**Metaphysical Fundamentality as a Fundamental Problem for CS Peirce and Zhu Xi**

Abstract (180): While the American pragmatist CS Peirce and the twelfth-century Confucian thinker Zhu Xi (朱熹) lived and worked in radically different contexts, there are nevertheless striking parallels in their view of knowledge and inquiry. Both reject the strict separation of theoretical and practical knowledge, conceiving of theoretical inquiry in a way that closely parallels practical reasoning, and they appeal to the fundamental nature of reality in order to draw conclusions about the way in which inquiry can be a component of the path towards moral perfection. Yet they prominently diverge in their account not only of the fundamental nature of reality, but also in their account of the way in which we have epistemic access to it. These connections between metaphysical fundamentality or structure and epistemology, I propose, have the potential to illuminate current discussions about fundamentality in metaphysics. Contemporary approaches that appeal either to grounding relations or to joint-carving ideology in characterizing metaphysical structure, I propose, implicitly rest on distinct sets of epistemological presuppositions that resemble the respective views of Zhu Xi or Peirce.

Contemporary metaphysics has begun to focus on questions having to do with the methodology of metaphysics. In particular, there are two prominent approaches to delineating the unique kinds of explanations offered by metaphysical theories. The first is an approach associated with Aristotle, where metaphysics aims to provide explanations in terms of what entities or relations, etc., are more fundamental than others, identifying the right kinds of dependence relations among entities – i.e., “what grounds what”.[[1]](#footnote-1) The other approach is one on which metaphysics aims to provide those concepts that are ‘joint-carving,’ giving us knowledge of the fundamental structure of the world, aiming to provide perfectly ‘natural’ representations of what the world is like..[[2]](#footnote-2)

Even though advocates of grounding can also make use of a notion of joint-carving, their notion of what kinds of distinctions are joint-carving would highlight precisely the grounding relations. The entities and their relations are theoretically primary, with joint-carving-ness defined in terms of those relations. The inverse holds true of the advocates of a joint-carving approach: assuming there were entities which ground other entities, those relations will figure prominently in a well-constructed ontology. Yet this latter approach will understand metaphysics as primarily a matter of representing the world’s structure accurately. The conceptual issues associated with metaphysical ideology take precedence over the substantive issues of whether there are fundamental entities or relations.

In this paper, I attempt a contrast between two historical figures – the American pragmatist CS Peirce and the twelfth-century Confucian thinker Zhu Xi (朱熹). The contemporary approaches to metaphysics which highlight either grounding or joint-carving are mirrored, I argue, in these two historical figures, as epistemological assumptions made by these two are shared in some ways by the contemporary approaches to metaphysics. Pierce, for example, gives theoretical primacy to semiotic and other logical disciplines, whereas metaphysics has a subordinate role coordinating natural scientific theories. The hierarchy of sciences corresponds to the way in which Pierce understands the aim and nature of knowledge, i.e., as a pragmatist. One might therefore take Pierce to approach metaphysics as providing knowledge of fundamental entities, but instead – I argue – his position more resembles that of the joint-carving approach.

Conversely, although Zhu Xi holds that knowledge of the world involves knowledge of the world’s structure, he does not approach metaphysics in as a joint-carver would. Instead, one comes to know that structure by means of knowing the entities in the world and their relation to one another. And the point is not merely epistemological. Zhu Xi paints the moral ideal of the sage as achieving unity with the world by means of his knowledge because the structure of the entities in the world involves an extra-mental unity or dependence – the sage comes to know and appropriate his own pre-theoretical unity with other things in knowing the world’s structure.

Even though interpretation of either thinker is controversial, my survey contrasts Pierce and Zhu Xi as exemplars of distinct approaches to metaphysics. I will conclude that there is an important divergence between Zhu Xi and Pierce because of the distinct ways in which they conceive of the epistemology of metaphysics. This points to a more perspicuous manner to contrast contemporary debates in metaphysics, because the joint-carving and grounding-centric approaches to metaphysics implicitly involve distinct epistemological presuppositions that lead them to their respective notions of metaphysical structure. Examination of Zhu Xi and Peirce sheds light on these divergent approaches to metaphysics and can help, I will propose, to decide between them.

**Zhu Xi, *Li,* and Self-Cultivation**

Zhu Xi, as a twelfth-century Confucian, was far removed from Peirce’s context. As a commentator on classical texts of the Confucian tradition, Zhu Xi needed to reconcile two tendencies found in that tradition. On one hand, it is uncontroversial that Confucianism aims at moral self-cultivation, “the purpose of Zhu Xi’s entire philosophical and educational system.”[[3]](#footnote-3) Self-cultivation is intimately connected to governing well politically. Moral exemplars of the tradition include the sage kings Yao and Shun, who not only were personally wise, but governed the state well. For example, in *Analects* 17:1 we read: “Clutching a treasure to one’s bosom, and thereby letting the state go to ruin – could this be called Good?”[[4]](#footnote-4) The ‘treasure’ is learning or wisdom.[[5]](#footnote-5) The sage is not truly wise or good unless aiming to make that wisdom useful to others.

However, Confucianism is also permeated with a scholarly ideal. The ‘sages’ (*sheng ren* 圣人*)* are the moral exemplars *par excellence*, where “as a man of holistic knowledge, the sage is believed to have reached the highest possible point both in cognitive process and in moral cultivation, which is what Confucians call ‘ultimate wisdom,’ in which knowledge and virtue are perfectly combined: knowledge becomes virtue and virtue becomes knowledge.”[[6]](#footnote-6) In this respect, the wisdom of a sage is conceived as the highest goal of human life. In attempting to reconcile these tendencies, Zhu Xi developed an understanding of the process of learning as ‘practical’ activity, a constitutive part of moral self-cultivation.

Zhu Xi first notes a reciprocal relationship between intellectual activity and self-cultivation: “neither self-cultivation nor exhaustive searching can be dispensed with. They are like the two wheels of a cart, or the two wings of a bird.”[[7]](#footnote-7) Yet he also claims a certain priority for knowledge over action: “Knowledge and action always need each other. It is like a person who has eyes but no legs and so cannot walk, or who has legs but no eyes and so cannot see. With respect to priority, knowledge comes first. With respect to import, action carries more weight.”[[8]](#footnote-8) The difficulty comes in elucidating *how* theoretical inquiry supports or is necessary for moral perfection, especially in light of a general account of knowledge and action. While learning requires moral cultivation as a necessary condition for it to be properly carried out, learning and knowledge are also necessary to ‘complete’ moral cultivation in knowledge and wisdom.[[9]](#footnote-9) Because knowledge perfects moral cultivation, Zhu Xi conceives of moral perfection as involving a species of knowledge: wisdom (*zhi* 知).

Zhu Xi grounds the unity of knowledge and moral perfection in the nature of reality itself. Prompted in large measure by the need to counter metaphysical claims of rival Daoists and Buddhists, Zhu Xi explains the nature of the material universe by appeal to two explanatory factors: *li* (理), which literally means something like ‘structure,’ and *qi* (气), that which gets structured by *li* in constituting a material object.[[10]](#footnote-10) In Zhu Xi’s system, all physical objects are composites of *li* and *qi*; “In the universe there has never been any [*qi*] without [*li*] nor any [*li*]without [*qi*].”[[11]](#footnote-11) *Li* is present within every existent thing: “All things have their [*li*], for [*li*] is not outside things or affairs.”[[12]](#footnote-12)

Zhu Xi’s remarks indicate that *li* is the more fundamental of the two principlesbecause it makes any entity to be the kind of thing it is.[[13]](#footnote-13) A repeated claim is: “only after there is ‘this’ *li,* there is ‘this’ *qi*.”[[14]](#footnote-14) The closest Zhu Xi comes to defining *li* is as a kind of reason or definition of a thing: “As far as things in the universe go, we can be certain that each has a reason why it is as it is and a rule to which it should conform. This is what is meant by [*li*].”[[15]](#footnote-15) Since *li* is the reason why things are as they are, Zhu Xi at times endorses the view that, “before the existence of things and affairs, their principles [*li*] are already present.”[[16]](#footnote-16) Nevertheless, Zhu Xi is equally clear that “[*li*] is not a separate entity but exists in the midst of this [*qi*]. If there weren’t this [*qi*], this [*li*] would have nothing to adhere to.”[[17]](#footnote-17)

*Li* serves to unify moral practice and knowledge because all of the universe is characterized by one *li.* A maxim that Zhu Xi inherits from Cheng Yi is that “*li* is one, but its manifestations are many” (*li yi, fen shu* 理一分殊). The one “heavenly” *li* (*tian li*)is identified with a concept Zhu Xi reshapes in borrowing it from Daoism: *Taiji* (太极)*. Taiji* is a sort of First Principle, or meta-*li,* so that the existence of everything and the process of natural changes are grounded in the *li* that is *Taiji.*[[18]](#footnote-18) *Taiji* is the ‘First Principle,’ in the sense that it unites the universe as one, and is a rational principle according to which the universe can be understood.[[19]](#footnote-19) This rational unity of the universe is critical to morality. Zhu Xi critiqued Buddhism (fairly or unfairly) for denying the importance of heavenly *li* (or *taiji*).[[20]](#footnote-20) He held, in opposition to Buddhism, that a realist metaphysics (with the reality of *li* in things individually and in *Taiji*) was necessary for the moral life.

Zhu Xi consequently ranks studies according to whether they lead to knowledge of *li* or merely ‘phenomena’ in some general sense.[[21]](#footnote-21) Study is supposed to lead one step-by-step through an understanding of things close at hand, ultimately to understanding the *li* of the universe (*Taiji*): “What is meant by ‘extension of knowledge’ lies in fully apprehending the principle in things….” A student begins to understand *li* in small ways, until they come to “one day become enlightened and thoroughly understand *li*; then, the manifest and the hidden, the subtle and obvious qualities of all things will be known… This is called ‘fully apprehending the principle in things.’ This is called ‘the completion of knowledge.’”[[22]](#footnote-22)

While Zhu Xi is not influenced by the Aristotelian tradition, outlining no explicit ‘science of metaphysics,’ he seems obviously interested in metaphysical truths about the fundamental nature of reality: e.g., *li-qi* duality, *Taiji*, and his cosmology. Second, the process of inquiry (*gewu*)aims at further and wider synthetic insights, until one comes to know the whole of reality*.* Knowledge of *Taiji* entails that one has knowledge of what the universe and everything – in the broadest sense – *is.* Thus, “grasping *taiji* in this sense was tantamount to grasping the master key, for it represented to [Zhu Xi] the apex of being and value, and bestowed realization and sagehood on those who sincerely and authentically comprehended and embraced it....”[[23]](#footnote-23)

Knowledge of the nature of the universe is, in fact, required both at the beginning of moral practice and as an integral element in its culmination. Having the correct initial apprehension of *Dao* and *li* is a foundation for moral practice, which is why Zhu Xi recommends that one study the Great Learning (a kind of cosmology/metaphysics) *before* other works in the classical canon[[24]](#footnote-24) and why explanations of the substance of the *Dao* appear at the head of Zhu Xi’s neo-Confucian anthology, *Reflections on Things at Hand*. Of course, a beginner lacks knowledge the same in quality/extent as the sage has, but their incipient knowledge must be about the same object the sage knows (the *Dao*) in order for this knowledge to be an appropriate guide for conduct. [[25]](#footnote-25) This point is negatively illustrated in Zhu’s criticism of Buddhism: *because* Buddhists lack the right doctrine about Heaven(i.e., the *Dao*/*Taiji*), they believe in reincarnation and many other false metaphysical views,and engage in problematic moral practice. By contrast, “one must first of all understand the character of Heaven.”[[26]](#footnote-26) The drive to eliminate heterodoxy, and oppose Buddhist ideals infiltrating Confucianism, was based on this idea that false theory would impede practice.[[27]](#footnote-27)

Because Zhu Xi also holds that there is one *li* for all things, the study of the world indirectly discloses what it is to be a human being. Knowledge of objective reality “can be understood as a facet of self-learning: [...] objective understanding enhances self-understanding, for by comprehending the warp and woof of the outer *li* of things, one gains insight into the inner *li* constituting one’s mind and character.”[[28]](#footnote-28) Zhu Xi therefore also emphasizes that each thing, including the human being, receives the entirety of *li* or *Taiji* – and *li* is present in the mind.[[29]](#footnote-29) The sage differs from others because he allows this *li* to shine through his whole persona, his thinking and behavior, and perfectly exemplify the ‘original nature,’ i.e., human nature as exemplifying the one *li.*[[30]](#footnote-30) The *Dao* of the Sage changes the person, as it “is to be heard through the ear, to be preserved in the heart, and to be deeply embraced there to become one’s moral character, and to become one’s activities and undertaking when it is put into practice.” By contrast, those who remain only scholars of “literary expression” are “vulgar people.”[[31]](#footnote-31) In the end, the moral goal is an ultimately ontological union of the sage and the *li* of the universe; “If you practice [learning] for a long time your mind and universal [*li*] will be one. ...A sage acts in accordance with all events, and the universe creates all things – that’s all there is.”[[32]](#footnote-32)

All knowledge has a moral valence, then, in two respects. First, knowledge is a moral achievement. Moral imperfections lead one to misapprehend the nature of things. Moral virtue is necessary for ‘investigation’ because a lack of ability to ‘preserve’ the mind thwarts knowledge of *li* and ultimate realization of wisdom.[[33]](#footnote-33) Zhu Xi therefore frequently says that a perfected mind is like “a clear mirror” because it is not clouded by misapprehensions or narrowness, and so reflects or appropriately responds to the *li* of everything it encounters.[[34]](#footnote-34) Second, knowledge always involves a moral valence in *content.* This is because *li* itself forms part of a whole, *Taiji,* that is morally good. Moral knowledge is therefore not a distinct *species* of knowledge from theoretical knowledge.[[35]](#footnote-35) Zhu Xi does not clearly deal with the idea that there might be ‘bad’ knowledge because he holds implicitly that knowledge is a ‘success term’ for apprehending the world as it really is. Given that the world is ultimately morally *good,* and one needs the correct moral stance so as to know that goodness, knowledge will always be morally good both in the process required to attain it and in terms of what is known.[[36]](#footnote-36) True knowledge, acquiring *li* by investigation, involves the learner becoming good in virtue of internalizing those good moral principles.[[37]](#footnote-37) Thus, “knowing is a kind of active discernment whereby the [*li*] with which all things are implicitly equipped comes to be specifically present to us and motivating.”[[38]](#footnote-38)

Clearly, successfully apprehending some fact or even *li* about the world does not, ipso facto, indicate that one possesses *wisdom*. Wisdom results from internalizing the *li* apprehended.[[39]](#footnote-39) Wisdom here is an ontological union between self and the *li* of what is known.[[40]](#footnote-40) To clarify, this is not to say that, e.g., in reading a book, the mind becomes a book. Rather, the mind realizes or reflects the *li* of the extra-mental objects. As opposed to an Aristotelian picture where the mind starts as *tabula rasa*, Zhu Xi’s mind is already full of *li* and comes to be *perfected* when it empties itself of narrow desires that impede our ability to grasp or realize the *li* that is already present there (in some respects, more resembling Platonic recollection). The mind begins in a state obscured by its ‘material nature’ and selfish desire, but can, by cultivation in study and moral practice, come to reflect and respond to things as they are. In a successful act of knowing, the mind comes to see that the *li* of the extra-mental thing is the *li* already possessed in itself.[[41]](#footnote-41) Material objectsare naturally suited to be known by the cognitive capacity that is the mind because both are endowed with the same *li*.[[42]](#footnote-42) Since the partners are naturally suited for each other, there is a ‘resonance’ between mind and world – a matching of *li* results in understanding(*lihui* 理会).[[43]](#footnote-43)

Because Zhu Xi thinks that the *li* of the mind involves being suited to engage in this way the *li* of extra-mental objects, the mind is ‘teleologically’ oriented to such investigation.[[44]](#footnote-44) Perfect human life is coming into union with the *li* of the world through appropriate intellectual activity, which is inseparable from the appropriate moral attitudes that lead one to respond correctly to what is known. For this reason, the ideal sage “aspires to become Heaven,”[[45]](#footnote-45) or, the nature of the sage is “one with Heaven,”[[46]](#footnote-46) regarding “everything in the world as his own self.” [[47]](#footnote-47) This union is possible because sages understand the *li* of all, without intellectual or moral biases. While becoming a sage is not a merely rational process, we might nevertheless characterize wisdom, built on investigation of things, as a clearly necessary component of moral perfection. Inquiry and investigation is thus, for Zhu Xi, an integral part of moral self-cultivation.

**Charles Sanders Peirce: From Semiotics to Metaphysics**

Charles Peirce’s begins with epistemological worries that seem far removed from Zhu Xi’s concerns, yet which (I will show) alight at a similar metaphysical resolution. Both are concerned to explain the way in which knowledge should be action-guiding and the practical role that knowledge plays in human life should determine what counts as knowledge. But Peirce’s starting point lies in epistemological worries derived from Kant and the modern philosophical tradition. In the *Critique of Pure Reason,* Kant attempts to justify universal judgments, such as judgments about how objects would behave under counter-factual conditions that nobody ever will experience (e.g., whether some particle out beyond the light-cone of our universe is ‘visible’), by appeal to special kinds of ‘transcendental’ arguments that are largely epistemological and *a priori*.

Peirce specifically was concerned about justification of these kinds of universal judgments when they concerned classes such as natural kinds: “[t]he real is that which is not whatever we happen to think it, but is unaffected by what we may think of it. The question, therefore, is whether man, horse, and other names of natural classes, correspond with anything which all men, or all horses, really have in common, independent of our thought, or whether these classes are constituted simply by a likeness in the way in which our minds are affected by individual objects which have in themselves no resemblance or relationship whatsoever.”[[48]](#footnote-48) Pierce believes that skepticism about our inability to give an *a posteriori* justification of these kinds of judgments arises from faulty empiricist psychology, where ‘sense data’ received from the extra-mental objects and on which basis we formulate our class concepts, such as ‘man’ or ‘horse,’ does not obviously resemble the extra-mental objects. If what we receive in sensation is intrinsically unlike the objects causing those sensations, we cannot know whether the objects are *really* as they appear.[[49]](#footnote-49) Peirce, rejecting Kant’s transcendental approach, instead tried to discover a ‘scientific’ justification of those judgments and concepts exceeding sense experience – that is, in Kantian language, an *a posteriori* justification. [[50]](#footnote-50)

Peirce’s solution to this dilemma is radical. He does not reject that knowledge and sensation involve representation; he rejects that our internal mental representations represent objects that are non-mental: “the realities which [representations] represent [are] *noumena*, or intelligible conceptions which are the last products of the mental action which is set in motion by sensation.”[[51]](#footnote-51) This requires a modification in how we think about what it is for a thought to correspond to extra-mental reality. A true thought, expressed in a proposition, corresponds to its ‘proper object of thought,’[[52]](#footnote-52) but this proper object is not merely a material object or one of its properties. Rather, “what we think of cannot possibly be of a different nature from thought itself…”[[53]](#footnote-53) and, consequently, what our thoughts correspond to when they are true is *another thought.*

Pierce naturally has to clarify his view to avoid the problem that all reality will be dependent on *my* mind or *my* thoughts, which he does by appealing to an idealized process of thinking. True thought will correspond not to a future thought that I actually will have, but to the idealized result of a process of thinking. “… if we can find out the right method of thinking and can follow it out — the right method of transforming signs — then truth can be nothing more nor less than the last result to which the following out of this method would ultimately carry us.”[[54]](#footnote-54) This is the hallmark of Pierce’s ‘pragmatist’ theory of truth: “the opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real.”[[55]](#footnote-55)

Since Pierce defines truth in terms of the right process for arriving at an ideal thought, he cannot define (without circularity) an ‘ideal’ way of thinking on the basis of something like reliably reaching true beliefs. Peirce’s account shifts the burden of saying what truth is to questions of epistemology or cognition, where epistemology alone needs to give us a non-trivial and non-circular account of how my thinking process can be compared to an idealized thinking process, and where this allows us to explain how it is that individual propositions which I might judge to be true (e.g., ‘the cat is on the mat’) can be false in light of failing to conform to the way in which thinking ought to proceed.

 To this end, Peirce offers an account of cognition as essentially a process of signification, or the transformation of signs. Objectively true thought is then characterized as the outcome of a process of idealized signification, where my thoughts are true when they conform to how thinking (as signifying) normatively *ought* to be done. Consequently, Peirce’s notion of semiosis is supposed to give us the right account of cognition that allows us to characterize truth. What Peirce terms ‘First-ness, Second-ness, and Third-ness’ can be understood as the essential stages/elements in semiosis. To signify successfully is to conduct a semiotic process well, so that signs become related appropriately.

As Peirce understood semiosis, it has three stages. “First-ness”: an interpreter begins with possibility – an indeterminate meaning or space of interpretative possibilities. Peirce points out this is an analogue to the Kantian “manifold of sense” which requires unity from categorical understanding and judgments.[[56]](#footnote-56) “Second-ness”: the actual, individual characteristics or signs that need interpretation. Peirce often uses the term ‘facts’ to denote secondness, as the factual elements that need to be understood as falling under a general law or as all having some common explanatory characteristic.[[57]](#footnote-57) Finally, “Third-ness,” is the general, universal, or law which acts as an interpretant for the prior two and completes the process of interpretation.[[58]](#footnote-58) Peirce believes that Thirdness is irreducible to either Firstness or Secondness because “the idea of meaning is irreducible to quality and reaction [i.e., Firstness and Secondness].”[[59]](#footnote-59) A meaning ‘unifies’ the manifold of matter for interpretation, picking out one of the many possible meanings and relating it definitively to the facts needing interpretation. Thirdness is then the normative goal of signification and, by extension, thought as a whole (thought being itself semiotic in essence).

For Pierce, this sequence is enough to account for the way in which we can arrive at judgments that are universal and objective, being independent of any one person’s judgments: “…to assert that there are external things which can be known only as exerting a power on our sense, is nothing different from asserting that there is a general drift in the history of human thought which will lead it to one general agreement.”[[60]](#footnote-60) A true thought is one which would appear among that future outcome, the set of judgments, resulting from an idealized reasoning process.[[61]](#footnote-61) The ‘essence’ of thinking, when characterized in this way, is such that all of my thinking (my judgments and concepts) has as its objects of judgment only other *future* thoughts: “thought is what it is, only by virtue of its addressing a future thought....”[[62]](#footnote-62) Pierce draws implications out of this characterization of the object of thinking, holding that the meaning of all of our concepts is derived from their relation to other possible thoughts that we could have in counterfactual situations:

the *total* meaning of the predication of an intellectual concept is contained in an affirmation that, under all conceivable circumstances of a given kind (or under this or that more or less indefinite part of the cases of their fulfillment, should the predication be modal) the subject of the predication would behave in a certain general way — that is, it would be true under given experiential circumstances (or under a more or less definitely stated proportion of them, *taken as they would occur,* that is in the same order of succession, *in experience*).[[63]](#footnote-63)

While the correct interpretation of Pierce on these (and many other points) is disputed, it seems clear that these overall motivations shape his account of metaphysics. In his schema of the sciences, all the sciences involve some specific kind of *process* of generalization, applicable to some domain of inquiry. Each science aims at achieving true generalizations, conditional propositions about the future,[[64]](#footnote-64) such that the results of scientific inquiry therefore all resemble hypotheses.[[65]](#footnote-65) When we have achieved a true generalization, future experience will not disappoint or surprise the knower, because the generalizations give us ‘predictive power’ over future events.[[66]](#footnote-66) Thus, while Peirce clearly states that metaphysics studies “the most general features of reality and real objects,”[[67]](#footnote-67) Peirce’s conception of metaphysics is unique because it seeks the regularities that characterize the world as a whole: “Metaphysics is the science of Reality. Reality consists in regularity. Real regularity is active law.”[[68]](#footnote-68) That is, metaphysics involves the discovery or postulation of *laws.* In this respect, Peirce takes metaphysics to be observational, only differing from physics or other positive sciences insofar as it deals with “kinds of phenomena with which every man’s experience is so saturated that he usually pays no particular attention to them.”[[69]](#footnote-69) This is why Peirce calls metaphysics “the interpretation of the facts of common experience in the light of a scientific logic.”[[70]](#footnote-70)

Peirce therefore holds that metaphysics has an important role in guiding scientific inquiry, as a metaphysical system is not *a priori*, but the propositions of metaphysics can be confirmed or falsified by positive science.[[71]](#footnote-71) In this respect, metaphysics provides a “roadmap for the special sciences by developing a general system in which all possible facts can be given a place.”[[72]](#footnote-72) Peirce holds that there is a mutual dependence between metaphysics and many positive sciences where, for example, the principles of metaphysics “must be settled before very much progress can be gained either in psychics or in physics.”[[73]](#footnote-73) He gives an example of how metaphysics could do so: “If we could find out any general characteristic of the universe, any mannerism in the ways of Nature, any law everywhere applicable and universally valid, such a discovery would be of such singular assistance to us in all our future reasoning that it would deserve a place almost at the head of the principles of logic.”[[74]](#footnote-74) Peirce’s own metaphysics (‘synechism,’ ‘agapism,’ and ‘tychism’) was an attempt to outline some general laws or patterns of reality that could inform scientific inquiry, fulfilling that stated role of metaphysics quite clearly.[[75]](#footnote-75)

Strikingly, then, the laws of nature are not merely descriptions of regularities but – as Peirce’s insistence that he is a ‘scholastic realist’ is supposed to indicate – these regularities in nature follow from the essential character of the universe itself. To say that “Thirdness is operative in Nature” is to say that the world (as whole) is characterized by some general tendencies, independently of each individual mind, and that these general tendencies can be discovered as the unique domain of metaphysics.[[76]](#footnote-76) More specifically, the universe has a nature such that its activities resemble mental laws of inference: “the universe is a vast representamen, a great symbol of God's purpose, working out its conclusions in living realities.”[[77]](#footnote-77) Peirce therefore accepts a view of the material universe that is close to what is described today as pan-psychism, such that “all matter is really mind.”[[78]](#footnote-78)

Peirce continuously denies “there is any reality which is absolutely incognizable in itself, so that it cannot be taken into the mind."[[79]](#footnote-79) This could be interpreted to mean that anything counting as ‘reality’ for human beings will always be a matter to which we can apply our judgment and our concepts; and that much seems clear because, if a judgment is true only insofar as it conforms to an idealized reasoning process, we could not have true judgments about things we could not reason about. Pierce sometimes therefore claims that the *being* of an extra-mental object consists in its actions or effects (apparently) on some perceiver, not any quality or structure in that object itself.[[80]](#footnote-80) All the mental lives of disparate persons grow ever closer, given that their nature aims at such convergence and living is a kind of teleologically-oriented process.[[81]](#footnote-81) Each individual mental life becomes part of one overall universal process of thinking, which Pierce compares to the Hegelian Absolute Idea and, later, embraces as his own kind of ‘Objective Idealism.’[[82]](#footnote-82)

As with Zhu Xi, then, Peirce appeals to the metaphysical unity of reality – the fact that right thinking involves conformity to the fundamental nature of the universe – as what unites good thinking and what is good for humans to do in general. Peirce is explicit that logic is a normative *practical* science that involves controlling my own thought, a process that aims at self-cultivation and self-discipline, such that it has a moral valence: “The phenomena of reasoning are, in their general features, parallel to those of moral conduct. For reasoning is essentially thought that is under self-control, just as moral conduct is conduct under self-control.”[[83]](#footnote-83) While logic does not reduce to moral philosophy,[[84]](#footnote-84) logic aims at a *part* of the overall practical good that Pierce calls the ‘summum bonum’; consequently, “that truth the conditions of which the logician endeavors to analyze, and which is the goal of the reasoner's aspirations, is nothing but a phase of the *summum bonum* which forms the subject of pure ethics….”[[85]](#footnote-85)

Ethics aims to discover the nature of the ultimate practical good of human life, and this good is what determines, at the end of the day, what counts as ‘good’ reasoning. Unsurprisingly, Pierce understands the *summum bonum* of human life in a manner that parallels his claims in semiotic about thinking aiming at idealized generalization:

…generalization should come about, not merely in man's cognitions, which are but the superficial film of his being, but objectively in the deepest emotional springs of his life. ...man prepares himself for transmutation into a new form of life, the joyful Nirvana in which the discontinuities of his will shall have all but disappeared.[[86]](#footnote-86)

This ultimate end would thus be one in which human reasoners are engaging in reasoning which aims at drawing everything into a universally-inclusive abductive generalization because their affections are universally inclusive of anything that exists.[[87]](#footnote-87) The *summum bonum* is not a maximally inclusive generalization or theoretical judgment, but rather that attitude or disposition according to which one engages properly in reasoning and, indeed, all activities of human life.[[88]](#footnote-88) The person who in following the laws of logic aims at right thinking is thereby, at least in part, aiming at a Nirvana-like conformity to what the world really is.

**Metaphysics as Grounding or Joint-Carving**

There is obvious sympathy between Peirce’s *summum bonum* and what Zhu Xi’s sage achieves when they become one with all things. Both clearly share analogous ways of thinking about knowledge as a ‘practical’ activity, integral to moral perfection. But there are also deep differences in how they have conceived of the ultimate nature of reality. Most obviously, Peirce holds that generals develop or evolve over time, since the universe’s nature is constantly changing or developing.[[89]](#footnote-89) Zhu Xi could not easily accept a view on which *li* evolve over time while simultaneously holding that my mind and the external world share one and the same *li.* Further, even though *li* are the norms according to which objects act well/badly or from which we can infer (推) conclusions about those objects,[[90]](#footnote-90) Zhu Xi’s *li* is not *essentially* something like a predictive law under which we subsume the actions or behavior of objects.[[91]](#footnote-91) Similarly, insofar as *li* is synonymous with ‘nature,’[[92]](#footnote-92) knowledge of *li* is knowledge of the natures of objects, but it is not the case that the nature of an object – for Zhu Xi – consists entirely in its possible future effects on experience.

These differences in how Peirce and Zhu Xi approach the nature of things, however, can be traced to distinct epistemologies. Zhu Xi’s approach to knowledge is such that, even though *li* is complete in the mind, discovery of the *li* can occur only by investigating the exterior world. In contrast with his contemporaries (e.g., Lu Xiangshan 陸象山), Zhu Xi insists that study of extra-mental objects, whether nature or the classics, is critical to discover or realize *li*.[[93]](#footnote-93) Then, insofar as we know the universe, we come to acquire a proper understanding of the place of human beings within it. Zhu Xi consequently proposed a method he called ‘the investigation of things in order to extend knowledge’ (*gewu zhizhi* 格物致知). While not modern scientific investigation, this is opposed to an intuitionist view of knowledge, on which we could come to understand truths about the world merely by examining our own mind, and resembles an ‘empirical’ method of inquiry.[[94]](#footnote-94)

Peirce shares the empirical orientation, although to a much higher degree than Zhu Xi, because he constructs his epistemology around the idea of anticipation or prediction. The aim of inquiry is that the individual reasoner’s thinking embodies an ideal process of forming generalizations.[[95]](#footnote-95) Generalization involves subsuming instances under a general pattern or rule, where the instances are (for Peirce) given in sense experience. And, as Pierce rejects that the concepts we employ are ‘given’ by sense experience or could be *a priori*,[[96]](#footnote-96) the concepts relative to each domain of inquiry, i.e., different positive sciences, are generated by a special process of inference in which one reasons to a general rule or concept from particular experience; this is what Pierce terms ‘abduction.’ [[97]](#footnote-97) Abduction is predictive in the way that Peirce understands to be the aim of thinking, which makes it *the* paradigmatic form of generalization.

Without wading into the details, Peirce’s metaphysical picture involves a clear mirroring of the semiotic structure of thinking as proceeding from instances to abductive generalization within reality itself. For example, concepts remain essentially indeterminate, and this makes the process of semiotic always necessary – there is always more to be resolved in any concept.[[98]](#footnote-98) This combination of views entails that the sciences never reach a final object of knowledge that would complete their inquiry – that is, there is no final ‘judgment’ that we could achieve on the basis of abductive concepts.[[99]](#footnote-99) Considerations about the nature of concepts and abduction play a critical role in Peirce’s perspective on the continually-evolving nature of reality, just as Peirce seems generally committed to the view that the universe develops in ways that mirror the processes involved in human reasoning.

Zhu Xi and Peirce’s approach to metaphysical knowledge correlate to some degree with the views mentioned at the start of this essay. Neither is a perfect exemplar of a grounding or joint-carving conception of metaphysical structure, and even the contemporary metaphysical notions of structure conceived along these two different lines are merely broad characterizations of approaches; there remain very different concrete formulations. For example, ‘grounding’ is often understood to be an explanatory relation among entities by its proponents, such as Kit Fine, who notes: “if the truth that *P* is grounded in other truths, then they *account* for its truth; *P*'s being the case holds *in virtue of* the other truths' being the case.”[[100]](#footnote-100) Jonathan Schaffer too approaches grounding relations as providing an explanation that tells us whether an entity is more fundamental than another entity – grounding relations are what characterize the ‘metaphysical structure’ of reality.[[101]](#footnote-101) On the whole, Zhu Xi’s *li* functions as a ‘grounding’-type explanation, since it is by knowing the *li* of an object that one understands that in virtue of which it is that object, i.e., the reason why it is. *Li* is the structuring principle of the world, the reason why things are what they are, because *li* is their ‘fundamental nature’ (*benxing* 本性).

Peirce, by contrast, even if he does believe there are ‘grounding’ relations of this sort (such as the way in which the nature of the universe explains its behavior), focuses on a distinct kind of metaphysical structure in addition to that of grounding-type explanations. An alternative view in contemporary metaphysics, represented by Ted Sider, takes metaphysical structure to be of a different kind and comes closer to Peirce’s overarching concerns. Sider sees metaphysics as aiming to provide a perfectly natural, or ‘joint-carving,’ way of identifying the concepts that represent the structure of the world. Structure remains a mind-independent feature of that world, but, unlike the grounding approach, Sider takes it that the structure of the fundamental truths about the world is mirrored in the structure of the world; thus, for example, "quantificational structure is part of the objective structure of the world.”[[102]](#footnote-102)

Sider’s account of metaphysical structure has much in common with Peirce, given the way he understands how metaphysical explanation occurs. For example, Sider argues that structure itself is a structural concept, a primitive concept in metaphysics, given the way that ‘structure’ is an explanatory generalization with power across different domains of sciences.[[103]](#footnote-103) The good ways to carve the joints of the world are then, as with Peirce, the ways that involve generalizations with explanatory power. Unlike Peirce, however, Sider embraces a Humean commitment that individual facts are ontologically prior to the generalizations we might draw about those facts.[[104]](#footnote-104) Sider is not tempted to take a leap to anything like objective idealism, and instead maintains a stark parsimony in the theory.

Nevertheless, the parallels are significant because the criteria for adequacy on Sider and Peirce’s theory are related. Sider’s interpretation of structure as being more or less ‘natural’ involves the claim that there is epistemic value to naturalness aside from the value of truth. Since our beliefs should aim at *both* truth and naturalness, there is something bad about having beliefs that are true but formulated in unnatural ways; “it’s *better* to think and speak in joint-carving terms.”[[105]](#footnote-105) If we take naturalness to be a constraint on expression of our concepts and judgments similar to the way in which Peirce understands our thoughts to aim at idealized generalization or explanation, it would not be unfair to characterize Peirce as collapsing the two aims of thought by identifying truth with naturalness.

The historical contrast between Zhu Xi and Peirce does not merely parallel this debate in contemporary metaphysics, but also highlights the epistemological bases for a divergence among those approaches to metaphysics that focus on joint-carving structure or on grounding relations. In sum, each approach to metaphysical methodology appears to involve distinct models of knowledge. Even if we assume, contra Peirce, that both truth and naturalness are epistemic *desiderata*, there is an important consequence in our metaphysics that results from different relations that might hold between these two. On Zhu Xi’s account, the *most natural* divisions of entitiesin the world are determined by the natures of the objects in question. The sage’s ability to grasp and express truths about reality involves grasping the nature of reality as a whole, *Taiji* – but this is just to grasp *li* itself on a deeper level, not to engage in an activity of a different sort, and the sage would not grasp reality if he did not understand the natural divisions among entities in the world. By contrast, for Peirce, what count as natural concepts or judgments are largely determined by facts about human inquiry, such that idealized processes of reasoning have a certain semiotic structure of proceeding from instances to properly-formed generalizations. The standards according to which a generalization is more or less natural therefore arise partly from characteristics of our modes of representation.

**Conclusion**

The point of this article is not that Peirce and Zhu Xi are paradigm examples of either contemporary approach to metaphysical structure, whether grounding or joint-carving, but that their metaphysics are sufficiently similar in certain respects to these contemporary notions such that the contrast between their metaphysical systems highlights a relationship between epistemology and the development of different notions of metaphysical structure. Specifically, their apparent disagreements in regard to epistemology are correlated with different ways of conceiving metaphysical fundamentality. Zhu Xi holds that entities and the relations among them are the primary kind of fundamental metaphysical structure, as in his appeal to *li* and *qi;* his project seeks knowledge of what accounts for the nature and existence of all entities.

Peirce by contrast thinks reality is deeply inflected with the mental and that what is metaphysically fundamental are the concepts by means of which we understand reality; his metaphysics aims to determine schemata that we might use to structure investigations in natural science, even if we might also investigate the fundamental ontology of those fundamental entities. Peirce is unique in that his pragmatism allows him to collapse the two different desiderata, as truth is defined in terms of explanatory power, and what determines the good-making features of a metaphysical theory are features taken from what it is to engage in a abductive inference or generalization well, such as simplicity, beauty, coherence, predictive power, unification, or comprehensiveness. Contemporary notions of structure as joint-carving appeal to such criteria for what counts as a natural or appropriately comprehensive explanation alongside a more ordinary and independent notion of truth, but nevertheless share that epistemological feature with Peirce’s theory.

The result of this study is then to illustrate, by examining concrete and historical systems that agree on certain overarching approaches to knowledge, that the relations among these ways of understanding metaphysical fundamentality are intertwined with a series of issues in epistemology, metaphysical methodology, practical normativity, and questions of value. In fact, they hint that certain approaches to metaphysics that are more or less ‘naturalized,’ or continuous with empirical *a posteriori* investigation such as found in natural science, naturally follow from our account of what is metaphysically fundamental. Peirce’s theory, while it makes metaphysical methodology center around the predictive power of a theory, requires one to appeal to (extra-scientific) facts about concepts and modes of inquiry in order to account for what counts as a good explanation. Zhu Xi links such notions of explanation directly to the ways in which entities depend upon one another and, in this respect, has a more naturalistic approach to metaphysical methodology insofar as the natural or joint-carving ways to divide the world involve the structure of the entities, not the structure of our explanations.

This opens an avenue for determining which of these notions of fundamentality is more viable or accurate: we should evaluate our notion of metaphysical fundamentality in light of how that impacts other connected realms of epistemology, methodology, and value. Although beyond the scope of this paper, it would seem that the plausibility of our conception of metaphysical fundamentality can be gauged by whether it entails significant costs elsewhere in our overall commitments.[[106]](#footnote-106)

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1. E.g., Jonathan Schaffer, “On What Grounds What,” in *Metametaphysics: New Essays on the Foundations of Ontology,* eds. David Manley, David J. Chalmers & Ryan Wasserman (Oxford University Press, 2009), 347-383. [↑](#footnote-ref-1)
2. E.g., Theodore Sider, *Writing the Book of the World* (Oxford: Oxford University Press, 2011). [↑](#footnote-ref-2)
3. Joseph Adler, *Reconstructing the Confucian Dao* (New York, NY: SUNY Press, 2014), 106. [↑](#footnote-ref-3)
4. Confucius, *Analects,* translated by Edward Slingerland (Indianapolis, IN: Hackett Publishing Co., Inc., 2003), 17:1. [↑](#footnote-ref-4)
5. In this case, Confucius; c.f., *Analects* 9:13. [↑](#footnote-ref-5)
6. Xinzhong Yao, “Knowledge, Virtue, and Joyfulness,” in *Dao* 5, 2 (June 2006): 284. [↑](#footnote-ref-6)
7. Zhu Xi [Chu Hsi], *Further Reflections on Things at Hand: A Reader*, trans. Allen Wittenborn (New York: University Press of America, 1991), 75, n. 13. [↑](#footnote-ref-7)
8. Ibid., n. 14. [↑](#footnote-ref-8)
9. David Jones, *Returning to Zhu Xi*, (New York: SUNY Press, 2015), 114. C.f., Zhu Xi, 四書章句集注 Sishu Zhangju Jizhu, (Shanghai: Shanghai Guji, 2001), 41. [↑](#footnote-ref-9)
10. I will leave these terms untranslated, along with *Taiji* later, as they function as technical terms. [↑](#footnote-ref-10)
11. LTBS, 90. [↑](#footnote-ref-11)
12. Zhu Xi, *Reflections on Things at Hand* [RTH], translated by Wing-Tsit Chan (New York: Columbia University Press, 1967), 16, n. 15. [↑](#footnote-ref-12)
13. For further information, see Stephen Angle and Justin Tiwald, *Neo-Confucianism: A Philosophical Introduction* (Cambridge: Polity Press, 2017), chaps. 2.3-2.4. [↑](#footnote-ref-13)
14. Yung Sik Kim, *The Natural Philosophy of Zhu Xi* (Philidelphia, PA: American Philosophical Society, 2000), 25. [↑](#footnote-ref-14)
15. Zhu Xi, *Learning to be a Sage* [LTBS]*,* translated by Daniel Gardner(Los Angeles, CA: University of California Press, 1990), 90 (*Daxue Houwen*大学后文, 15a:3). [↑](#footnote-ref-15)
16. RTH, 26, n. 32. [↑](#footnote-ref-16)
17. LTBS, 92. [↑](#footnote-ref-17)
18. For a more transcendent, realist interpretation of *taiji,* see Julia Ching, *Religious Thought of Chu Hsi* (Oxford: Oxford University Press, 2000) 44-47. [↑](#footnote-ref-18)
19. Kim, 20. Again, translations are contentious, so I use *taiji* as a technical term. It is often translated “Supreme Polarity” or “Great Ultimate.” [↑](#footnote-ref-19)
20. Ching, 179-180. [↑](#footnote-ref-20)
21. LTBS, 90. [↑](#footnote-ref-21)
22. Daniel Gardner, *Chu Hsi and Ta-hsueh: Neo-Confucian Reflection on the Confucian Canon* (Cambridge: Harvard University Press, 1986), 104-105 (Ta-hsueh [Daxue], “Commentary of Tseng Tzu,” 5). [↑](#footnote-ref-22)
23. Kirill Thompson, "Zhu Xi", *The Stanford Encyclopedia of Philosophy* (Fall 2015 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/fall2015/entries/zhu-xi/, sec. 3.1. [↑](#footnote-ref-23)
24. FRTH, 88, n. 4. RTH 101-102, n. 34. [↑](#footnote-ref-24)
25. In his preface, Zhu Xi notes, “fearing that a beginner may not know where to start, we have selected passages concerned with fundamentals...”(RTH, 1). [↑](#footnote-ref-25)
26. RTH, 287, n. 14. [↑](#footnote-ref-26)
27. C.f., RTH, 299-301, n. 17. E.g., the strong reaction to Buddhism: RTH, 286, n. 11. [↑](#footnote-ref-27)
28. Thompson, 3.1. [↑](#footnote-ref-28)
29. Zhu Xi, *Zhu Xi: Selected Writings,* Philip Ivanhoe, ed., C. Virag & P. Ivanhoe, trans. (Oxford: Oxford University Press, 2019), 20, no. 13, and 48, no. 26. [↑](#footnote-ref-29)
30. RTH, 62, n. 52. [↑](#footnote-ref-30)
31. RTH, 35, n. 2. [↑](#footnote-ref-31)
32. FRTH, 84, n. 82. [↑](#footnote-ref-32)
33. LTBS, 123-124. [↑](#footnote-ref-33)
34. For a comprehensive overview, see John Jorgensen, “The Radiant Mind,” in *The Buddhist Roots of Zhu Xi’s Philosophical Thought,* ed. John Makeham (Oxford University Press, 2018), 36-121, esp. 75. [↑](#footnote-ref-34)
35. Ying-Shih Yü, “Morality and Knowledge in Csu Hsi’s Philosophical System,” in *Csu Hsi and Neo-Confucianism*, edited by Wing-Tsit Chan (Honolulu, HI: University of Hawaii Press, 1986), 242-243. [↑](#footnote-ref-35)
36. C.f., Kenneth Dorter, “Metaphysics and Morality in Neo-Confucianism and Greece,” in *Dao* 8, 3 (2009): 268. [↑](#footnote-ref-36)
37. LTBS, 112-113, n. 2.73. [↑](#footnote-ref-37)
38. Angle and Tiwald, chap. 6.4. [↑](#footnote-ref-38)
39. RTH, 75-76, n. 86. ““one does not make it part of his own nature through practicing it…that wisdom is not really his.” [↑](#footnote-ref-39)
40. Yang Guorong, “Knowing, Being, and Wisdom,” in *Dao* 5, 1 (Dec. 2005): 66. [↑](#footnote-ref-40)
41. See Jorgensen, 76-86. [↑](#footnote-ref-41)
42. Gardner, *Chu Hsi and Ta-hsueh,* ibid. “…every man’s intellect is possessed of the capacity for knowing and everything in the world is possessed of *li*. But, to the extent that *li* is not yet thoroughly probed, man’s knowledge is not yet fully realized.” [↑](#footnote-ref-42)
43. Yang 2005, 123. [↑](#footnote-ref-43)
44. See esp. Ying-shih, 241-245. [↑](#footnote-ref-44)
45. RTH, 35, n. 1. [↑](#footnote-ref-45)
46. RTH, 6, n. 1. [↑](#footnote-ref-46)
47. RTH, 74-75, n. 83. [↑](#footnote-ref-47)
48. Charles S. Peirce, *Collected Papers* [CP], vols. 1-6 edited by Charles Hartshorne and Paul Weiss, vols. 7-8 edited by A.W. Burks (Cambridge: Belknap Press of Harvard University Press, 1958-1966; electronic edition by InteLex Corporation, 1994), 8.1: 12 [all references to CP are in the format “Volume.Book: Paragraph”]. [↑](#footnote-ref-48)
49. Ibid. [↑](#footnote-ref-49)
50. C.f., Joseph Esposito, *Evolutionary Metaphysics* (Athens, OH: Ohio University Press, 1980), 1-5. [↑](#footnote-ref-50)
51. CP 8.1:13. [↑](#footnote-ref-51)
52. CP 5.3: 554. “Truth is the conformity of a representamen to its object, *its* object, ITS object, mind you.” [↑](#footnote-ref-52)
53. CP 6.1: 339. [↑](#footnote-ref-53)
54. CP 5.3: 553. [↑](#footnote-ref-54)
55. CP 5.2: 407. [↑](#footnote-ref-55)
56. CP 1.3: 302. [↑](#footnote-ref-56)
57. Ibid., 326-327. [↑](#footnote-ref-57)
58. Ibid., 344. [↑](#footnote-ref-58)
59. Ibid., 343. [↑](#footnote-ref-59)
60. CP 8.1:12. [↑](#footnote-ref-60)
61. CP 8.1: 15. Peirce sometimes refers to this as phenomenalism. [↑](#footnote-ref-61)
62. CP 5.2: 316. [↑](#footnote-ref-62)
63. CP 5.3: 467. [↑](#footnote-ref-63)
64. CP 5.3: 483. [↑](#footnote-ref-64)
65. This point is made in Esposito, 90; ibid., 131-132. [↑](#footnote-ref-65)
66. CP 5.2: 197. [↑](#footnote-ref-66)
67. CP 6.P:6. [↑](#footnote-ref-67)
68. CP 5.1: 121. [↑](#footnote-ref-68)
69. CP 6.P: 2. [↑](#footnote-ref-69)
70. De Waal, 296 (citing from Peirce’s Harvard manuscripts; R 472:04, 1903). See also Susan Haack, “The Legitimacy of Metaphysics,” in *Philosophical Topics,* Vol. 36, No. 1 (Spring 2008): 101-106. [↑](#footnote-ref-70)
71. *Pace* W.B. Gallie, who argues that “metaphysics [adds to knowledge] not in the way in which a new hypothesis makes possible deductions which can verified, but...by rearranging certain central ideas in ways that suggest new hypotheses from which deductions can be made” (“The Metaphysics of C.S. Peirce,” in *Proceedings of the Aristotelian Society,* New Series, Vol. 47 (1946-1947): 61). It seems to me that Peirce’s insistence on the verifiability of agapism, synechism, etc., indicate metaphysical theories are hypotheses verified by positive science (c.f., CP 1.P: 7, 6.1: 315). But this is not strictly necessary for my argument: even if metaphysics does not posit new hypotheses, the whole structure of scientific theories it ‘re-arranges’ would be hypothetically constructed. Thus, metaphysics would still be ‘structurally’ hypothetical even if the contents of its theories are nothing over and above scientific results. This is because metaphysics is generally abductive in method (c.f., Haack, cited below). [↑](#footnote-ref-71)
72. Cornelis De Waal, “Why Metaphysics needs Logic and Mathematics Doesn’t,” in *Transcctions of the Charles S Peirce Society,* Vol. XLI, No. 2 (Spring 2005): 294. [↑](#footnote-ref-72)
73. CP 6.P: 4. See also CP 5.2: 423. [↑](#footnote-ref-73)
74. CP 6.1: 397. [↑](#footnote-ref-74)
75. Nicholas Guardiano gives a series of ways in which Peirce attempts to verify or demonstrate the truth of his objective idealism in “The Intelligibility of Peirce’s Metaphysics of Objective Idealism,” in *Cognitio,* Vol. 12, No. 2 (Jul./Dec. 2011): 198-201. [↑](#footnote-ref-75)
76. See in particular CP 5.4. [↑](#footnote-ref-76)
77. CP 5.4: 119. [↑](#footnote-ref-77)
78. CP 6.1: 301. [↑](#footnote-ref-78)
79. CP 8.1:13. [↑](#footnote-ref-79)
80. CP 6.1: 318. [↑](#footnote-ref-80)
81. C.f., CP 1:219-220; 8.1.: 136. [↑](#footnote-ref-81)
82. CP 5.1: 119. [↑](#footnote-ref-82)
83. CP 1.4:606. [↑](#footnote-ref-83)
84. CP 1.4: 576. [↑](#footnote-ref-84)
85. CP 1.4: 575. [↑](#footnote-ref-85)
86. CP 1.4: 673. [↑](#footnote-ref-86)
87. CP 1.4:590. [↑](#footnote-ref-87)
88. CP 1.4: 615. See also Olesky, 187. [↑](#footnote-ref-88)
89. E.g., CP 6.1: 101. [↑](#footnote-ref-89)
90. *Zhu Xi: Selected Writings,* 37, no. 1. [↑](#footnote-ref-90)
91. The Confucian sages are often depicted as having power to predict or foresee the future, but predictive power is not that in which their comprehension of *li* consists. E.g., RTH, 94-95, n. 15. [↑](#footnote-ref-91)
92. *Zhu Xi: Selected Writings,* 18, no. 8. [↑](#footnote-ref-92)
93. See, for example, Ching, 150-151. [↑](#footnote-ref-93)
94. See Thompson, 3.1. [↑](#footnote-ref-94)
95. CP 1.4:615. [↑](#footnote-ref-95)
96. Esposito, 36-37. [↑](#footnote-ref-96)
97. “Private Thoughts, 1860,” in *Writings of Charles S. Peirce,* Vol. 1, eds. Fisch, Kloesel, Moore, Roberts, Ziegler (Bloomington, IN: Indiana University Press, 1982), 8-9, n. LV. Peirce’s idea seems to be that there are no absolutely elemental or primal truths, but that there might be some truths a priori relative to a domain of inquiry or set of operations within it; c.f., Esposito, 31. [↑](#footnote-ref-97)
98. C.f., CP 1.4: 615. [↑](#footnote-ref-98)
99. CP 6.1: 232. [↑](#footnote-ref-99)
100. Kit Fine, “The Question of Realism”, *Philosophers' Imprint*, 1 (2001): 15. [↑](#footnote-ref-100)
101. Schaffer, 350-356. [↑](#footnote-ref-101)
102. Sider, 188. [↑](#footnote-ref-102)
103. Sider, 137-140. [↑](#footnote-ref-103)
104. Sider, 21-22; 268-290. [↑](#footnote-ref-104)
105. Sider, 61. [↑](#footnote-ref-105)
106. Thanks in particular to Bryan Van Norden. [↑](#footnote-ref-106)