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# Existential Graphs as Ontographic Media

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## 1. Introduction

In a number of recent philosophical works, the concept of ontography has been strategically invoked as either a complementary *supplement* to ontology or as an *alternative* to ontology, depending on the epistemic and philosophical scope attributed to the concept.<sup>1</sup> Both uses of the concept involve a revaluation of figurative and visual thinking against logico-conceptual thinking—i. e. a revaluation of a philosophical practice that supplements or departs from the traditional site of philosophy, language.

The term has proved itself particularly popular among various representatives of object-oriented ontology, who have appropriated it to describe their own non-anthropocentric, object-oriented philosophical projects. Graham Harman, for example, even uses the term to characterise his whole enterprise, asking »isn't ontography a pretty good name for what I am doing«?<sup>2</sup> Harman understands ontography as a cartographic practice that maps »a limited number of dynamics that can occur between all different sorts of objects.«<sup>3</sup> Ian Bogost's understanding and use of the concept likewise stresses that ontography »is a practice, not merely a theory«<sup>4</sup>, while also seeing particular ontographic potential in certain forms of representation such as lists, catalogues, exploded-view drawings, and diagrams. All of the latter, for Bogost, serve to highlight the relationships between objects: »ontography involves the revelation of object relationships without necessarily offering clarification or description of any kind.«<sup>5</sup>

Object-oriented philosophy's revaluation of such cartographical and diagrammatical forms of representation and its contention that ontography is a practice

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<sup>1</sup> For an overview, see Michael Stadler: Was heißt Ontographie? Vorarbeit zu einer visuellen Ontologie, Würzburg 2014.

<sup>2</sup> Graham Harman: Ontography: The Rise of Objects, under: <https://doctorzamailek2.wordpress.com/2009/07/14/ontography-the-rise-of-objects/> (21 January 2019).

<sup>3</sup> Ibid.

<sup>4</sup> Ian Bogost: Alien Phenomenology, or What It's Like to Be a Thing, Minneapolis/London 2012, p. 50.

<sup>5</sup> Ibid., p. 38.

of depicting the most relevant basic elements of reality, which also involves deconstructing what Quentin Meillassoux terms ›correlationism‹, i. e. the anthropocentrism of philosophy. This brings it particularly close to another field of philosophy that shares these key concerns without ever describing itself as ontographic, namely, Charles Sanders Peirce's diagrammatology. Yet while Harman and Bogost generally only hint at what ontography is and what ontographic practice may amount to, Peirce works through and elaborates his semiotic epistemology—which is always also concerned with ontological questions—at the most fundamental level.

Now I am of course not the first one to notice these proximities. In his seminal study on ontography as visual ontology, Michael Stadler calls Peirce's ›existential graphs‹, along with a range of other philosophical theories, ›probable ontography‹, though he does not further pursue this idea. In the following, I aim to address this lacuna. In doing so, my guiding question will be: what are the ontographic dimensions of Peirce's diagrammatology and how does the latter relate to the self-professed ontography of object-oriented philosophy?

## 2. »Moving Pictures of Thought«

Peirce's existential graphs represent almost the centrepiece of his semiotic epistemology, which can also be characterised as diagrammatology. Both the diagram and what Peirce calls ›diagrammatic reasoning‹ not only play an important role in his typology of signs; they also prove central to his sign-based epistemology and logic as well as to his particular brand of pragmatism.<sup>6</sup> In his triadic sign classification system, the diagram constitutes a sub-class of the icon, which is characterised by a relation of resemblance to the object it designates. What distinguishes the diagram is its capacity to reduce this resemblance between the *representamen* and the object to certain essential characteristics, and therefore, to abstract from any feature that is not essential to our understanding of the latter. The diagram is therefore an iconic form of representation, which fulfils an epistemic—Bogost would say ontographic function—, since it is not only capable of illustrating essential relationships but also revealing them in the first place.

The concept of the diagram is nonetheless not restricted to this position within Peirce's classification system of the sign, but is also elaborated along epistemological lines into a specific practice of thinking that incorporates logical reasoning in particular. As Peirce writes, »All necessary reasoning is diagrammatic; and the assurance furnished by all other reasoning must be based upon necessary reasoning.

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<sup>6</sup> Here, Pierce speaks of pragmaticism rather than pragmatism.

In this sense, all reasoning depends directly or indirectly upon diagrams.<sup>7</sup> It is on this basis that, at widely scattered points throughout his *œuvre*, Peirce develops a system or logic of scientific argumentation that investigates and illuminates the course of thinking. He considers the latter to consist in the triad of abduction, deduction, and induction, at the heart of which lies diagrammatic reasoning, which is essentially based on the construction and manipulation of diagrammatic representations. Peirce's aim was to continually develop his sign-based epistemology into a formal semiotic logic that would satisfy all of the requirements on thinking and reasoning without—and this is crucial—needing to appeal to psychological or cognitivist elements.<sup>8</sup>

In order to achieve this, he elaborates his system of existential graphs (in the following, EGs)—which constitutes a graphical form of writing for propositional logic, predicate logic, and modal logic.<sup>9</sup> Together with the corresponding rules of reasoning formulated by Peirce, these EGs form both a notation system and a calculus. As logical instruments, they serve to divide up the reasoning process into the smallest possible number of steps. This takes place via ›diagrammatic reasoning‹, which consists in the successive manipulation and transformation of a diagram. In this system, logical or abstract relations manifest themselves as iconic signs, or more precisely as geometrical forms or topological graphs. Propositions are thus represented through the iconic reconstruction of the relations between their constitutive elements. As Peirce puts it, »The Diagram not only represents the related correlates, but also, and much more definitely, represents the relations between them, as so many objects of the Icon.«<sup>10</sup> The diagrams that emerge in this way are flat, geometric figures, which depict non-spatial entities through the representation and transformation of spatial or topological relationships.

<sup>7</sup> Charles S. Peirce: *The New Elements of Mathematics* by Charles S. Peirce, Vol. 4, ed. Carolyn Eisele, The Hague/Paris 1976, p. 314.

<sup>8</sup> »But the ordinary logicians talk of acts of the mind, concepts, judgments, acts of concluding, which are mixed ideas into which enter all sorts of elements in a manner which prevents any strict mathematical reasoning about them. All these ideas of the mind are, however, representations, or signs. We must begin by getting diagrammatic notions of signs from which we strip away, at first, all reference to the mind; and after we have made those ideas just as distinct as our notion of a prime number or of an oval line, we may then consider, if need be, what are the peculiar characteristics of a mental sign, and in fact may give a mathematical definition of a mind, in the same sense in which we can give a mathematical definition of a straight line.« Peirce: *The New Elements* Vol. 4 (as note 7), p. 54.

<sup>9</sup> CP 4.347–584; CP 4.418–509; Charles S. Peirce: *Semiotische Schriften*. Bd. III, ed. and trans. by Christian Kloesel and Helmut Pape, Frankfurt/M. 1993, pp. 75–210; Charles S. Peirce: *The New Elements of Mathematics* by Charles S. Peirce, Vol. 3, ed. Carolyn Eisele, The Hague/Paris 1976, pp. 331–448.

<sup>10</sup> Peirce: *The New Elements*, Vol. 4 (as note 7) p. 316.

For Peirce, the transformation of such diagrams allows us to observe relations between these graphically represented propositions that were previously hidden behind language. His system is intended not only to represent mathematical or logical reasoning processes, but also all elements of the ›phaneron‹, i. e. principally everything that can be present to consciousness (whether ›real‹ or ›fictive‹<sup>11</sup>) or, as Michael Stadler puts it, everything given and not-given:<sup>12</sup>

»It is therefore necessary that it be possible to express any recognisable or perceptible state of affairs via the graph, and to do so in an analytic manner, insofar as this concerns those relationships of its elements upon which every possible conclusion depends. What is then a state of affairs? [...] A state of affairs is something that is separated from the rest of the real, since it is something that can be expressed by a proposition.«<sup>13</sup>

In EGs, graphical thinking takes place on a ›phemic sheet / sheet of assertion‹, which is itself a graph and denotes the discursive sphere in which the graphs shown on the sheet are accepted as true. Changes to the original diagram are indicated using marks, points, different coloured backgrounds, various solid or dotted lines, circumscriptions, and sections.<sup>14</sup> An entire thought or reasoning process can then be allowed to unfold successively with respect to its construction and reception, even if this successive process is translated into the simultaneity of a spatial structure. The aim of these transformations to the diagram is to bring out the relation of transition, the *ergo*, in as many steps as possible. Peirce's system is intended to replace the traditional algebraic system of logic, whose standardised signs he considers deficient insofar as their meaning is determined merely by convention. He considers his own system, where »the symbols in which such problems present themselves«, are simply substituted by »concrete visual figures«, to exhibit far greater analyticity.<sup>15</sup> In Peirce's eyes, this accounts for the superiority of EGs over mathematics:

<sup>11</sup> »[B]y the *phaneron* I mean the collective total of all that is in any way or in any sense present to the mind, quite regardless of whether it corresponds to any real thing or not.« CP 1.284 [emphasis in original].

<sup>12</sup> Cf. Stadler: Was heißt Ontographie (as note 1), pp. 20–21.

<sup>13</sup> Charles S. Peirce: Semiotische Schriften, Bd. II, ed. and trans. by Christian Kloesel and Helmut Pape, Frankfurt/M. 1990, p. 100 [original paper unpublished (MS 492b)]. This also accounts for the term »existential graphs«: existential here refers to the capacity of graphs to depict any existing state of any aspect of any possible universe.

<sup>14</sup> On the representation of all conventions and rules, cf. Peirce: Semiotische Schriften, Bd. III (as note 9); cf. also CP 4.396ff. For further explanation cf. Helmut Pape: Einleitung, in: Peirce: Semiotische Schriften, Bd. III (as note 9), pp. 33–66.

<sup>15</sup> CP 4.571.

»The mathematician wants to reach the conclusion, and his interest in the process is merely as a means to reach similar conclusions. The logician does not care what the result may be; his desire is to understand the nature of the process by which it is reached. The mathematician seeks the speediest and most abridged of secure methods; the logician wishes to make each smallest step of the process stand out distinctly, so that its nature may be understood. He wants his diagram to be, above all, as analytical as possible. In view of this, I beg leave, Reader, as an Introduction to my defence of pragmatism, to bring before you a very simple system of diagrammatisation of propositions which I term the System of Existential Graphs.«<sup>16</sup>

In addition, Peirce claims that using almost exclusively iconic signs allows propositions to be represented more simply, more understandably, and with greater ease than formal algebraic languages, which can only be learnt with difficulty.<sup>17</sup> This is in part because iconic signs are already invested with the requisite level of significance on account of their structural resemblance to their objects, and they are determined by as few presuppositions in the sense of conventions as possible. At the heart of Peircean graphs we find the predicative function, which first establishes relations between subjects. To this extent, EGs are primarily iconic, since no indices are used to denote the various related entities.

A further aspect that appears essential to the construction and experimental use of graphs is the processuality and temporality required for diagrammatical reasoning. For what is important in diagrammatical reasoning is not just the relationships between the different forms on a two-dimensional surface, but also and especially their relationships over time. As Peirce himself states: »It is a truly extraordinary feature of Diagrams that they show, literally show—, not only that a necessary consequence does follow, but that it would follow under all circumstances whatsoever. It is not, however the statical Diagram that does this, but the comparison of the Diagram before and after a Transformation of a universally permissible kind.«<sup>18</sup> It is this possibility of comparing two or more diagrams or of comparing one or more diagrams before and after transformation that accounts for their epistemic value. The object of a second or succeeding diagram in a process is not simply something external to the diagram, but is itself another diagram that emerges from and refers to the first, in order in turn to produce a new diagram: »The transformate diagram is substantially contained in the transformand Diagram [...]. The transformate diagram is the Eventual, or Rational Interpretant of the transformand Diagram, at the same time being a new Diagram of which

<sup>16</sup> CP 4.533–534.

<sup>17</sup> Cf. CP 3.619, Peirce: *Semiotische Schriften*. Bd. III (as note 9), p. 197.

<sup>18</sup> MS 293 (Prolegomena for an Apology to Pragmatism, variant 13).

the Initial Interpretant, or signification, is the Symbolic statement, or statement in general terms, of the Conclusion.«<sup>19</sup> Out of this movement and as a generative consequence of their relationships, diagrams unfold as media of thought or, in Peirce's own terms, as »moving pictures of thought«.<sup>20</sup> To this extent, logic and time cannot remain independent from one another: the process of thinking is rather dependent on time. In this regard, Peirce himself remarks that, »Time has usually been considered by logicians to be what is called »extralogical« matter. I never shared this opinion. [...] The idea of time really is involved in the very idea of an argument.«<sup>21</sup>

In short, for Peirce, the process of thinking is unequivocally material: it is visible and observable and implies time and movement. Any given graph or diagram sequence exceeds mere depiction or the indirect representation of the thought process in every respect; it *is* this process itself, as it were—»the operation of thinking in actu«.<sup>22</sup>

Finally, the EG system as a whole, in which thinking via diagrams is itself thought by means of diagrams, is also accorded an epistemological function. In the EG system, graphs relate to the sheet of assertion as individual thoughts relate to the mind. As comprehensive, interconnected thought, the mind is represented by all permissible transformations of the absolute graph; it is a structuring, regulating space of possibility for various operations—yet it is only in their consummation—only in the diversity of what can in fact be realised within this space—that its regulatory framework manifests itself:

»The scribed graphs are determinations of the sheet, just as thoughts are determinations of the mind; and the mind itself is a comprehensive thought just as the sheet considered in all its actual transformations—states and transformations, taken collectively, is a graph—instance and taken in all its permissible transformations is a graph. Thus the system of existential graphs is a rough and generalized diagram of the Mind, and it gives a better idea of what the mind is, from the point of view of logic, than could be conveyed by any abstract account of it.«<sup>23</sup>

<sup>19</sup> Peirce: *The New Elements*, Vol. 4 (as note 7), p. 318 f.

<sup>20</sup> CP 4.8.

<sup>21</sup> CP 4.523. Despite Peirce's awareness of this problem, his solution fails to fulfil his own demands of clearly exhibiting the thinking process in its immanent temporality. Though graphs are static, frozen figures, they do serve to illustrate the temporal process of diagrammatical reasoning, yet only while obscuring one of the key features of the diagram: its immanent temporality.

<sup>22</sup> CP 4.6 [emphasis in original].

<sup>23</sup> CP 4.582.

As the quotation shows, Peirce thus characterises the EG system as a whole, as a general diagram of the mind. It is distinguished from *thinking-as-a-sign-process* insofar as it is this very process that becomes the subject of enquiry here. For EGs ultimately amount to a method of investigating thought and its conditions, possibilities, processes, operations, and consequences by means of iconic signs. As Peirce states, »it is necessary that we should be able to reason in graphs about graphs.«<sup>24</sup> In EGs, it is thought itself that is thought, and this thinking takes place quite outside the linguistic horizon. As diagrammatical pictures of diagrammatical thinking, EGs thus transcend thinking and begin to philosophise, since they fulfil all the criteria of philosophical *agents*: they pose and answer questions on aesthetics, logic, ontology, epistemology, and pragmatism and they do so in a verifiable manner that exhibits an absolute functional equivalence to the operations of language-based philosophy. And since their philosophy is not concerned with anything outside themselves—i. e. since the diagram here is at once the precondition of knowledge, the means of acquiring knowledge, and the object of knowledge itself, such that thinking via diagrams comes back to itself by means of diagrams—the system of graph logic cannot but be described as a media philosophy or, more precisely, a diagram philosophy.<sup>25</sup>

As Peirce himself states: »There is really no reasoning that is not of the nature of diagrammatic, or mathematical, reasoning; and therefore we must admit no conceptions which are not susceptible of being represented in diagrammatic form. Ideas too lofty to be expressed in diagrams are mere rubbish for the purposes of philosophy.«<sup>26</sup> A series of graphs is therefore not just a picture of thought, but also a thought-picture—a picture that calls for thinking and that in a certain sense also thinks itself. Through its strict use of non-linguistic signs to represent inferential arguments, the EG system transcends the horizon and paradigm of language as a space of possibility in which thought processes can unfold. The existential graphs that Peirce himself describes as his »chef d'œuvre«<sup>27</sup> thus maybe cannot strictly be considered *moving* pictures of thought, yet they can certainly be deemed diagrammatical forms of representation of diagrammatical thought.

<sup>24</sup> CP 4.527.

<sup>25</sup> Helmut Pape also considers existential graphs an original philosophical theory. Cf. Pape: Einleitung (as note 14), p. 17. On this contention, cf. the argument for a »heteromediality« of media philosophy beyond language and writing in Lorenz Engell and Bernhard Siebert: Editorial, in: Zeitschrift für Medien- und Kulturforschung 2 (2010) (»Schwerpunkt Medienphilosophie«), pp. 5–9.

<sup>26</sup> Charles S. Peirce: Sketch of a New Philosophy, in: Writings of Charles S. Peirce, Vol. 8 (1890–1892), ed. by Peirce Edition Project, Indianapolis 2010, pp. 19–22: 24.

<sup>27</sup> CP 4, between 4.346 and 347 (p. 291).

### 3. Diagrammatology and Ontology: Peirce and Kant

Peirce affirms the permanence of reality<sup>28</sup> and the possibility of knowing it; he therefore commits himself to addressing fundamental ontological questions.<sup>29</sup> His semiotic epistemology nonetheless aims to significantly modify the metaphysical concept of consciousness. Peirce's epistemological theory, which places the sign at the very heart of its logic, is developed precisely through the rejection of transcendental philosophical theorems—particularly those of a Kantian and Cartesian bent. While for Kant knowledge is only possible insofar as objects are constituted through the subject's cognitive faculties, i. e. insofar as the subject is the highest *a priori* presupposition of all knowledge, i. e. Meillassoux's correlationism, for Peirce it is simply senseless to assume such *a priori* structures of consciousness. For Peirce, indeed, it is not the subject that determines the shape and form of objects; we are rather always already in the midst of a process of reciprocal reference and denotation. Between the subject and the object, we always find the sign that is necessary for knowledge, while all knowledge refers to knowledge that has preceded it, and so on *ad infinitum*. The limit concept of knowledge here is not the *transcendental I* but rather the ›dynamic object‹. Kant's doctrine of transcendental apperception—the very quintessence of all *a priori* conditions of knowledge—is then summarily dismissed by Peirce in favour of the consistency of the sign: »Again, consciousness is sometimes used to signify the I think, or unity in thought; but the unity is nothing but consistency, or the recognition of it. Consistency belongs to every sign, so far as it is a sign; and therefore every sign, since it signifies primarily that it is a sign, signifies its own consistency.«<sup>30</sup> A little later Peirce adds that »the identity of a man consists in the consistency of what he does and thinks, and consistency is the intellectual character of a thing; that is, is its expressing something.«<sup>31</sup> The unity of thought, human self-consciousness in its incarnation as the *I think*, human identity—all of this is transformed in Peirce into a semiotic theory of consciousness that exchanges the self-reflexive subject for the consistency and self-referentiality of the sign. The conditions for the semiotic concept of consciousness can already be found in the Peircean construction of the sign process itself. For consistency refers to nothing other than the object-regulated sign process in which the interpretant of the initial triad becomes the representamen of a higher-level succeeding triad, which in turn—this is precisely the

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<sup>28</sup> CP 5.384.

<sup>29</sup> His philosophy therefore to a large extent constitutes a complex debate with Immanuel Kant, particularly with regard to the justification of the latter's categories.

<sup>30</sup> CP 5.313.

<sup>31</sup> CP 5.315.



self-referentiality of the sign—refers back to this initial triad.<sup>32</sup> This means that the interpretant interprets itself as the interpretant that interprets a representamen as standing for an object. A sign therefore not only represents something; it can also represent itself as representing, insofar as the interpretant is cognisant of itself as the interpretant that interprets a sign as standing for an object. In this way, a subject or any form of substance whatsoever becomes obsolete, which is what allows Max Bense to reasonably regard Peirce's »functional conception of consciousness« as anticipating the cybernetic theory of consciousness.

This displacement of the concept of consciousness at the same time implies a radical displacement of the question of the conditions of the possibility of knowledge. In the *Critique of Pure Reason*, Kant answers this question by appealing to the synthesis of apperception, the *a priori* forms of intuition, and the pure concepts of the understanding, i. e. the categories.<sup>33</sup> Against Kant, Peirce mobilises nothing less than a semiotic *a priori*,<sup>34</sup> stating that »The sign [exists] first of all.«<sup>35</sup>

This nonetheless does not mean that Peirce simply replaces one transcendental condition with another. His displacement rather goes hand in hand with a fundamental restructuring and dynamisation of the entire question of epistemological theory. For despite positing this paradoxical *a priori*, Peirce does away in advance with any of the associated problems in Kant, such as questions concerning the philosophy of the subject or a beyond of empirical knowledge. He therefore fundamentally casts doubt on Kant's question concerning the possibility of synthetic *a priori* judgements, which Kant answers by stating that all that is universally valid must be contained in the conditions of our experience, i. e. in the categories as non-empirical elements of the understanding and space and time as the pure forms of intuition. Peirce not only rejects the *a priori* structures of consciousness that are so crucial for Kant but also the possibility of the existence of a »thing-in-itself. For Kant, objects are only perceptible insofar as they are mediated by the *a priori* conditions of knowledge, yet how they are constituted independently of this

<sup>32</sup> Cf. Gerhard Schönrich: Idealismus oder Pragmatismus des Zeichenbegriffs? Kants Einheit des Bewusstseins und Peirces Konsistenz des Zeichens, in: Stefan Büttner et al. (eds.): Unendlichkeit und Selbstreferenz. Würzburg 2002, pp. 90–103; Max Bense: Vermittlung der Realitäten. Semiotische Erkenntnistheorie. Baden-Baden 1976, esp. »Bewusstseinstheorie: Erste semiotische Annäherung«, pp. 23–35; »Bewusstseinstheorie und semiotische Erkenntnistheorie«, pp. 36–44.

<sup>33</sup> Immanuel Kant: *Critique of Pure Reason*, ed. and trans. by Paul Guyer and Allen Wood, Cambridge 1998 [1781 (A) 1787 (B)].

<sup>34</sup> For a detailed treatment cf.: Max Bense: *Axiomatik und Semiotik in Mathematik und Naturerkenntnis*. Baden-Baden 1981, esp. pp. 197ff.

<sup>35</sup> Peirce: *Semiotische Schriften*. Bd. III (as note 9), p. 247 [original paper unpublished, MS 318].

mediation, as things-in-themselves, cannot be known.<sup>36</sup> This view is shared by Graham Harman, who explicitly underscores, although in very different fashion to Meillassoux, Kant's dictum of the continual withdrawal of the thing-in-itself or—in his own terminology—»the real object«. By contrast—and this is surely the decisive difference between Peirce's approach to ontography and that of object-oriented ontology—Peirce holds that, as Max Bense puts it, »what is given is what is representable.«<sup>37</sup> As I noted above, Peirce explicitly maintains the possibility of knowledge of the real, as that which is affirmed after a potentially infinite reasoning (i. e. sign) process as a consensual result by a community of researchers (albeit with the proviso of »fallibilism«). And yet he also states that »This ideal first [i. e. the limit concept of knowledge: the dynamic object] is the particular thing-in-itself. It does not exist as such. That is, there is no thing which is in-itself in the sense of not being relative to the mind, though things which are relative to the mind doubtless are, apart from that relation.«<sup>38</sup> This means that what cannot be represented by means of signs that does not exist. In Peirce's own words: »In short, cognizability (in its widest sense) and being are not merely metaphysically the same, but are synonymous terms.«<sup>39</sup> To this extent, knowledge development can be understood as the development of signs and representational possibilities, without any need to appeal to an absolute, ahistorical foundation. Foundations, indeed, are themselves capable of development.

#### 4. The Diagrammatic A Priori

From an ontographic perspective, Peirce's critique of Kant is particularly important insofar as it bears on the status of the diagram as a condition of the possibility of knowledge. As we saw above, his rejection of a priori structures of consciousness is accompanied by a revaluation of the sign and of the experiment or reasoning. His diagrammatology therefore does not bear the least resemblance to a »hidden art in the depths of the human soul«, as Kant describes his schematism.<sup>40</sup> In place of a cognitive transcendental, Peirce continually reaffirms that »external signs answer every purpose, and there is no need at all of considering what passes in one's mind.«<sup>41</sup> This already touches on a second consequence

<sup>36</sup> Cf. e. g. Kant 1998, (A 235 B 289).

<sup>37</sup> Bense: *Axiomatik und Semiotik* (as note 34), p. 11.

<sup>38</sup> CP 5.311.

<sup>39</sup> CP 5.257.

<sup>40</sup> Kant: *Critique of Pure Reason* (as note 33), p. 273 (A 141 B 180).

<sup>41</sup> Charles S. Peirce: *The New Elements of Mathematics* by Charles S. Peirce, Vol. 1, ed. by Carolyn Eisele, The Hague/Paris 1976, p. 122.

of Peirce's displacement of the Kantian concept of consciousness, namely—and this may again well surprise advocates of OOO—its fundamental undermining of the anthropocentrism of thought (and action). If it is true that »the mind is a sign developing according to the laws of inference«, <sup>42</sup> i. e. if thought processes are sign processes operating according to a particular schema (or more precisely to the laws of reasoning), then nothing prevents us from attributing a capacity for thought and consciousness to non-human sign processes that operate according to these laws. This view is shared by Peirce who calls the anthropomorphism in his formulations merely »coincidental« and believes that thought processes also take place in domains quite outside human consciousness: »Thought is not necessarily connected with a brain. It appears in the work of bees, of crystals, and throughout the purely physical world.« <sup>43</sup>

This narcissistic injury seems difficult to come to terms with. Over and over, debates of Peircean epistemology have stressed that knowledge development still cannot take place without recourse to knowing human beings, and that the thought process has to be distinguished from the process of creative reasoning, which is the exclusive preserve of human brains. <sup>44</sup> And as Michael Stadler observes, even Ian Bogost concedes that his ontography does not succeed in escaping anthropocentrism: »Anthropocentrism is thus both a torment and a foregone conclusion for us humans [...]. One can never entirely escape the recession into one's own centrism.« <sup>45</sup> Peirce, by contrast, emphasises the independence of the diagram and its capacity to initiate action, not only in human thought, but also in thought processes taking place outside the human brain. In this regard, diagrammatic thinking as a necessarily creative and vital process can happen in domains where the (concept of a) subject is quite superfluous.

»It is, therefore, a very extraordinary feature of diagrams that they show [...] that a consequence does follow, and more marvellous yet, that it would follow under all varieties of circumstances accompanying the premisses. [...] Now let us see how the diagram entrains its consequence. The Diagram sufficiently partakes of the percussivity of a Percut to determine, as its Dynamic, or Middle, Interpretant, a state of activity in the In-

<sup>42</sup> CP 5.313.

<sup>43</sup> CP 4.551.

<sup>44</sup> For more on these arguments cf. Michael Hoffmann: *Erkenntnisentwicklung. Ein semiotisch-pragmatischer Ansatz*. Klostermann 2005, p. 6; Ralf Müller: *Die dynamische Logik des Erkennens von Charles S. Peirce*. Würzburg 1999, pp. 111 ff. For Thomas Pruisken too, the »anthropological forgetfulness« of Peirce's semiotics represents its »theoretical blindspot«: Thomas Pruisken: *Medialität und Zeichen. Konzeption einer pragmatisch-sinnkritischen Theorie medialer Erfahrung*. Würzburg 2007, p. 263.

<sup>45</sup> Bogost: *Alien Phenomenology* (as note 4), p. 80.

terpreter, mingled with curiosity. As usual this mixture leads to Experimentation. It is the normal Logical effect; that is to say, it not only happens in the cortex of the human brain, but must plainly happen in every Quasi-mind in which signs of all kinds have a vitality of their own.«<sup>46</sup>

Even though Peirce himself states that he »almost despair[s]« in trying to explain what is meant by such a »Quasi-mind« here, he does express the notion with impressive clarity elsewhere:

»A thought is not per se in any mind or quasi-mind. I mean this in the same sense as I might say that Right or Truth would remain what they are though they were not embodied, & [sic] though nothing were right or true. But a thought, to gain any active mode of being must be embodied in a Sign. [...] Now as every thinking requires a mind, so every sign even if external to all minds must be a determination of a quasi-mind. This quasi-mind is itself a sign, a determinable sign. [...] I use the word ›Sign‹ in the widest sense for any medium for the communication or extension of a Form (or feature).«<sup>47</sup>

With two short observations that can be drawn from this passage I will come to the end. For it addresses two fundamental questions: first, the necessary materiality of the sign, i. e. the fact that every thought has to be embodied in a sign and that every sign requires a bearer to make it perceptible.<sup>48</sup> This means that for Peirce there can be no pure concept of the understanding in the Kantian sense. For if there can be no unembodied thought, there can also be no pure concept. Diagrams always require representation, and so must always be external, embodied signs. In Peirce's words: »[N]o application could be made of such an abstract statement without translating it into a sensible image.«<sup>49</sup> Diagrams, then, are never *pure*.

Secondly, the quotation makes clear that the »Quasi-mind« can be considered synonymous with the above-mentioned Peircean conception of ›consciousness as a sign process‹. Furthermore, both the sign itself and consciousness or the (quasi-) mind can be considered the ›autopoietic‹ results of the sign process, as both media and as forms. And in light of what we have seen above, Peirce's sign theory can also be understood as a media theory.<sup>50</sup> For Peirce's concept of the sign far exceeds

<sup>46</sup> Peirce: *The New Elements*, Vol. 4 (as note 7), p. 318.

<sup>47</sup> Charles S. Peirce: *Semiotics and Significs. The Correspondence between Charles S. Peirce and Victoria Lady Welby*, ed. by Charles Hardwick, Bloomington/London 1977, p. 195 f.

<sup>48</sup> Cf. also CP 5.287.

<sup>49</sup> CP 3.363.

<sup>50</sup> This view is also shared by Alexander Roesler: *Medienphilosophie und Zeichentheorie*, in: Stefan Münker, Alexander Roesler and Mike Sandbothe (eds.): *Medienphilosophie*.

the notion that signs are mere tools—mere means of communication, knowledge acquisition, or the expression of the activity of consciousness or the understanding that would not itself be sign-based. It also transcends the idea of the sign as a transparent mediator or mere conveyor of a pre-given meaning. For Peirce, signs are rather spaces of possibility for perception and thinking, or media that »submit that which they store, process, and mediate to conditions that they themselves create and are.«<sup>51</sup> The self-reflexivity of the sign process makes sign-events tangible as media-events—as events »that communicate through media, insofar as these communicate themselves and with one another as specific events.«<sup>52</sup> As processes, they are not media but they are constantly in a process of becoming.<sup>53</sup> Insofar as they are considered »mind« or »consciousness«, they are not media in a substantial sense, and are only constituted as such in the process itself. Peirce's dictum, »the sign exists first of all« might then just as well run »*the medium exists first of all*«: the semiotic a priori of thought and knowledge is therefore equally a media a priori, and human perception here is only one reference point among others.

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<sup>51</sup> Lorenz Engell and Joseph Vogl: Vorwort, in: Lorenz Engell, Joseph Vogl et al. (eds.): Kursbuch Medienkultur, Stuttgart 1999, pp. 8–11: 10; cf. also: Walther: The Sign as Medium (as note 50).

<sup>52</sup> Engell, Vogl: Vorwort (as note 51), *ibid.*

<sup>53</sup> Cf. Vogl, Joseph: Medien-Werden. Galileis Fernrohr, in: Archiv für Mediengeschichte Bd. 1, ed. Lorenz Engell, Bernhard Siegert and Joseph Vogl (»Mediale Historiographien«), Weimar 2001, pp. 115–123.