A Theoretical Framework for Talking Seriously about God

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**Introduction[[1]](#footnote-2)**

In a book from 2011 I developed a theoretical framework for discussing theodicy, which was a combination of the philosophy of Lorenz B. Puntel and the theology of Wolfhart Pannenberg.[[2]](#footnote-3) I find the work of Puntel to be the best theoretical framework for doing metaphysics in general.[[3]](#footnote-4) However, I find it especially lacking in its involvement with natural science and physics.[[4]](#footnote-5) This is very different in the book *Every Thing Must Go* by James Ladyman et al,[[5]](#footnote-6) which is a book about metaphysics which presents an ontology where involvement with physics is of main priority. Interestingly, the ontic structural realism of Ladyman is very similar to the configuration ontology of Puntel. Ladyman has much to add when it comes to natural science, whereas Puntel has several things to add to Ladyman when it comes to the understanding of truth and the relation between language and world. I find such structural ontology to be a theoretical framework very apt for talking seriously about God. But whereas Puntel finds a natural place for God in metaphysics, Ladyman thinks that the topic of God should be excluded, and so my article will end with a discussion of this.

My goal in this article is to compare the ontologies of Puntel and Ladyman with the intention of exploring the possibilities of making them both more coherent by letting them complement each other. In part one of the article, I will present Puntel’s ontology. In part two, I will present the ontic structural realism of Ladyman and discuss it in light of Puntel’s ontology. I believe that both positions have some problems, but that they can be combined into a very coherent framework for doing ontology (and for talking seriously about God), and it is my goal in this article to start the process of doing so.

**Part 1: The configuration ontology of Lorenz B. Puntel**

I now present the configuration ontology of German philosopher Lorenz B. Puntel based on his book *Structure and Being* (2008).[[6]](#footnote-7) In this book Puntel convincingly shows how sentences have different meanings dependent on their theoretical framework, and that sentences often become ambiguous if it is unclear what kind of ontology they presuppose.[[7]](#footnote-8) “Theoretical frameworks” are instruments that make possible the articulation, conceptualization, and explanation of theoretical contents.[[8]](#footnote-9) A theoretical framework consists of a language, a logic, a conceptuality, and components that constitute a theoretical apparatus.[[9]](#footnote-10)

In a first presentation of the topic of comparing theories, Puntel suggests that the central criterion for comparing theories is coherence. Theories aim for truth,[[10]](#footnote-11) but truth is the goal and not the criterion.[[11]](#footnote-12) Puntel argues that coherence is the best criterion of truth. A theory must fundamentally be intelligible at all, and then it is more intelligible the more coherent it is. Coherence is a matter of degrees. It is not just about being consistent, but about developing detailed structures in the theory. Puntel here adds *completeness* as an additional comparative criterion, concerning the number of elements in the theory and their interconnections.[[12]](#footnote-13)

When Puntel spells out further how theories can be compared, he mentions three conceptual pairs to be used as criteria. The first conceptual pair is depth of structuration, which distinguishes between the surface structures and deep structures of a theory. Depth of structuration is a continuum that has to do with whether (parts of) the theory are valid only in a very particularistic theoretical framework, in a universal framework, or somewhere in between.[[13]](#footnote-14) This criterion does not imply that we human beings can actually develop an absolute theoretical framework, but it can still function as a regulative idea.

The second conceptual pair is grainedness, and distinguishes between fine-grained and coarse-grained. Grainedness is a continuum that has to do with the degree of differentiation, detail, and specificity of a theory. Puntel exemplifies by saying that “there is a red house on the corner” may well be true, but it is a coarse-grained truth.[[14]](#footnote-15)

The third conceptual pair is greater or lesser coherence. Puntel here refers to a book by Nicholas Rescher from 1973, and identifies the same three aspects of coherence as Rescher did in 1973.[[15]](#footnote-16) The first aspect is that of consistency, which means lack of contradiction (and a contradiction is to state both p and not-p in the same regard and at the same time). The second aspect is comprehensiveness, which has to do with the number of elements that are integrated in the theory. This is a material criterion, and what is meant by “elements” or “parts” of a theory will soon be further explained. The third aspect is cohesiveness, and has to do with the totality of relations between the elements of the theory. The theory is more coherent when there are more connections between the elements and these are tighter and more precise.[[16]](#footnote-17) The interconnections refer to any kind of relation or combination, and they determine how the elements of the theory are constituted and conceptualized, as will be clearer below in this subchapter. The theory is more coherent when the interconnections are more detailed, finely grained and precise.[[17]](#footnote-18)

Consistency is an either-or issue, because either the theory is consistent or not. Comprehensiveness and cohesiveness allows for degrees, since there can be more elements, and more and tighter connections. For this reason a theory can be more or less coherent.[[18]](#footnote-19) In this article I will use the term *coherence* and refer to these three aspects of coherence. In one sense the criteria of depth of structure and grainedness are included in the criterion of coherence, since the criteria of depth of structure and grainedness are specific ways of being comprehensive and cohesive. Puntel understands the various levels of structures as forming an internal coherence.[[19]](#footnote-20) Further, the aspect of completeness is a specification of the aspect of comprehensiveness. For reasons of simplicity, I will here focus on coherence only.

As mentioned, Puntel refers to Rescher’s book *The Coherence Theory of Truth* from 1973 when spelling out the criterion of coherence. In this book, Rescher defined truth as *correspondence* with reality, but used *coherence* as a criterion for truth.[[20]](#footnote-21) Puntel criticized this and argued that a closer link was necessary between definition and criterion, and Rescher accepted this critique.[[21]](#footnote-22) Defining truth as coherence establishes a link between definition and criterion, which legitimates the criterion and makes it understandable with what right one can claim one’s own understanding of truth as the actual truth by arguing that one has an opinion that is more coherent than another. Rescher seems again to have changed his mind, and wants to leave ontological questions aside,[[22]](#footnote-23) but Puntel criticizes Rescher for problems which then follow.[[23]](#footnote-24)

In the following, I shall present Puntel’s understanding of truth and his ontology. Puntel criticizes other theories of truth, and since I do not have the space to discuss different theories of truth, I refer the reader to the book *Wahrheitstheorien in der neueren Philosophie* (1993), where Puntel discusses different theories of truth.[[24]](#footnote-25) There is also quite an amount of critique of other theories of truth at various places in *Structure and Being*.[[25]](#footnote-26)

What is truth? According to Puntel, Tarski captured the fundamental core of what people intuitively mean by truth, with the following definition: “*a true sentence is one which says that the state of affairs is so and so, and the state of affairs indeed is so and so*”.[[26]](#footnote-27) But what does this mean? In his own theory, Puntel distinguishes between three different entities that can be true, so-called “truth bearers”.[[27]](#footnote-28) The three truth bearers are the utterance (of a sentence), the sentence, and the proposition. These stand in a hierarchical order because the utterance is true only if the sentence is true, and the sentence is true only if the proposition is true – but not the other way around. This means that the proposition is the fundamental truth bearer, but what is a proposition and what does it mean to say that a proposition is true?

The proposition is what the sentence expresses. The sentence expresses a state of affairs.[[28]](#footnote-29) When the proposition is true, it is identical with a fact.[[29]](#footnote-30) This seems strange, because most people are used to thinking of propositions on the one hand as something (semantic) in the mind and facts on the other hand as something (ontological) in the world.[[30]](#footnote-31) But Puntel considers semantics and ontology to be two sides of the same coin.[[31]](#footnote-32) To understand this, we must consider some more details of Puntel’s ontology.

After Kant, many have distinguished between the world *für mich* and *an sich*, and considered this to be an unbridgeable gap. But Puntel disagrees with the idea that there is a gap between thoughts and language on the one side, and the world on the other side.[[32]](#footnote-33) He understands the world as fundamentally expressible, and if it is expressible there must be something that can express it, namely language.[[33]](#footnote-34) Language is the counterpart to the world’s expressibility.[[34]](#footnote-35) “Language” in this sense is not to be understood as a natural language used in a country today, but as a semiotic system with uncountably many expressions.[[35]](#footnote-36) When this semiotic system is structured syntactically, semantically, and ontologically, it can express the world. Important then is that there is a one-to-one correspondence between semantic and ontological structures.[[36]](#footnote-37) When language is understood this way, Puntel argues that the world is language-dependent.[[37]](#footnote-38) Access to the world is absolutely language mediated.[[38]](#footnote-39) If you claim that the world is independent of any language, then you express about the world that it cannot be expressed, and that is a self-contradiction.[[39]](#footnote-40) The “subjective” thoughts and language and the “objective” world are poles within the same language-dependent dimension – there is no unbridgeable gap between them.[[40]](#footnote-41)

How does Puntel understand this language-dependent world? Puntel agrees with the early Wittgenstein that the world does not consist of things, but of facts.[[41]](#footnote-42) A “fact” is what is the case – it is the existence of states of affairs.[[42]](#footnote-43) So the world consists of facts, or differently put: the world consists of true propositions.[[43]](#footnote-44) How can that be? All the facts of the world (particles, waves, forces, and anything that is the case) are structures.[[44]](#footnote-45) “Structures” are differentiated and ordered interconnections or interrelations of parts.[[45]](#footnote-46) Proper parts are characterized by irreflexivity (a proper part is not a proper part of itself), assymetry (if a is a proper part of b, then b is not a proper part of a), and transivity (if *a* is a proper part of *b*, and *b* is a proper part of *c*, then *a* is a proper part of *c*).[[46]](#footnote-47)

Puntel argues that facts are the only entities in the world,[[47]](#footnote-48) and that every entity is a structure.[[48]](#footnote-49) The simplest structures are null-stuctures, which only structure themselves. These are called simple primary structures. These simple primary structures can be combined into a configuration of simple primary structures, which then becomes a complex primary structure. And these again can be combined into new configurations of complex primary structures.[[49]](#footnote-50) The world consists of structures, and language is structures, and the job of systematic philosophy is to bring those two dimensions into agreement, because when they agree the true structure of the world is manifest.[[50]](#footnote-51) Only through the structures of language can the structures of being be understood.[[51]](#footnote-52)

How does this happen? A fundamental fact about language is that the linguistic items in the language require determination.[[52]](#footnote-53) Language semantically determines its own items, which happens internally.[[53]](#footnote-54) When a proposition is fully determined, it is true, and then it is identical to a fact.[[54]](#footnote-55) What this last sentence means is that when a proposition is fully determined, its place in the world has been clarified, and then its place in the world is a fact. The full determination means explicitly identifying one item in the semantic dimension (the proposition) with an item in the ontological dimension (the fact).[[55]](#footnote-56) This reminds us of the correspondence theory of truth, but whereas it is unclear how to understand the correspondence in normal correspondence theories, the “correspondence” is by Puntel understood as identity.[[56]](#footnote-57) This can be coherently done since the world is understood as consisting of facts only, and so Puntel has an explicit theory of the relation between language and world.[[57]](#footnote-58) Facts are ontological structures that can be understood by means of language only.[[58]](#footnote-59)

Does this mean that humans construct the world randomly? No, Puntel claims that experience is important when it comes to understanding the world. The world presents itself as a grand datum for philosophy, but it is accessible only as prestructured. The task for philosophy is to comprehend, explain, and articulate this world as precisely and adequately as possible.[[59]](#footnote-60) For this job, the natural languages are the necessary starting point for philosophy, but they are very imprecise. The task for philosophy is then to make natural language more coherent and precise.[[60]](#footnote-61) Puntel argues that this can be done also with religious language insofar as it presents a theory about the world.[[61]](#footnote-62)

Puntel calls his ontology contextual or configuration ontology. He is very critical of substance ontology in all its forms, because they all have the same root problem: the substance is an unintelligible entity. A substance is most often understood as a substrate of attributes (properties and/or relations), but when the attributes are removed, what is left (the substance) is unintelligible.[[62]](#footnote-63) In Puntel’s alternative ontology, every simple primary fact (the basic entities) is determined by a network of relations and/or functions. This means that in Puntel’s ontology, relations are more basic than substances, while the opposite is the case in substance ontology.

Syntactically, Western languages have a subject-predicate form which reflects substance ontology, since the sentence-subject taking a predicate is similar to the substance and its predicates.[[63]](#footnote-64) Puntel argues that philosophical language should syntactically reflect his alternative ontology, by using the form “It is the case that some state of affairs occurs at time *t* at place *p*”.[[64]](#footnote-65) Puntel describes this as language based on a strong version of the context principle (that words get their meaning only in the context of a sentence) as opposed to the composition principle (where the sentence gets its meaning from the parts of the sentence).[[65]](#footnote-66) However, he still uses the subject-predicate form, but then only as a convenient abbreviation of sentences without subject and predicate.[[66]](#footnote-67) With his alternative way of constructing language, Puntel has made ontology, semantics, and syntax cohere with each other in a precise way.

What is the relationship between substance ontology and Puntel’s own ontology? Puntel considers substance ontology to be a coarse-grained truth, and his own ontology to be a fine-grained truth.[[67]](#footnote-68) *Substances* or *objects* and *attributes* in substance ontology must be understood as abbreviated sentences that express primary propositions and configurations of propositions in Puntel’s ontology.[[68]](#footnote-69) What it means for a substance to “have” an attribute is that the attribute is a part of a configuration.[[69]](#footnote-70)

In Puntel’s theory of truth, the subject is not primary.[[70]](#footnote-71) The subject is a part of the world, and the perspective of the subject is a part of the world. The perspective of the subject can be formulated as something which is the case; for example, “It is the case from the perspective of subject *S* that *S* knows that *P*.”[[71]](#footnote-72) “Perspective” is the same as “theoretical framework” in Puntel’s ontology.[[72]](#footnote-73) But Puntel does believe that truth is relative to theoretical frameworks, so is he a relativist after all? He is not an *ontological* relativist, defined as one who denies that truth is one, because Puntel does believe that something can be absolutely true within all theoretical frameworks. He may be called an *epistemic* relativist, defined as one who thinks that human access to truth is dependent on perspective or theoretical framework, since Puntel does not claim that we human beings can reach absolute truth, or ever make a final decision that something is true within all theoretical frameworks.[[73]](#footnote-74) But he does argue that the concept of absolute truth is understandable and functions as a regulative idea that explains what absolute truth is and the role of coherence.[[74]](#footnote-75)

Puntel identifies universal coherence with the universal structuration of being. To conceive of anything is to place it within this structuration, and a proposition is true when it has been given its rightful place. This is how truth is defined with reference to coherence, and thus how the criterion of coherence functions as a criterion of truth, since the more coherent the theory is, the more likely it is to be structured rightly. Tarski’s definition that “a true sentence is one which says that the state of affairs is so and so, and the state of affairs *indeed* is so and so” rightly makes the state of affairs fundamental. Puntel’s ontology explains the little word “indeed” which makes the difference in the first and the second half of Tarski’s definition: a true sentence expresses that the state of affairs is so and so, and it is *fully determined* that the state of affairs is so and so.[[75]](#footnote-76)

In agreement with his own theory, Puntel ends by stating that another theory may be more coherent and thus better than his.[[76]](#footnote-77) But of all the current alternatives he knows of, he finds his own theory to be the best thus far.[[77]](#footnote-78)

**Part 2: The ontic structural realism of James Ladyman compared with the configuration ontology of Lorenz Puntel**

As mentioned in my introduction, Puntel is not concerned with what claims are being made in current physics and other natural sciences. James Ladyman, on the other hand, is very concerned with this in his ontic structural realism. In the following I shall present ontic structural realism with focus on comparison with Puntel's configuration ontology. I will show similarities, topics where they may complement each other, and disagreements. The presentation is based on the book *Every Thing Must Go: Metaphysics Naturalized* (2007) by James Ladyman et al.[[78]](#footnote-79)

Ladyman's book starts with a critique of metaphysics that is not informed by modern physics.[[79]](#footnote-80) Interestingly enough, there is little that indicates that Puntel is informed by modern physics, but he writes that whatever physics is concerned with, it will always be structures, and so his ontology will be compatible with modern physics in any case.[[80]](#footnote-81) What Ladyman shows – which strengthens Puntel’s case – is that modern physics supports structural ontologies against substance ontologies, which is a point Puntel stresses for philosophical reasons alone.

What is ontic structural realism?

In chapter two of his book, Ladyman presents ontic structural realism as a golden mean between scientific realism and constructive empiricism. Scientific realism is the view that our best current scientific theories are approximately true,[[81]](#footnote-82) whereas constructive empiricism is van Fraassen’s view that is meant to dispense the need for metaphysics and not believe in anything beyond what can be empirically observed.[[82]](#footnote-83) An important argument in favour of scientific realism is the no-miracle argument: unless science discovers truth, it would be a miracle for it to be so efficient and make novel predictions. But the argument from theory change challenges the no-miracle argument: previous theories like the caloric theory of heat or the ether theory of light were successful and made novel predictions, but they were wrong and made reference to entities that do not exist. John Worrall in 1989 suggested structural realism as a golden mean to explain how scientific theories have success even through theory change: the reason is that the structure of the theory is preserved through theory change. Ladyman argues that there are two versions of structural realism: epistemic structural realism and ontic structural realism. The ontic, as opposed to the epistemic version, holds that there are objective modal structures in the world. The reason is that these are necessary for the no-miracle argument to work, since science explains what *will* happen when certain measurements are made. Ladyman defends ontic structural realism.[[83]](#footnote-84)

A main component of ontic structural realism is the proposal that there are no things – no self-subsistent individuals – there are only structures.[[84]](#footnote-85) Individuals are nothing but the sum of their relations.[[85]](#footnote-86) These structures are located,[[86]](#footnote-87) and structure is the final word in ontology.[[87]](#footnote-88) So for example, a tiger is a pattern behaving like a tiger at a certain place and that’s it.[[88]](#footnote-89) There is no reason to believe that things in addition have thisness or haecceity.[[89]](#footnote-90)

This is very similar to Puntel, who argues that there are no substances, only attributes/structures at a place.[[90]](#footnote-91) He uses an example of a white cat on a mat, saying that it is catting whitely at the mat.[[91]](#footnote-92) The individual cat is then a configuration of its attributes.[[92]](#footnote-93) The idea that there should be a substrate below the attributes is unintelligible according to Puntel.[[93]](#footnote-94) While Puntel reaches this conclusion from philosophical arguments, Ladyman argues that physics shows us that relations are fundamental. An example is electrons, since facts about their identity, diversity, etc. depend on the relations they enter into.[[94]](#footnote-95) According to Ladyman, the majority of philosophers of physics agree that the world is not made of things.[[95]](#footnote-96) Puntel makes a similar point quoting Wittgenstein – that the world is not made of things, but of facts – which in Puntel’s ontology are structures.[[96]](#footnote-97)

There may be a disagreement between Puntel and Ladyman on the question of parts and wholes, but I do not think there is. Ladyman rejects the idea that the world is composed of bigger things that are mereological sums of smaller things. Physics shows us that such mereological atomism is false.[[97]](#footnote-98) But Ladyman would probably not reject Puntel’s claim that complex structures have less complex structures as parts, when “part” is explicated by the characteristics of irreflexivity, asymmetry, and transivity, for this seems to be a tautological claim made true by definition (if a part does not have these characteristics it is not a part, and if it is a part it is less complex than what it is a part of). Ladyman’s point is rather that composition in science is dynamical because it is model-dependent.[[98]](#footnote-99) But this is in exact agreement with Puntel, who argues that the structures of the world can be expressed though different theoretical frameworks.[[99]](#footnote-100)

The classical objection to ontologies that make relations more fundamental than individuals is to argue that relations must be relations between something, namely individuals. Relations presuppose relata, and thus relations cannot be fundamental. Ladyman quotes Russell and many other scholars who have made this objection.[[100]](#footnote-101) Ladyman answers that relations indeed have relata, but that the relata are also relations.[[101]](#footnote-102) Individuals are nothing but relations.[[102]](#footnote-103)

To this answer one could object that this does not solve the problem, but just pushes it one step back, since these relata or individuals consisting of relations consist of relations that again presuppose individuals. Ladyman rejects this and writes that it is relations “all the way down”.[[103]](#footnote-104) He rejects that ontology can be divided into levels where there is a fundamental level,[[104]](#footnote-105) but argues that examples like the electron shows that relations are primary to things.[[105]](#footnote-106)

It is not totally clear in Ladyman’s ontology what kind of *fundamentality* relations have to individuals and why. I believe that Puntel can offer a more illuminating explanation as to how and why relations are fundamental, since he has worked more with the relation between language and ontology. Defending a strong version of the context principle, Puntel argues that relations/structures are the most fundamentally understandable entities. The world consists of ever greater configurations of these structures, and structures are all that exist. There is no meaning in saying that something unstructured and thus inexpressible and incomprehensible exists in the world, for it would not even have any meaning that it “exists” or is part of the “world”. Structures are thus ontologically primary in virtue of being semantically primary, which in Puntel’s conception amounts to the same thing.

Since Puntel constructs an ontology from structures as the fundamentally understandable entities, he can explain why it is the case – as Ladyman claims – that it is relations “all the way down” or why structures are “all there is”. It is because all the entities in the ontology are configurations of structures down to the simplest structures, which are the basically understandable entities – and these are understood only in relation to other structures. More simply put: the most fundamental entities physicists can discover are relations, since those are the most fundamental entities humans can understand. Puntel can construct the ontology he does by rejecting the Kantian division between *das Ding an sich* and *das Ding für mich*. Again, this seems in close agreement with Ladyman, who says that unknowable individuals are irrelevant to metaphysics and that ontic structural realism wants to be intelligible without “any Kantian residue”.[[106]](#footnote-107) According to Ladyman, reality and information cannot be distinguished.[[107]](#footnote-108)

Levels in ontology

A bit more should here be said about levels in ontology. Ladyman rejects the idea of levels in ontology, and he rejects the idea of a fundamental level, but he believes that ontology is scale relative. Puntel argues that there are simple structures out of which the more complex structures are configurated, and he believes that different theoretical frameworks express the world in different ways. Semantically, Puntel argues that the fundamental structures are the simplest structures (the null-structures which structure only themselves, like “it’s red” or “it’s round”).[[108]](#footnote-109) Ontologically, he argues that there must be a fundamental level of being, on which everything else depend for its existence.[[109]](#footnote-110)

Again, it is not so easy to tell how much of a disagreement there is here, since Ladyman often writes about levels, fundamentality, primacy, etc. without specifying the role of semantics and ontology in this or what is meant more precisely by the term “fundamental”. I shall try to relate Puntel and Ladyman on the different issues in the following, and I start with levels in ontology. Even if Ladyman rejects levels in ontology, I mentioned that he would probably agree with Puntel that ontologically complex structures have ontologically simpler structures as their parts. Rather, Ladyman rejects the idea that complex things are made out of ever smaller things until one reaches the smallest subsistent entities.

So, when Ladyman then rejects the idea of a fundamental level, he seems to reject finding these smallest entities that everything else is mereologically composed of. Of course, many structures are composed of smaller entities (cells out of molecules out of atoms, etc.), but when it comes to the particles today known as elementary particles, their individuality and characteristics depend on other structures, and they may themselves be the result of quantum field activity, superstrings or something else. The meaning of “fundamentality” as being the basic building block that everything else is made of is thus rejected by Ladyman.

Ladyman does accept the idea that some structures are universal. Could universal structures reasonably be called “fundamental”? I understand Ladyman as arguing that the universal structures of the world give the world its modal structures. This is because the universal structures determine which other structures in the world are necessary, possible and impossible. Puntel agrees that there are objective modal structures in the world.[[110]](#footnote-111) He would agree that there is no epistemic foundation in philosophy that everything else can be based on, since he is a coherentist. But he does think that there are absolute structures that the contingent structures depend upon for their existence. These structures are then fundamental in the sense of being structures that other structures depend upon for their existence.

I guess Ladyman would agree that there are structures that are fundamental in the sense of being structures that give the world objective modality.[[111]](#footnote-112) But I guess he could also say that which structures are the fundamental in this sense will depend on the theoretical framework one uses, so that not one single structure could be selected as fundamental in every theoretical framework. Thus no structure is absolutely fundamental in all theoretical frameworks.

A step that Ladyman is probably not prepared to take is the step that Puntel takes when he argues that there is a kind of necessity which is absolute necessity, which is to be a structure independent of any other structure.[[112]](#footnote-113) Puntel uses several lines of argument against the possibility that there could be absolutely nothing, and concludes that something must exist with absolute necessity.[[113]](#footnote-114) It would be interesting to know whether or not Ladyman could accept that some structures might be fundamental in the sense of being the structure that everything else depends upon. Dependence and independence seems to be another interesting meaning of levels and fundamentality.

Another kind of leveling in metaphysics is when Ladyman writes that ontology is scale relative. Ontological scale relativity means that what exists is relative to the scale at which it is being measured.[[114]](#footnote-115) From the examples given, “scale” seems to mean both as a metric scale (there are no cats at the quantum scale, and no mountains at the astrophysical scale), and as a fine-grained/coarse-grained scale (evolution occurs only over a long time and many individuals, not on one animal).

I find it more illuminating to say with Puntel that what exists is relative to a theoretical framework instead of saying that it is relative to scale. For example, gravity presumably exists on small and large scales, and on fine-grained and coarse-grained scales, but what gravity is understood to be depends on the theoretical framework within which it appears (Newtonian force, geometrical bending of spacetime, gravitons, etc.). In any case, it seems that by specifying the meaning of “fundamentality” and “levels”, these can be applied meaningfully in metaphysics – even if Ladyman says that no interesting content can be given to the metaphor of levels.[[115]](#footnote-116)

On the goal, content and method of metaphysics

Ladyman describes coherence as a goal for metaphysics, saying that it is an important justification for a hypothesis that it stands in “networked consilience relationships” with other hypotheses.[[116]](#footnote-117) Ladyman agrees with E.J. Lowe that truth is one and indivisible, and that it is the job of metaphysics to show how the different parts of reality fit together.[[117]](#footnote-118) This is very similar to Puntel, who argues that truth is one, and that it is the job of systematic philosophy to discuss what the comprehensive true description of the world is.[[118]](#footnote-119) Ladyman argues that a metaphysical proposal is to be “preferred to another to the extent that the first unifies more of current science in a more enlightening way”.[[119]](#footnote-120) The three aspects of coherence that Puntel is concerned with (consistency, connectedness, and completeness) are here included – connectedness corresponds to network relationships and completeness corresponds to unifying science, and all of this of course has to be consistent.

Puntel has a detailed understanding of coherence grounded in an ontology and theory of truth. Ladyman on the other hand finds that theoretical virtues point in different directions and that there is no obvious way to choose between them, so that choices become pragmatic.[[120]](#footnote-121) At one place Ladyman argues with reference to Philip Kitcher that a better explanation uses fewer kinds of argument patterns.[[121]](#footnote-122) This is also a pragmatic criterion, since – as Nicholas Rescher argues – we have no reason to believe that truth is simple.[[122]](#footnote-123) A great advantage with Puntel’s theory is that the coherence criterion helps us choose between theories, and that the criterion is grounded in the concept of truth: since truth is how everything fits together, a more coherent theory can claim to be closer to truth than a less coherent theory although possibly both may be superseded by an even more coherent theory.  
  
The main methodological difference between Ladyman and Puntel may be that Ladyman is only interested in coherence among certain data, while Puntel finds all data (understood as truth candidates) relevant.[[123]](#footnote-124) Ladyman proposes a principle of naturalistic closure (PNC), which briefly states that metaphysics should only consider hypotheses where there is scientific consensus today that they can be investigated, and it must be related to at least two specific confirmable hypotheses.[[124]](#footnote-125)

In detail, the principle says:

Any new metaphysical claim that is to be taken seriously at time *t* should be

motivated by, and only by, the service it would perform, if true, in showing how two

or more specific scientific hypotheses, at least one of which is drawn from

fundamental physics, jointly explain more than the sum of what is explained by the

two hypotheses taken separately.[[125]](#footnote-126)

The motivation behind this principle is that Ladyman considers it to be the goal of metaphysics to unify science, and in this unification project fundamental physics has a central role in being universal.

I do not understand why any new metaphysical claim has to integrate a hypothesis from physics. It seems reasonable that when metaphysics tries to give a unified description of the world, there may be some metaphysical claims that do not integrate any hypotheses from fundamental physics. Here are some examples of metaphysical claims that seem well worthy of serious discussion instead of being disqualified from the outset for not integrating hypotheses from physics: non-physical qualia exist; objective moral values exist; that a proposition is true means that it can be integrated in the world; the limits of human intelligence are such and such; language and world relate in such and such a way; a state of affairs can be more fundamental than another in such and such senses of "fundamentality".

Ladyman says that what is physically uninteresting is metaphysically uninteresting.[[126]](#footnote-127) But whether or not there are non-physical qualia is very interesting.[[127]](#footnote-128) Physics may not tell us the answer, but a unified picture of the world must include how conscious experiences are to be understood. The question of the nature of qualia can be discussed with rational arguments. Whether there are non-physical structures in the world is a question that belongs in metaphysics that is supposed to give a unified picture of the world. But the PNC seems to exclude it from discussion at the outset, since whether or not there are non-physical qualia does not show “how two or more specific scientific hypotheses, at least one of which is drawn from fundamental physics, jointly explain more than the sum of what is explained by the two hypotheses taken separately”[[128]](#footnote-129) – at least not as far as I can tell, but maybe I misunderstand the PNC here.

I do not understand why Ladyman thinks that what is physically uninteresting is metaphysically uninteresting. Whether there are non-physical qualia is very interesting for us humans, and so metaphysics should investigate it. Ladyman writes that we should not waste resources on investigating what lies beyond the limits of physics,[[129]](#footnote-130) but why not when we have resources and interested people who give good and rational arguments, although not within the field of physics? Contrary to Ladyman, Puntel thinks that the human mind will always strive for maximal intelligibility and will pursue questions meaningfully as long as the questions are coherent and clear.[[130]](#footnote-131)

A reason why Ladyman wants to limit metaphysics to what is empirically verifiable and linked to fundamental physics seems to be the desire to strive for objectivity and to free metaphysics from anthropocentric myths.[[131]](#footnote-132) He thinks that resources should be spent on these important matters, and not on the far less certain matters where verification is only very indirect or justification very uncertain, or where conclusions are merely about logical possibilities.[[132]](#footnote-133)

This seems to be a decisive point when it comes to metaphysics: should one investigate broadly, discuss all possibilities, and spend time on uncertain matters, or should one focus only on what can be securely verified through measurements and experiments? How one answers is likely to be influenced by how probably one finds it that there are interesting things to be discovered without measurements and experiments, but some may be interested in discussing questions where no answer seems reachable just because one cannot exclude the possibility that something interesting might be discovered. And it seems to be a matter of personal interest whether one finds it interesting to discuss which of two uncertain hypotheses are best justified, or whether such discussions should not be made at all.

As seen, Puntel finds all data – in a broad sense of data – relevant for metaphysics, whereas Ladyman wants to restrict it. As Ladyman points out, there are infinitely many logical possibilities, and it is impossible to discuss them all,[[133]](#footnote-134) so it is understandable that he wants to exclude many unserious alternatives such as certain New Age interpretations of quantum physics. But in practice, Puntel’s criterion of coherence quickly rules out unserious metaphysics. The reason is that there is already a very coherent metaphysics in naturalism (and I remind the reader that coherence is about coherence with data, not just about internal consistency). Any competing metaphysics thus has to prove itself more coherent than naturalism, and thus almost all alternatives immediately fail. The criterion of coherence thus achieves almost the same goal as Ladyman has of ruling out unserious metaphysics, but without sounding dogmatic in ruling out anyone in advance.

Is there a place for God in metaphysics?

Several of Ladyman’s views presented in the previous section also function as arguments against God having a place in metaphysics, and I shall now reconsider some of these. The principle of naturalistic closure says that only metaphysical claims that integrate fundamental physics are acceptable, but I argued that there are interesting metaphysical questions outside the limits of physics. As an example, Ladyman writes that the question of what caused the big bang is uninteresting since it is outside what physics can answer. It may be Elvis, God, a black hole or infinitely many other options, but according to Ladyman each of these answers “is as probable as another”[[134]](#footnote-135), and therefore questions like these are questions we should forget about.[[135]](#footnote-136)

According to Puntel’s metaphysics, a claim is more probable than another if it is more coherent, and thus the claim that God caused[[136]](#footnote-137) the big bang will be more coherent (and thus more probable) than the claim that Elvis caused the big bang. That is because God – as opposed to Elvis – is described with properties compatible with creating a universe, and there are other arguments supporting the existence of such a God.

Another claim made by Ladyman was that what is physically uninteresting is metaphysically uninteresting, and again God is given as a concrete example of something which is physically uninteresting, although it is said to be anthropologically interesting.[[137]](#footnote-138) I argued above that questions with great interest for humans should be included in metaphysics. The claim that God exists is – in advanced proposals – the claim that there is a universal metaphysically necessary structure which is conscious and on which structures in the world depend for their existence. Thematically, this belongs within metaphysics. Ladyman is very sure that there is no such structure, but even to demonstrate that the existence of God is very implausible is surely of great human interest, and should thus be of interest to metaphysics.

I am not certain, but according to how Ladyman defines real patterns, I assume that Ladyman thinks that God does not fulfil the criterion of being a real pattern, so that God should not be counted among things that exist:

To be is to be a real pattern; and a pattern x → y is real iff

(i) it is projectible; and

(ii) it has a model that carries information about at least one pattern P in an encoding that has logical depth less than the bit-map encoding of P, and where P is not projectible by a physically possible device computing information about another real pattern of lower logical depth than x → y.[[138]](#footnote-139)

This may seem to exclude God since God is not projectible, and since it does not make sense to compare an encoding of God with a bit-map encoding of God. A *bit-map encoding* is “a zero-compression encoding, a one-to-one mapping from each bit of information in the pre-encoded representation of P to a distinct bit in the encoding”,[[139]](#footnote-140) and *projectibility* is “better-than-chance estimatability by a physically possible computer running a non-trivial program”.[[140]](#footnote-141) In simpler words, the point with criterion number one of projectibility is that it should be possible to project/predict the pattern into the future, since the pattern is then a stable enough pattern to be worth measuring in the future.[[141]](#footnote-142) While a *mere pattern* is any relation among data, a *real pattern* has the stability that makes it projectible.[[142]](#footnote-143) The point with criterion number two is that a real pattern should be possible to capture in a simpler way than by a one-to-one mapping. For example, if there is a real pattern among voters it should be possible to describe this in a simpler way than by saying what each individual has voted.[[143]](#footnote-144)

However, this definition seems to rule out non-physical qualia as well, since one cannot compare qualia with bit-maps of these either – or what would a bit-map of a quale be? In addition, at least some qualia seems hard to project, for example when will person x or people in general have a conscious experience of love at first sight? But qualia seem accepted by Ladyman since they carry information about other patterns. The example given is that a certain aroma carries information like ‘Mom baked here recently’ or even just ‘I smelled this in the old country’.[[144]](#footnote-145) It does not seem very projectible when you will experience a specific unknown thing you have smelled in your childhood, nor does it seem to make sense to compare it with a bit-map. The same could be said about love at first sight (which may not exist, but the question here is whether we can rule out the possibility that it might exist).

How then does God fare compared to qualia? Since God is free, God is hardly projectible, unless you count things like “will continue to keep things in existence”, “will continue to be reported as experienced”, etc. as projectibility, but there are non-projectible qualia as well. Like qualia, God does carry information about other patterns, for example about the world that it was created by God. That information is contested, but so is a lot of information, and the definition does not say that the information should not be contested. And God can be described in simple ways, but the concept of a bit-map does not apply to God – nor does it apply to qualia. If the definition of real patterns allows for non-physical qualia, it seems to me that it should allow for the possibility of God as well.

Yet another reason, according to Ladyman, to exclude God from metaphysics is that only structures which can be empirically verified should be included.[[145]](#footnote-146) This claim is further supported by the goals of objectivity and freeing metaphysics from anthropocentric myths.[[146]](#footnote-147) While the existence of God cannot be empirically verified directly, it can be supported indirectly by the empirical implications that specific hypotheses about God have. Considering the coherence of a particular hypothesis about God can be done as objectively as other hypotheses. As long as the criterion of coherence with data is taken seriously (so that one does not reject evolution or claims in physics, etc.), this safeguards against anthropocentricity. One can always charge a believer in God for being anthropocentric, but this is an *ad hominem* argument no better than the claim that people reject the existence of God for anthropocentric reasons.[[147]](#footnote-148) According to Ladyman, those who raise the question of the origin of reality usually deflate reality to include entities like God.[[148]](#footnote-149) Puntel agrees that there are physical models of the universe where it is meaningless to ask what the cause of the universe is, but he argues that one can compare such models with theistic models to compare them on overall coherence.[[149]](#footnote-150)  
  
Belief in God is less objective than belief in many claims within physics in the sense that it is less certain. One could therefore argue that discussions about God spill much ink, and that time could be better spent on other questions. But one could also argue that at least many wrongful ideas about God have been rejected through discussion over time, and that the question of God has great existential consequences for many, and that the mere possibility that interesting truths could be discovered about God’s existence or non-existence is more than enough warrant for continued discussion. Puntel argues very seriously that God is the necessary fundamental structure of being, and when so many of the greatest minds in the history of philosophy have found the topic of God worthy of serious discussion, it seems unwarranted to dismiss it as a question worthy of discussion at all.[[150]](#footnote-151)

Accepting God as a topic for metaphysics does not open the door for an infinity of equally improbable alternatives. As mentioned, the criterion of coherence (with data), combined with the fact that naturalism is a very coherent alternative, only leaves the door open for very serious theories about God. Such theories have been entertained by great minds before and now, and Ladyman has not given good reason to reject them.[[151]](#footnote-152)

**Conclusion**

Puntel’s ontology can improve ontic structural realism on many points by making it more fine-grained and precise. Ladyman’s ontology can strengthen Puntel’s ontology by offering a lot of supporting arguments from fundamental physics. Ladyman rejects that there is a place for God in metaphysics, but I have not found any of the arguments for excluding God to be any good.

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1. I am very grateful to Lorenz B. Puntel and James Ladyman for discussing matters in this article with me, and to the authors in *Talking Seriously about God* for their comments on an earlier draft. [↑](#footnote-ref-2)
2. Atle Ottesen Søvik, *The Problem of Evil and the Power of God, Studies in Systematic Theology* (Leiden: Brill, 2011). [↑](#footnote-ref-3)
3. In particular I will refer to Lorenz B. Puntel and Alan White, *Structure and Being: A Theoretical Framework for a Systematic Philosophy*(University Park, PA: Pennsylvania State University Press, 2008). This book was in 2011 recognized by the Metaphysical Society of America as the most important book in metaphysics the last five years. [↑](#footnote-ref-4)
4. Puntel’s ontology is mainly concerned with the very most basic structures of being, and not so concerned with the special sciences. Since I believe that mind is a result of evolution, I nevertheless find it important for a coherent basic metaphysics to try to understand the natural world where mind arose. [↑](#footnote-ref-5)
5. James Ladyman et al., *Every Thing Must Go: Metaphysics Naturalized*(Oxford: Oxford University Press, 2007). [↑](#footnote-ref-6)
6. This presentation leans heavily on my presentation of Puntel in Atle Ottesen Søvik, *The Problem of Evil and the Power of God: On the Coherence and Authenticity of Some Christian Theodicies with Different Understandings of God's Power*(Oslo: MF Norwegian School of Theology: Unipub, 2009), chapter 3.1. and *The Problem of Evil and the Power of God*, chapter six. [↑](#footnote-ref-7)
7. Puntel and White, *Structure and Being*, 9, 62, 236. [↑](#footnote-ref-8)
8. Ibid., 24. [↑](#footnote-ref-9)
9. Ibid., 9. “Ontology” is defined by Puntel as a theory of beings ibid., 370. [↑](#footnote-ref-10)
10. A philosophical theory is an ordered relation between language, structure, and the universe of discourse (ibid., 136.). “Language” and “structure” is defined below, the “universe of discourse” is being that can be understood (ibid., 395.). According to how Puntel understands theories, theories aim for truth (ibid., 27.). His understanding of truth is provided below. [↑](#footnote-ref-11)
11. Ibid., 464. [↑](#footnote-ref-12)
12. Ibid., 69-70. [↑](#footnote-ref-13)
13. Ibid., 408-09. [↑](#footnote-ref-14)
14. Ibid., 409-10. [↑](#footnote-ref-15)
15. See Nicholas Rescher, *The Coherence Theory of Truth*, Clarendon Library of Logic and Philosophy (Oxford: Clarendon Press, 1973), 31-38 and 168-75. Puntel explains the aspects, but does not label them, so I use here Rescher’s labels for the aspects, namely “consistency”, “comprehensiveness”, and “cohesiveness”. [↑](#footnote-ref-16)
16. Puntel and White, *Structure and Being*, 410. [↑](#footnote-ref-17)
17. Ibid., 476. [↑](#footnote-ref-18)
18. Ibid., 465-66. [↑](#footnote-ref-19)
19. Ibid., 408. [↑](#footnote-ref-20)
20. See Rescher, *The Coherence Theory of Truth*, 23-24. [↑](#footnote-ref-21)
21. "Truth as Ideal Coherence," Review of Metaphysics 38(1985): 796. See also footnote 3 on the same page. [↑](#footnote-ref-22)
22. See for example *Philosophical Reasoning: A Study in the Methodology of Philosophizing*(Malden, MA: Blackwell Publ., 2001), 194. [↑](#footnote-ref-23)
23. Puntel and White, *Structure and Being*, 48. [↑](#footnote-ref-24)
24. Lourenz B. Puntel, *Wahrheitstheorien in der neueren Philosophie: Eine kritisch-systematische Darstellung*, 3rd ed.(Darmstadt: Wissenschaftliche Buchgesellschaft, 1993). [↑](#footnote-ref-25)
25. See for example Puntel and White, *Structure and Being*, 141-54, 222-45. [↑](#footnote-ref-26)
26. Tarski, according to Puntel, in ibid., 143. Emphasis in text [↑](#footnote-ref-27)
27. Puntel mentions that the term ”truth-bearer” is not very good in his account, since it gives associations to substance ontology and ”true” as a predicate, while he defends another kind of ontology where ”true” is an operator. He nevertheless uses ”truth-bearer” as a name for what the truth-operator determines or qualifies. For the truth-bearers, see ibid., 147, 226-27, 32.; and Lorenz Bruno Puntel, *Grundlagen einer Theorie der Wahrheit, Grundlagen der Kommunikation und Kognition* (Berlin: de Gruyter, 1990), 322-33. [↑](#footnote-ref-28)
28. Puntel and White, *Structure and Being*, 163. [↑](#footnote-ref-29)
29. Ibid., 232-34. [↑](#footnote-ref-30)
30. Ibid., 235. [↑](#footnote-ref-31)
31. Ibid., 171. [↑](#footnote-ref-32)
32. Ibid., 401. [↑](#footnote-ref-33)
33. Ibid., 97, 377. [↑](#footnote-ref-34)
34. Ibid., 388. [↑](#footnote-ref-35)
35. Ibid., 32, 387. [↑](#footnote-ref-36)
36. Ibid., 396. [↑](#footnote-ref-37)
37. Ibid., 170. [↑](#footnote-ref-38)
38. Ibid., 387. [↑](#footnote-ref-39)
39. Ibid., 377. [↑](#footnote-ref-40)
40. Ibid., 368, 401. [↑](#footnote-ref-41)
41. Ibid., 236. [↑](#footnote-ref-42)
42. Ibid., 164. [↑](#footnote-ref-43)
43. Ibid., 232. [↑](#footnote-ref-44)
44. Ibid., 262. [↑](#footnote-ref-45)
45. Ibid., 27. [↑](#footnote-ref-46)
46. Ibid., 268. [↑](#footnote-ref-47)
47. Ibid., 233. [↑](#footnote-ref-48)
48. Ibid., 259. [↑](#footnote-ref-49)
49. Ibid., 29. [↑](#footnote-ref-50)
50. Ibid., 40. [↑](#footnote-ref-51)
51. Ibid., 395. [↑](#footnote-ref-52)
52. Ibid., 148. [↑](#footnote-ref-53)
53. Ibid., 152-53. [↑](#footnote-ref-54)
54. Ibid., 183. [↑](#footnote-ref-55)
55. Ibid., 234. [↑](#footnote-ref-56)
56. Ibid. [↑](#footnote-ref-57)
57. Ibid., 234-36. [↑](#footnote-ref-58)
58. Ibid., 209. Does this make Puntel into a realist or an anti-realist? Puntel rejects both sides of the debate, since they do not distinguish between natural languages and language as such (in the general sense understood by Puntel). The world is not dependent on natural languages, but the world is dependent on language as such. [↑](#footnote-ref-59)
59. Ibid., 249-50. [↑](#footnote-ref-60)
60. Ibid., 80. [↑](#footnote-ref-61)
61. Ibid., 330-32. More details on the use of the criterion of coherence with regard to theological language are commented under the criterion of authenticity. [↑](#footnote-ref-62)
62. Ibid., 190-95. [↑](#footnote-ref-63)
63. Ibid., 146, 396. [↑](#footnote-ref-64)
64. Ibid., 213. [↑](#footnote-ref-65)
65. Ibid., 185-208. [↑](#footnote-ref-66)
66. Ibid., 147, 206. [↑](#footnote-ref-67)
67. Ibid., 410. [↑](#footnote-ref-68)
68. Ibid., 202. [↑](#footnote-ref-69)
69. Puntel, *Grundlagen einer Theorie der Wahrheit*, 214. [↑](#footnote-ref-70)
70. Puntel and White, *Structure and Being*, 76. [↑](#footnote-ref-71)
71. Ibid., 111. [↑](#footnote-ref-72)
72. Although Puntel does not define the two as the same, I interpret him this way, since he seems to use them with interchangeable meaning. See for example ibid., 408. [↑](#footnote-ref-73)
73. Ibid., 117. [↑](#footnote-ref-74)
74. Ibid., 242-43. [↑](#footnote-ref-75)
75. Ibid., 225-26. [↑](#footnote-ref-76)
76. Ibid., 483-84. [↑](#footnote-ref-77)
77. Ibid., 427. [↑](#footnote-ref-78)
78. Ladyman et al., *Every Thing Must Go*. Even though there are several authors, I refer only to Ladyman for simplicity. [↑](#footnote-ref-79)
79. Ibid., chapter one. [↑](#footnote-ref-80)
80. Puntel and White, Structure and Being, 262. [↑](#footnote-ref-81)
81. Ladyman et al., *Every Thing Must Go*, 68. [↑](#footnote-ref-82)
82. Ibid., 95-99. [↑](#footnote-ref-83)
83. Ibid., chapter two. [↑](#footnote-ref-84)
84. Ibid., 130. [↑](#footnote-ref-85)
85. Ibid., 138. [↑](#footnote-ref-86)
86. Ibid., 121-22. [↑](#footnote-ref-87)
87. Ibid., 178. [↑](#footnote-ref-88)
88. Ibid., 178-79. [↑](#footnote-ref-89)
89. Ibid., 154. [↑](#footnote-ref-90)
90. Puntel and White, *Structure and Being*, 213. I use the terms structure, pattern, relation, and attribute as all having the same meaning as “structure”. [↑](#footnote-ref-91)
91. Ibid., 198.. Ladyman says that there should be a semantics showing how sentences can be true when they refer to individuals (  
    Ladyman et al., *Every Thing Must Go*, 254.). Puntel has developed an alternative semantics expressing the location of structures (“it’s catting whitely on the mat”) while showing also how normal sentences are useful abbreviations of such sentences. “It” in the beginning of the sentence then does not refer to any individual or substance, but is merely an empty placeholder. [↑](#footnote-ref-92)
92. Puntel and White, *Structure and Being*, 29. [↑](#footnote-ref-93)
93. Ibid., 190-95. [↑](#footnote-ref-94)
94. Ladyman et al., *Every Thing Must Go*, 152. [↑](#footnote-ref-95)
95. Ibid., 153. [↑](#footnote-ref-96)
96. Puntel and White, Structure and Being, 368, 401. Ladyman gives the same quote from Wittgenstein in Don Ross, James Ladyman, and Harold Kincaid, *Scientific Metaphysics*(Oxford: Oxford University Press, 2013), 111., but thinks that Wittgenstein nevertheless believed that the world is made of things. What Wittgenstein meant is not important here – Puntel and Ladyman believe that the world is not made of things. [↑](#footnote-ref-97)
97. Ladyman et al., *Every Thing Must Go*, 55, 253. [↑](#footnote-ref-98)
98. Ibid., 21. [↑](#footnote-ref-99)
99. Puntel and White, *Structure and Being*, 407. [↑](#footnote-ref-100)
100. Ladyman et al., *Every Thing Must Go*, 138. [↑](#footnote-ref-101)
101. Ibid., 155. [↑](#footnote-ref-102)
102. Ibid., 138. [↑](#footnote-ref-103)
103. Ibid., 152. The expression refers to the famous story of the lady who explains how the world rests on a turtle, and when asked what the turtle rests on, answers that it is turtles all the way down. [↑](#footnote-ref-104)
104. Ibid., 179. [↑](#footnote-ref-105)
105. Ibid., 152. [↑](#footnote-ref-106)
106. Ibid., 131. [↑](#footnote-ref-107)
107. Ibid., 189. [↑](#footnote-ref-108)
108. «It is» is here only a locator – there is a round structure at *p* at *t*. [↑](#footnote-ref-109)
109. Puntel and White, *Structure and Being*, 443-46. [↑](#footnote-ref-110)
110. Ibid., 442. [↑](#footnote-ref-111)
111. Ladyman et al., *Every Thing Must Go*, 288. [↑](#footnote-ref-112)
112. Puntel and White, *Structure and Being*, 443. [↑](#footnote-ref-113)
113. Ibid., 444-46. [↑](#footnote-ref-114)
114. Ladyman et al., *Every Thing Must Go*, 200. [↑](#footnote-ref-115)
115. Ibid., 54. Ladyman’s distinction between first and second order real patterns is yet another kind of level within metaphysics (ibid., 243.). [↑](#footnote-ref-116)
116. Ibid., 27., with reference to Paul Thagard, *Conceptual Revolutions*(Princeton, N.J.: Princeton University Press, 1992). [↑](#footnote-ref-117)
117. Ladyman et al., *Every Thing Must Go*, 16. [↑](#footnote-ref-118)
118. Puntel and White, *Structure and Being*, 1. [↑](#footnote-ref-119)
119. Ladyman et al., *Every Thing Must Go*, 66. [↑](#footnote-ref-120)
120. Ibid., 83.; cf James Ladyman, *Understanding Philosophy of Science*(London ; New York: Routledge, 2002), 257. [↑](#footnote-ref-121)
121. Ladyman et al., *Every Thing Must Go*, 30. [↑](#footnote-ref-122)
122. Nicholas Rescher, *The Limits of Science*, Rev. ed.(Pittsburgh, Pa.: University of Pittsburgh Press, 1999), 46-48. [↑](#footnote-ref-123)
123. Puntel and White, *Structure and Being*, 10-11. [↑](#footnote-ref-124)
124. Ladyman et al., *Every Thing Must Go*, 29. [↑](#footnote-ref-125)
125. In addition, some stipulations are added so that the full principle of naturalistic closure is as follows: Any new metaphysical claim that is to be taken seriously at time *t* should be motivated by, and only by, the service it would perform, if true, in showing how two or more specific scientific hypotheses, at least one of which is drawn from fundamental physics, jointly explain more than the sum of what is explained by the two hypotheses taken separately, where this is interpreted by reference to the following terminological stipulations:

     Stipulation: A ‘scientific hypothesis’ is understood as an hypothesis that is taken seriously by institutionally *bona fide* science at *t*.

     Stipulation: A ‘specific scientific hypothesis’ is one that has been directly investigated and confirmed by institutionally *bona fide* scientific activity prior to *t* or is one that might be investigated at or after *t*, in the absence of constraints resulting from engineering, physiological, or economic restrictions or their combination, as the primary object of attempted verification, falsification, or quantitative refinement, where this activity is part of an objective research project fundable by a *bona fide* scientific research funding body.

     Stipulation: An ‘objective research project’ has the primary purpose of establishing objective facts about nature that would, if accepted on the basis of the project, be expected to continue to be accepted by inquirers aiming to maximize their stock of true beliefs, notwithstanding shifts in the inquirers’ practical, commercial, or ideological preferences.(ibid., 37-38.) [↑](#footnote-ref-126)
126. Ibid., 235. [↑](#footnote-ref-127)
127. “Non-physical” here in the sense that it seems to be different from all other physical structures in being not measurable in any known quantity, not possible to locate exactly, not possible to investigate from a third-person perspective, etc. [↑](#footnote-ref-128)
128. Ladyman et al., *Every Thing Must Go*, 37. [↑](#footnote-ref-129)
129. Ibid., 309. [↑](#footnote-ref-130)
130. Puntel and White, *Structure and Being*, 413. [↑](#footnote-ref-131)
131. Ladyman et al., *Every Thing Must Go*, 237. [↑](#footnote-ref-132)
132. Ibid. [↑](#footnote-ref-133)
133. Ibid., 30. [↑](#footnote-ref-134)
134. Ibid. [↑](#footnote-ref-135)
135. Ibid., 129-30. [↑](#footnote-ref-136)
136. I here use the term «cause» in a wide sense to denote a state of affairs which make another state of affairs be what it is or happen like it does. [↑](#footnote-ref-137)
137. Ladyman et al., *Every Thing Must Go*, 235. [↑](#footnote-ref-138)
138. Ibid., 233. [↑](#footnote-ref-139)
139. Ibid., 232. [↑](#footnote-ref-140)
140. Ibid., 224. [↑](#footnote-ref-141)
141. Ibid., 228-29. [↑](#footnote-ref-142)
142. Ibid., 228. [↑](#footnote-ref-143)
143. Ibid., 202. [↑](#footnote-ref-144)
144. Ibid., 230. [↑](#footnote-ref-145)
145. Ibid., 235. [↑](#footnote-ref-146)
146. Ibid., 236. [↑](#footnote-ref-147)
147. When Ladyman writes that religious metaphysicians are “doing nothing but revealing properties of themselves and don’t usually realize it” (ibid., 310.), this is a similar kind of *ad hominem* argument. [↑](#footnote-ref-148)
148. Ibid. [↑](#footnote-ref-149)
149. Puntel and White, *Structure and Being*, 347-49. [↑](#footnote-ref-150)
150. In an iTunes U lecture, Ladyman says that classical questions in the history of philosophy should be kept alive (James Ladyman, Identity, Individuality and Discernibility, podcast audio, Power Structuralism in Ancient Ontologies2012. (In iTunes U, Steven French is wrongly described as speaker.)) The question of God is a classical question in philosophy. Does Ladyman then think that the question of God should be kept alive by being seriously discussed, or merely remembered for historical interest? [↑](#footnote-ref-151)
151. He claims at one place that divine intervention contradicts physics, but no argument is given to support this claim. Many understandings of divine intervention do not contradict physics. There is nothing in the laws of physics that prevent a force from outside intervening in a system. One may refer to the law of conservation of energy, but nobody would know whether or not energy had been conserved in a case of divine intervention. God may also intervene without adding energy to the system, for example by using the Bohmian kind of pilot waves in the Bohmian interpretation of quantum mechanics. One may then argue that we do not know in detail how God would do that, but we do not know how laws of physics work either, or how conscious intentions produce actions, so this is far from a contradiction with physics. [↑](#footnote-ref-152)