Peirce as a Truthmaker Realist
Propositional realism as backbone of Peircean metaphysics

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Abstract: This note argues that there is a narrow connection between the different aspects of Peirce's philosophical realism and his doctrine of propositions, forming an early version of "truthmaker" realism. Distinguishing predicate realism, subject realism and representation realism, it is argued that these realisms connect to each their aspect of true propositions. Finally, the argument is made that Peirce's metaphysics, over his career, grows by means of still new metaphysical deductions from results reached in semiotics and logic, so that propositional realism, simultaneously, develops from defining the real as that which makes true propositions true to all that which is *involved* in making true propositions true.

Keywords: Predicate; Proposition; Realism; Subject; Truth.

Much has been written about Peirce's realism, most lately Robert Lane's strong volume *Peirce on Realism and Idealism* (2018)[1]. It is well-known that Peirce was a realist in at least two different senses of the word – 1) realism understood as the doctrine that the real is that which is independent of what any particular person or group think about it, and 2) realism in the "medieval" sense that universals or general predicates may refer to general properties, structures, patterns and laws of reality. Independence realism and universals realism, as it were. Most of what has been written, however, fails to go into detail with the narrow interdependence between Peirce's realism and his philosophy of propositions – which is the subject of

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[1] Among important contributions on Peirce's realism could be mentioned Boler (1963), Fisch (1967), Roberts (1970), Murphey (1993), Misak (2004), Short (2005), Pietarinen (2006), Lane (2018). As to Peirce's philosophy of propositions, see in particular Bellucci (2014, 2017); Stjernfelt (2012, 2014, 2015a, 2015b, 2016, 2018, 2019a. 2019b, in prep.).

this brief note. Peirce was an early and strong proponent of what is nowadays discussed under the headline of "truthmaker realism"[2] – real is that which makes a true proposition true. I am not certain much new is really said here – the attempt is rather to present some well-known aspects of Peirce's realism in a new optics.

The basic Kantian argument

It is well known that Peirce as a teenager in the 1850s was intoxicated with Kant and that the development of his early philosophy from around 1860 was hugely inspired by the *Kritik der reinen Vernunft.* Kant based his critical philosophy on the existence of science which was taken as the *explanandum* to be rendered understandable by investigating its *Möglichkeitsbedingungen*, its conditions of possibility. An important step in this endeavor was the establishment of a transcendental argument for the validity of the twelve categories which Kant took to be the basics of all understanding – a step involving the famous "metaphysical deduction" of those categories based on the critical principle that metaphysical categories can be derived from logical concepts only. While the transcendental argument should grant the validity of the categories by showing they were a priori conditions of possibility of experience, the metaphysical deduction should, in the first place, establish their existence as metaphysical conceptions derived from logic.

Peirce took over that idea to form a veritable backbone of argumentation during the whole of his career. Almost 40 years later, in the 1902 *Minute Logic*, he sums up: «As to Metaphysics, if the theory of logic which is to be developed in this book has any truth, the position of the two greatest of all metaphysicians, Aristotle and Kant, will herein be supported by satisfactory proof, that that science can only rest directly upon the theory of logic. Indeed, it may be said that there has hardly been a metaphysician of the first rank who has not made logic his stepping-stone to metaphysics» (CP 2.121)[3]. Logic and semiotic results were, for that reason, im-

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2   Mulligan *et al.* (1984).
3   At the same time, he offered his analysis of the transcendental method: «The method was the invention of Kant, and in his hands it consists in showing, by some

mediately charged with the possibility of developing new metaphysical concepts. Famous is Peirce's early development of his three categories in the 1867 «New List» paper, which developed from an attempt to cleanse Kant's category table from unclarities. The nature of this derivation has been the subject of some discussion (see Bellucci, 2017: ch. 1), and much points to the fact that Peirce's method differs from Kant who took as his point of departure an unproblematized logical tradition. Peirce, admirer of Kant the philosopher but detractor of Kant the logician, admitted no such thing but instead took his point of departure in what he assumed to be the central synthesis of knowledge: the unity of experience in an argument built from true propositions. A proposition is the form which brings unity to the mass of unordered impressions – and it does so in three ways, a unified *representation* which charts a *relation* with some *quality*. That was the «New List» version of the three categories. Much later, after 1900, those categories were elevated to form the center of Peircean phenomenology[4].

In Kant's point of departure by the existence of objective science, Peirce zoomed in on the undoubtable existence of true propositions. Here, he paralleled the neo-Kantian movement developing in Germany at the same time, which had an early culmination in Hermann Cohen's dictum: «Er erscheint noch heute so dürftig, jener Inhalt der transscendentalen Methode: die Erfahrung ist gegeben; es sind die Bedingungen zu entdecken, auf denen ihre Möglichkeit beruht» (Cohen, 1877: 24). Experience as a fact is the given, whose conditions of possibility philosophy must uncover in order to account for how objective knowledge of reality is possible. Later, Cohen famously summed up this idea as beginning from "the fact

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ingenious argument – different in every case – that the logical analysis of the process which the mind must go through shows that the proposition which is to be defended is involved in the a priori conditions of the possibility of practical everyday experience. If Kant had performed all the work which a thorough, scientific application of his method demanded, he would have to postpone the publication of his "Critic of the Pure Reason" for another century, at least, which would have been regrettable. It would be radically contrary to Kant's principles to base logic (in the sense in which the word is used in the present book) upon the transcendental method. On the contrary, his whole critic of the understanding is deliberately based upon a scientific logic supposed to be already established» (*Minute Logic*, 1902; R 425 = CP 2.31)

4   For the intricate relationships between logic, metaphysics, and phenomenology in Peirce, see Stjernfelt (2016b).

of science"[5]. To Peirce the neo-Kantian, this fact consisted in the undoubted existence of true propositions: «… a realist is simply one who knows no more recondite reality than that which is represented in a true representation» («Some Consequences of Four Incapacities», 1868, EP 1: 53 = CP 5.312)[6].

Predicate realism

The «New List» gave Peirce's category table of three: *Quality, Relation, Representation*. Each of the three gives rise to an aspect of Peirce's realism. Probably the most controversial of these is the medieval or "Scotist" realism, with reference to John Duns Scotus whom Peirce read intensively in the 1860s[7]. Peirce's just quoted 1868 argument for reality as represented in a true representation emphasizes this realism: «… it follows that since no cognition of ours is absolutely determinate, generals must have a real existence. Now this scholastic realism is usually set down as a belief in metaphysical fictions. (…) Since, therefore, the word "man" is true of something, that which "man" means is real. The nominalist must admit that man is truly applicable to something; but he believes that there is beneath this a thing in itself, an incognizable reality. His is the metaphysical figment» (*ibid*.). Peirce's argument claims that the existence of true propositions involving general predicates implies that those predicates refer to structures of reality. Contrary to widespread assumptions, it is not the realist who invents unnecessary metaphysical entities, but it is his opponent the nominalist. The nominalist opposition – Peirce goes on to refer to Scotus' later opponent William of Ockham – is really the position which has to invent metaphysical fantasies, namely a recondite reality which can never

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[5]   «Alle Philosophie ist auf das Faktum der Wissenschaft angewiesen. Diese Anweisung auf das Faktum der Wissenschaft gilt uns als das Ewige in Kants System» (Cohen, 1904: 65).

[6]   This, of course, is no news to historians of Peirce's development: «It is not an exaggeration to say that the subject-predicate theory of the proposition is one of the fundamental premises of Peirce's philosophy in the late 1860's» (Murphey, 1961: 152). In some important respects, Peirce was an American neo-Kantian, in some respects even anticipating his German counterparts of which he seems to have known nothing.

[7]   See Boler (1963); Stjernfelt (2007, ch. 2).

be reached by representations. Peirce would admit no such thing. By this argument, Peirce simultaneously attacks Kant's supposition of the existence of an unreachable *Ding an sich.* Peirce should go on to articulate his Scotist realism in his well-known 1871 review of Fraser's publication of Berkeley (CP 8.7-38), and to sharpen it, e.g. with his introduction of "real possibilities" in 1897 which made him a modal realist as to generals. The propositional roots of his realism as to universals, however, are already clear in the 1860s.

Subject realism

Peirce never left the age-old Aristotelian doctrine that propositions consist of two parts, predicates and subjects, although he radically further developed those notions. With the introduction of the logic of relatives around 1870 and his formalization of first order predicate logic in 1883-85, he considerably expanded the notions of predicate and subject to include relational predicates able to attach to any number of subjects. The role of those subjects is not to contribute anything to the description of the object of the proposition, but merely to *indicate* or *identify* those objects as assumedly existent entities separate from the proposition. Here, Peirce stuck to another Kantian idea, that existence is no predicate. The role of the subjects of a proposition is to claim existence, the role of predicates to describe the claimed existence, and propositions may even be defined as signs which separately indicate their object. The development of the concept of the index as the type of sign responsible for reference to independently existent objects really got underway in the 1880s after the 1885 «Algebra of Logic» formalized propositions in two parts: a predicative part involving a predicate satiated with bound variables and an initial subject part quantifying those variables. But already in the 1867 «New List», this existence-claiming role of subject indices was developed within the frame of a *likeness-sign-symbol* distinction (later icon-index-symbol), in which the second category comprise those signs «… whose relation to their objects consists in a correspondence in fact, and these may be termed indices or signs» (EP 1: 7 = CP 1.558)[8]. Thus subjects and predicate of the propo-

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[8]   This subject realism argument was inherited by Quine in his famous claim for

sition take care, as it were, each of their aspect of realism. Subject signs claim to refer to objects independent of their representation in propositions and in case of true propositions, they actually *do* so refer. Predicate signs claim to describe those same objects, and in true propositions, they actually *do* so describe. Conversely, when both parts of the proposition successfully satisfy these functions, the proposition is true[9]. Thus, subject signs incarnate independence realism, predicate signs incarnate realism as to universals[10].

Representation realism

The realisms of the two parts of the proposition come together in what could be termed Peirce's realism of *facts* or of *states of things.* Peirce very often refers to "states of things" in some universe of discourse as that which the representation of a proposition, as a

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ontological commitment: «A theory is committed to those and only those entities to which the bound variables of the theory must be capable of referring in order that the affirmations made in the theory be true» (Quine, 1948: 33; the article was reprinted in Quine, 1953: 1-19). Quine thus takes over Peirce's subject realism but not his predicate nor representation realism: to him, all that exists are individuals referred to by the index signs of bound variables. Smith (2005) takes Quine's example to be the root of the poverty of current analytical philosophy metaphysics: taking his departure in a reading of surface features of the logical formalism of first order predicate logic, he arrives at a naked "fantology" (from "F(a)-ontology"). Smith's paper implies an important question: which features of logic merit the derivation of metaphysical categories and which do not? Peirce was certainly a maximalist on this question, but I am not certain Peirce did ever articulate explicit criteria as to such a question, but an important further task would be to check if any such criterion could be implied in his many examples.

[9] Importantly, subject signs also successfully refer in false propositions; here, it is the failure of description in their predicate parts which make them false. If both subject and predicate parts of propositions fail to satisfy their indicative and descriptive functions, the resulting proposition will be meaningless rather than false.

[10] It may be objected that subject indices do not refer to *reality* but merely to *existence.* This is indeed correct, but Peircean reality as a whole is made up of three modes of being, based on the three categories, of which the second pertains to existence while the two others, pertain to qualities and laws, or, in Peirce's mature version, *may-be's* and *would-be's*, respectively. In the 1903 *Syllabus*, for instance, Peirce may articulate subject realism as follows: "This shows that a Dicisign must profess to refer or relate to something as having a real being independently of the representation of it as such, and further that this reference or relation must not be shown as rational, but must appear as a blind Secondness." (EP 2: 276 = CP 2.310) Here, we use the notion of realism in a broad sense to cover the status of all three modes of being.

whole, claims to represent. In his mature period after the turn of the century, this relation is made the object of explicit scrutiny: «A state of things is an abstract constituent part of reality, of such a nature that a proposition is needed to represent it» (R 283, 1906, EP 2: 378 = CP 5.549). The whole of a propositional representation has, as its correlate in reality, a *state of things*, also sometimes called a *fact*. This takes place simultaneously, of course, with the Austrian development of the notion of "Sachverhalt", state-of-affairs, initially coined by Hermann Lotze and Carl Stumpf, later famously popularized by Husserl and Wittgenstein[11]. In Peirce, the two realisms of predicate and subject come together and fuse in a realism of states-of-things: they are independent of any particular representation, and they incarnate general properties which are real. Many of Peirce's formulations of independence realism refer to representation realism.

But states-of-things in themselves also enjoy a certain independence. The relative independence of states-of-things in reality can be seen from the fact that their depiction in propositions forms independent "medads", that is, 0-valent expressions. In Peirce's well-known doctrine of valency of expressions, 1-, 2- and 3-valent predicates, monadic, dyadic and triadic, are irreducible and may combine to form higher-order predicates with any number of slots to be potentially satiated by subject signs. But when such a predicate is fully satiated by subject signs in all slots, the resulting proposition forms a *medad* with zero valency, and Peirce sometimes speak of propositions as "complete" signs. This allows for a transcendental deduction of conditions of possibility with an important lesson on the elementary structure of reality: Reality must be structured in such a way so that it is possible for true propositions to slice it into the appropriate, corresponding states-of-things which may, in

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[11]   Actually, Peirce seems to have begun using "states-of-things" as the real correlate of true propositions earlier than the Austro-German tradition for "Sachverhalte", initiated by Lotze (1874) and further developed by Stumpf in the 1880s (cf. Smith, 1994; Milkov, 2002). Peirce used "state of things" as that which a true proposition represents already in the 1860s – e.g. in the 1868 «Questions Concerning Certain Faculties» and «Four Incapacities» papers (e.g. EP 1: 24 = CP 5.254; EP 1: 37 = CP 5.279. Initially, however, Peirce does not seem to have explicitly defined "state of things" as a technical term, but he should definitely be included in the early history of states-of-affairs realism and "truthmaker" realism.

many cases, be considered in isolation in order to judge the truth value of the relevant propositions. This loose connectedness of reality is made possible by its composition from three types of being, different both from a holist world with stronger connectedness and a world of independent elements with no connectedness. Notably, states-of-things differ from simple parts or subsets of reality. Relations of cause and effect hold between states-of-things or facts, not simply between things. In a certain sense, propositions are what correspond to Wittgenstein's famous "logical atoms" in Peirce's theory. But unlike Wittgenstein who supposed the existence of logical atoms but was unable to point out one single example, in Peirce examples abound, for they comprise all true propositions: «A fact is so highly a prescissively abstract state of things, that it can be wholly represented in a simple proposition, and the term "simple", here, has no absolute meaning, but is merely a comparative expression» (R 283, 1906, EP 2: 378 = CP 5.549). In Wittgenstein, logical atoms were supposed to be simple in an absolute, elementary and compositional sense of the word which was why they were difficult to identify. That is explicitly not the case in Peirce where "simple" is merely comparative, that is, in comparison to complexes of facts which require several propositions and arguments for their description. Peircean facts, moreover, are ontologically neutral: they can be abstracted by true propositions on all levels of reality from mathematics to the special sciences, and they are so to speak *fractal*: any state-of-things charted by one proposition may be potentially analyzed into further parts and aspects not yet acknowledged by the given proposition, in order to be investigated in further propositions[12]. An open issue, however, remains whether all "states-of-things" of reality may be charted by true propositions or whether there may be unaccessible lacunae of reality.

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[12]   Peirce addresses this in a phenomenological rebuke of Kant's more atomist-associationist theory of synthesis: «Kant gives the erroneous view that ideas are presented separated and then thought together by the mind. This is his doctrine that a mental synthesis precedes every analysis. What really happens is that something is presented which in itself has no parts, but which nevertheless is analyzed by the mind, that is to say, its having parts consists in this, that the mind afterward recognizes those parts in it» («A Guess at the Riddle», 1888, CP 1.384).

Realism of indefinite inquiry

Large parts of reality are not yet covered by science. This simple fact becomes a problem for Peirce's definition of reality as the truthmaker of true propositions. It would be a strange consequence to claim that yet uncharted parts of what is are not real because there are not yet any true propositions to represent them. This gives rise to Peirce's well-known definition, in the 1878 pragmatism papers, of the real as that which is the object of the total set of true propositions to which science will converge in the limit – and his corresponding idea of science as a collective, indefinite endeavor by investigators across generations. There is no guarantee, however, that all parts of what is will, in fact, eventually yield to scientific investigation. Robert Lane (2018, ch. 7) charts how Peirce vacillates between different ways of solving this conundrum – by changing the realism of final investigation from the indicative to the subjunctive so that the real is not what will, but what *would be* the result of investigation carried sufficiently far – by claiming propositions addressing e.g. past events whose traces have been lost are meaningless – by claiming that the lack of true propositions in a given field implies there must be corresponding *lacunae* in reality itself (Lane: "deficit indeterminacy") – by developing a three-value logic with a borderline limit truth value category L between true and false so that undetermined propositions "in between" refer to undistinguishable, merely possible parts of reality with a sort of degenerate mode of being. Be that as it may, Peirce's struggle with this problem testifies to his unwavering insistence that the real is that what is, will, would or could be represented by true propositions.

Extrapolating from propositions:
deducing metaphysical realism from semiotic investigation

While this challenge that such "hidden secrets" pose for propositional realism remained unsolved, that did not prevent Peirce from vastly extrapolating propositional realism. In 1907, Peirce returned to judge his early efforts of the «New List»:

The first question, and it was a question of supreme importance requiring not only utter abandonment of all bias, but also a most cautious yet vigorously

active research, was whether or not the fundamental categories of thought really have that sort of dependence upon formal logic that Kant asserted. I became thoroughly convinced that such a relation really did and must exist. After a series of inquiries, I came to see that Kant ought not to have confined himself to divisions of propositions, or "judgments", as the Germans confuse the subject by calling them, but ought to have taken account of all elementary and significant differences of form among signs of all sorts, and that, above all, he ought not to have left out of account fundamental forms of reasonings. («Notes on "The New List"», 1907, CP 1.561)

The implication of the latter period of the quote generalizes propositional realism from its core in logic proper to cover also the semiotics of the "grammatica speculativa" as prerequisites to logic proper on the one hand, and to the investigation structures of the "speculative rhetoric" or "methodeutics" on the other hand. That is, logic in its broad sense, comprising semiotics, logic proper, and investigation methodology, every part of it may be taken as point of departure for the metaphysical deduction from logical categories to metaphysical categories. We already saw how the famous triplet icon-index-symbol was connected to the metaphysical deduction of the «New List», so that the existence of such sign types was connected to the existence of objective resemblance relations, of objective reactions in the here-and-now, and of general, lawlike behavior, respectively.

But even more ambitious are the possible metaphysical results to be harvested from extrapolating propositional realism to the broader field of investigation. The ineradicability of measurement uncertainty in empirical research, which Peirce knew well from his gravimetric work as a practicing physicist, could give rise to the metaphysical idea of the real existence of "objective chance" or "tychism" around 1890. Similarly, the existence of a continuity of possible occasions for using a general term in true propositions gave rise to the idea that such continuity exists as part of reality itself ("synechism"). The structure of the chain of arguments in investigation could yield metaphysical results in the claim that biological evolution in its move from one species to the next reach a sort of conclusion based on the premises of earlier species and environments. During that process it may even appear that nature itself performs processes of abduction, deduction and induction. Yes, the whole evolution of the universe may be seen as an argu-

ment (Lectures on Pragmatism, 1903, CP 5.119). Correspondingly, it seems to be the character of indefinite development from less to more knowledge in the neverending process of investigation which forms the logical mould of the metaphysical idea of the evolution of the universe from chaos and chance to more and more well-ordered, lawlike and varied behavior in Peirce's cosmology from the 1880s "Design and Chance" over "Guess at the Riddle" to the 1890s *Monist* papers[13]. The "Guess at the Riddle" is simply structured over the supposed inheritance of the metaphysical structure of three over the descending chain of philosophy and special sciences, from the Kantian fountainhead of reasoning to metaphysics, and psychology, over physiology, biology, physics, to sociology and theology – going metaphysically far further than any orthodox Kantian, to be sure. Some of such deductions surely have a more experimental, abductive ring to them, and not all results of them were kept in the course of Peirce's development. But they all share the character that Peirce so to speak takes the step from defining the real as that which makes true propositions true to the broader claim that real is all that which is involved in making true propositions true. In short, through this expansion of logic to cover all aspects, details, and procedures of the process of investigation, Peircean metaphysics might, in turn, reach many of its most adventurous claims of cosmology.

This is not the place to investigate the validity of such claims, merely to resume a handful of them in order to point to the growing breadth of the results of this constant motor in Peirce's development. Every new result in semiotics, logic and epistemology, expanding from the 1860s core of propositional realism, immediately would raise the possibility of new metaphysical deductions expanding the ontological commitments of Peircean metaphysics. Doing so, he went farther than most other "truthmaker" realists.

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[13]   A brief version of that argument is: «Looking upon the course of logic as a whole we see that it proceeds from the question to the answer -- from the vague to the definite. And so likewise all the evolution we know of proceeds from the vague to the definite» («Logic of Continuity», 1897, CP 6.191).

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