxonomy could take up volumes by itself. In effect, it already does, in the form of books and articles related directly to the particular kinds of knowledge I discuss. I intend here to explicate enough on each kind in order to illustrate what their irreducible differences are, why they are important to epistemology in general, and prepare for a discussion about their common hermeneutic structure.

1.1 Knowing-by-acquaintance

In the previous chapter, I discuss Lorraine Code's account of knowing-others and how this can be applied even to non-persons such as the objects investigated by the natural sciences, like rocks and trees. This is because knowing-others occurs through acquaintance, a process of drawing on and interpreting past experience. In interpersonal interactions, this occurs when one recognizes another person. Seeing a friend on the street involves not just recognizing some set of facts about the friend, but requires that one integrate all of these facts into an interpretation and then compare the experience of the actual person against the expectations of one's interpretation. Lorraine Code's commentary on approaching objects of propositional knowledge through the mode by which we know others provides contours to the features of acquaintance that make it relevantly different from propositional accounts of objects.[147] Instead of simple discrete objects, knowing-by-acquaintance approaches things in the world as complex intersections of history, as things emergent from particular causal relationships, metaphorically giving them a recognizable personality. Acquaintance with an other, if it is to be a reliable or accurate knowledge of that other, must pick out relevant features of the other while not presuming complete familiarity and blinding the knower to new experiences of the other. This means that any knowing-by-acquaintance is provisional and responds to the world and its changes.

The process of interpreting the visual and behavioral clues of a person and the ensuing recognition of a friend is much like seeing a gestalt image: visual pieces, such as

[147] Code (1993).

a "having a face" or even the more specific "has this type of shaggy hair cut," come together to form something different from a mere list of parts, and what emerges from the combination of pieces can be recognized in more than one way.[148] Integration is not always successful, however. Much like being unable to "see" one resolution of a gestalt picture (e.g. the faces in the vase/face double image), sometimes an assemblage of visual information that prompts us to identify a friend is unsuccessful and tracks a stranger instead. There are other aspects of sensory experience integrated into the process of recognizing others as well, the most immediately obvious of which are aural cues such as speech habits. Of course, either eyes or ears may be used independently to recognize someone (recognizing others in photographs or over the phone, for instance), but in both cases it is a gauging of expectation against the circumstances.

The organization of such a gestalt is necessarily based on the particularity of the person engaged in organizing it. The weight of significance a knower gives to various aspects of a person's features, such as taking the pitch of voice as being more important than her cadence or the content of her utterances when attempting to recognize her, is based on that knower's personality. These include habits developed out of past successes in identifying that person in various circumstances, as well as successes in identifying other persons in general.

The structure of acquaintance is not limited to recognizing other persons; it also includes the forming and checking of expectations about *any* kind of experience. This is Code's point when she broadens the importance of subjectivity to our characterizations of the complete breadth of experience of the world rather than only to interpersonal

[148] Notice that recognition of features of persons ('has a face' or 'has hair') necessarily build on a more basic acquaintance with recognizing things like 'face' and 'hair' within one's visual experience of the world.

relationships. Simple physical skills such as walking engage a cross-sensory gestalt of proprioceptive awareness about the position of one's limbs, visual cues about the environment one is navigating, expectations about the traction of various surfaces, and more. The most important feature of these gestalts is the personal nature of their composition, e.g. blind people might not use visual cues about their environment to walk, but may rely on additional tactile information gleaned through a probe or additional aural cues. It is not simply that blind persons do not have reliable vision and therefore must rely on alternative aspects of their experience to navigate the world. The alternatives each individual knower draws upon are dependent on her particular person, including things such as her history, her physiology, her social ties, and any privations she might have in these areas. Thus it is not simply that blind people must rely on alternative sensory input, but rather the necessity that each individual relies on non-shared particular features that cannot be captured in universalized principles or rules. These personal features of knowing-by-acquaintance, *viz* the assembling of components into a gestalt of familiarity and expectation, plus the recognition of similarities and differences between expectation and experience, are what make knowing-by-aquaintance central to each knower's ability to know.

Principles or rules should not suddenly be abandoned, however. They still provide benefits, but they lose their special status as primary. Successful knowing-that ('Ice provides less traction than gravel') and successful knowing-how (i.e. knowing how to walk) can both be enhanced by the use of principles or rules. One example that comes to mind with walking is the use of physical therapy for the sake of relearning how to walk. Thus both knowing-that and knowing-how rely on knowledge-by-acquaintance for their

success, but are not reducible to acquaintance alone. In other words, kinds of knowing can be conceptually distinguished but may be layered and even tied up with one another within individual acts of knowing.

1.2 Knowing-That

Despite the problems faced by the focus on propositions within mainstream theories of knowledge, propositions still seem like a necessary part of describing knowing-that. Working out the best way to conceptually organize notions of beliefs, propositions, and truths about the world are important because decisions made in daily life depend on knowing *that* particular things are the case—that I parked my car in a different spot than usual last night so I should not call the police and report a stolen vehicle, that daylight savings time starts this weekend and so I need to change my clocks to make sure I get to work on time, or that water conducts electricity so I should not submerge my toaster with me in the bath tub. What makes knowledge-that valuable is that acting on the basis of true beliefs tends to lead to more successful outcomes in our daily activities.[149]

The value of knowing-that is one of the reasons it is so closely associated with the sciences, especially the scientific method, which serves as a way of discovering previously unknown facts about the world. As an appropriate experimental method grounds hypotheses in data and repeatable results, justification works similarly to ground beliefs in the data of sense experience and reliable processes. The reasonability of holding a hypothesis or belief to be true about the world relies on the connection between

[149] This is not to say that propositional knowledge is useful only because it is true and not also because of some sort of justification component. My point here is merely that if knowing-that did not have any connection to truth about the world then it would lose its usefulness. In other words, regardless of the stance one takes on justification, if propositional knowing were not true, then knowledge-that would have no efficacy.

the expectation about the world and the grounds on which that expectation is held. It is this feature that allows for discussions of accountability to take place when attributing knowledge-that to a subject, as well as to make suggestions about standards we should follow when reflecting on our own knowledge-that.

In the previous chapter, I called into question the possibility of an acceptable description of justification in propositional knowledge and yet here I argue that it is a positive feature of propositional knowledge-that. If the justification of propositional knowing is to retain its value despite the arguments of the second chapter, then it cannot be used as the grounds for knowledge generally, but merely as a narrow heuristic within knowing-that. Although heuristically useful, proposition focused justification as discussed in accounts of knowing-that cannot be exhaustive with regard to any kind of knowing because they do not and cannot account for the challenge that embodied aspects of experience play in grounding knowledge. This is specifically the domain of knowledge-by-acquaintance, as discussed above. Although standards of justification are always tied up with the embodiment of knowers and knowing-by-acquaintance, knowing-that is still irreducible to knowing-by-acquaintance because acquaintance is not propositional. Although one may form a proposition "Some subject S has acquaintance with some object O", the knowing-by-acquaintance of that subject is not itself constituted by propositions, or even beliefs. The clearest example of this is the acquaintance one has with one's body by way of proprioceptive awareness of one's limbs. Describing such acquaintance propositionally or reducing it to beliefs merely forces it to be explicit in a way that raises it into the realm of knowing-that, but does not successfully account for all of the features of gestalt describe earlier.

1.3 Knowing-How

Knowing-how is also important in the production of propositional scientific knowledge, in that the production of such knowledge is grounded in the skill of quality lab work. "Labs" may differ, as seen in the difference between the particle physics experiments conducted at the European Organization for Nuclear Research (CERN) and the outdoor laboratory of the ornithologist observing and recording birds of paradise in Papua New Guinea, and therefore lab work may involve different skills in different instances, but all scientists rely on some set of appropriate skills for the gathering of their empirical data.

Know-how is clearly dependent on knowing-by-acquaintance because of the role acquaintance plays in making one effective within the domain of a skilled activity. Physical skills involve acquaintance with one's body; engaging in mathematics involves acquaintance with relevant concepts (e.g. numbers and orders of operations). This does not mean one can equate familiarity with skill, however. The acquisition of skill is itself a logical demonstration of this: basic familiarity with one's body is a prerequisite for practicing swimming, and practice will likely increase familiarity with one's body in particular strokes. However, the skill itself is proficiency within the domain of propelling oneself through the water, and is achieved by intelligently making use of one's acquaintance with the world to achieve one's aims within that domain, be it the breast stroke or the butterfly.

I have already discussed the dangers of reducing knowing-how to knowing-that, but for similar reasons it is important to avoid reversing the reduction. Although the

production of scientific knowledge-that rests on skill and know-how, there are important features of the two kinds of knowledge that would get lost if knowing-that was reduced to knowing-how. For instance, knowing-that involves knowing propositions, but know-how involves a domain of proficiency. The former lends itself to understanding an "object of knowledge" whereas the latter better describes "successful interaction with things in the world." Propositions aim to capture truth about the world, but proficiency is about efficacy in the world. Also, proficiency comes in degrees; even in trade skills the learning of the vocation comes in stages—such as those of apprentice, journeyman, and master. Knowing-how also admits of degrees in terms of success. On the other hand, knowledge that a proposition is true may have stronger or weaker justification but the truth of the proposition, because the truth-value by which it is assessed is bivalent, cannot admit of degree. Know-how may be involved in coming to know that a proposition is true, but the close relationship between the two does not warrant reducing knowledge of propositions to knowing-how because many of these distinct features would be obscured.

1.4 Knowing what it is like to be an 'X'

Another form of knowledge that is irreducible to those mentioned thus far is the knowledge of what it is like to have a particular organized subjectivity, or knowing-phenomenologically. This is explored in analytic philosophy in the influential article by Thomas Nagel, "What Is It Like to Be a Bat?" in which he investigates the problem that the phenomenological experience of consciousness presents for metaphysical accounts of mind and body. Here I am concerned with the knowledge of what it is like to be something, an epistemological point tangential to the issue of whether or not materialism can account for subjective personal experience.

Nagel captures the problem of understanding the subjectivity of an other when he discusses the example of knowing what it is like to be a bat. Though knowledge of a bat's sensory apparatuses will inform humans about how bats in general experience the world, the consciousness that organizes the sensory experiences is unavailable to us. This is because human experience is also already shaped by a particular kind of conceptual and sensory organization.

> To the extent that I could look and behave like a wasp or a bat without changing my fundamental structure, my experiences would not be anything like the experiences of those animals. On the other hand, it is doubtful that any meaning can be attached to the supposition that I should possess the internal neurophysio-logical constitution of a bat. Even if I could by gradual degrees be transformed into a bat, nothing in my present constitution enables me to imagine what the experiences of such a future stage of myself thus metamorphosed would be like. The best evidence would come from the experiences of bats, if we only knew what they were like.[150]

It is not merely knowing what the sensory experience of a bat is like that is needed to have knowledge of the subjective consciousness of the bat, but rather the meaning that arises out of a particular organization of that sensory experience as well. To know-phenomenologically is thus to know through the phenomenological aspect of having an organized, meaning-generating and meaning-laden experience, including all the accidental and contingent features that come with the variety of sense data and their relationships with past experience.

[150] Nagel "What is it like to be a bat?" (1974), 439.

The externality humans have to the phenomenology of being a bat is not a simple dichotomy between bat and non-bat, however. In Nagel's eyes, this problem is related to the broader problem of other minds. There are degrees of separation, presumably even across human experience, which restricts the confidence with which an objective claim can be made about the subjective phenomenological experience of another.

> They are subjective, however, in the sense that even this objective ascription of experience is possible only for someone sufficiently similar to the object of ascription to be able to adopt his point of view-to understand the ascription in the first person as well as in the third, so to speak. The more different from oneself the other experiencer is, the less success one can expect with this enterprise. In our own case we occupy the relevant point of view, but we will have as much difficulty understanding our own experience properly if we approach it from another point of view as we would if we tried to understand the experience of another species without taking up *its* points of view.[151]

Phenomenological subjectivity is not just simple embodied experiential states, but also includes a history. Although one can never directly experience the phenomenon of being another person, there is a spectrum of limited understanding about what such experience involves, an understanding that is granted by having similarly embodied histories. In the case of humans, shared structures of experience, such as culture and generally similar physicality, make it easier for those of similar backgrounds to know more about what it is like to be an other.

[151] Ibid., 442.

Similar to knowing-by-acquaintance, there is a close relationship between knowing-phenomenologically and other kinds of knowing because of the role experience plays in knowing. It is important, therefore, to distinguish, though not necessarily separate, knowing-what-it-is-like from knowing-by-acquaintance, knowing-that, and knowing-how. Whereas knowing-by-acquaintance is an organized expectation directed toward something, knowing what it is like to be something is knowing subjectively in the first-person. It therefore takes up a second-order relation to what it is like to have acquaintance. Knowing-phenomenologically is composed in part but not in whole by knowing-by-acquaintance; much like the experience of sensory perception is different from the phenomenological dimension of what it is like to have such perception, knowing-phenomenologically is qualitatively different because it is subjective experience of consciousness.

Although propositions must be known within a subjective framework, knowing what it is like to be loses the subjective aspect of experiencing phenomena if it is reduced to propositions. In the same way that knowing-phenomenologically is irreducible to a physicalist account of brain chemistry, the phenomenological aspect of experience is not a proposition. Any propositional account is an attempt at *describing* what it is like to have conscious experience and therefore, much like between knowing-phenomenologically and knowing-by-acquaintance, is already one step removed.

Similar arguments can be made regarding knowing-how and knowing-others. The experience of what it is like to act with skill can be distinguished from the proficiency of knowing-how, even though they are tightly entwined. Although becoming explicitly or implicitly aware of some aspect of what it is like to act skillfully may play an important

role in developing a proficiency, acting proficiently also involves a host of material and historical features that make knowing-how irreducible to knowing-phenomenologically.

1.5 Knowing-Oneself

Historically, what has been taken to be "knowledge of the self" has depended on the metaphysical position one held about the features (or even existence) of the self, and from there an argument was made about how and what features of the self be known. The classic Greek adage "Know thyself (γνῶθι σεαυτόν *gnothi seauton*)" above the Temple at Delphi can be understood, in light of the Socratic method, to be a self-reflective practice concerned with one's knowledge of the world and the meaning of words. The self is known by the reflective refinement of the ἔλεγχος *elenchus*. In a similar vein, the Cartesian meditative method involves doubt about one's knowledge, a method in which, at the nadir of knowledge, it is nonetheless impossible to doubt the existence of the self as a thinking thing.[152] David Hume fails to find such a self, however, discovering in his introspective journey only mental perceptions. "I can never catch *myself* at any time without a perception, and can never observe anything but the perception."[153] Immanuel Kant argues that the self or the "*I think*" cannot be an object of knowledge, while it simultaneously plays the knowing subject, and only appears as a representation that is thought of, in some sense, indirectly. [154]

There are a few ways in which knowing-oneself is not a very clear category for a taxonomy of knowledges. Knowing-oneself could be a claim about personal identity, including a host of assumptions about the existence and properties of such an identity

[152] See the second meditation.
[153] Hume, *A Treatise of Human Nature* (2000), 165. 1.4.6.
[154] Kant (1996), 435-441. B422-432.

which are unnecessary to the present discussion. Self-knowledge might also be used to designate some sort of indexical about which sets of experiences, habits, skills, moods, knowledge, beliefs, and other characteristics cohere. Knowing one's "self" in this case seems to either be a process of understanding the emergent identity out of the aggregation of these things, or the stripping away of these things to some kind of "essence" which may be like a Lockean substance behind what is knowable. If the former is true, it seems more worthwhile to invest energy into understanding the characteristics that constitute a self, and therefore knowing-oneself is done through knowing the ways in which the self is constituted. If the latter is true, however, there seems to be no investigation that will provide access to such a self. At this point, knowing the self becomes a question about a narrow domain of metaphysics rather than a kind of knowledge.

1.6 Knowing-Language

In Michael Dummett's collected essays *The Seas of Language*, he notes the problem of trying to describe knowledge of a language within the conceptual framework of knowing-how and knowing-that.

> One [conception] is that knowledge of a language is simply a practical ability, like knowing how to swim, save for being immeasurably more complex: this view is expressed in the characterization of a theory of meaning as a theoretical representation of a practical ability, and its articulation as corresponding to the articulation of that complex ability. I now think that a knowledge of a language has a substantial theoretical component; better expressed, that the classification of knowledge into

> theoretical and practical (knowledge-that and knowledge-how) is far too crude to allow knowledge of a language to be located within it.[155]

According to Dummett, there are two reasons why knowing-language is not like knowing-how. First, a subject may have a practical ability, but that ability is not rationally complex enough to explain the intention of utterances associated with language. Second, purely practical abilities can be described and known conceptually without one's possessing the actually practical know-how. Both of these seem problematic for language because utterances must carry intention in order to have meaning and because it is impossible to have conceptual knowledge of language without also knowing a language of some kind. He uses the difference between swimming and language as examples. It seems that a kinesthesiologist can describe the motions of swimming while being unable to put into action such motions and a swimmer might not know any theory about swimming. It seems impossible for anyone to have a theoretical knowledge of language and not be able to use any language, since the conceptual effectiveness of theory comes from language. At the same time, knowing-language is not like knowing-that because, for Dummett at least, that would mean making explicit the theory of meaning which structures one's linguistic activities. This does not seem to be a necessary condition for knowing language since many speakers cannot make such knowledge explicit.

The alternative, he goes on to argue, is that linguistic knowledge relies on an implicit meaning-theory. In the particulars of the linguistic act of meaning something, in the reasons a speaker has for choosing particular words to communicate, there must be some background organization of how to engage meanings. However, this background is

[155] Dummett, *The Seas of Language* (1996), x.

not necessarily accessible to a speaker, though he or she might acknowledge the use of such a theory if it was attributed to him or her by a third party. There is debate about whether or not this idea of implicit knowing-a-language is closer to, or perhaps can be reduced to, know-how or know-that. I will raise and address these concerns later.[156]

2. Epistemology as Hermeneutic

2.1 The Movement of Knowing

The taxonomy presented up to this point is an exploration of the diversity and breadth of the applicability of the term "knowledge." Of the approaches in this taxonomy, none, either individually or collectively, provide a description of the movement that is at the heart of epistemology. In Wilfrid Sellars' piece "Does Empirical Knowledge Have a Foundation?" he voices his dissatisfaction with the static description of knowledge within debates about the structure of justification in epistemology. He writes that

> *Above all,* the picture is misleading because of its static character. One seems forced to choose between the picture of an elephant standing on a tortoise (What supports the tortoise?) and the picture of a great Hegelian serpent of knowledge with its tail in its mouth (Where does it begin?). Neither will do. For empirical knowledge, like its sophisticated extension, science, is rational, not because it has a *foundation* but because it is a self-correcting enterprise which can put *any* claim in jeopardy, though not *all* at once.[157]

Sellars is pointing to the problem of arguing about which static image of knowledge to choose, namely whether it is a foundationalist or coherentist image, and how this is a

[156] See the last section of this chapter.
[157] Sellars (2000), 124.

distraction from the moving vision of *knowing* or *understanding*. Knowing and understanding are processual, and thereby are never as final or complete as suggested by the claim to have acquired some inert *thing* called 'knowledge.' An alternative account of knowing that does leave room for the empirical process of comparison is given in hermeneutics. I am not the first person to address the relationship between epistemology and hermeneutics. At the end of *Philosophy and the Mirror of Nature* Richard Rorty argues for the end of epistemology and the replacement of it with hermeneutics.[158] In Merold Westphal's article "Hermeneutics as Epistemology" he responds to Rorty's claim by arguing that hermeneutics, similar to approaches within the Anglo-American analytic tradition of philosophy, is a kind of post-modern epistemology.[159] However, neither replacing epistemology with hermeneutics nor describing hermeneutics as a kind of epistemology draw the right connection between hermeneutics and epistemology.

In this section, I look to resources from philosophical hermeneutics to explore the structure of this epistemological movement. I lay out the structure of the hermeneutic circle as it is explicitly discussed in Martin Heidegger's *Being and Time* and Hans-Georg Gadamer's *Truth and Method*, and describe how the same circular interpretive structure can be seen in Michael Polanyi's work. Using these resources, I illustrate how the common structure behind the kinds of knowledge I have discussed in the taxonomy, and indeed behind epistemology writ-large, is hermeneutic. In short, I argue that epistemology is hermeneutic.

[158] Rorty, *Philosophy and the Mirror of Nature*, (1980).
[159] Westphal, "Hermeneutics as Epistemology" (1998).

2.2 Heidegger and the Structure of the Hermeneutic Circle

If knowing is necessarily an empirical project, then what is the relationship between the knower and the thing to be known?[160] Heidegger argues that this is not a correspondence relationship in which sense data correspond to particular features of the world, but instead that knowing is a process of interpretation of the world, from the concerns and activities by which one is constituted. Because knowing is always a process of interpretation, knowing always involves hermeneutic understanding. Interpretation as a hermeneutic process has three particular features that are important for finding a common structure underlying our taxonomy. First, the process of interpretation always starts out from the knower's preconceptions about whatever phenomenon is to be understood. Knowing is based not only on the features of the phenomenon, which provide logical limits to understanding, but also on the interpretive limits every knower projects upon the world as part of the process of knowing. Second, this means that the structure of interpretation is necessarily circular because it is a constant checking of presuppositions that come from a set of fore-structures that organize an understanding as a whole against particularities of the world. Last, this approach to the structure of epistemology makes it impossible for a correspondence notion of truth to be absolute across all knowledge, replacing it with a more pragmatic alternative.

For Heidegger, human beings who are capable of knowing do so through a set of world-organizing, and necessarily implicit, presumptions. These presumptions are the totality of the context within which any approach to phenomena in the world must take

[160] I argue that it is necessarily an empirical project in the second chapter when I mention the insularity of tautologically necessary truths and the problem of using a sense datum as the foundation that prevents regress.

place because such presumptions *are* the structure of the world as the knower understands it.

> This totality need not be grasped explicitly by a thematic interpretation. Even if it has undergone such an interpretation, it recedes into an understanding which does not stand out from the background. And this is the very mode in which it is the essential foundation for everyday circumspective interpretation.[161]

Any attempt at understanding or knowing comes out of a pre-understanding, even reflective rationality-based attempts at knowing a pure objective reality. This is because interpretation relies on what Heidegger calls the "fore-structures of understanding": fore-having, fore-sight, and fore-conception. A fore-having is the background understanding of the world that delimits the possible approaches a knower can have to a phenomenon. Though there may be many logical possibilities, particular relationships, habits, predispositions, assumptions, and so on provide this delimiting function. On the other hand, fore-sight is the particular perspective from which the interpretive act of knowing is begun, which Heidegger says "'takes the first cut' out of what has been taken into our fore-having, and it does so with a view to a definite way in which this can be interpreted."[162] If fore-having is the initial *background*, fore-sight is the *perspective* from which a knower is concerned with whatever is being interpreted. A knower's particular interest in understanding or knowing play a direct role in shaping the approach he or she does take to interpreting within the limits of his or her fore-having. Lastly, based on the particular approach a knower does take, certain conceptions are already at work to

[161] Heidegger, *Being and Time* (1962), 191.
[162] Ibid.

organize the interpretation, even if they are held with uncertainty. Where fore-having serves as a *background* of what is already known before the "first cut" provided by the *perspective* of fore-sight, the conceiving of an interpretation always makes use of expectations and familiar concepts in its organization so that it can be *grasped* by the interpreter.[163] This Heidegger calls fore-conception.[164]

Since all knowing and understanding must progress from the knower's particular background and how it shapes his or her approach to the world, the process of improving one's knowledge must be circular. However, this is importantly *not* a vicious circle.

> It is not to be reduced to the level of a vicious circle, or even a circle which is merely tolerated. In the circle is hidden a positive possibility of the most primordial kind of knowing. To be sure, we genuinely take hold of this possibility only when, in our interpretation, we have understood that our first, last, and constant task is never to allow our fore-having, fore-sight, and fore-conception to be presented to us by fancies and popular conceptions, but rather to make the scientific theme secure by working out these fore-structures in terms of the things themselves.[165]

Despite the bias that comes with fore-structures, there is no approach to the world outside of these fore-structures. The hermeneutic circle is non-vicious when it uses the object one seeks to understand as the check for the misleading tendencies of bad bias associated with vicious circularity. Paying attention to the things themselves reveals problems of fit for the projections through which one understands. The totality of fore-structures is tested

[163] I am following Hubert Dreyfuss's description of the fore-structures of understanding as he describes them in his commentary Dreyfus, *Being-in-the-World* (1990), 199.
[164] Ibid.
[165] Heidegger (1962), 195.

against the particularities of the things themselves, and any particulars that cannot be worked out in terms of the things themselves undergo revision. This revision then leads to a reconstituted totality, which is reapplied to the things themselves in the next cycle.

This acknowledgement of the importance of the subjective in knowing also lends itself to a drastic change in the notion of truth. Ronald Bontekoe describes the problems of a simple notion of correspondence within a hermeneutically structured epistemology:

> Thus truth as *aletheia*—as uncoveredness or disclosedness—must both precede and follow any understanding of truth as agreement, for unless there has already been a disclosing of the entity as it is in itself, there can be no grounds for making assertions about it, and unless there is subsequent to the assertion still a disclosing of the entity as it is in itself, there can be no way of telling whether the assertion is true.[166]

Heidegger's description of truth as "uncoveredness or disclosedness" captures the process of knowing as admitting of degrees, and if truth is about degrees of disclosure then even bivalent notions of truth are reliant on processes of interpretation.

2.3 Gadamer and the Circularity of Fusing Horizons

As one of Heidegger's students, it is no surprise that Hans-Georg Gadamer continues the project of explicating hermeneutics and the hermeneutic circle. His work also provides a description of the important structural features of starting from the position of the knower, the circularity of the process of interpretation, and the change in standards about truth, though in slightly different language.

[166] Bontekoe, *Dimensions of the Hermeneutic Circle* (1996), 65.

What Heidegger refers to as "fore-structures" of understanding, Gadamer calls 'prejudices'.[167] According to Gadamer, the main movement towards a conception of objectivity that denies the importance of the particularities of the knower comes from the Enlightenment. He says that "the fundamental prejudice of the Enlightenment is the prejudice against prejudice itself, which denies tradition its power."[168] Relating this back to the structure of interpretation, he notes that

> The overcoming of all prejudices, this global demand of the Enlightenment, will itself prove to be a prejudice, and removing it opens the way to an appropriate understanding of the finitude which dominates not only our humanity but also our historical consciousness.[169]

To deny the role of prejudices is, therefore, to deny the role that one's cultural and historical tradition play in constructing the context of one's even being able to know in the first place.

Gadamer's major work is describing in detail the circular process of understanding as interpretation. He describes the process of understanding what an other has to say about a subject of concern as a "fusion of horizons." What is the connection between understanding and a horizon? A horizon implies a vantage point, which means that to have a horizon is to have a located perspective. With the particular located-ness of every horizon also comes its particular limitations: no view is all-inclusive. Despite such limits, there are still wider and narrower fields of vision. The scope of a horizon is

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[167] It is important to reiterate that for Gadamer "prejudice" is not the post-Enlightenment pejorative, but rather should be identified with the positives and negatives of "a judgment that is rendered before all of the elements that determine a situation have been finally examined" Gadamer, *Truth and Method* (2006), 273. Because there is never a completely final examination all interpretations can be returned to. Another translation of this German word, *vorurteil*, is 'anticipation'.
[168] Gadamer (2006), 273.
[169] Ibid., 277.

therefore related to its usefulness, as Gadamer makes clear when he writes that "A person who has no horizon does not see far enough and hence over-values what is nearest to him. On the other hand, 'to have a horizon' means not being limited to what is nearby but being able to see beyond it."[170] A narrow scope prevents one from seeing how background assumptions, prejudices, may lead to misunderstanding because they are clung to rather than put at risk. A wider scope means having the vision to know there are limits to what is currently understood, even without knowing what those limits are, and that a thing may need to be *re*-understood to better fit it into its larger field of context.

This spatial metaphor illustrates what Gadamer calls the "historically effected consciousness", the fact that all Being is structured by the features of its time and place, by its historicity, such as culture, tradition, language, physical embodiment, and so on. Understanding always comes out of some past experience, some background, and is impossible without all of the prejudices such a past brings. These prejudices are the concerns and expectations that motivate understanding and structure the first interpretation; as they are revised or discarded they constitute an understanding. A view from nowhere is impossible because methodological changes never remove one from a tradition. The influence of the tradition can, at best, only be mindfully taken into account. At the same time, a tradition is not a static source of pre-formed assumptions with which one is born. A cultural and linguistic tradition may structure a person's concerns and her initial interpretation of a subject matter, but the relationship is bi-directional.

> The anticipation that governs our understanding of a text is not an act of subjectivity, but proceeds from the commonality that binds us to the tradition. But this commonality is constantly being formed in our relation

[170] Ibid., 301.

> to tradition. Tradition is not simply a permanent precondition; rather, we produce it ourselves inasmuch as we understand, participate in the evolution of tradition, and hence further determine it ourselves. Thus the circle of understanding is not a 'methodological' circle, but describes an element of the ontological structure of understanding.[171]

Understanding grounds itself in the tradition, but the tradition itself is also changing because understanding and participation are tied together. Ontologically, the being of the person who is engaged in understanding and the tradition in which they take part are mutually determining. Tradition makes possible the understanding of experience through prejudices, and in this way prejudices partially constitute tradition. When the world succeeds at forcing attention to these prejudices, especially through an interpretation of experience which violates our expectations, prejudices *and the tradition they partially constitute* can undergo change.[172] Of course, with the open possibility of our expectations being violated as our tradition changes, there must always remain open the ontological possibility of another future change in prejudices. One additional outcome of this relationship is that understanding is, in principle, an infinite project. The visual and spatial metaphor of a horizon thus captures the important features of the process of understanding: (1) it is from a location; (2) it is a process of engaging prejudices by foregrounding them, challenging them, and revising them; and 3) the process of

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[171] Ibid., 294).

[172] Prejudices are not necessarily transparent to us. If they are not freely available, then the difficult part of Gadamer's suggestion is actually finding ways to foreground them. Frequently, we hastily dismiss instances in which our prejudices lead to violations of our expectations, but we misattribute the problem to the world instead of our prejudices. For instance, due to confidence in one's own position, violations of our expectations are assigned to the foibles of others or the deception of nature. Also worth noting, it is also impossible to engage with the sum total of our prejudices all at once. Being able to do so would imply the "view from nowhere" sort of objectivity which Gadamer is critiquing with his assessment of the Enlightenment.

understanding is never finished because of the limitations that come with any particular perspective.

Horizons contribute to understanding through the process of fusion. This process begins first through the projection from one's horizon into the historical horizon of what is to be understood. The interpreter's horizon is not abandoned in this process, but particular prejudices about the subject to be understood become foregrounded in the tension between horizons. As problems with a particular understanding become apparent through this process of foregrounding, the resulting changes are fused back into the interpreter's horizon, at which point the process begins again. The process comes to a rest when any foregrounded assumptions do not prevent understanding, where the circular motion loses traction, or becomes vicious. The only way that prejudices can thus be foregrounded is through projecting and examining oneself from the perspective of the other. Paul Ricoeur describes Gadamer's fusion of horizons by writing that "[O]nly insofar as I place myself in the other's point of view do I confront myself with my present horizon, with my prejudices."[173] Because this process is so active, it may better be called a *fusing* of horizons while there is any traction in the circle.

A simple example of foregrounding prejudices is the case in which a text serves as an other. Texts themselves have a horizon that a reader reconstructs in order to enter into a dialogue with the text about its topic or theme. Reading a text such as Ariostotle's *Politics* and discovering a discussion of justified slavery often presents contemporary American students with many of their assumptions as they try to understand the text. The most immediate prejudice that they must confront is the difference between their association of 'slavery' with the history of slavery in the antebellum South and

[173] Riceour, "Hermeneutics and the Critique of Ideology" (1990), 309.

Aristotle's argument within the context of ancient Athens' slave culture. A fusing of horizons with this text does not, of course, entail agreeing with Aristotle's attempt at justifying slavery. Instead, trying to understand Aristotle's context and an ancient Athenian description of slavery might reveal to a student what she associates with the term 'slavery' and the important social justice issues in contemporary American politics that it raises.

Despite never being exhausted, interpretation does have resting points. Gadamer notes that an interpretation is satisfactory when it disappears into what it is an interpretation of, but this is still not the impossible-to-achieve exhausted interpretation.[174] The fusing of horizons also contains standards that aim at valuing some perspectives over others. Although, as he states, there is no developing a "best understanding," it is still important to pursue the higher vantage, the less parochial view.[175] If something prompts one towards new possibilities yet one does not pursue a further understanding, this means that one still could have a better view.

2.4 Science and Objectivity

Of course, some may argue that clinging to any perspective invites subjective bias. In contrast, for instance, is the classic example of impartial, objective knowledge: the natural sciences. Although Heidegger and Gadamer are both discussing interpretation, it might be argued that scientific success and advancement are an excellent counter-example to the kind of knowledge they describe. In part, this is why Heidegger and Gadamer restrict the domain of their projects to the human sciences. The history of 'objectivity' and the impartial scientific self it calls for are described in Lorraine Daston

[174] Gadamer (2006), 399.
[175] See Gadamer (2006), 15-16 and 296, as well as Bontekoe (1996), 111 and 122.

and Peter Galison's aptly titled book *Objectivity*. In it, they detail the historic shift from scientists as "rational genius observers" after the Enlightenment to "objective deniers of self" after the rise of the epistemic virtue of objectivity in the nineteenth century. One major takeaway from this is that, since the development of 'objectivity' is not ahistoric, the hasty simplification of science to objectivity is a social trend in the epistemic standards of the community, not an essential feature of the process and discipline of science itself. Objectivity is seen as science's defining feature, but scientific practice is not divorceable from scientific practitioners.

Daston and Galison make their argument about the history of objectivity within the context of science as a discipline that operates through epistemic virtues held by the community of experts. They provide as evidence for their claim an historical analysis of scientific atlases and the normative evaluations of exemplary scientists contained in biographies and autobiographies. Atlases are collections of images designed to train apprentice scientists in the skill of perceiving the natural world and to keep veteran scientists practiced. A classic example of such an atlas is the handbook that hobby birdwatchers and trained ornithologists use in the field to verify what they have seen. Atlases themselves are products of particular trends within the sub-fields of the sciences and, as both pedagogical and professional tools, they provide useful data about the standards and central values of their time. Such works therefore provide an excellent sample of the expectations of the profession at the time. On the topic of biographies as evidence, Daston and Galison argue that

> Our interest in [scientific biographies] is, however, precisely *as* historically specific stereotypes and moral lessons. A stereotype is a

> category of social perception, and a norm is no less a norm for being honored in the breach. Because epistemology is by definition normative – how knowledge *should* best be sought – there is no avoiding its dos and don'ts. Yet in the case of the learned, including scientists, bare treatises on method have never been deemed sufficient: the pursuit if knowledge is also a way of life, to be exemplified and thereby typified.[176]

It is not the accuracy of biographies that matters, but the norms of the community they illustrate. This argument applies equally to the written portions of atlases, which often detail the justification of their own printing, as well as the creation of the images themselves.

Objectivity in science, despite being characterized as wary of making metaphysical claims, relies on particular metaphysical assumptions about the self. Of the utmost concern for a scientist trying to engage in objective observation is the taint of subjective distortion. However, this concern about subjectivity created tensions in scientific practice. "The scientist *qua* experimenter reasons and conjectures; the scientist *qua* observer must forget all reasoning and only register," which means resisting a biased organization of experimental data as much as possible while observing one's experiment.[177] Scientific practice was therefore deeply involved with a self that restrained itself through its own will, a "will to will-lessness."[178] Daston and Galison mention scientific exemplar Michael Faraday's argument that observations should be recorded

[176] Daston and Galison, *Objectivity* (2010), 232.
[177] Ibid., 243.
[178] Ibid., 203.

immediately so that memories not become distorted by biased organization of the data, which is an example of how notions of scientific self and practice were intertwined.[179]

One of the results of objectivity becoming the central epistemic virtue of natural science is the virtue's spread to other arenas through the emulation of science as the perfect epistemic enterprise. One of the major projects of the twentieth century has been an argument about the metaphysics of self associated with an objectivity-centered science, the sort of science that demonizes self-imposition and lauds self-lessness within its community, especially as such values spread to communities that try to emulate science, as in the work of many Logical Positivists. Analytic philosopher Hilary Putnam argues against this expansion of objectivity when he critiques Realism, which he thinks promotes a false dichotomy between itself and Relativism. According to him, any perception involves our participation, such that,

> even when we see such a "reality" as a tree, the possibility of that perception is dependent on a whole conceptual scheme, on a language in place...
>
> What I am saying, then, is that elements of what we call "language" or "mind" *penetrate so deeply into what we call "reality" that the very product of representing ourselves as being "mappers" of something "language-independent" is fatally compromised from the very start*. Like Relativism, but in a different way, Realism is an impossible attempt to view the world from Nowhere. In this situation, it is a temptation to say, "So we make the world," or "our language makes up the world" or "our

[179] Ibid., 243-5.

> culture makes up the world"; but this is just another form of the same mistake. If we succumb, once again we view the world – the only world we know – as a *product*. One kind of philosopher views it as a product from a raw material: Unconceptualized Reality. The other views it as a creation *ex nihilo*. *But the world isn't a product. It's just the world.*[180]

For Putnam, there is no escaping our involvement with the world in our attempts to engage with it, and so absolute reality and absolute relativity are both impossible. Later, when discussing the limits of an absolute objectivity, he states that, as knowers, we are "beings who cannot have a view of the world that does not reflect our interests and values, but who are, for all that, committed to regarding some views of the world–and, for that matter, some interests and values–as better than others."[181] By extension, an absolute objectivity that carries no perspective is an impossible standard to employ.

A second argument against the metaphysics of scientific objectivity is given by feminist philosopher Sandra Harding. The specific problem with objectivity lies in its definition, specifically as understood by the perspective she calls "objectivism".

> Consider… how objectivism too narrowly operationalizes the notion of maximizing objectivity. The conception of value-free, impartial, dispassionate research is supposed to direct the identification of all social values and their elimination from the results of research, yet it has been operationalized to identify and eliminate only those social values and interests that differ among the researchers and critics who are regarded by the scientific community as competent to make such judgments. If the

[180] Putnam, Realism with a Human Face (1992), 28.
[181] Ibid., 178.

> community of "qualified" researchers and critics systematically excludes, for example, all African-Americans and women of all races and if the larger culture is stratified by race and gender and lacks powerful critiques of this stratification, it is not plausible to imagine that racist and sexist interests and values would be identified within a community of scientists composed entirely of people who benefit – intentionally or not – from institutionalized racism and sexism. [182]

Of course, the antecedent of Harding's conditional is supported by historical evidence about the social factors that go into research. This is why she concludes that "objectivism operationalizes the notion of objectivity in much too narrow a way to permit the achievement of the value-free research that is supposed to be its outcome."[183] What makes this argument so persuasive is that it illustrates the self-defeating nature of an objectivity that presumes it can eliminate all of its own biases. Her alternative is to integrate a strong reflexivity into the epistemic virtue of objectivity, especially regarding socially constructed aspects of researchers' identities, relabeling this new standard as "strong objectivity".

These two thinkers, despite the successes of science, argue that objectivity is metaphysically impossible to achieve. Additionally, even as some sort of epistemic ideal it is self-defeating. Problems such as these support the hermeneutic projects of Heidegger and Gadamer, but they all lack a comprehensive description of the epistemic process in which the scientist engages.

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[182] Harding, "Rethinking Standpoint Epistemology" (1993), 70.
[183] Ibid.

2.5 Polanyi and Tacit Knowing as Hermeneutics

The widespread view of science, especially by non-experts, is that science is not only the best example of an impersonal knowledge project, but that its success actually comes from the impersonal practices of scientists. The colloquial expression "Science tells us that…" illustrates the non-expert vision of science as the product of laboratories and data, which the expression accomplishes by removing any mention of scientists themselves. Such a view falls in line with the description of objectivity in Daston and Galison's work. Michael Polanyi, a twentieth century scientist and philosopher, provides a description of science that shares the metaphysical concerns raised by Putnam and Harding. In his account, all acts of knowing are *personal* acts, even, perhaps especially, acts of scientific knowing. As a scientist-turned-philosopher, Polanyi is interested in dispelling a view of science that believes the discipline is the source of universal objective knowledge, a view which he labels "scientism".

The main drawback of scientism is that it fails to account for the involvement of the skilled scientist in the process of experimental science. To demonstrate this, Polanyi appeals to the reading of a map. He says that "[a] map represents a part of the earth's surface in the same sense in which experimental science represents a much greater variety of experience."[184] He then describes three steps that are necessary when using a map: (1) finding a correspondence between the map and the world, (2) charting a route on the map, and (3) traveling the route through identifying locations on the map with the use of landmarks within the landscape. Identifying a starting point of reference in order to align the map with the world requires interpretive judgment of both the map and the world. Similarly, navigating one's route requires the same sorts of judgments about

[184] Polanyi and Prosch, *Meaning* (1975), 30.

landmarks in the world and points of reference on the map. Even the highest quality map cannot read itself; map reading still requires a skilled reader to interpret the map. Experimental science operates analogously: "First we make some measurements which yield a set of numbers representing our experience at the start; from those numbers we then compute, by aid of our formulas, a future event; finally, we look out for the experience predicted by our computation."[185] The skill required to observe landmarks in a landscape, or to observe data that fits one's expectations, is a skill specific to the person observing. Much like maps, "[n]umbers do not of themselves point to events."[186]

The interpretation of maps, numbers, or lab equipment all rests on skillful performance rather than on objective passivity. Even in the case of digital measurement, there is still the experimental question of error versus significance. Errors indicate a mistake in laboratory practice, but a significant deviation reveals a challenge to one's theory. Polanyi elaborates:

> no formulas can foretell the actual readings on our instruments. These readings will rarely, if ever, coincide with the predicted numbers as computed from Newton's laws, and there is no rule – *and can be no rule* – on which we can rely for deciding whether the discrepancies between theory and observation should be shrugged aside as observational errors or be recognized, on the contrary, as actual deviations from the theory. The assessment in each case is a personal judgment.[187]

To further support his point, and in a move similar to Daston and Galison's use of scientific atlases, he turns to the education of scientists. The process of becoming an

[185] Ibid.
[186] Ibid.
[187] Ibid.

expert in a field is a training not only in an extensive field of propositional "knowing-that", but also a training in how to perceive correctly. "They are training their eyes, their ears, and their sense of touch to recognize *the things* to which their textbooks and theories refer…. They are acquiring the skills for testing by their own bodily senses the objects of which their textbooks speak."[188] But they are not acquiring these skills from reading alone. Looking at an atlas is only part of the process of training; one must actually *practice* the bodily skills of sensing correctly on non-textbook examples such as observing birds in the wild or combining two liquids to produce a solid precipitate in a chemistry lab. This is why university-level natural science programs have laboratories, and why medical students engage in clinical rotations. Students learn to make judgments that *must* be personal because they are based on the embodiment of that person. Even the rules that govern the safe number of significant digits in laboratory practice do not enforce themselves, but must be skillfully employed by the scientist who wants to (and knows how to) put them to use.

The skillful practice of being a scientist does not arise out of thin air, however; it is arises out of the evolution of a community. In *The Structure of Scientific Revolutions*, Thomas Kuhn notes that scientific communities share a paradigm, the group's "way of seeing the world and of practicing science in it."[189] Like Polanyi, Kuhn argues that paradigms are not simply a set of rules that a community follows, but rather consists in things logically prior to rules, concepts, or theories; things like the set of assumptions about the metaphysics of the world that organize empirical experience (e.g. terms such as 'force' or 'molecule'), or the pedagogical use of shared historical successes to guide

[188] Ibid., 31.
[189] Kuhn, *The Structure of Scientific Revolutions* (1996), 4.

future research. Paradigms structure normal scientific practice by establishing a framework that has explained some problems, but needs more articulation. Such articulation will hopefully lead to a better understanding of the world, but also seems to lead to problems of dealing with possible anomalies. Even though the personal judgment of an individual scientist is involved in deciding whether or not troublesome data is the result of error or anomaly, it is the paradigm that provides scientists with their background training and metaphysical assumptions within which they make their judgments. At times, these conflicts about error or anomaly result in scientific revolutions, periods where paradigms fail to successfully guide the community. These are instances when experimentation forces the scientific community to consider one of two incommensurable options: interpret deviations in data as within an acceptable margin of error based on possible mistakes in practice or uncontrollable variation in conditions and continue the paradigm of the status quo, or label the deviation as an anomaly that cannot be explained by the current theory and reject the paradigm of the status quo.[190] During these times, the community splinters into groups with competing accounts, usually with newly dominant paradigms being those that "are more successful than their competitors in solving a few problems that the group of practitioners has come to recognize as acute."[191] Shifts such as these within science are periods when paradigms (and thus the features of the community that compose them) often become a focus of the community and are more available for change. Not only is the paradigm open to change, but in fact it must change in some way, both to account for the acutely present instances of anomaly,

[190] Ibid., 93-98.
[191] Ibid., 23). Many other factors go into these struggles as well, such as the varying degrees of investment members of a community have based on the number of years of research they have already contributed within a paradigm; older members of the community will thus often be more resistant to change compared to younger, up-and-coming members.

but also to reconfigure the past successes of previous paradigms for the sake of pedagogical and historical coherence. Because these modifications to history have an impact on the values and educational standards of the field, shifts in paradigm have a direct influence on what is considered acceptable interpretation of data. Therefore, following both Kuhn and Polanyi, science and scientific knowledge cannot help but arise out of the practices of individuals and communities who construct a framework for making sense of empirical reality; and it can never arise out of a completely impartial set of scientific principles that reveal to any subject who follows them the same universal truth. Since scientism does not describe this essential feature of scientific knowledge, opting instead to mistakenly identify such knowledge with detached objectivity, it describes accurately neither science nor knowledge.

Though the widespread view is to associate science with impersonal objective knowledge, Polanyi reverses this association and argues that not only scientific knowledge, but all knowledge, is personal knowledge. At the most basic point, every act of knowledge involves skilled practice, as demonstrated by the role of the practical curriculum (e.g., laboratory work or clinical rotations) in the education of scientists. Knowledge of any kind, knowing-that, knowing-how, knowing-others, etc., shares the structural features of personal knowledge. This is because all knowing has what Polanyi calls a "from-to" structure. Using the example of hammering a nail, he states that there are two forms of awareness. The awareness of the hammer as it affects the hand and the body are the things *from which* the awareness of skillfully knowing how *to* wield the hammer is possible. The bodily awareness is subsidiary to the focal awareness of the

hammering. This from-to structure has three aspects to it – a functional aspect, a phenomenal aspect, and a semantic aspect.

The functional aspect is the way subsidiaries serve the function of bringing something into focal attention. All knowledge is *from* some subsidiaries (bodily knowledge, propositional knowledge, skilled experience, etc.) to a focus, as Polanyi describes when he says that "The sight of the printed words [when reading a sentence] guide our focal attention away from the type to a focal target that is its meaning."[192]

However, something can change its functional role from subsidiary to focus or *vice versa*. That printed words change their functional role is apparent in changes to the phenomenal aspect that occur when changing focus from a sentence to an individual word in the sentence. In this case, the spelling of the word on the page *appears* differently, even though it has not physically changed appearance. Another example of the phenomenal aspect of from-to knowing is the experience of a stereoscopic image, where there is an additional experiential dimension when viewing both of the images at the same time. They combine together to form a focus, an image with depth, that the two original images lack.

Lastly, the semantic aspect is the way that subsidiaries gain their meaning through contributing to a focus. The words in a sentence gain their meaning by creating a focus on what the sentence is trying to convey. In other words, the focus (a sentence's meaning) is known from subsidiaries (the individual words being used, familiarity with the grammar and stylistic uses of the language, and so on) but this from-to relationship

[192] Polanyi and Prosch (1975), 35.

also provides meaning to the subsidiaries because of how they bear on their focus; subsidiaries "mean something *to which* we attend *from them*." [193]

Returning to the hammer example, the various subsidiaries make hammering possible through what Polanyi calls a "tacit act," where the "subsidiaries function as such by being integrated to a focus on which they bear."[194] The explicit act is what we focus upon–the hammering of the nail. Along with this explicit act is the tacit act of our integrating of the subsidiaries in such a way as to make possible the focal action. These subsidiaries include the feelings in the hand of the hammer as it moves and strikes the nail, and the perception of the nail at a particular distance, the skillful ability (acquired from prior experience) to gauge the proper amount of force to apply to the hammer to effectively aim a strike. The integration of the subsidiaries may occur tacitly, but this integration is indispensable for the explicit act's success. Shifting awareness from the hammering of the nail to the feeling of the hammer in the hand as it strikes a surface interrupts the act of hammering, since the act of hammering is no longer the focus. This is a shift in all three aspects of the from-to structure – the functional aspect changes because what was functioning as a subsidiary bearing upon a focus is now functioning as a focus with subsidiaries bearing upon it, the phenomenal aspect changes because the sensation is now located not between the head and the nail but between the handle and the hand, and the semantic aspect has changed because the meaning of the sensations in the hand are no longer directed towards the hammering of the nail but are themselves the focus.

The reason the functional role, an awareness of something as either focal or subsidiary at a particular time, is so important is because it defines the structure of the

[193] Ibid., 97.
[194] Ibid., 39.

integration itself. It is for this reason that Polanyi says the from-to awareness of a subsidiary is mutually exclusive from focal awareness, though something may move from being a subsidiary to a focus.[195] When something is under focal awareness, it is from the integration of subsidiaries that it becomes intelligible. However, the features something has as a subsidiary differ from its features as a focus. This is because of the semantic aspect of an integration. Recall that the direction of meaning is bi-directional: a focus gains its meaning by the subsidiaries that bear on it, but those subsidiaries also gain their meaning by their integration towards a particular focus. With any functional shift, then, comes a semantic shift. This results in what Polanyi calls the "unspecifiability of subsidiaries"; some may be explicitly engaged, but in their role as subsidiaries that bear on a particular focus they have a particular meaning which is lost when they change functional role.[196] An easy example of this is a set of spectacles. While in use, spectacles disappear into one's awareness of the world. One looks *through* them *to* the world. However, in order to inspect the lenses in a pair of spectacles, one must remove the frames, at which time the lenses become the focus of awareness instead. Notice that a mirror does not avoid this problem because even inspecting a set of lenses via mirror changes the focus from the actual glasses to a reflection of the glasses examined through their own lenses. Dirty lenses make this especially interesting, as it becomes difficult to see through dirt or scratches that prior to investigation were invisible.

This phenomenon of tacit knowing is explained frequently through appeal to gestalt psychology.[197] Features that emerge out of one integration of a gestalt image's

[195] Ibid., 38-9.
[196] Ibid., 39. See also Polanyi, "Knowing and Being" (1969), 124, and 128-9.
[197] For more examples of this explanation of unspecifiability, see Polanyi, "The Unaccountable Element in Science" (1969), 115, and Polanyi, "Knowing and Being" (1969), 124.

parts disappear as an alternative integration presents itself. Likewise, as a subsidiary is changed to a focus, it loses the *kind* of relationship it had with other subsidiaries in bearing on or toward a focus because it has lost the meaning associated with its former position. The unspecified elements that are lost as something changes from subsidiary to focus are important because they are part of what provides the particular coherence a knower has relative to the focus. Memories, muscular habituations, cultural assumptions, and more all serve as tacit subsidiaries in integrations about such impersonal things as a scientist trying her best to objectively observe an experiment with the least amount of bias possible.

The integration of subsidiaries can occur both tacitly and explicitly, but there is an important difference between the two. An explicit integration involves direct acknowledgment of the relationship between particular subsidiaries, such as the physiologist's theoretical knowledge of human anatomy. Theoretical knowledge of the relationship between particular parts of the body does not, however, entail the ability to carry out skilled acts such as dancing or gymnastics, even if it may enhance such acts. Tacit integration cannot rest only on an explicit consideration of subsidiaries because such a consideration requires changing their functional role to that of a focus. The tacit integration of being in a body cannot be replaced by an explicit integration, but the explicit can enhance the tacit. Thus, the tacit integration is the more basic of the two.

Polanyi seems to be thinking of something like a hermeneutic circle when describing the way subsidiaries integrate to form a focal awareness, especially when he uses the following language in his paper "Knowing and Being."

> We can see then two complementary efforts aiming at the elucidation of a comprehensive entity [i.e. a focus]. One proceeds from a recognition of a whole towards an identification of its particulars; the other, from the recognition of a group of presumed particulars towards the grasping of their relationship in the whole.[198]

The integration of subsidiaries towards a focus is a circular process. It moves from a particular integration of subsidiaries towards an understanding of a focus which gives those subsidiaries their meaning. If the focal object still is not fully accounted for by the subsidiaries, then the integration of these subsidiaries, both in the form of their relationships with each other and their individual particularities, is adjusted and they are once again used to know the focal object. Much like the hermeneutic circle, as this process yields less change, the cycle loses traction and becomes vicious.

It seems like this structure could fall prey to the problems described with coherentist notions of truth or knowledge. From where do the things that constitute our awareness, especially our subsidiary awareness, gain their veracity? The foundations of knowing in this account are "rooted in commitments and beliefs about the nature of things," trust in our initial biological and cultural starting points, in what Polanyi calls "a fiduciary act."[199] Such an act can ground knowing because any act of knowing is not an act of "*detachment* but rather that of *involvement*," and if humans are to make any attempt to know about the world then it must be through their involvement with the world, through embodiment and shared social commitments.[200] However, this is not a reductive foundation of body and culture, but rather one in which meaning is an emergent

[198] Polanyi and Prosch (1975), 125.
[199] Ibid., 63.
[200] Ibid., 63.

dimension. Recall the example of a stereoscopic image. Polanyi notes that the extra visual depth is not present in either of the two pictures, but emerges as a phenomenological aspect of viewing the two together. This feature of perception gains its veracity from the success of biological features of the knower. One of the subsidiary features that makes possible the emergence of depth in a stereoscopic image is the skilled exerting of muscular pressure to focus the eyes. This is a skill human babies usually pick up quite early in life and often do not reflect on. As an infant, there is no alternative but to learn to use one's eyes if one wants to be visually involved with the world. Similarly, our uses of language and values also come from an involvement with our social world.

The major positive standard for knowing, then, is efficacy. Why not something called "truth"? Polanyi warns us that truth as a concept is something that is still community based.

> [S]uch ideals as scientific truth, justice under the law, and good art cannot be given concrete definitions. What these really are, *in concreto*, is simply what all members of each relevant group are striving together to delineate. Truth, for instance, is given specific form only as the community of scientists is free to work out what its form is – and this task is never finished. The same thing is true of justice in the practical development of legal systems and of art in the continuing work of artists.[201]

Rather than starting out with a search for the foundations of knowledge or a definition of knowledge, Polanyi has given a description of the process of knowing. His descriptions of the structure of knowing are not "first philosophy" founded on principles, but rather a

[201] Ibid., 204.

revisable description based on his own interpretation as a scientist, as a philosopher, and as a European intellectual living in the twentieth century.

3. A Capacious Approach to Justification and Reduction

Michael Polanyi's personal knowing connects the projects of epistemology and hermeneutics by grounding knowing and understanding in the same process of tacit integration. Recalling Sellars' point, the hermeneutic circle makes sense of knowing without referring to a static picture of knowledge. Additionally, tacit integration provides solutions for the problems of justification and reductionism mentioned in the second chapter, while at the same time creating space within which our different accounts of the various species of knowledge can interact.

The problems of justification and reductionism have the same basic source – the desire to explicitly lay out the sufficient conditions for knowledge. The from-to structure of subsidiaries and focus recasts this problem in terms of the unspecifiability of subsidiaries. When recast in these terms, the solution to the problem is never a search for completely explicit conditions. Doing this, and thus focusing on a single kind of knowing, distorts accounts of each individual form of knowledge because it disregards the ways in which the species within the taxonomy are integrated. Distortion of individual kinds of knowledge can occur either in accounting for some sort of justification with respect to that kind, such as searching for justification only within the realm of propositions, or with respect to a reduction of that kind of knowledge to another, such as reducing skill to propositions. The hermeneutic structure of integration shows that no consideration of only one single kind of knowledge can ever provide the sufficient (i.e. exhaustive) conditions of any successful knowing. Epistemology itself is historically

constituted and maintains a tradition, and a tradition that should be reflective of its own practices. Epistemologists must always be open to re-organizing and re-understanding our accounts of knowledge in light of changes in everyday concerns and of changes in the conceptual backgrounds that accompany them.

Justification is a problem because epistemologists have focused on explicitly laying out the mechanism of principle-based justification. If propositions are statements about the way the world is, and beliefs have as their content such propositions, and knowledge is a true belief one justifiably believes, then the common presupposition of attempts to construct a theory of knowledge is that discussion must be grounded in principles and proceed from these principles to an explanatory and evaluative framework. Once we have a set of principles, we can judge claims to know as legitimate or illegitimate, and we can explain why something is or is not knowledge. This approach creates an unsolvable problem, however. The propositional framing of justification fails because of its complete failure to incorporate the particular features of the knower, viz. the personal features that any individual knower cannot help but rely upon in any act of knowing. The point here is much like Polanyi's argument that no formula, independent of a person to apply it, can foretell the readings on scientific instruments. In this case, no principle, independent of a person to apply it, leads to knowing or knowledge. The reason a person is needed rather than an abstract subject is because of the personalized gestalt that every act of knowing requires. Without including this personalized gestalt and the integration that it involves, principle-based justification is inadequate.

The alternative to principle-focused justification is a justification based on pragmatic success or efficacy. Any account of success must include the skillful,

personalized actions of an actor. This is why critiques from hermeneutics, from-to knowing, and even from within analytic feminist philosophy and some philosophy of science are so concerned with the historicity of the knower, especially the experiences of embodiment and social located-ness that each knower learns to navigate in her particular way. If knowledge is taken at its most basic level to be a tacit, circular process of interpreting the world from one's background and then using the world as a basis for revising one's approach, then even principles and standards are also always up for revision. The impossibility of knowing everything and the infinite regress of trying to justify a belief are both resolved in the same way: regress is *always logically possible*, but it is kept at bay by the need to find solutions to immediate, live concerns. This is not to say that every interpretation eventually ends with one giving up and deciding not to finish interpreting a text because it is taking too long. One's concerns are limiting factors on the explanatory requirements needed for a successful interpretation. Principles are not eternally true, but because they are provisional they must be effective. Indeed, after recognizing the impossibility of universality, truth faces a fate similar to that of justification – it consists in a community's definitions and standards, circumscribed by the larger importance of the effectiveness of that concept of truth to that community as it navigates the world.

Efficacy-based justification also incorporates the physical and phenomenological elements of knowing, elements which are not considered in principle-based accounts of knowing-how. Taking the example of knowing how to swim, even if one has an abstract notion of what perfect butterfly-stroke form looks like, the application of that abstract idea of a good stroke requires an integration of the personal features of the knower such

as proprioceptive awareness of one's limbs while in a watery environment and the confidence the knower develops about what works and what does not. Principles about justification, much like propositional accounts of knowledge, are thus limited to heuristic subsidiaries that may be useful, but are always judged within the context of how they fit with their ability to help us succeed at knowing or identify successful knowing.

If there is not an objective, principled approach to impartial knowledge, then knowing as hermeneutic might seem to be a system of relativism and bias. Such a problem is discussed in what is called the "bias paradox" in feminist epistemology, a problem that is not just limited to feminist critiques of objectivity but to any critiques of objectivity, as Deborah Heikes points out.[202] Heikes constructs the problem as one in which two alternatives seem to exist: either we ground knowledge claims in objective, view-from-nowhere facts, or we find some way to deal with the relativism that crops up out of grounding knowledge claims in the subjectivity of the knower. This is initially a problem for feminist standpoint epistemology because, Heikes argues,

> The first of these commitments is, quite naturally, to the feminist project. Broadly conceived, feminism is concerned with exposing, subverting, and overcoming oppression in all of its forms. In the realm of epistemology, one of the specific outcomes of this commitment is that feminist philosophers consistently expose and attack the ideal of impartiality as disguising the subjective interests of those in power. Despite widespread diversity, most feminists hold that all views are the expression of some subjective interests of some knower or group of

[202] Heikes, "The Bias Paradox" (2004).

knowers. As a result, one cannot ask epistemological questions without asking about the nature of epistemic agents who hold those views.

The second commitment of feminist empiricism is to empiricism, which is typically seen in some allegiance (albeit not uncritical) to the tools and methods of analytic philosophy. For those feminist empiricists working within the analytic tradition, analytic philosophy is not inherently or irredeemably androcentric. Yet analytic philosophy is grounded firmly in Enlightenment ideals that seemingly require a commitment to pure impartiality or complete objectivity. The tension of feminist empiricism lies between the feminist component, which requires a commitment to the subjectivity of knowers, and the empiricist component, which requires some endorsement of impartiality. From this tension arises the bias paradox, which confronts not only feminist empiricists but any epistemological view that tries to steer between subjective and objective conditions for knowledge.[203]

Like projects in feminist epistemology, the hermeneutic process of knowing as I have described it also starts from an acknowledgement of the impossibility of achieving impartial objectivity and the inescapability of the subjective and personal; it too must respond to this paradox. If a knower claims to have objective universal knowledge, then she would be ignoring the fact that features of her subjectivity, her fore-structures, prejudices, or tacitly engaged subsidiaries, are necessary features for her knowledge of anything. In the other direction, if a knower can never escape the features of her subjectivity, then how can she acquire normative standards and avoid relativism? How

[203] Ibid., 317.

can knowledge be impartial yet subjective, or perhaps grounded in a particular knower's experience and still objective?

Any response to this paradox is a direct response to the problem with justification. In a sketch of a way out of the paradox, Heikes notes that "a priori constraints on rationality appear to be doomed to a regress of interpretation from within particular epistemic viewpoints," a problem similar to those mentioned in chapter two. In order to avoid the paradox, then, she argues that "the answer lies in recognizing that while rationality does have a priori constraints governing it, it is ultimately an activity of coping with the world."[204] The subjectivity of a knower is thus not merely subjective, but is at the same time a subjectivity within a world, and specifically a world occupied by other subjectivities. The world and the subjectivities of others do not conform to wishful thinking, for instance, and therefore can violate our expectations.

The hermeneutic structure of knowing is rooted in the human experience of "coping with the world." Fore-structures, prejudices, and subsidiaries are all descriptions of the backgrounds that structure this process. Since this account of knowing starts from an argument regarding the impossibility of an objective analysis of the principles behind a knower's justification, the analysis of justification must be replaced with a pragmatic notion of efficacy in relation to the world, and new understandings of terms like "universal" (as seen in the benefits of Gadamer's fusion of horizons) and "truth" (as seen in Heidegger's notion of truth as *aletheia*). The process of coping itself is circular and driven by events within the world and a knower's concerns, events and concerns which are themselves interpreted through the knower's subjective background. This is also why

[204] Ibid., 330.

justification must incorporate the personal aspect of knowing; coping mechanisms and concerns drive the individual assessments of success within a world.

An account of knowing as tacit integration must also avoid being viciously reductive. It might be argued that any account in which various species of knowledge share a common structure must be reductionistic. As a strong claim—there can be no common structure if reductionism is to be avoided—it relies on a false dichotomy between**,** on the one hand, accounts in which distinct kinds of knowledge are unrelated and, on the other, accounts in which seeming differences between kinds of knowledge are reducible to one single kind. This oversimplifies the relationship between species. Taking the example of living creatures, they can share a common feature such as being carbon-based, and still be different enough to be considered on their own terms, as plants or as animals, for instance. Once epistemologists stop trying to reduce species of knowledge to one another, then proper research into their productive differences will be taken more seriously. Rather than attempt to present an exhaustive list of possible species, in this chapter I only claim that the necessarily interpretive structure of human experience serves as the common element for all acts of knowing without reducing those acts to a single kind.

The possible relationships between knowledges mentioned in the earlier taxonomy illustrate how it need not be vicious in the connections made between kinds. Returning to the connection between tacit knowing and knowing-a-language illustrates this. Earlier, Dummett's contention was that linguistic knowledge relies on an implicit meaning-theory. Tacit integration helps explain this implicit meaning-theory by including it as part of the subsidiaries any knower of a language makes use of when communicating

in that language. The reason Dummett's implicit meaning-theory supports the irreducibility of knowing-a-language is because it seems to have features of *both* knowing-how and knowing-that. The from-to structure of knowing can explain this by noting how "knowing-that"s and "knowing-how"s serve as subsidiaries for knowing-a-language. The problem of whether or not knowing-a-language is reducible to other forms of knowledge is thus revealed as a more sophisticated account of connections between kinds of knowing, as irreducible kinds of knowing can and do serve as subsidiaries to one another.

Understood through the spatial metaphor of capaciousness, the framework of tacit integration is what provides room for multiple types of knowledge within a single account. It is the functional role of subsidiaries that opens this space. In the case of justification, the personalized nature of integrating subsidiaries creates a broader applicability by moving away from the project of making explicit sufficient principles and toward an account of knowing grounded in the knower's relationship with the world. This kind of justification is broader because it is a feature of the process of integration that is central to any act of knowing, rather than to propositional knowing alone. Similarly, the subsidiary-focus relationship explains how different kinds of knowledge can be integrated into the same act of knowing without being reduced to a single kind. Reduction can be understood in these terms as narrowness or a deprivation of space. Without sufficient conceptual space, a narrow theory forces knowledges to either conform or be left out and therefore risks inaccuracy, and thus a loss of explanatory and normative power. The epistemological model of tacit integration therefore makes space

for the knower within justification and simultaneously makes space for diverse kinds of knowledge and knowing.

CHAPTER FOUR:

CLASSICAL CHINESE 知 *ZHI* AND A CAPACIOUS THEORY OF KNOWLEDGE

At the end of the last chapter I noted that the problems of bias and relativism are often leveled against rejections of explicit and absolute descriptions of knowledge. If terms such as 'truth' and 'justification' in their technical roles are determined through social construction, then one of the biggest barriers to a theory of knowledge is coming up with an account of knowledge that respects particularity and locality while still retaining prescriptive, normative force in its language. In this chapter, I consider the case of 知 *zhi*, often translated simply as "to know" or "knowledge". Following Angus Grahams' description of the philosophical developments of the early Chinese period, *viz.* that thinkers of the day were concerned with "way-making" rather than "truth-seeking", I argue that translating 知 *zhi* in these simple terms stresses knowledge as an object and obfuscates 知 *zhi* as a process. If way-making involves 知道 *zhidao*, or "knowing how to realize a way", then it must involve efficacious action, rather than the theory-practice divide implied by an account of knowledge that centers on truth. This case study serves as an example of the cross-cultural flexibility of the capacious, hermeneutic, and tacit account of knowledge developed earlier, a flexibility that is missing when merely subsuming '知 *zhi*' into 'knowledge'. Since this intervention is in epistemology and not in early Chinese philosophy, I will be using resources in Chinese philosophy to make points about the need for a non-reductive epistemology in general.

1. The "Problem" of Chinese Philosophy

In order to judge whether or not there is a rich concern for knowledge and knowing, broadly construed, in early Chinese philosophy, it must be asked *how* the tradition is philosophically relevant. This question is often parsed in terms of contemporary technical vocabulary associated with areas of specialization such as ethics: is Confucius a virtue ethicist? If Western philosophical discourse is taken as "mainstream" or privileged as neutral, then the answers to this question fit into what Robert Bernasconi describes as a kind of philosophical double bind. Speaking on African philosophy rather than Chinese philosophy, he says that

> Western philosophy traps African philosophy in a double bind: Either African philosophy is so similar to Western philosophy that it makes no distinctive contribution and effectively disappears; or it is so different that its credentials to be genuine philosophy will always be in doubt.[205]

On the logic of this double bind, if Confucius is engaged in a project that maps onto virtue ethics, then his project is just a watered-down version of contemporary work. Similarly, if the《論語》*Lunyu*, *The Analects of Confucius*, is not virtue ethics (nor deontological ethics, nor consequentialist ethics), then it must not be philosophy but instead some sort of wisdom literature about morality.

This double bind operates as a false dichotomy caused by an overly narrow notion of philosophy. This dichotomy rests on the assumption that philosophy is an acultural collection of arguments aimed at the truth. Since Chinese philosophy does not structure

[205] Bernasconi, "African Philosophy's Challenge to Continental Philosophy" (1997), 188.

arguments in the same way, it is either a weaker version of more contemporary arguments about ethics (or epistemology, or metaphysics, so on), or it is in fact not an argument at all and therefore not philosophy. In either case, Chinese philosophy is effectively excluded. This is because the terms "philosophy" and "argument" are actually constructed by historical and social conditions, a construction process that is often times complicated and opaque, such as with the term "truth" as mentioned in the previous chapter. After arguing for an epistemology that is sensitive to the historicity and social embededness of knowers outlined in that chapter, it should be clear that the historical and social context is important in "Western" philosophy as well. This approach should not change when examining other traditions. The ability to examine historical and social aspects of our philosophical approaches is one of the reasons that Karsten Struhl argues for all philosophy being cross-cultural philosophy.[206] Approaching our own tradition in this way provides possibilities for noticing assumptions to which we are too close to notice otherwise. Given the justification for approaching our own traditions through their historical and social contexts, this is also how we should approach traditions from which we are further removed.

Avoiding the premature exclusion of Chinese philosophy involves giving due diligence to the context in which it arises. This is well framed by A. C. Graham:

> Their whole thinking is a response to the breakdown of the moral and political order which had claimed the authority of Heaven; and the crucial question for all of them is not the Western philosopher's 'What is the

[206] Struhl, "No (More) Philosophy without Cross-Cultural Philosophy" (2010).

> truth?' but 'Where is the Way?', the way to order the state and conduct personal life.[207]

Given this difference in the basic concern behind philosophical inquiry, two questions are worth asking: (1) How do works from the classical Chinese period count as philosophy? and (2) What might these texts have to add to a capacious account of knowledge and knowing? I answer the first question by examining the development of Chinese language and the standards for argumentation during this period.[208] To describe what Chinese philosophy has to say about epistemology I use this understanding of Chinese language to sketch important lexical connections related to the term '知 *zhi*' in selected early Chinese philosophical texts. After thinking through these representative texts, I will return to the importance of this case study to a capacious epistemology.

2. Points of Reference for Navigating Classical Chinese Thought

2.1 Developing Contextualized Definitions of 知 Zhi in Early Chinese Works

The major problem to avoid when considering the philosophical and epistemological relevance of early Chinese texts is hasty reduction. For instance, it is deeply problematic to approach early Chinese using a definition of philosophy based on a search for "truth", when instead there seems to be a stronger focus on something more akin to "efficacy". Similarly, it is problematic to begin discussions of 知 *zhi* by making a simple identification of 知 *zhi* with 'to know' or 'knowledge'. To presume that these two

[207] Graham, *Disputers of the Tao* (1989), 3.
[208] That is to say, I am not offering an exhaustive account of the necessary and sufficient conditions of what counts as philosophy, nor an exhaustive account of the ways in which Chinese philosophy *might* be considered philosophically relevant. I am merely arguing both that Chinese philosophy should not be excluded based on a hasty reduction, and that the rich intellectual exchanges of the period found in the reflective assessment of language use is strong evidence in favor of considering the period philosophically relevant.

terms capture the same concepts is to assume that the English language already has complete access to the phenomena of knowing. This kind of mistake is a case of linguistic reduction. Any attempt at investigating the philosophical relevance of early Chinese works must therefore be sensitive to what goes into the context of interpreting such works. In this case, the goal is to understand '知 *zhi*' in English rather than understand 'knowledge' in classical Chinese, thereby pushing the boundaries of a capacious epistemology.

One might argue that my use of 'epistemology' is also importing assumptions about knowledge and what knowing looks like in other cultures. I do not deny this, but I am attempting to engage as many of those assumptions as possible in my approach to early China. Even the use of 'epistemology' as a term for describing a theory of knowledge is dangerous because of its direct importation of '*episteme*'. However, the failure of English 'knowledge' to mean the same thing as '*episteme'* is exactly why I still use the term 'epistemology' instead of 'theory of knowledge'. *Episteme* itself plays little to no role in contemporary discussions of knowledge, and thus 'epistemology' is already divorced from its etymology.

Avoiding a loss of philosophically important meaning by reducing Chinese terms to English terms is a familiar problem in the interpretation of early Chinese texts. In the discussion of their process of translation, David Hall and Roger Ames discuss the fact that any philosophical translation is simultaneously an interpretation. While writing in English about Chinese works, they must navigate two different problems, namely (1) the requirement that any translation be coherent in its target language, but that (2) in reaching this coherence the translation must not distort the meaning of the original text. They

therefore strive to make sure their translations are "determined by their textual and intertextual loci, as well as by their etymological roots."[209] It is through this hermeneutic sensitivity that they construct their "philosophical lexicon", which "requires conceptual coherence as a primary criterion of translation."[210] Given the discussion of hermeneutics in the last chapter, meeting such a criterion of coherence should not be understood as one-time act of translation. A particular translation-as-interpretation is itself composed through a process in which the understanding of a text increases its coherence by checking the interpretation of the textual elements against how terms are used in particular instances. These particular instances gain their meaning from the context of that text as a whole, the literary whole of which the text is a part, and the linguistic whole of which any particular passage's etymology is a part. Therefore, the development of a good translation involves an interpretive process of moving back and forth between these elements of text, literary tradition, and linguistic tradition.

In *A Daoist Theory of Chinese Thought*, Chad Hansen identifies many of the same differences between Western philosophical assumptions and languages as Hall and Ames.[211] In discussing the important features of Chinese language that inform both his translation and interpretation of early Chinese thought, he repeatedly returns to two closely related points: first, that classical literary Chinese is a pragmatic, practice guiding language; and second, that classic literary Chinese operates with a different set of

[209] Hall and Ames, *Thinking Through Confucius* (1987), 3.
[210] Ibid., 1.
[211] See, for example, Hansen's discussion of problems with the "translation paradigm", in Hansen, *A Daoist Theory of Chinese Thought* (1992), 7-10. I would argue that much of the overlap in translation/interpretation concerns stem from Ames, Hall, and Hansen all identifying themselves as philosophers rather than sinologists, and thus see their projects from particular philosophical concerns. They do, of course, have their differences, especially when it comes to the best description of early Chinese metaphysical or cosmological assumptions. See note # for more information.

metaphysical presumptions than contemporary mainstream Western philosophy. To support these claims without resorting to linguistic determinism, he explicates what he calls a "folk linguistic theory" of classical Chinese; that is, an account of how writers of classical Chinese use language, not necessarily a linguistic theory explicitly endorsed by any particular authors.[212]

To support his first point, that classical Chinese was primarily a pragmatic and social-action guiding language, Hansen draws on both its historical origins and a few of the structural features of its grammar. With its origins in the development of divination during that Shang dynasty (1600 BCE-1046 BCE), early literary Chinese began as recordings on oracle bones such as turtle shells or ox shoulders. These bones were heated until cracked and the cracks then read to provide guidance about how to act in a particular situation. Oracle bones also frequently contain a record of the effectiveness of the advice. If these oracle bones are the earliest kinds of Chinese writing, which so far seems to be the case, then, Hansen argues, "it suggests one reason why the priests would think of language as guiding behavior. The record keeping would be viewed as accumulating valuable guidance rather than a descriptive history."[213] The characters used in oracle bone inscriptions are not, of course, the same as the characters used in the Spring and Autumn period (771 BCE-475 BCE) or the Warring States period (475 BCE-221 BCE), but because of the strong influence the Shang dynasty had on the Zhou dynasty, classical

[212] Hansen (1992), 25. See specifically his footnote, where he justifies his methods. "I realisitically expect that this strategy will again evoke accusations of *linguistic determinism*. The careful reader of this introduction will, I trust, remember that I argue that classical Chinese thinkers had a different *theory of* psychology, not a different *psychology*. Similarly, I shall not be arguing that our languages are as different as are our *theories* of languages. The Chinese theory can be applied to English just as the Western theory can be applied to Chinese." See also 34-35 for the role education in a language plays in imparting a particular folk theory of language.
[213] Ibid., 31.

literary Chinese is historically grounded in oracle bone inscriptions. The《易經》*Yijing,* mentioned more below, is an example of the continued and connected development of divination and language in early China. This early and sustained connection between prescription and language is one reason that Hansen takes Chinese to be so pragmatic and action guiding.

More evidence that supports this claim is the lack of a strong division between prescription and description in the grammatical structures. Language as action-guiding explains this easily, because every use of language, even descriptive, will guide one's actions. To make this point, he compares English and Chinese.

> In English, we learn that we *omit the subject* to make the sentence into an imperative or a command. Our *complete-sentence* ideology treats imperatives as mutilated sentences (with an implied subject). We regard the descriptive form as the normal, complete form, the one that illustrates the real role of language.[214]

When trying to translate classical Chinese, where the subject is commonly omitted, this leads to

> huge chunks of text that one translator renders in declarative English and another in imperative English. Behind this apparent ambiguity, I suggest, lies this assumption about the function of language. *All* language functions

[214] Ibid., 51.

> to guide behavior. Given that assumption, a community would not require an explicit prescriptive marker.[215]

Classical Chinese's folk theory of language elides the strong distinction between declarative and prescriptive. This is also a reason why reading things such as 'mental states' or 'sense data' into early Chinese texts may be imparting different textures to the tradition than what are really there. This is not to say that prescriptions and descriptions do not exist within Classical Chinese, but rather that even descriptive claims are assumed to be about guiding behavior. One example of this is the different definitions of 仁 *ren* that Confucius gives to different students in the *Lunyu*, definitions which change for the purpose of guiding the particular student at the time of his inquiry.

The last feature of language that reveals the practical action-guiding focus of classical Chinese is what Hansen describes as the central role that the social conventions of language play in early China's skepticism. Rather than focusing on appearance, reality, and Being, as is done in early Greek philosophy, there is more of a concern about the direct connection between language and conduct. I turn to the metaphysical differences that underpin classical Chinese below, but these metaphysical differences are worth mentioning here because the focus on language and convention rather than on appearance and reality is further evidence of the action-guiding role of language. Hansen notes that "Chinese philosophy arose in a context of prior interest in transmission, conformity, mastery, and practice of ritual as means of socialization."[216] These features are especially clear in their impact on education. Transmission, conformity, and mastery are important for their role in giving students the proper use of classical Chinese language. Many

[215] Ibid., 51.
[216] Ibid., 41.

debates of the time were around whether or not a standard existed that could guide the use of language, because proper language use was connected to proper action. In fact, the structure of Hansen's project centers on this argument: the Ruists, Mohists, and Daoists are all interested in the relationship between usage, convention, and behavior.[217] For Ruists, this is a project of 正名 *zhengming*, of making sure that the practice of using names and terms fits with the political ideals of an organized family, community, and state. For Mohists, this is a project of finding the natural standards of 天 *Tian* to accomplish a more all-encompassing social order rather than a family- or state-centered political order. For Daoists, this is a project of maintaining a healthy skepticism about the possibility of firmly fixing language, as somewhat ironically captured by the second line of the opening of the《道德经》*Daodejing* , "名可名也,非恆名。[N]aming (*ming*) that can assign fixed reference to things is not really naming."[218] However, in none of these instances are the thinkers in question arguing about the constancy of what is and what is not, but rather about whether or not the linguistic conventions of the community are efficacious or not, or if they even can be.[219]

Besides being evidence of the pragmatic action-guiding focus of classical Chinese, the differences in skepticism also reveal a different set of metaphysical assumptions about the world. Characters can serve as nouns, adjectives, and intransitive verbs in Chinese. As noted earlier, although English generally requires a subject, Chinese frequently omits one. It can engage in such omissions because it does not have the same subject-predicate assumptions about language, assumptions that are based on a world of

[217] Ibid., 4. The relationships among usage, convention, and behavior is an ordered one, but not a transcendent one. For more on this, see Hall and Ames (1987), 158, on rational order and aesthetic order.
[218] Ames and Hall, *Daodejing "Making This Life Significant": A Philosophical Translation* (2003), 77.
[219] Hansen (1992), 51.

objects. Hansen calls this a concern with scope because the important metaphysical questions are not about the constancy of a one behind the appearance of a many, but rather how to use language to best navigate a world that does change.

> In Chinese ontology we see no reductive thrust towards atoms or unchanging particulars and no grammatical object-property distinction…. The importance of this model… lies in the conception of language mastery that goes along with it. Chinese linguistic theory emphasized the ability to distinguish or mark the boundaries between stuffs. Reality is not a multitude of independent, fixed objects, but a ground out of which a linguistic community *carves* distinctions and marks them with names. Each part-whole assignment is relative to some presupposed standard and purpose.[220]

The question in China was never about finding essences that endure behind an object's changing appearances because in classical Chinese the scope of concern is always being negotiated through language use.[221] The focus on scope and the absence of the strong subject-predicate distinctions present in Western philosophy are evidence of the lack of other major metaphysical assumptions: ontology and minds are no longer caught up on objects and subject, and therefore the problems of objectivity and subjectivity are no longer concerns that must be figured out before ethics and epistemology can be

[220] Ibid., 50.

[221] Hansen's assessment of early Chinese metaphysics as a substance ontology of efficaciously carving up the world into sets of "stuffs" is not the only account of how early China might have thought about the world. Hall and Ames offer a process account, instead, but there is no need to accept one or the other for the sake of this project. The important feature of either of these accounts of early Chinese metaphysics is that the efficacy of language in organizing the world and social behavior is centerpiece. Graham (1989), 401, gives a brief overview of the distinctions between Hansen and Hall and Ames, as do Hall and Ames (1987), 262-264. Despite the metaphysical differences, there is much agreement about the structure of classical literary Chinese between the four.

discussed.[222] This also means that there is not an immediate concern with truth or facts, but instead with efficacy and convention. The Chinese linguistic theory Hansen argues for is therefore unconcerned about the connection between private ideas and the world, but instead concerned about the connection between 字 *zi*, "characters," and how they capture the world so that the community can best act.[223]

Any approach to Chinese epistemology must incorporate these elements: it must not sacrifice coherence in English, nor distance itself from the etymological scope of the original language and texts; it must pay attention to the action-guiding nature of classical written Chinese; and it must be sensitive to the very different metaphysical milieu of the times.[224] The methodological approach I take here draws upon these sensitivities to differences in language, especially the way in which language gains meaning, both generally and for classical Chinese specifically. Henry Rosemont, Jr. offers advice in the form of "concept clusters", a term he first begins using in "Against Relativity". Describing the problematic search for the term 'moral' in classical Chinese language, he lays out the contrasting concept clusters associated with Western ethics and Confucianism.

> It may seem that a big fuss is being made over a little word: why not simply find the closest approximation to the English 'moral' in the

[222] Hansen (1992), 43.
[223] Hansen also uses the relationship between written classical Chinese and the various spoken languages of the period as evidence for his claim about the social nature of the written Chinese language. He says that it is not the pictographic content that makes written Chinese so central, but rather the recognition by those fluent in it that it is grounded in the cultural values of the past and the continued conventions of usage. Because characters are grounded in history and convention and not in correspondences between the appearance of the world and ideas, they are necessarily public.
[224] Whether or not these differences are better described as mereological or hologrammatic makes little difference; both support the point being made, which is an argument for avoiding an accidental importation of the standard metaphysics of contemporary Western epistemology.

> language (culture) under investigation, and proceed with the analysis from there? … But now consider as a specific example the classical Chinese language in which the early Confucians wrote. Not merely does that language contain no lexical item for 'moral', it also does not have terms corresponding to 'freedom', 'liberty', 'autonomy', 'individual', 'utility', 'rationality', 'objective', 'subjective', 'choice', 'dilemma', 'duty', 'rights', and probably most eerie of all for a moralist, classical Chinese has no lexical item corresponding to 'ought'—prudential or obligatory.[225]

Rosemont further elaborates the predicament for translating clusters piecemeal, noting that

> The notion of "concept cluster" that follows is important… because arguments that endeavor to show that *dao* (道), or *li* (禮), or *yi* (義), or some other single Chinese graph might appropriately be translated as 'morals' cannot succeed unless one is also willing to offer Chinese lexical candidates for 'subjective', 'rights', 'choice', and so forth—an altogether question-begging philological effort.[226]

Concept clusters are important ways of understanding lexical relations because those very relationships constitute the concepts that shape the philosophical discussions in which we engage. Even supposing a particular Chinese text is wrong or non-philosophical, it is impossible to describe what sort of conceptual error it may be making if the translation into English distorts the original. All translations that seek to avoid (or at least minimize)

[225] Rosemont, "Against Relativism" (1988), 61.
[226] Ibid.

these kinds of mistakes must therefore be sure to preserve the connections between concepts by accounting for the relationships between major lexical elements.

An example of the practice of this is the development of a philosophical lexicon from Hall and Ames's work mentioned above, as well as in the introduction to Ames and Rosemont's *The Analects of Confucius*. The choice of words to put into a lexicon, as well as a description of how these terms are adopted and given more specific relationships by particular thinkers, is dictated by the translator's sensitivity to hermeneutic concerns: the historical and cultural context of the text, as best as can be determined; the relationship between a text's particular use of language relative to the general usage of the term at the time, as best as can be determined by similarly dated texts; and the awareness of the historical proximity but fallibility of the commentarial traditions that proceed from the text.

The concept cluster approach also helps illuminate the metaphysical and linguistic particularities by which classical Chinese is *affective*, the way in which the language motivates and persuades. Hansen's account of the general structure of classical Chinese writing, an account that Rosemont finds persuasive, is situated in the description of language as a social, action guiding process covered above.[227] In the broadest terms, Hansen describes classical Chinese:

> The smallest units of guiding discourse are [名] *ming* (names). We string *ming* together in progressively larger units. The salient compositional structure is a [道] *dao* (guiding discourse). The Chinese counterpart of

[227] Rosemont, "Praxis-Guiding Discourse in the Confucian Analects" (2011).

> interpretation is not an account of the truth conditions. Rather, to interpret a *dao* is to perform it. The interpretation of a *dao* starts from the interpretation of the *ming* that compose it. In learning a conventional name, you learn a socially shared way of making discriminations in guiding your actions according to a *dao*.[228]

One of the features of *dao* that this account captures well is the productive vagueness that the term plays in discourse at the time. As Hansen notes, *dao* can be understood as a guiding discourse. However, the term itself is not merely about discourse, but also implies both metaphorically and literally 'road', 'path', 'way', and the associated verbs of traveling roads, paths, or ways. The etymological background of the character displays and conveys the action-guiding nature of discourse. Traveling a path and keeping one's bearings require being able to engage in the effective use of *ming*, especially through social and cultural education in conventions. There are also further stages that can be distinguished within this buildup from *ming* to *dao*, specifically 字 *zi*, or characters that represent *ming*; 詞 *ci*, or phrases composed of *ming*; and 說 *shuo*, explanations composed of *zi* and *ci* that organize to form the largest unit, *dao*.[229] Thus, the major focus of early Chinese thinkers is on issues of guiding practice and using language, rather than on reaching truth or understanding the relationship between appearance and reality.

[228] Hansen (1992), 3-4.
[229] Ibid., 45.

2.2 Issues of Authorship, History, and Influence

Authorship, the most basic historical starting point, illuminates how complicated early Chinese works can be. Texts were often assembled by generations of disciples after the death of a master, with the work itself bearing the master's name. In the early histories of China such as the《史記》*Shiji (Records of the Grand Historian*), the sayings of a master and the commentaries by disciples on the content of those sayings were taken as a whole and attributed to their title-bearers. Many texts have been given creation stories further back in the past than their "actual" origin. Texts like the《孟子》*Mengzi* and the《莊子》*Zhuangzi* were then organized and commented on by intellectuals such as 趙岐 Zhao Qi (108-201), with his commentary on the *Mengzi* during the Han dynasty (206 BCE-220 CE), and 郭象 Guo Xiang, who edited and wrote a commentary on the *Zhuangzi* during the Jin dynasty (265-420 CE). The *Mengzi* and the *Zhuangzi*, however, are themselves from historical periods centuries before their editing. The *Mengzi* is often claimed to be from the latter half of the fourth century BCE, five hundred years before Zhao Qi's editing and commentary; the *Zhuangzi* is traditionally attributed to the late-fourth, early third century BCE, five to six hundred years before Guo Xiang's commentary. Fine dates on authorship, as well as empirically available evidence about their attributed authors, are impossible.

Despite the high degree of historical distance and uncertainty, there is still a significant interpretive context found in the traditional narrative associated with these early texts. The commentarial tradition provides a rich context out of which technical philosophical vocabularies develop. An excellent example of this is the role that the《易

經》*Yijing* (*Book of Changes*) plays in the construction of a Ruist cosmological narrative.[230] As a text, the *Yijing* consists of two parts. The first is a prognostication guide for trigrams and hexagrams, sets of broken and unbroken lines, organized into what is known as the《周易》*Zhouyi*. The second is a commentary on the *Zhouyi* called the《十翼》*Shiyi* (*Ten Wings*). Within the *Ten Wings* commentaries, there is a story of the invention of the eight trigrams (八卦 *ba gua*) by the mythological 伏羲 Fuxi, a feat he accomplishes through observation of the natural world.[231] During the Western Zhou Dynasty (1045 BCE-771 BCE) King Wen is credited with organizing the eight trigrams into their sixty four hexagram pairings and including descriptions of the significance of these hexagrams. Later, the Duke of Zhou, son of King Wen, younger brother of King Wu, and regent for King Wu's son, is said to have provided descriptions of the significance of individual lines within a six line prognostication.[232] The work of Fuxi, King Wen, and the Duke of Zhou is purportedly the body of the text of the *Zhouyi* portion of the *Yijing*. The Ruist scholar Confucius, reportedly an avid reader of the *Zhouyi*, is then credited with writing the *Ten Wings* commentary and appending it to the *Zhouyi*, thus producing what is organized during the Han dynasty and received today as the *Yijing*. In the traditional account, then, the *Book of Changes* provides an early Ruist approach to the organization of the social and natural world grounded all the way back into the earliest reaches of the mythological past.

[230] Rather than using the term 'Confucian', I will refer to the tradition as 'Ruist' to be inclusive of the Chinese term associated with the tradition, 儒家 *Rujia*. This helps connect Confucius' project up to historical tradition of which he saw himself as a continuation.
[231] Rutt, Zhouyi*: The Book of Changes* (2002), 421.
[232] Ibid., 28-29.

There are possible inaccuracies in the received tradition, however, especially regarding the status of the *Zhouyi* as a Ruist work. The *Yijing*'s Ruist status comes from Confucius' association with the text, especially the notion that he wrote and organized commentaries around the *Zhouyi*. In his biography in the *Shiji,* Confucius is described as having worn out his personal copy of the text. These claims are mostly mythological in function, though that does not deny their effectiveness. In his analysis of the *Yijing*, Richard Rutt argues that there are a few problems with this version of the story. The first problem is that the *Zhouyi* was a divination manual and in *Lunyu* 7.20 and 7.21 Confucius prefers searching for knowledge through the exemplars of antiquity rather than turning to supernatural appeal to strange things or spirits.[233] Additionally, Rutt argues that in the one instance in which there appears to be a word-for-word citation from the *Zhouyi*, it is actually that the "same proverb was probably quoted in both the *Lunyu* and the *Zhouyi* independently."[234] Lastly, the connection between the *Zhouyi* and the Ruists must not have been very strong because the divination manual was not targeted for destruction in the Qin dynasty's mass burning of books, especially those that were Ruist. Rather, it was in the Han dynasty that the *Yijing* gained its status and thereby retroactively became part of the authoritative past.

For the sake of the argument I am making here, which is that the classical Chinese period is a philosophically relevant period, I will grant the assumption that Rutt is correct and the *Yijing* is neither edited nor are its commentaries written by Confucius and that Sima Qian's biographical account of their connection is a valuable story but historically inaccurate. Even if Rutt is correct,

[233] Ibid., 33-34.
[234] Ibid., 34, 325.

the power of the received tradition is still very important to understanding the historical impact the *Yijing* has had as a text received by the Ruist tradition. The development of a cosmological framework out of this text by Ru scholars was still valuable for its application to intellectual and practical problems of the day. In this way, Ru literati, and indeed, literati and intellectuals of a variety of identities, engaged in this practice, described by Roger Ames as "appreciation" of the tradition.[235] Even if the history is inaccurate, the careful use and re-tooling of language is a way of acknowledging indebtedness to one's tradition with thanks, one sense of the term "appreciate," as well as a way of contributing value and richness to the linguistic resources that the tradition has to offer, the other sense of the term "appreciate." To approach these texts therefore does not require complete historical accuracy, something that is unavailable in many important ways, but rather an attention to as many details of the tradition as possible, especially the received tradition and the commentaries that comprise it. A focus on efficacious application of available cultural and linguistic resources to deal with one's concerns rather than an appeal to 'truth' grounded in a reality beyond culture and language is one way in which early Chinese approaches to the past and to language overlap.

[235] Ames, *Confucian Role Ethics: A Vocabulary* (2011). This is the organizing theme of the first chapter, but is explained most clearly on 2-3.

3. Chinese Approaches to 知 *Zhi*

Given the structure of Chinese language as focused on action-guiding rather than truth-declaring, the borders between epistemology and ethics are frequently blurred. This does not mean that there is no epistemology in early China, but rather that epistemology and ethics are mutually intertwined. Given the normative nature of epistemology and the importance of knowledge to ethics in "Western" traditions, this should not be seen as a reason to orientalize the Chinese tradition and presume it deals with neither philosophy nor epistemology. In order to understand how early Chinese works are philosophically and epistemologically relevant, I pursue two lines of thought in considering each text. In the first, I argue for the philosophical significance of early Chinese texts. To do this, I examine the development of modes of argumentation and standards of persuasiveness across texts, including both the internal developments within the Ruist tradition as reflected in the *Lunyu,* the *Mengzi*, and the *Xunzi*, and the engagements between Ruists and non-Ruists, particularly Mohists and Zhuangzians.

The second line of thought, which is more directly related to the central project of this dissertation, follows the meanings of 知 *zhi* and 智 *zhi* within the development of individual concept clusters. This analysis of concept clusters is itself a provisional analysis of early Chinese epistemology. In English discussions of epistemology there are distinctions between knowledge, opinion, and wisdom. The original terms in classical Chinese are elided within the paranomastic relationships between characters such as 知 *zhi* and 智 *zhi*, terms which themselves are now used distinctly in contemporary colloquial compounds such as 知道 *zhidao* "to know," and 智慧 *zhihui* "wisdom." Even

in contemporary Chinese, however, the connection between 知 *zhi* and 智 *zhi* is still strong, as evidenced by the common translation of 智慧 *zhihui* as "knowledge."[236] This is not to say that colloquial English strongly embraces philosophical distinctions compared to colloquial Chinese, but rather that any expectations to find "Western" philosophical distinctions in the works of classical China would only be a small step away from accidentally importing them.

It is important to reiterate here that this is not a project directed at intervening in the fine details of the interpretation of early Chinese works, but rather that the goal here is to articulate what the trends in careful philosophical interpretation of these works entails for philosophy in general and epistemology in particular. Epistemology is not a primary concern of any of the texts, but there is an effort to make use of and explain the concept *zhi*. As an intervention in epistemology, then, this chapter is unfortunately but necessarily glossing over details that could easily fill their own book.

3.1 Lunyu

The《論語》*Lunyu*, translated as *The Analects of Confucius*, is a collection of sayings of the Ruist 孔丘 Kong Qiu, also known as 孔夫子 Kong Fuzi. Sixteenth century Jesuit missionaries to China Latinized this Chinese phrase "Master Kong" into "Confucius". This collection was compiled by his students (and their students) and is an excellent starting point for a discussion about the context of persuasive writing and the

[236] There are more nuanced character compounds for knowledge, especially as part of the project of translating and interpreting concepts from English, such as the use of 知識 *zhishi* to discuss knowledge in the context of epistemology, 知識論 zhishilun. An analysis of the importation of "Western" projects in epistemology would be an excellent postcolonial critique of contemporary claims to universality in epistemology. This chapter is only a safeguard against reading contemporary epistemology into classical China, not a deconstruction of contemporary work in twenty-first century China.

means of argumentation commonly employed in early China.[237] As a collection of sayings, it represents what becomes mainstream Ruist thought. It also sheds light on the language used by Confucius to make his points, the sources of authority deemed appropriate and persuasive, and the structure of student inquiry.

One of the tools of language used by the *Lunyu* to persuade readers (and listeners) is parallelism. An example of this parallel structure can be seen in 6.23:

> The Master said: "The wise enjoy water; those authoritative in their conduct enjoy mountains. The wise are active; the authoritative are still. The wise find enjoyment; the authoritative are long-enduring.[238]

This passage places comments about the wise (知者 *zhizhe*) and the authoritative-in-conduct (仁者 *renzhe*) in parallel structures that cause the audience to make comparisons. However, these comparisons are not meant to create dichotomous oppositions as in the Pythagorean/Aristotelean table of opposites, where one of the pairs is held over and against the other. Being wise is not mutually exclusive from being authoritative. Instead, the passage is about making connections between people labeled "wise" or "authoritative" to evoke correlative comparisons about how such people act. Hall and Ames describe this use of language as "allusive".

> Allusive language is metaphorical. But allusive metaphors are not to be contrasted with literal expressions; they constitute an autonomous medium

[237] There is a scholarly debate about the compiling of the *Lunyu* and how the text might have arisen via accretion. For more, see Brooks and Brooks, *The Original Analects* (1996), and Makeham, "The Original Analects: Sayings of Confucius and His Successors, and: The Analects of Confucius: A Philosophical Translation (review)" (1999).
[238] *Lunyu*, 6.23. Translation from Ames and Rosemont, *The Analects of Confucius: A Philosophical Translation* (1998), 108-109.

> of discourse. Metaphors when construed as the extensions of literal locutions are "expressive" metaphors, whereas allusive metaphors permit language to be used to "hint at," "suggest," or "mention" particularities. The suggestive character of the language of allusion serves the sort of communicative activity that evokes the particular feelings in communicants which constitute the "meanings" of the language. [239]

Rather than truth or correspondence with reality, parallelisms in classical Chinese take as their standard of success the ability they have to evoke correlational thinking through aesthetic coherence and connection building.

This correlative thinking is not simply a free-association, but must also meet practical considerations of efficacy, whether the effectiveness is in relation to social conventions or natural phenomenon. Hall and Ames elaborate:

> Allusive language is the language of the parable, the teaching story. The truth of allusive statements is realized in the communicant: "He who has ears to hear let him hear." It is the evocation and inner articulation that guarantees the truth, or more appropriately, the efficacy of the statement.[240]

Efficacy is two-fold, then; language is efficacious if it is affective and if the actions it prompts are effective. Joseph Needham observes that the notion of effectiveness was not a rational-causal connection, but one based on pattern and relationship.

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[239] Hall and Ames (1987), 298.
[240] Ibid.

> Things behaved in particular ways not necessarily because of prior actions or impulsions of other things, but because their position in the ever-moving cyclical universe was such that they were endowed with intrinsic natures which made that behaviour inevitable for them. If they did not behave in those particular ways they would lose their relational positions in the whole (which made them what they were), and turn into something other than themselves.[241]

It is by similarity in pattern and by relational resonance that things are effective. Parallelism in language guides readers and listeners into considering whether or not patterns and relationships resonate.

Another common tool is citation of historical and cultural sources of authority. The 詩經 *Shijing*, or the *Book of Songs*, is not only frequently referenced, but Confucius also encourages others to study it.

> The Master said, "My young friends, why don't any of you study the *Songs*? Reciting the *Songs* can arouse your sensibilities, strengthen your powers of observation, enhance your ability to get on with others, and sharpen your critical skills. Close at hand it enables you to serve your father, and away at court it enables you to serve your lord. It instills in you a broad vocabulary for making distinctions in the world around you.[242]

The *Book of Songs*, itself an accretion text full of poetry formed from the Western Zhou Dynasty to Spring and Autumn period, represents the Ruist perspective on culture:

[241] Needham, (1956), 281.
[242] *Lunyu* 17.9. Translation from Ames and Rosemont (1998), 206.

learning comes from taking the experiences of our ancestors and applying them to contemporary problems. This reinforces the persuasive character of allusive parallelisms and correlative connection building, as seen by Confucius' instruction. An example of the praiseworthiness of developing such connections with the past is found in Confucius' praise of Zigong in *Lunyu* 1.15, when Zigong cites a poem from the *Book of Songs* and Confucius replies "Zigong, it is only with the likes of you then that I can discuss the *Songs*! On the basis of what has been said, you know what is yet to come."[243]

The 禮記 *Liji*, or the *Book of Rites*, was also important as a source for authority on the knowledge of the past. In *Lunyu* 16.13, the *Book of Rites* and the *Book of Songs* occupy similar places of importance.

> Chen Gang asked the son of Confucius, Boyu: "Have you been given any kind of special instruction?"
>
> "Not yet," he replied. "Once when my father was standing alone and I hastened quickly and deferentially across the courtyard, he asked me, 'Have you studied the *Songs*?' I replied, 'Not yet,' to which he remarked, 'If you do not study the *Songs*, you will be at a loss as to what to say.' I deferentially took my leave and studied the *Songs*.
>
> "On another day when he was again standing alone, I hastened quickly and deferentially across the courtyard. He asked me, 'Have you studied the *Rites*?' I replied, 'Not yet,' to which he remarked, "If you do not study the *Rites*, you will be at a loss as to where to stand.' I

[243] *Lunyu* 1.15. Translation from Ames and Rosemont (1998), 75.

deferentially took my leave and studied the *Rites*. What I have learned from him, then, are these two things."

Chen Gang, taking his leave, was delighted, and said, "I asked one question and got three answers. I learned the importance of the *Songs* and of the *Rites*, and I also learned that exemplary persons do not treat their own sons as a special case."[244]

Of particular importance in this passage is the connection of historical sources of authority to the practical. The *Book of Songs* and the *Book of Rites* provide the cultural background needed to participate in discussion and in ritualized actions, both of which are important practical social concerns. Confucius reiterates this concern for practicality in *Lunyu* 13.5 when he avoids lauding those who can recite the contents of the *Book of Songs* but do not know how to apply it in performing any duties of office.

Passage 16.13 also reveals the importance of the teacher-student relationship. As mentioned earlier, Confucius is known for giving different answers to the same question, a point of frustration for those who are seeking axiomatic definitions of important terms such as 仁 *ren* (authoritative conduct, benevolence) or 禮 *li* (ritual propriety), or rules to guide how one acts. An excellent example of Confucius answering the same question differently can be found in *Lunyu* 11.22. After giving different answers to two students asking the same question, whether or not they should act after learning about something, Confucius justifies his divergent answers by appealing to the character of his students. "The Master replied, 'Ranyou is diffident, and so I urged him on. But Zilu has the energy

[244] *Lunyu* 16.13. Translation from Ames and Rosemont (1998), 200.

of two, and so I sought to rein him in.'"[245] As a collection of conversations recorded by students, text of the *Lunyu* also serves to underscore the point that a teacher figure holds authority within the text. Confucius is always an exemplar in the text, both in terms of what he says and in terms of his practical conduct.

Through uses of persuasive language, appeals to cultural and historical sources of authoritative knowledge, and to the character of a good teacher, the *Lunyu* presents a description of cultivating an educated disposition. Approaching the epistemological importance of the *Lunyu* is best done through seeing the connections between 知 *zhi* and the practical ethical project of the text; for instance, *zhi* and *ren* appear together frequently throughout many passages.[246] Hall and Ames describe a set of four terms which sketch the role *zhi* has in thinking and education. They argue that "thinking for Confucius is not to be understood as a process of abstract reasoning, but is fundamentally *performative* in that it is an activity whose immediate consequence is the achievement of a practical result."[247] 學 *xue*, "learning", is the process unmediated by theory or explicit coneption by which one becomes aware. In the Ruist program, one specifically becomes aware of the culture of which one is a participant. This awareness includes not only the mental and social, but also the physical culture, as seen by the Confucius' core curriculum: 禮 *li*; 樂 *yue*; 射 *she*; 御 *yu*; 書 *shu*; and 數 *shu*.[248] As trained skills, these arts most certainly involved a physical element of repetition, either through recitation in the case of becoming familiar with texts, or practicing with bow or chariot. Social custom and standards are also present in archery and charioteering because of the cultural status

[245] *Lunyu* 11.22. Translation from Ames and Rosemont (1998), 146-147.
[246] See, for example passages 4.1, 4.2, 4.7, 6.22, 6.23, 9.29, 12.22, 14.28, 15.33, and 17.8.
[247] Hall and Ames (1987), 44.
[248] Ibid., 45.

of these activities. *Xue* is the way in which persons fully participate in culture, not just the means of becoming conceptually familiar.

Although not valued as highly as education, 思 *si,* "reflecting", represents an important part of the process of thinking.[249] The importance of proper harmony between *xue* and *si* is found in *Lunyu* 2.15.

> The Master said: "Learning without due reflection leads to perplexity; reflection without learning leads to perilous circumstances."[250]

Hall and Ames elucidate: "[W]e shall argue that [Confucius] held thinking to involve both the acquisition and entertainment of existing meaning and the creative adaptation and extension of this meaning to maximize the possibilities of one's own circumstances."[251] In interpreting 2.15 in this context, they continue: "The point here is that if one simply learns without reflecting critically upon what one is learning, one will fail to act 'properly,' that is, to personalize what is learned in such a manner as to make it appropriate and meaningful in one's own unique circumstances."[252] The back and forth between *xue* and *si* provide the context for understanding what it means for someone to 知 *zhi* or for someone to be described as 知者 *zhizhe*. Learning and reflection provide the space within which one has enough cultural ground to stand on so that one may interpret and creatively engage cultural norms to resolve contemporary problems. It is from common culture and concerns that one is most able to affect one's community. *Zhi* is

[249] See, for instance, *Lunyu* 15.31, where Confucius states that he wasted time reflecting (思 *si*) with no benefit, and in hindsight he should have spent it learning (學 *xue*).
[250] *Lunyu* 2.15. Translation from Ames and Rosemont (1998), 79.
[251] Hall and Ames (1987), 47.
[252] Ibid., 47-48.

connected to 信 *xin* in a similar way; *zhi* always involves articulating what one knows through *xue* and *si* and determining the world in some way, and *xin* always involves the directedness of how one should articulate and determine the world with and in front of others. This should not come as a surprise, given the structure of the classical Chinese language as action-guiding, as discussed earlier. It is for this reason Ames and Hall, as well as Rosemont, translate 知 *zhi* as "realize" (both in the sense of "coming to understand" and in the sense of "making real"), and 信 *xin* as "living up to one's word" that also involves "effecting sociopolitical truth".[253]

Zhi is used in several different ways within the *Lunyu*. Rosemont conveniently organizes these into roughly three different senses of *zhi*, senses to be distinguished but not necessarily seen as completely distinct from one another. These three instances are uses of *zhi* that translate as "acknowledged", uses of *zhi* that translate well as "realize", and uses of 不知 *buzhi* that translate as negative claims. *Zhi* as "acknowledge" or "being known-of" is awkward if rendered as "realize", but it is still accompanied by the social dimension of knowledge. If *xin* involves "living up to one's word" then the social dimension of being known illuminates the connection – one can only be known for their actions within a social context. Confucius warns his students away from social relativism, however, by noting that it is not whether or not others know you, but rather that you are aware of others who are well-known. It is more important to be situated within culture rather than to simply desire something like fame. *Zhi* as "realize" works in a variety of passages, but passage 2.17 in particular captures the extra depth added above and beyond

[253] Ibid., 60.

the simple translation of "to know". In their translation of the *Lunyu*, Ames and Rosemont jointly translate the passage:

> The Master said: "Zilu, shall I teach you what wisdom (*zhi*) means? To know (*zhi*) what you know (*zhi*) and know (*zhi*) what you do not know (*zhi*), is wisdom (*zhi*)."[254]

Rosemont offers another translation to demonstrate the fuller meaning of the original Chinese as action-guiding.

> The Master said: "Zilu, shall I teach you what realization (*zhi*) means? To make real (*zhi*) what you have realized (*zhi*) and to realize (*zhi*) what you have not yet made real (*zhi*), is realization (*zhi*)."[255]

This translation conveys both the action guiding role of *zhi* compared to the more passive, mental association with "to know" in English and the way in which the action guiding nature of classical Chinese elides the distinctions between 'knowledge' and 'wisdom'. Lastly, expressions of not knowing, of *buzhi*, use *zhi* in the sense of "acknowledge" (1.1, 1.16) to express doubts or lack of awareness about something being the case (for instance, whether or not Zilu, Ranyou, or Zihua are *ren* in 5.8), or the inability to realize something (3.11).

Developing an educated disposition is the first step to realizing the best way to fulfill one's roles, including those of family, friendship, and government. The 道 *dao* for Ruists is education as a path of cultivation. In particular, thinking as education, reflection,

[254] Ames and Rosemont (1998), 79.
[255] Rosemont (2011), 19.

knowledge/wisdom and living up to one's word are the basis by which the *Book of Songs* and the *Book of Rites* turn from cultural artifacts into families, communities, and governments that can realize (in both senses of the word) social harmony in times such as droughts, famines, and economic inequality. The values that come to the fore in Ruist considerations in particular are therefore tied to the ability to successfully apply the wisdom of the past to the problems of the present. 禮 *li*, translated by Ames and Rosemont as "observing ritual propriety", captures this dimension of the application by including not only simple ritual orthopraxy, but also the proper intention during, or perhaps developed through, performative acts. Similarly, 仁 *ren*, translated as "authoritative conduct/person" or "to act authoritatively", is connected to the authoritativeness one has by way of successfully embodying the values of the culture, often through engaging in *li*. 義 *yi*, translated as "appropriate" or "fitting", includes the internalization of cultural values; it "is one's sense of appropriateness that enables one to act in a proper and fitting manner, given the specific situation."[256] *Li*, *ren*, and *yi* are all different facets of the same politico-social project, and *zhi* serves as the combination of cultural knowledge acquired through education and the use of such an education, through reflection, to successfully apply one's educated, and thereby cultivated, sensibilities to bear on the particular concerns of the present. Although brief, considering the Ruist project here shows that their epistemological concerns are deeply embedded and inseparable from their ethical concerns because all are focused on pragmatic action-guidance.

[256] Ames and Rosemont (1998), 54.

3.2 Mozi

With accretion texts, it is difficult to pinpoint exactly when different works are written concurrently or in response to each other. It is clear that the《墨子》 *Mozi* is responding to Ruist conventions and concerns, but it is not necessarily clear that it is responding only to the *Lunyu* and Confucius. For the present purpose, this is not a huge point because the *Lunyu* still represents a mode that Ruists engaged in to justify, propagate, and make sense of their conventions and concerns. Master Mo himself appears to have been an artisan or craftsperson of some sort, of low social status, and driven by utility rather than culture. The school of thought that arose around him therefore persuades through examples from trade skills and argues for a different ethical and political program from the Ruists.

Many of the persuasive moves of the text are done in ways similar to the *Lunyu*. The *Mozi* makes use of parallel structures, appeals to the authority of the past and to important cultural texts, and preserves the sayings of a teacher-figure.[257] Despite this, it is clear that the Mohists were in direct disagreement with the Ruists; one part of the *Mozi* is even titled *Fei Ru*, "Denying the Ruists", and thus is explicitly against the Ruist position. These disagreements take the form of appealing to counter-examples.

> The Ruists say: "The exemplary man must dress and speak like the ancients so as to become authoritative in conduct." It must be said [in reply]: "What is called 'ancient' was once new to everyone and when those of ancient times spoke it or wore it, they were therefore not

[257] For instance, the *Mozi* cites selections from the *Book of Songs* 5 times in Mozi Books 2-9 as positive evidence for its claims, and often references historical authorities such as King Wen and Wu. The title of the text is also indicative of the authority placed in the sayings of the teacher Master Mo.

> exemplary men. So does one really have to wear what the exemplary person wears, and one speak what the exemplary person speaks before being considered authoritative in conduct?[258]

The *Mozi* is offering a counter-example here against a Ruist attempt to justify an apparently circular argument about appeals to the authority of the past. Being authoritative in conduct cannot be a result of wearing clothes of the past and speaking like those in the past because at some point the clothes and speech were new. If they were new at some time, then they could not have been themselves relying on the speech and the clothes of the ancients, so therefore the ancients would not qualify as exemplary persons. Thus, the account of how to act prescribed by the Ruists, according to the Mohist argument, does not match up with how the exemplary ancients could have become exemplary or authoritative in the first place. The *Mozi* is full of arguments against particular ways of living attributed to Ruists, many of which are found in the titles of the text, such as the 節葬 *Jiezang* "Thrift in Funerals" sections, the 非樂 *Feiyue* "Against Music" sections, and the 非命 *Feiming* "Against Fatalism" sections.

The disagreements between the Ruists and the Mohists rely on the common assumption that language usage plays an important role in guiding action and is deeply connected with social convention. *Zhi* will therefore be tied up in the Mohist ethical and political project in much the same way as it is for the Ruists. The Mohists identify Ruist

[258] 儒者曰：「君子必服古言然後仁。」應之曰：「所謂古之言服者，皆嘗新矣，而古人言之，服之，則非君子也。然則必服非君子之服，言非君子之言，而後仁乎？」*Mozi*, Book 9, *Feiruxia* section 4. Referenced from *Mozi yinde* 墨子引得 *(A Concordance to the Mo Tzu)* (1966), 63. My concordance references are all from Sturgeon (2011). The translation is mine.

appeals to social convention as a standard for conduct to be a problematic basis for a well ordered society, and therefore they are engaged in criticizing the Ruist appeal to *li* and *ren* and at the same time identifying an alternative to ground language usage and social convention itself. In the Mohist project, the use of action guiding language is structured around the search for standards to guide action and organize society, standards which they find in *fa*, 'models' or 'standards', instead of the ritual-based standard of Ruist *li*. Thus, one of the main criticisms by the Mohists against the Ruists is putting too much authority in social convention. Instead, Mohists are interested in a project of improving language usage through a process of 辯 *bian*, disputation, translated by A. C. Graham as "arguing out alternatives," the two alternatives of which are 是 *shi* and 非 *fei*, or "is this" and "is not".[259] The Mohists are making more explicit the evaluation of alternative linguistic accounts of how one should act, for instance by appealing to *fa* (models), rather than making what they often see as appeals to convention.

Fa are themselves justified by way of three bases: 本 *ben*, 原 *yuan*, and 用 *yong*. A *ben* is an origin or a root, in this case an origin in the actions of the ancient sage kings; a *yuan* is a source, in this case a source of verification through what people commonly hear and see; a *yong* is the usefulness of something in terms of 利 *li* ('utility' or 'benefits'), in this case the practical value of a policy in terms of *li* for the government or the people.[260] Chris Fraser summarizes how this structures Mohist arguments.

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[259] (Graham, Disputers of the Tao 1989, 36).

[260] This comes from *Mozi*, Book 9, *Feimingshang*, section 2. "子墨子言曰：「有本之者，有原之者，有用之者。於何本之？上本之於古者聖王之事。於何原之？下原察百姓耳目之實。於何用之？廢以為刑政，觀其中國家百姓人民之利。此所謂言有三表也。」" Referenced from *Mozi yinde* 墨子引得 *(A Concordance to the Mo Tzu)* (1966), 56-57. A. C. Graham and Chris Fraser both note that this passage is a

> The Mohists regularly appeal to these three criteria when justifying their core doctrines. … In arguing against fatalism, for example, they contend that (1) historical examples show that security and order depend on government policy, not fate: the ancient sage kings achieved peace and security under the same social conditions in which the tyrants brought turmoil and danger. (2) No one has ever actually seen or heard fate. (3) Fatalism has detrimental social consequences: If people listen to the fatalists, they will devote no effort to being virtuous or industrious. … Similarly, in arguing for the existence of ghosts and spirits who reward the good and punish the wicked, the Mohists point out that (1) the sage kings all venerated the ghosts and spirits; (2) countless well-known stories report cases in which ghosts have been seen and heard; and (3) the teaching that ghosts and spirits reward the worthy and punish the wicked has beneficial social consequences, as fear of punishment will deter people from wrongdoing.[261]

These three bases also apply to simpler examples. One of the most often cited examples of a *fa* is the use of compass to determine whether something is a circle or is not a circle,

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metaphorical discussion that relates directly to *fa*, but is literally about three 表 *biao*, or three gnomons, poles which cast shadows for the sake of measuring the location of the sun.

[261] Fraser, "Mohism" (2014). I am hesitant about some of the terminology Fraser uses in his discussion of Mohist epistemology, e.g. discussions of implicit notions of reliability and standards of justification, because they pre-structure the reading about knowledge in terms of a narrow, 20th century approach to knowledge. This is not to say that Fraser reading of the *Mozi* is completely unreliable, but only that for the sake of this project I will attempt to avoid incorporating these terms even though he uses them. Despite his use of contemporary Western epistemological categories, he does still hold that the Mohist project is about competency and skill rather than an analysis of states. See Fraser, "Knowledge and Error in Early Chinese Thought" (2011).

or the use of a carpenter's square to determine if something is square or is not square.[262] Imagining a trade skill that one learns from another, there is certainly a *ben* attached to historical authority. Many of the ancient sage kings of China are attributed with developing trade skills themselves, as seen in the *Xici* commentary of the *Yijing*, which lists the various sages associated with important landmark developments of trades associated with civilization, such as Fuxi and the development of hunting and fishing, Shennong and the development of agriculture, and so on.[263] The ease of seeing for oneself whether or not a frame is square when gauging with a carpenter's square provides a common *yuan*. The utility of quality craftsmanship versus shoddy work is also easily and quickly visible when one's work is tested: if the door shuts in its frame successfully, then clearly the model or standard is *yong*.

Where the 道 *dao* for Ruists focused on education—an internalization of cultural fluency—as the first step to political and social efficacy, the 道 *dao* for Mohists is focused on disputation—an application of standards for language use—as the skill that allows one to distinguish effective social relations and governmental policy from non-effective. The *Lunyu* reflects a concern about the characters of the master and the students, but the *Mozi* is concerned about the reasons that make the claim itself better. With respect to *zhi*, the phrase 何以知 *heiyizhi*, "how does one know" or "how would one realize", is used frequently in the text to signpost the support for the argument, especially in books two through nine, the books that contain the major doctrines of the school. All of these instances are pragmatic concerns because of the action-guiding

[262] *Mozi*, Book 1, *Fayi*, section 1.
[263] Rutt (2002), 421-422.

nature of what it means to be offering a *dao* in the first place. The use of the phrase *heyizhi* is part of a shift the Mohists are making towards an explicit project of reflective language usage grounded in the utility of the practice the language prompts or promotes. Because the Mohists provide reasons for their use of normative terms, and reasons to avoid the Ruist use of terms, this changes the way in which interschool discourse unfolds. Mohist responses and alternatives to Ruist accounts are evidence of the emergence of a rich philosophical environment evolving in early classical China.[264]

3.3 Mengzi

The《孟子》*Mengzi* is another Ruist classic, reaching the height of its influence during the Song Dynasty (960-1279CE) when it was designated by the Neo-Confucian 朱熹 Zhuxi (1130-1200 CE) as one of the Four Books with which all educated persons should be familiar. The master of its title, Master Meng (372-289 BCE), lived during the Warring States period. It makes use of similar sources of authority and similar stylistic uses of language as the *Lunyu*, and, like the other early Chinese texts discussed, it is also an accretion text and it does not offer any epistemology distinct from it ethical concerns. It does, however, represent an interesting development in Ruist style of argument by engaging the arguments of others directly, including Mohist arguments.[265] As a Ruist response to alternatives, then, the *Mengzi* represents the development of a philosophical mode of discourse, as well as another point of reference for an epistemology rooted in concerns about practical conduct.

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[264] The Mohist school continues to develop a richer account of disputation (辯 *bian*), as seen in Graham, *Later Mohist Logic, Ethics and Science* (1978). Unfortunately, much of the text we *do* have is highly corrupt. While consideration of later Mohist work does add an additional nuance to the history of early Chinese philosophy, it is not necessary in this rough sketch.

[265] A. C. Graham notes that this has to do with the debates between groups facilitated by the various Kings of different states at the "Jixia Academy" Graham (1989), 112.

The *Mengzi* as a text makes use of the mytho-historical figures common to both the Ruists and Mohists, but denies the Mohist interpretation because it does not fit with the goals of the sage kings. Mengzi sees Yao and Shun, both sage kings of the earliest times, as organizing the world so that sons respected fathers and vassals respected princes. After Yao and Shun died, society began to degrade and the 道 *dao* that organized the world "fell into obscurity," as illustrated by the occurrence of the worst possible sins against rulers and fathers: regicide and patricide.[266] In support of this reading, he makes reference to the《書經》*Book of Documents*, and the *Book of Odes*, as well as to Confucius himself. The two major competitors in the practical realm of political and ethical advice are dangerous because they continue the trend of causing the social chaos that resulted in losing the order of Yao and Shun. Mengzi argues that

> the words of Yang Zhu and Mo Di fill the empire. The teachings current in the empire are those of the school of Yang or the school of Mo. Yang advocates everyone for himself, which amounts to denial of one's Prince; Mo advocates love without discrimination, which amounts to denial of one's father. To ignore one's father on the one hand, and one's prince on the other, is to be no different from the beasts.[267]

Appeals to authority were no long sufficient, however, given the more nuanced criticisms within the Mohist style of disputation. This is why Mengzi identifies what he is engaged in as 辯 *bian*, disputation, even though he seems to be engaged in disputation only reluctantly.

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[266] *Mengzi*, IIIB.9. Translation from (Lau, *Mencius* (1970), 72.
[267] *Mengzi*, IIIB.9, Translation from Lau (1970), 73.

> I wish to safeguard the way of the former sages against the onslaughts of Yang and Mo and to banish excessive views. Then there will be no way for advocates of heresies to arise. For what arises in the mind will interfere with policy, and what shows itself in policy will interfere with practice. … I am not fond of disputation, but I have no alternative. Whoever can, with words, combat Yang and Mo is a true disciple of the sages.[268]

Mengzi's goal is not to perfect disputation or offer the best possible argument, but to continue the socio-political work of the sages: organize society through a 道 *dao* that allows people to prosper. The context of convincing others about what such a *dao* looked like, however had changed; Mengzi could not help but engage in disputation.

An example of disputation that cuts very close to Mohist 法 *fa* is found in Mengzi's analogical arguments with Gaozi about 性 *xing*, the natural dispositions of humans, often translated as "human nature". The importance of the Mengzi-Gaozi debates in this case is not whose account is more accurate, but rather the structure of the debates themselves, a structure which reveals a more careful and sustained examination of competing analogies than found in the *Lunyu*. In one of Gaozi's analogies, he compares human *xing* to water.

> Give it an outlet in the east and it will flow east; give it an outlet in the west and it will flow west. Human nature does not show any preference

[268] *Mengzi*, IIIB.9. Translation from Lau (1970), 74.

> for either good or bad just as water does not show preference for either east or west.[269]

Mengzi's reply reorients the analogy in order to create a better fit between his account of the natural human disposition as good and flowing water.

> [W]ater does not show any preference for either east or west, but does it show the same indifference to high and low? Human nature is good just as water seeks low ground. There is no man who is not good; there is no water that does not flow downwards. Now, in the case of water, by splashing it one can make it shoot up higher that one's forehead, and by forcing it one can make it stay on a hill. How can that be the nature of water? It is the circumstances being what they are. That man can be made bad shows that his nature is no different from that of water in this respect.[270]

Book VIA is full of other examples of disputes about *xing* that take the form of sustained analogical arguments. Although metaphor and analogy are not uncommon, sustaining a focus on the analogies themselves is part of a qualitative change in Ruist disagreements with their opponents. Such a change is itself a result of responding directly to those very opponents.

Despite the focus on analogies, however, the Mengzi-Gaozi debates do not contain any of the technical language of the Mohists. For instance, there is no mention of the term 法 *fa* as a standard for resolving disputes or as a basis for understanding 道 *dao*

[269] *Mengzi*, VIA.2. Lau (1970), 122.
[270] Ibid.

anywhere in the considerations of good analogies in Book VI. The integration of disputation into Ruist arguments is not a wholesale activity, but rather a piecemeal process of taking what works in discourse to support their own interpretation of organizing society. One of the biggest similarities between Mohist writings and Book VIA of the *Mengzi* is at the end, where Mengzi mentions the importance of regulative tools that provide common standards (e.g. squares and compasses) as the common basis for teaching carpentry.[271]

The connection between 知 *zhi* and the ethical project of the *Mengzi* is clearest in the role of the closely related term 智 *zhi*, which serves as one of the four key concepts that structure Mengzi's account of human flourishing. All humans start with four inchoate sprouts or hearts: one each of compassion, of shame, of deference, and of the ability to affirm and deny.[272] With care and cultivation, these seedlings come to fruition as a person becomes 仁 *ren* (authoritative in conduct), 義 *yi* (appropriate), 禮 *li* (observant of ritual propriety), and 智 *zhi* (wise).[273] By referring to the hearts of these concepts as sprouts, the *Mengzi* is invoking a cultivation metaphor; to grow these sprouts requires creating the right conditions for them to thrive. Similarly, even though these are starting points for all humans, they can be lost through neglect and poor environment.[274] Because 智 *zhi* is identified as one of the four desired outcomes of personal cultivation,

[271] "In teaching others, the master carpenter naturally does so by means of compasses and the square, and the student naturally also learns by means of compasses and squares." *Mengzi*, VIA.20. Translation from Lau (1970), 132.
[272] *Mengzi*, Book IIA6.
[273] Ibid.
[274] See, for instance, Book IIA2, or 6A13 for more plant related metaphors of self-cultivation.

and as an etymologically close word to 知 *zhi*, the *Mengzi* further reinforces the blurred boundary between the epistemological and the ethical in early Chinese philosophy.[275]

> 智 *Zhi* is described in Book VB1, where it is compared with skill in archery.
>
> Wisdom [智] may be compared to skillfulness. Sagacity may be compared to strength. It is like shooting an arrow from beyond a hundred paces: its making it there is due to your strength, but its hitting the bull's-eye is not due to your strength. [276]

Kwong-Loi Shun reads the skillfulness of 智 *zhi* in the archery metaphor as being able to "adjust one's aim according to the circumstances, such as wind direction" and that, in terms of wisdom, "forming proper directions of the heart/mind requires an ability to adjust one's behavior according to circumstances."[277] This is involves the ability to 權 *quan*, to weigh the situation, and thereby act in the best way. *Quan* is not a simple application of rules, but a personal judgment based on the particulars of the situation and one's place and perspective therein.[278]

The epistemological and ethical success rate of one who is 智 *zhi* is by no means perfect. In 2B9, Mengzi is confronted with the Duke of Zhou as an example of someone who is sage yet still makes mistakes.

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[275] In Book IIA7 and IVA27, the interconnection between 智 *zhi* and the other four concepts is also reinforced.
[276] *Mengzi,* 5B1. Translation from Van Norden, *Mengzi* (2008), 133.
[277] Shun, *Mencius and Early Chinese Thought* (1997), 68.
[278] Shun (1997), 69-70.

> [Chen Jia] asked, "What sort of person was the Duke of Zhou?"
>
> Mengzi said, "He was an ancient sage."
>
> Chen Jia asked, "Is it the case that he assigned Guan Shu to oversee the Shang, and Guan Shu revolted with them?"
>
> Mengzi said, "That is so."
>
> Chen Jia asked, "Did the Duke of Zhou know that he was going to revolt when he assigned him?"
>
> Mengzi said, "He did not know."
>
> Chen Jia said, "In that case, can even a sage have faults?"
>
> Mengzi said, "The Duke of Zhou was the younger brother to his older brother Guan Shu. Was the Duke of Zhou's mistake not, after all, appropriate? Furthermore, when the gentlemen of ancient times made a mistake, they corrected it. When the gentlemen of today make a mistake, they stick to it. … The gentlemen of today do not only stick to their mistakes, they even rationalize them."[279]

Mengzi points out the importance of continued concern for relations and a sustained effort at doing the right thing. Even without knowledge (知 *zhi*) about the state of the world or what the future will bring, one can still be a sage. This is because the epistemic concern of the *Mengzi*'s account of *dao* is cultivating one's innate dispositions, the four sprouts, so that one has the wisdom (智 *zhi*), or knows *how* to navigate particular

[279] *Mengzi*, IIB9. Translation from Van Norden (2008), 57-58.

situations to their best outcome. Thus, those who really are 智 *zhi* take advantage of the natural proclivities of things.[280]

3.4 Zhuangzi

Where the Mohist-Ruist debates were extremely influential in shaping the structure of early Chinese philosophical discourse, the *Zhuangzi* shapes much of China's aesthetic standards and idiomatic expressions. Many of these idiomatic expressions survive in contemporary Mandarin as 成语 *chengyu*, four-character idioms, and the influence of the *Zhuangzi*'s aesthetic can be seen in poetry in China and Japan. [281] Although the text is traditionally attributed to Zhuangzi, Master Zhuang, it is widely accepted that mostly only the first seven chapter of the text, the "Inner Chapters", are from his brush. More recent scholarship challenges even this notion, arguing that based on linguistic analysis, even the inner chapters appear to be from multiple authors.[282] Either way, the notion of multiple authorship creates some tensions in any interpretation, given that looking for consistent, coherent arguments often presumes that there is a single thesis. Given the existence of multiple authors, and in many cases even the appearance of multiple and disparate theses, the best way to unite the pieces of the text is to treat them as poetic riffs on similar topics and themes. One of the benefits of this approach is that it brings into relief the tensions and the topographical differences of different portions of the text, making the reader think through the languaging of any given issue him or herself.

[280] *Mengzi*, IVB26.
[281] For examples of this influence see Qiu, *Basho and the Dao* (2005), especially the chapters one and four on the relationship between Chinese and Japanese aesthetics.
[282] See McCraw, *Stratifying Zhuangzi* (2010).

The aesthetic dimensions of the text often work to violate expectations and challenge social conventions. For instance, Confucius appears in some passages as the hero of the story and in others as the subject of ridicule. Even the alleged author Zhuang Zhou appears in both kinds of roles, pointing out a deep sense of play within the text. Conceptually, this is captured by the notion of 遊 *you*, wandering or roving, often done in the company of friends, and the titular topic of the first chapter of the text, 〈逍遙遊〉 *Xiaoyaoyou* "Free and Easy Wandering". The importance of a world that is in constant transformation (化 *hua*) is touched on from the very beginning of the book in the story of a huge fish that turns into the gigantic mythical *peng* bird, a creature so large it causes the seasonal changes between dry and wet just by taking flight. This theme of dealing with transformation is returned to frequently in the text, and the best response to it is always a rambling playfulness, even though this play does not exclude seriousness. In one story, a man stops by to see his death-bed bound friend and together they wonder about the possible transformations he will go through.[283] In another, Zhuang Zhou is visited after the death of his wife, he is found drumming on a pot and singing because he has come to understand how his wife was and continues to be part of a series of transformations.[284] In yet another, Zhuang Zhou himself is dying, but he dissuades his disciples from making a coffin, despite their protests that birds will eat his body. He says that even in the ground with a casket he will be eaten by insects. "You rob the one of them to give to the other ;

[283] Graham, *Chuang-Tzu: The Inner Chapters* (1981), 87-89.
[284] Ibid., 123-124.

how come you like them so much better?"[285] Meaning making, even sober meaning, always involve play, and just as often involves play with others.[286]

The text is even self-referential in this regard, commenting on its attributed author and the ways in which he uses language. In the last chapter of the text, it describes Zhuang Zhou as thinking "that 'spillover' saying lets the stream find its own channels, that 'weighty' saying is the most genuine, that saying 'from a lodging-place' widens the range."[287] This reference is to the earlier section in which the text describes these three uses of language. The meaning and significance of words when using language "from a lodging-place" relies on the particular perspective one has taken. Some positions have value because they are impartial, such as that of a third-party judge, or because they are less likely to be selfishly biased, such as a stranger speaking well of one's family members rather than oneself. Using language that is 'weighted' based on the heft of the authority of experience and expertise involves appealing to the experience or expertise of anyone from venerable sages to oneself, but this can go wrong if one does not actually have the qualifying experience or expertise. 'Spillover' language gains its name from a type of cup which was weighted such that it would empty itself when filled past a certain point, then turn itself upright again after emptying. These last kinds of words are identified with a playfulness with everyday language in which the efficacy of language is based on each particular usage. Taking such words as universal or fixed would be to miss the way in which they are deployed. In some instances, they will be false; in other

[285] Ibid., 125.
[286] For more on the important role of relationships in play and meaning making, see Ames, Knowing in the Zhuangzi: 'From Here, on the Bridge, over the River Hao" (1998).
[287] Graham (1981), 282-283.

instances, they will be true. Successful deployment is therefore about wandering within such meanings and finding the words that fit the situation but not fixating on those words.

The stress on the aesthetic and the distrust of language here is because the *Zhuangzi* is very critical of the logic and standards of discourse between schools of thought at the time. This is most clearly reflected in its criticisms of the debates between the Mohists and the Ruists.

> Saying is not blowing breath, saying says something; the only trouble is that what it says is never fixed. Do we really say something? Or have we never said anything? If you think it different from the twitter of fledgelings, is there proof of the distinction? Or isn't there any proof? By what is the Way hidden, that there should be a genuine or a false? By what is saying darkened, that sometimes 'That's it' and sometimes 'That's not'? Wherever we walk how can the Way be absent? Whatever the standpoint how can saying be unallowable? The Way is hidden by formation of the lesser, saying is darkened by its foliage and flowers. And so we have the 'That's it, that's not' of Confucians and Mohists, by which what is *it* for one of them for the other is not, what is *not* for one of them for the other is. … No thing is not 'other', no thing is not 'it'. If you treat yourself too as 'other' they do not appear, if you know of yourself you know of them.[288]

[288] Ibid., 52.

In order to make a distinction between the mutually exclusive stances of the Mohists and the Ruists, for example on their approach to music, one would have to decide that one had the complete *dao*. This turns out to be a problem, however, because the world is frequently not as mutually exclusive as our language makes it out to be. Steve Coutinho argues this when he points out that the *Zhuangzi* is prompting its reader to recognize this when relying on language. "If we want to see how something may be other to itself, we will not get far if we insist on looking at examples of things that are clear cases of reference… Looking at clear cases of what is affirmed will only confirm our suspicions that affirmation and denial are mutually exlusive."[289] Instead, by juxtaposing what is affirmed with what is denied, and vice versa, the brittleness rigidness of argumentative language is revealed against a transforming world.

The distrust of rigid or unflexible language is also central to the *Zhuangzi*'s approach to knowledge. The "that's it" and "that's not" claims that the Mohists and the Ruists make are knowledge claims about a *dao,* the way persons should live their lives and the way kings should govern. The *Zhuangzi*'s approach to the *dao* and knowledge is best captured by the connection to *zhi* and *buzhi*. When Confucius states at various points in the *Lunyu* that he does not know, he is frequently making polite negative statements about another person's conduct: "He may be an effective official, but I do not know if he is 仁 *ren*." In the *Zhuangzi*, however, any claim to *zhi* that is supposed to be exhaustive needs to be accompanied with *buzhi*, a not-knowing that comes out of understanding the way meaning arises within a constantly transforming world. This *buzhi* is different from the *buzhi* as it used in the *Lunyu*. This is why spillover words and *you* are so important to

[289] Coutinho, *Zhuangzi and Early Chinese Philosophy* (2004), 163.

making sense of the text's criticisms of knowing. *Buzhi* is accomplished by change in perspective and scale rather than straight disputation, and these occur when the text affects the reader through jarring and jolting her complacency with meaning. If some idea seems too unwieldy, the reader is encouraged to know from fantastic places such as "the realm of Nothingwhatever" where Zhuangzi tells Huizi to plant his huge tree when the latter complains of its uselessness.[290] The text plays with assumed standards when it discusses juxtaposing classic examples of large and small with each other, urging one to "know that heaven and earth amount to a grain of rice, that the tip of a hair amounts to a hill or a mountain" as a way to understand the importance of perspective.[291] Thus, playing with perspective is important to realizing the limits of any particular point of view. Perspective is at its best when it is like the center of a potter's wheel where alternatives are equally available for consideration and can be taken up based on their efficaciousness.[292] The *dao* of the *Zhuangzi* is therefore concerned with a realization of the impact *hua* has on how one operates in the world, especially when one "rounds off the square" but assumes he or she has the whole picture. The best way to adapt to the impossible project of knowing all things is by not-knowing.

3.5 Xunzi

The《荀子》*Xunzi,* which tradition says was authored by Master Xun (b. 310 BCE), is in many ways the most sophisticated of the texts covered up to this point. It draws upon each of the other texts mentioned thus far and interweaves their perspectives piecemeal, providing a comprehensive, yet decidedly Ruist, account of a variety of topics.

[290] Graham(1981), 47.
[291] Ibid., 146.
[292] Ibid., 54.

The text appeals to the same ancient sage-kings as the *Lunyu*, the *Mozi*, and the *Mengzi*; it directly refers to Confucius as a source of authority; it makes use of Mohist-influenced styles of disputation; and, even though it offers a different account, it continues the debates about 性 *xing* found in the *Mengzi*. Additionally, it draws on many of the same references and even parallels some of the language found in the *Zhuangzi*.

The *Xunzi* does represent a particular argumentative style that is worth mentioning, though. In considering the many alternative accounts of the *dao*, the text notes that the problem with these other schools and masters is not that they are completely incorrect, but simply that they are incomplete while they purport to be complete.

> In the past, there was the blindness of senior retainers, of which the disordered schools are examples. Mo Di was blinded by utility and was insensible to the value of good form.… Hui Shi was blinded by propositions and was insensible to realities. Zhuang Zhou was blinded by Nature and was insensible to men…. Each of these methods encompasses but a single corner of the Way. But the Way itself is constant in its form yet completely changeable. One corner is an insufficient basis for drawing conclusions about it. Men with knowledge of some small point gaze upon their single corner of the Way and are never able to recognize that it is only a small corner. Thus, they consider it sufficient and proceed to

> embroider upon it. Within they bring disorder upon themselves; without they cause others to be deluded.[293]

The text is thus arguing that it encompasses a broader, more inclusive and complete view than any of its intellectual competitors. This is also a general standard one should hold toward one's education and learning, as the text notes when it says, "Just as the value of Heaven is to be seen in its brilliance and that of Earth in its vast expanses, so the gentleman is to be valued for his completeness."[294]

The focus on education as cultivation is one feature that makes the text decidedly Ruist. The concern the *Xunzi* shows for 正名 *zhengming,* proper naming, represents a Ruist response to the *Zhuangzi's* concerns about change and language. The role of education is to prepare someone to respond to a variety of social and political circumstances, and proper naming uses education, especially the education in proper conventions, to keep language appropriate for guiding society on the *dao*. Both of these are possible because of the clear limits placed on the field of study, limits that are necessary if one ever expects to be able to accomplish anything.[295] Thus, A. S. Cua describes Xunzi's project as search for both linguistic and ethical propriety.

> In propounding his doctrine of rectification of terms, [Xunzi], like Confucius, is mainly concerned with the problem of a morally well-ordered society, with the uniformity of human conduct under the

[293] *Xunzi*, 21.4. Translation from Knoblock, *Xunzi: A Translation and Study of the Complete Works, Volume III* (1994), 102-103. Also, note the similarities of this overview of Chinese philosophers and that which occurs at the end of the *Zhuangzi*, both of which use language about partial grasps of the *dao* rather than evaluations based on truth or falsity.
[294] Xunzi, 1.14. Translation from Knoblock, *Xunzi: A Translation and Study of the Complete Works, Volume I* (1988), 142.
[295] See *Xunzi* 2.8 and the beginning of 21.9.

> government of a sage king or morally enlightened political authority. Rectification of terms is ultimately a matter of rectification of moral faults and misconduct and not merely a matter of avoidance of logical or linguistic errors. Thus, from the point of view of its ethical objective, the doctrine may be construed as a method for diagnosis and remedy of moral faults.[296]

Although his language is filled with references to Western philosophical categories, Cua's point regarding the *Xunzi* is that if the process of acting in the best way for oneself and one's community must always be grounded on proper languaging, and the proper-ness of such languaging comes from those who are educated. By ignoring the social, human-focused order in favor of the natural, heaven-focused order, so the argument goes, the *Zhuangzi*'s skeptical attitude about language does not account for the historical success of civilization and the education that keeps it going. Education plays a role in keeping language well justified, while language plays a role in ordering the social and political world, and thus the *Xunzi* identifies itself squarely in the Ruist camp.

Knowing in the *Xunzi* is fixated on the same process of discriminating via *shi* and *fei* that has had a place in Warring States philosophy since the *Mozi.* The process of discrimination involves distinguishing when to use language properly, an ability that is required in order to make use of language. The basic starting point of the *Xunzi*, much like the *Mengzi,* is therefore grounded in an account of 性 *xing*, basic human tendencies and capacities. These are manifested in the human ability to interact with the world via

[296] (Cua 1985, 1).

our heart-minds, sense-organs, and the features of things in the world. It is by the interactions of these things that humans can 知 *zhi.* Of course, in this context, it is crucial not to import Western epistemological concepts related to perception or knowledge. Fraser notes that

> Xunzi's theory of perceptual knowledge assigns no role to anything comparable to the Cartesian-Empiricist notion of ideas or impressions, nor to any other form of epistemic or psychological intermediary. The text's theoretical framework comprises only features of things–such as shape, sound, sweetness odor, or heat–the sense organs, which differentiate these features, and the heart, which employs the sense organs to "verify" or recognize them.[297]

The ability to avoid the blindness that occurs in other schools and to actually know the *dao* comes from cultivating the 心 *xin,* heart-mind. *Zhi* is very much an action in this context, and successful action requires training. "What do men use to know the Way? I say that it is the mind. How doe the mind know? I say by its emptiness [虛 *xu*], unity [壹 *yi*], and stillness [靜 *jing*]."[298] By cultivating these three aspects of the heart-mind, a person can be more accurate in his or her knowing. *Xu*, emptiness of heart-mind, is the limitless ability to continue interacting with the world yet not become filled up. Cultivating *xu* allows one to avoid the bias of past experience and thereby to be receptive to the world.[299] *Yi*, unity of the heart-mind, is the ability of the mind to consider two

[297] Fraser (2011), 12.
[298] *Xunzi* 21.5d, Translation from Knoblock (1994), 104-105.
[299] *Xunzi* 21.5d . "Not allowing what has previously been stored to interfere with what is being received in the mind is called emptiness." Translation from Knoblock (1994), 104.

things at the same time and distinguish their differences while at the same time not become overwhelmed by the multiplicity of the world. Cultivation of *yi* therefore allows one to distinguish and maintain an understanding of differences.[300] Lastly, *jing,* stillness of the heart-mind, is the constant involvement of the mind with concerns, whether serious or fantasy. Cultivation of stillness allows one to remain still despite the involvement of the heart-mind, thereby avoiding the blindness that accompanies being overly invested in a situation. Because all of these features of the heart-mind relate to knowing the *dao*, they apply not to propositional forms, or even merely to processing sense data, but to the larger and richer project of navigating social and political situations.

3.6 Justifying Chinese Philosophy and Epistemology

While the above sketch of these five texts is by no means exhaustive, it is sufficient for demonstrating the complexity and richness of argumentation and the depth of conceptual relations in early Chinese thought. At the beginning of this chapter, I introduced Rosemont's argument about concept clusters, which illustrate that any translation, and thereby interpretation, of another culture's work must preserve the connections between concepts by accounting for the relationships between major lexical elements. This grounds the consideration of another culture's account of the world within that culture's language and standards without forgoing all evaluative consideration of the efficacy of the clusters themselves. In this case, the complexity and richness of both the concept clusters *and* the ways in which the clusters themselves are supported through persuasion, appeals to authority, standards of arguments, and aesthetic integration

[300] "Not allowing the one thing to interfere with the other is called unity." *Xunzi* 21.5d. Translation from Knoblock (1994), 104.

provide strong reasons to consider the early Chinese period as philosophical. To reduce this richness and depth to a weak version of "Western" philosophical concepts or exclude them because they are not identical results in a loss of tools to foreground potential culture-wide assumptions and the loss of access to the conceptual resources of another tradition. Such resources may be useful for a variety of purposes, such as resolving longstanding philosophical problems within one's own tradition, or sparking the imagination. Additionally, attempts at cross-cultural understanding of the philosophical perspective of others without such resources are diminshed.

Rather than reduce it to a mediocre version of contemporary analytic labels, the variety of lexical elements in different approaches to *zhi* in these five texts provides good reasons to take China seriously as a source of its own epistemological tradition. Even examining the variety of lexical terms surrounding *zhi* in the three Ruist texts covered provides good evidence for this understanding of Chinese thought as having something to say related to a broad sense of epistemology. For instance, some of the terms that are important in later Ruist texts, such as the *Mengzi* and the *Xunzi,* are first considered in the *Lunyu*: i.e. *xue*, *si*, and *xin,* or the traits of *ren*, *yi*, and *li*. Although all these terms are common terminology for the *Mengzi* and the *Xunzi*, other terms replace them as the focus of arguments change, as represented by the concerted attention given to *xing* in both of these texts, a focus that is lacking in the *Lunyu*. Even shared concepts between all three texts receive different treatement, such as the focus in *Xunzi* on *xin,* heart-mind, by minting new connects to other concepts, such as *xu*, *yi*, and *jing*. Each of these texts thus clusters many of the same concepts around *zhi,* but paying attention to the variety between these closely related positions reveals the diversity internal to the time period.

This rich variety compounded with a sustained development of clusters of meaning supports a view of Warring States' period China as being philosophically and epistemologically relevant.

4. Capaciousness in Cross-Cultural Epistemology

At the start of this chapter I argued that the comparative-philosophical double bind rests on a narrow definition of philosophy. I have argued that if Chinese philosophy is to be taken seriously, it must be taken on its own terms rather than reduced to "Western" philosophical concepts. If epistemology is to truly provide an inclusive account of knowledge, then it must be able to include an approach to Chinese epistemology on its own terms, non-reductively and with sensitivity to context. This is a continuation of the theme developed through the entire dissertation: narrowness risks an inaccuracy by way of reduction and exclusion. . In the first chapter, the emphasis was on the ways in which approaches to knowledge and knowing in the past are anachronistically subsumed, and thereby simplified, into theories of knowledge by later periods. In the second chapter, the emphasis was on the dangers of reducing of knowing-how and knowing-others to predicate-based theories of knowledge. Finally, in chapter three, I offered a way of avoiding a reductionistic account, despite the complexity that accompanies having to sort out the positive and negative effects of particular assumptions and biases, if and when such assumptions and biases are made available. Capaciousness, as discussed in chapter three, provides a way of being attempting to avoid the harms of hasty reductions, but is by no means a failsafe. Prejudices and assumptions are always in play, but by being aware of the need to look for them one may be successful in avoiding their most negative influences. Ignoring the necessity of such prejudices undermines the possibility of even

recognizing their negative influence. A comparative context in which contrast and differences are productive is an excellent means of engaging in such foregrounding.

The case I have focused on in this chapter provides an opportunity to reflect on the harmonies and differences between early Chinese philosophies' approaches to knowing and knowledge and the capacious account sketched in Chapter Three. The sketch I have drawn here illustrates a few features of Chinese epistemology that resonate well with a hermeneutically grounded epistemology. One example of this is the recognition of the role society plays in structuring language, especially in evaluating important terms that shape both concerns and conduct. In the last chapter, the major example of this was 'truth'. In this chapter, the thread throughout the early Chinese period has been a focus on '*dao*'. Although both are socially constructed and conduct-guiding, there is a more explicit conversation in the Chinese discourse about the role society plays in constructing language, especially because of the major breakdown in social-political order during the Warring States period.

A second example is the use of a pragmatic standard of efficacy in relation to one's immediate concerns. The hermeneutic account of knowing in chapter three gains its initial foothold by rejecting objectivity defined over and against subjectivity. The Chinese tradition had no such distinction, given the development of the technical senses of these terms in the seventeenth to twentieth centuries, so it should not be surprising there is no rejection of them. However, the ethical concerns of early China motivate the conditions for success. Efficacy is important because in many instances effective social order was needed to avoid famine, banditry, and unnecessary military expeditions.

Although social construction and efficacy are resonating features, there are some important differences that must not be ignored if capacious epistemology is not to reductively subsume Chinese philosophy. For example, although capacious epistemology takes knowing to be a complex process, it does not make the same assumptions as the early Chinese correlative *qi* cosmology. Part of this is because many of the thinkers mentioned in chapter three had different cultural backgrounds quite separate from Warring States China; even the attributed authors of the *Lunyu*, the *Mozi*, the *Mengzi*, the *Zhuangzi*, and the *Xunzi* had distinct cultural backgrounds relative to each other. One of the things hopefully visible after seeing the variation in terminology across these five texts is that a capacious approach to knowledge can acknowledge the great diversity within Chinese philosophy itself. That makes the general trends identified in this chapter broad brush strokes rather than anything like "underlying principles of Chinese thought". The distance between shared cultural assumptions is part of what must be recognized as part of trying to understand how concepts from other cultures are not monolithic, and to reduce them into a single simple set of principles would be to misunderstand them.

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