



Revista Eletrônica de Filosofia  
*Philosophy Electronic Journal*  
ISSN 1809-8428

São Paulo: Centro de Estudos de Pragmatismo  
Programa de Estudos Pós-Graduados em Filosofia  
Pontifícia Universidade Católica de São Paulo  
Disponível em <http://www.pucsp.br/pragmatismo>

Vol. 15, nº. 1, janeiro-junho, 2018, p.50-59  
DOI: 10.23925/1809-8428.2018v15i1p50-59

## **AN ONTOLOGY OF UNIVERSALS AND THE CONVERGENCE OF THEOLOGICAL AND SCIENTIFIC REALISMS: A PEIRCEAN PRAGMATIST APPROACH**

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**Abstract:** *Contemporary and classical Theological realism seems to converge with an ontology that worries about how to describe the world in terms of formal structures, or, to connect with the philosophical tradition, universals. When it comes to the question whether the objects of a faith have an ontological consistency (and how it does so) a structuralist wonders how a feasible account can be achieved by the means of our possible inquiries, as for example, it is in the case of mathematical structures who lack phenomenical character. The realist, though, faces the problem of accounting for the entities beyond the phenomenical character and still pervasive to our conceptual ammunition. A universal, thus, lacks phenomenical character and nonetheless is necessary in order to make sense of our best scientific theories in the extent of accounting a One-over-many behaviour that is necessary if induction truly works. Universals then, are real in the sense that they are independent of our idiosyncratic ways of conceive reality, they reflect elements of recalcitrant experience. Drawing on the work of the pragmatistic realism of Charles Sanders Peirce, I want to point out a similar explanation of universals with regards to faith and the description of the ontological furniture of the elements of religious experience. They indeed appear to claim for fundamental human experiences that eventually can crop out even from common sense and instinct, they will appear if we inquire well enough and long enough in the quest for understanding the reality of God and the elements of philosophical theology. Scepticism about philosophical theology along with theological anti-realism and nominalism relinquish to engage with the metaphysical aspects of a faith. As opposed to that trend, I aim in this essay to address some fundamental premisses necessary to tackle the debate properly.*

**Keywords:** Realism. Theology. Philosophical inquiry. Pragmatism. Universals. Peirce.

### **UMA ONTOLOGIA DOS UNIVERSAIS E A CONVERGÊNCIA ENTRE OS REALISMOS CLÁSSICO E TEOLÓGICO: UMA ABORDAGEM PRAGMATISTA PEIRCIANA**

**Resumo:** O realismo teológico clássico e contemporâneo parece convergir com uma ontologia que se preocupa em descrever o mundo em termos de estruturas formais, ou ligar universais com a tradição filosófica. Quando se trata da questão de se os objetos da fé têm consistência ontológica (e como teria), um estruturalista se pergunta como uma descrição plausível pode ser alcançada através dos meios de nossas possíveis investigações, como, por exemplo, é o caso de estruturas matemáticas que carecem de caráter fenomênica. O realista, por outro lado, encara o problema de dar conta das entidades para além da carência de caráter fenomênica e ainda penetrante em nossa munção

conceitual. Um universal, portanto, carece de caráter fenomênica e, no entanto, é necessário para fazer sentido de nossas melhores teorias científicas na medida em que expressam o comportamento Uno-sobre-múltiplo que é necessário se a indução realmente funciona. Os universais, portanto, são reais no sentido de que são independentes de nossas formas idiossincráticas de conceber a realidade, refletem elementos da experiência recalcitrante. Recorrendo ao trabalho do realismo pragmatista de Charles Sanders Peirce, quero apontar uma explicação similar dos universais com relação à fé e a descrição da mobília ontológica dos elementos da experiência religiosa. Eles de fato aparecem apelar para experiências humanas fundamentais que eventualmente podem emergir do senso comum e instinto, aparecerão se investigarmos suficientemente bem e a cabo na busca de compreender a realidade de Deus e os elementos da teologia filosófica. Ceticismo da teologia filosófica juntamente com o anti-realismo teológico e nominalismo abrem mão de confrontar com os aspectos metafísicos da fé. Como um em oposição a esta tendência, busco abordar neste ensaio algumas premissas fundamentais necessárias para enfrentar direito este debate.

**Palavras-chaves:** Realismo. Teologia. Investigação Filosófica. Pragmatismo. Universais. Peirce.

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## Introduction

The metaphysical aspects of religious belief are far too many to be discussed *in toto*, what I aim here is rather to achieve some clarity in how to understand universals from the perspective of a kind of theological realism. Now, to achieve that, it might be necessary to start describing the kinds of realism of relevance in contemporary philosophical thought.

Indeed, different approaches to realism convey in the acceptance of some entities and objects that might populate and furnish the ontology of the things we accept in the world.

Is there any point of convergence between the realism in theology and the realism of the metaphysics in the analytic tradition? Some people (Rea, p.1) think this is simply untenable. Let's think that  $x$  is a singular term, then *realism* about  $x$  means that there is  $y$  which is a real item in such that  $x=y$ . Now, that is called a canonical statement, so the realistic interpretation of such a statement in a theory  $T$  is what we call realism in a theory. Realism, so conceived, it is somewhat recursive, because presupposes the reality of the isomorphism between  $x$  and  $y$ .

However, beyond that fundamental description there is a drastic difference between any kind of realism and the realism about God, also known as theological realism, because whereas some kinds of realism defend the existence or reality of some items, the realism about God, at least in the traditional way that theology and metaphysics understands it, regards God as the fundament of all beings and of reality in general. J. Cunningham calls that trait of theological realism as the metaphysical freight, and is obviously a big point of contending points between believers and non believers. The theological realist also claims the reality of the objects of religious experience later on formulated as creeds, defends the possibility of revelation and many other things.

## **Scientific realism as mathematical realism**

Now, there is a kind of realism that flourishes in scientific inquiries and probably is the starting point of every well trained scientist who usually recognise that events happen with a regularity, they never jumbled up neither go backwards. Physics is developed to explain these regularity and that regularity is often expressed by a mathematical formula, seldom related with a whole puzzle of other mathematical formulae of other regularities. Of course, in accounting for these things are going to get a more complicated because there is a branched realism in these considerations that goes all the way up to the more abstract human thought and that is the realism about mathematics. Let me digress in such a extent that you might understand in which aspects might there be a convergence between these scientific and mathematical realism with the theological realism based in a rather unifying account of universals.

## **Mathematical structuralist realism**

The structuralist considers that there is a subject matter of mathematics and this subject matter consist in patterns or structures and not necessarily by objects on those patterns or structures. A structure is described in terms of interrelations. Historically, the matemathician David Hilbert is considered an earlier founder, as he says:

Mathematical structures are more abstract, and free-standing, in the sense that there are no restrictions on the kind of things that can exemplify them. (Shapiro 1997, Ch. 3, §6)

To give more sense to this, define a system to be a collection of objects together with certain relations on those objects. On the one hand, a natural number system might be a countably infinite collection of objects with a designated initial object, a one-to-one successor relation that satisfies the principle of mathematical induction and the other axioms of arithmetic. A structure, on the other hand, is the abstract form of a system, which ignores or abstracts away from any features of the objects that do not bear on the relations. In addition, the natural number structure is the form common to all of the natural number systems. And this structure is the subject matter of arithmetic. The structure, consequently, it is a sort of Universal, a one over many, but instead of applying over an individual object, like a property does, holds for systems.

## **The Ante Rem Approach**

For the Ante Rem structuralist of mathematics, a structure is objective, even if not exemplified. His semantics is straightforward: first order variables range over the places in the respective structure: a singular term, like '0' denotes a place in the structure. Places in the structure are bona fide objects, but they are free-standing, i.e., they function as a background ontology. Nonetheless, an Ante Rem structuralist can consider objects forming a system, like places-cum-objects. For example, in Von Neumann ordinals under the ordinal successor relation form a system that exemplifies the natural number structure:

$\{\varphi, \{\varphi\}\} = 2$ . Von Neumann system

$\{\{\varphi\}\} = 2$  Zermelo system

These two definitions are actually invoked by Benacerraf's "Ernie and Johnny" fable: in which it is proven that both ways are effective to account for numbers, because they have a common structure rather than for having the same members, not forcing us to engage with any of them particularly beyond their functional role towards the structure. Structures are prior to places in the same sense that any organization is prior to the offices that constitute it. (Shapiro 1997,9)

Structuralism, from this mentioned perspective, provides a holistic picture of the story because we can have tradeoffs in two directions: (1) we can incorporate mathematical structures to the scientific reality or (2) we can construct branches of mathematics by developing a study of physical processes<sup>1</sup>. Moreover, the continuity within the different branches of mathematics raises another consideration: any structure, as such, can be mathematical, and at the same time any mathematical element is, in principle, susceptible to instantiation, and therefore, every mathematical structure is applicable regardless our incapacity on recognise that in our current theories.

The structuralist approach seems, thus, to be a two stage account of applicability towards Frege's Constraint: the first stage is the identification of a particular abstract structure, the second state gives applications, such as counting, an explanation in terms of structurally specified mappings between the objects in some non-mathematical domain and the elements of the mathematical structure, so long the scope of the applicability of these mappings is wide enough and we have the right kind of epistemic access to them, the structuralist program can fit the bill of explaining the relationships and tradeoffs of mathematics within its branches and also and more importantly with the applicability in experimental science.

Charles Sanders Peirce's concept of diagrammatic reasoning can, for example, avoid the apparent dilemma of applicability by ways of a semeiotic structuralist account, and thus makes it possible to explain how knowledge of structures develops. "This is achieved by relating Peirce's idea of "diagrammatic reasoning" to Kant's "schemata" (a), by highlighting as three essential functions of "diagrammatization" to fix vague thinking in order to gain self-control of thought (b), to reduce complexity (c), and to disarm the "internal-external dichotomy" behind the apriorism-inductivism distinction (d), by showing that the possibility of diagrammatic reasoning depends on a certain form of realism (e), and by explaining the genuine creativity enabled by diagrammatic reasoning through the role of experimenting with diagrams (f), of creating new elements for diagrams (g), and of using different representational systems for diagrammatization (h)" (Hoffmann 2003, 121).

Thus far, a version of realism about structures in mathematics shows us how even an abstract science can account for entities like universals, and even describe (succesfully or not) how there is a way of postulating them and describe their

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<sup>1</sup> I think that such might be the case for classical geometry, topology or, more contemporary approaches to quantum mathematics.

interaction with our ways to acquire knowledge. The following section will have this example on the backdrop of how theological realism may use these strategies towards a way of explaining its own problems.

### Theological realism

Are there real universals in the religious experience and in the development of theology? The theological tradition recognised from a very early age a ordered but progressive growth in the theological beliefs. The theological beliefs were recognised germinally in the creation and the unity of the created reality with the revelation, thus, the *semina verbi* (St. Bonaventure) are able to be recognised in the divergent disciplines, even in the germinally scientific beliefs about the world. Scientific further developments were somehow stimulated by that kind of evolution of beliefs. Can these germinal theological conceptions be a sort of universal?

Closer to our times, theologians like Karl Rahner recognised that the theological development happens into an ordered process of growth of germinal ideas that ramified themselves and bloom when the times are ripped enough. All these aspects of theology draw us back to the questions of what kind of metaphysical entities are those *semina verbi*: are they ideas?, germinal experiences? The same kind of consideration can be addressed to the universality of religious experience. Indeed, it looks as though the different religious experiences have elements in common, mingled with the particular personalities of the people who held them, but still recalcitrant to most of them in such a extent that people like Ignatius of Loyola were able to do phenomenologies of the internal motions or Williams James' inclusive account of the *Varieties of the Religious Experience*. It is quite clear to me that the warranted assent to the metaphysical truth of God's existence cannot be a precondition for theistic hermeneutics and praxis; these attitudes go further than a mere theoretical description and involve a gift of faith. Nonetheless, I dare to propose that even if these attitudes involve a deeper assent than the theoretical, yet they are combined with a universal recalcitrant group of experiences. As far as I am aware, I do not really think those experiences are objects of metaphysical inquiries even from people working, on the one hand, from the philosophy of religion, or, on the other hand, from the philosophical theology, theodicy or natural theology.

Contemporary approaches to ontology acknowledge structures that are similar to the traditional notion of universals and yet they differ in the way they are described and how that description takes place. Think of a pervasive physical structure like the one of a molecule of water, we can say that the structure of the molecule is a universal because whenever two atoms of hydrogen and one of oxygen are bound chemically by the principle of Pauli (a mathematical law too) there will be an object instantiated in such a way that will behave only as the other structures we say that the water is composed of. All that story is not addressed as empty erudition, but in order to facilitate saying what kind of things contemporary metaphysicians consider as universals. Does that mean we should give up to the theological recalcitrant things I addressed before? I do not think we should, because they are also structures too, and the normative power of mathematics of drawing necessary conclusions is not totally alien to that.

## Antirealist tendencies in theology

Theological antirealism has acquired popularity among theologians, they believe that this will be a lifesaver of the spiritual meaning of theological constructs, as these seem to be very contextual dependent on historical circumstances or cultural coordinates. An interesting example of these kind of views might be found in constructivists, Wittgensteinians and followers of theologies as the one of Paul Tillich. Going back to our first mentioned account, metaphysical and scientific realism is often also attacked by many competing antirealist views: though the defense of these approaches seem usually more well fit to the task than their realist counterparts in theology. We tend to think that the ostensible success of the no-miracles arguments, at least for the mathematical part of contemporary physics, is indispensable. It is difficult, however to find some kind of analogue for theology, and we all wonder what makes a real difference among different theologies: is there any indisputable experimental evidence to choose between Protestant and Catholic theology? Or between Muslim and Christian? Certainly not in the sense of an experimental proof. We usually are rather more interested in the common features of divergent theological approaches; on how they capture in different ways what we consider a valuable religious experience. As I will explain below, I do not think that theology is in such a doomed position towards consensus, ie., realistic consensus, but it is obviously a consensus that demands something different to empirical or phenomenical existences.

Part of the risk of accept a full-blooded antirealism, on the one hand, is the treat of a relativist *laissez-faire*, we should be cautious of drawing out all the practical bearings of a purely constructivist approach if we want to be taken seriously. On the other hand, it is not easy to unpack in which sense religious experiences might be finally common in the sense of having a permanent metaphysical consistency.

I dare to say that not all the responses to antirealism are in the line of the indispensability of mathematical structures. Mathematical structuralism is more consistent in giving us a metaphysical ontology that furnishes the world through and through. Indeed, it does not only recognises that some natural structures are out there and happen to be mathematically expressed, it affirms that if we want to have a correct metaphysics we need to take on account that the language that utters them formally and dynamically in the best possible way is mathematical and diagrammatic. The rival nominalistic position is unsatisfactory inasmuch as it leaves the explanation of a given fundamental fact, or law of nature, or the like to a sort of overwhelming coincidence.

Nonetheless, although metaphysics does not impinge directly in how we obtain the technological benefits of cars or computers, as Bas Van Fraasen complains, it does impinge in morality and free will, without a unified account science is left to instrumental purposes that end up not profiting for humanity and loosing sense, Peirce tells us:

Thus it happens quite naturally, that those who are animated with the spirit of science are for hurrying forward, while those who have the interests of religion at heart are apt to press back. (CP 6.430)

That is the actually correct pragmatic stance on the relationships of science

and religion, Peirce recognised this as the *common sense marriage of religion and science*. Peirce, nonetheless, could only achieved this kind of view by trying, throughout all his philosophical career, to overcome the threat of nominalism. Indeed, this philosopher always thought that the worst philosophical blunder of modern philosophy was due to nominalism and its consequences. I have got limited space to expand about that interesting topic but it will be enough to say that part of the problem lies in the expectation, as Cathy Legg (2009) points out, of a coextensive meaning of the terms 'existence' and 'reality'. Let us clarify that in order to carry on with our reflection: phenomenalist ontologies call platonist all the approaches that accept universals in the furniture of real items, they think that the realist overcrowds the world with spooky items that have no empirical instantiations. Now, when we say real what we mean is not an object having phenomenical properties, but the content of a true proposition: in the sense that it is how it is regardless of our idiosyncratic ways of conceive it. It also means that is recalcitrant to our experiences of inquiring. Consider a law of nature: it is real because is instantiated each time that appears to norm over a range of phenomena, and yet it is not identified with any phenomenon in particular.

Furthermore, what is called the 'humble argument' for the reality of God, devised by the same Peirce, was an instance of the affinity between believing in God as the Creator or Sustainer of the cosmos and the stages of the scientific work in which by observing the facts and pondering one can evolve an explanatory hypothesis.

The same happens with mathematical diagrammatic reasoning, it thrives as a diagrammatical and experimental answer after we let our imagination be sucked in the mapping of the problem.

The humble belief in God's reality may be considered as a hypothesis that raises from scientific inquiry in the following manner: It is an initially strong hypothesis that excites a peculiar confidence, it is a belief that makes a difference not in the object of inquiry, but in the inquirer, giving her a particular thrust in the search for a lovable ideal of truth; this is analogous to other directly experiential feelings. For Peirce, the aims that launch of to get in the road of inquiry are just as the ideas that come from perception, which are practically indubitable: "Peirce often equated instinctive and common sense beliefs with feeling and perception, further amplifying the ordinary power that religious experience displayed" (Anderson, 177). Peirce, on the other hand, attacks nominalism as unscientific, that's how perception enters into the discussion too:

Where would one find such an idea, say as that of God, come from, if not from direct experience? Would you make it a result of some kind of reasoning, good or bad?... No: as to God, open you eyes – and your heart, which is a perceptive organ- and you see him. (CP 6.493)

Thereby, what we approach here as the meaning of a 'universal' in the theological sense and the kind of religious experience we try to figure out is not a criptic phenomenon for some particular group of illuminated people; it is rather the universal humble feeling or instinct that emerges when pondering the harmony of the universe as contingent to a greater reason that gives sense and unity to the experience of either the vastness of the cosmos or the sublimity of its character. The

hypothesis of God, as he says in his little article about the Neglected argument of the reality of God, is the hypothesis of a universe with purpose that, abductively, makes the world more rational ab initio. Yet the idea is humble in the sense of being of a hypothetical nature:

[...] the idea (of a 'living God') is a vague one but is only the more irresistible for that. Subtile distinctions are out of place; the truth of common sense is that little as we can comprehend the author of all beauty and power and thought, it is really impossible, except by sophisticating the plain truth, to think otherwise than that there is a living being. (MS L224:n.p., 7/26/05)

For Peirce, consequently, the spirit of religion is to conduct the life by the guidance of the instinctive common sense beliefs in a way to improve human existence, they stir up our debts to focus in a single conformity, even in the whole of conducting our lives as well as the patterns of our inquiries in science. The spirit of religion impinges love and consensus for benevolence. The hypothesis of God, therefore, is the most basic common sense belief about that love and movement to benevolence. Moreover, Peirce believed in a non-theological church that discloses some social bearings:

Man's highest developments are social; and religion, though it begins in a seminal individual inspiration, only comes to full flower in a great church coextensive with civilization. This is true of every religion, but supereminently so of the religion of love. (CP 6.493)

Peirce, is talking about the love that drives us out of ourselves and generates concerns and care for others, he also believed that agape in this sense is equal to a logical rational attitude:

This community, again, must not be limited, but must extend to all races of beings with whom we can come into immediate or mediate intellectual relation. It must reach, however vaguely, beyond this geological epoch, beyond all bounds. He who would not sacrifice his won soul to save the whole world, is, as it seems to me, illogical in all his inferences, collectively. Logic is rooted in the social principle. (EP1 149)

Peirce's descriptions of the church's reasons and rights are based in his agapism: the belief that love is an effective force in the evolution of the universe. This is somehow linked in an explanatory way with the explanation of regularities in the world, they have an evolutionary character passing from chance to order.



## Religious experiences and its universality. Love as a universal

Now let us bring the two lines of argument of this essay together: Just as the community of inquirers holding a realist attitude towards their objects and the structures that interact with them is needed to move science forward, the church, as a beloved community, is required to work for religion, to spread the agapastic love consisting in the overcoming of self-interest by turning out to other's interests and the interest of the truth of God's cosmos. As a universal is revealed itself in the universes of experience by the pragmatic bearings, thus, the principle of love is disseminated through actions, that also fits the bill for a pragmatic test in the extent that is not a private encounter, but an experience achieved by all those who inquire well enough and long enough:

But religion cannot reside in its totality in a single individual. Like every species of reality, it is essentially a social, a public affair. It is the idea of a whole church, welding all its members together in one organic, systemic perception of the Glory of the Highest – an idea having a growth from generation to generation and claiming a supremacy in the determination of all conduct, private and public. (CP 6.429)

Peirce's approach to the agapastic character of a church requires universality, just as the universals understood mathematically, it is generated by instinctive or common sense beliefs that are out in the reach of all who would pay attention to common sense and instinct. The beliefs, though, are abiding always to truth, in some sense fallibilistic, some kind of working creeds. I do not hold that this stance is far from those memorable words at the beginning of *Gaudium et Spes*, the church conceives herself at the service of humanity and their more intimate feelings of hope and content, the more common sensical and also deep religious feelings. Peirce thought that religion and science together advance toward a *summum bonum* he understood as the growth of concrete reasonableness (CP 5.3, 5.433).

## Conclusion

A theologian or a critic might think that what has been presented here is just a philosophically-sided vision, but if we take seriously the medieval condition of an interaction of faith and reason as harmonious then it emerges the question: why we should not think that concrete reasonableness is also concrete openness to truths that are beyond our reach and we embrace them under the hope that we are in the right path of inquiry towards the love of God? The spirit of Peirce's approach to the reality of God is not the one of a deductive demonstration, but the coherence created by the openness to uncompromised truth that emerges in the acceptance of a reality expressed in universals, this 'Scholastic Realism', as Peirce called it, is concrete reasonableness opened to what is real though not always utterly manifested in Secondness, as a universal or the divine action might as well be.

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