

Review

*Thinking Through the Imagination:
Aesthetics in Human Cognition,*

By John Kaag

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In *Thinking Through the Imagination* John Kaag provides an interesting study of the role of imagination in human cognition and he supports his case by highlighting connections between Kant's account of aesthetic judgments in the *Critique of Judgment*, Charles S. Peirce's description of abductive reasoning and its metaphysical implications, and studies that elucidate the process of imaginative thinking from the standpoint of contemporary empirical sciences including linguistics, cognitive neuroscience, and biology. The book is thus a useful tool for emphasizing aspects of the relationship between Peirce and Kant that are sometimes neglected, and shows that Peirce's metaphysical speculations, which have often been counterposed to his scientific frame of mind, can in fact find some support in contemporary empirical sciences.

Kaag's book defends two main theses. Firstly, it is wrong to consider the imagination as a capacity that only characterizes narrow portions of our lives – concerning fantasies, illusions, aesthetic productions, and so on – quite the contrary, imagination plays an essential role in human cognition. Secondly, that the only way to properly account for its central significance is not to characterize the imagination as something that is 'typically human' and that places us in opposition with nature; rather, imagination should be understood as a capacity having its roots in our

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biological and neurological setting, in continuity with nature at large. These theses are defended in nine chapters. Apart from the introductory and the concluding chapters, one is dedicated to Kant, four are devoted to Peirce, whereas two chapters analyse the imagination from the perspective of current empirical studies.

Chapter 2, 'Enlightening Thought: Kant and the Imagination', sets the stage for the later discussion of Peirce. Of course, this chapter does not aim to provide an exhaustive account of the imagination in Kant, which would require much more than a single section of a book. Rather, it intends to highlight some aspects of Kant's thinking, contained especially in the *Critique of Judgment*, that anticipate essential positions defended by Peirce and other American pragmatists.

I am sympathetic to the view that there is continuity between the *Critique of Judgment* and central concepts in Peirce's philosophy, even though I do not always agree with the details of Kaag's analysis. Kaag rightly emphasizes that imagination performs a central task in Kant's account of human cognition. It is so in the *Critique of Pure Reason*, where the imagination mediates between concepts and intuitions, thus allowing the former to be applied to the latter. This is clear in Kant's account of the schematism, without which the categories, as a priori concepts, would not be applicable to sensible intuitions (33ff.).

Kaag claims that the emphasis on imagination for an elucidation of human cognitions becomes even greater in the *Critique of Judgment*, and especially in Kant's description of aesthetic judgments. Here the imagination does not only serve the need of subsuming intuitions under a determinate given concept, but it gives rise to a 'free play' between our sensible and cognitive faculties, which make possible human creativity (40). Aesthetic judgments are performed by our reflective power of judgment. Kant describes the latter as a faculty that comes into play when we do not have a universal or a rule to judge a given particular, and we wish

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to find it (KJ 5: 179).¹ In this regard, Kaag suggests that Kant's account of reflective judgments anticipate various aspects of Peirce's description of abductive reasoning. The fact that Kant describes aesthetic judgments as reflective, and that he claims that the reflective power of judgment has an essential role when we look for concepts and rules to judge given particulars, leads Kaag to stress that the imaginative play between our cognitive faculties described by Kant in connection with aesthetic judgments must have an essential function in our empirical cognitions broadly conceived. (41-2).² One question that seems important to discuss in this respect is whether regulative judgments, which seek a rule to judge a given particular, present the same play between imagination and understanding that Kant attributes to aesthetic judgments (where the identification of a determinate rule to judge the given is not at issue).³

A central importance in Kaag's reading of the third *Critique* (and of the relation of the latter to Peirce) is then given to Kant's analysis of artistic genius. Kant defines genius as 'the talent (natural gift [*Naturgabe*]) that gives the rule to art,' or as 'the inborn predisposition of the mind [*angeborene Gemüthsanlage*] (*ingenium*) through which nature gives the rule to art' (KJ 5: 307). Kaag interprets this definition in a strong way and proposes to read these statements as a move that brings Kant toward what I have identified as the second thesis of *Thinking Through the Imagination*. That is to say, in his theory of genius Kant

¹ References to Kant's work are given according to the standard edition (Kant's *gesammelte Schriften*. Berlin: De Gruyter, Reimer 1900-), indicating volume and page number. For references to the *Critique of Pure Reason* I use A and B to refer respectively to the paging of the first and the second original editions.

² In connection to this view, he also quotes (39) Eva Schaper, who writes that 'aesthetic judgments as they are discussed in the first part of the *Critique of Judgment* can then be seen as paradigmatically exhibiting the ground for the possibility of judgment tout court' (Eva Schaper, "Taste, Sublimity and Genius: The Aesthetics of Nature and Art," in *The Cambridge Companion to Kant*, edited by P. Guyer. Cambridge: Cambridge University Press, 1992, 368).

³ On this point see: Claudio La Rocca, *Esistenza e giudizio: linguaggio e ontologia in Kant*, Pisa: ETS 1999, 259-74.

would realize that in order to account for the imaginative grasp of aesthetic ideas obtained by artists, nature cannot be seen as a phenomenal product of our mind. On the contrary, the human mind itself and its powers can only be accounted for as being parts of nature (not grasped as merely phenomenal any longer) (53). Kaag thus suggests that the third *Critique* ‘invites Kant to reframe the ontology he had relied upon in the *Critique of Pure Reason*.’ In this framework ‘[t]he character of genius revises the oppositional relation between man and nature. Instead of opposition, the new relation is one of continuity’ (53). Kaag then claims that the theory of imagination Kant developed in the third *Critique* brings Kant to a position closer to what Peirce will later defend in his theory of inquiry and in his related non-reductionist ontology, which postulates the continuity between mind and nature (53-4).

As I have already mentioned, I am sympathetic to the view that a comparison between Peirce and Kant in general, and the *Critique of Judgment* in particular, furthers our understanding of both philosophers. For this reason, I regard Kaag’s book as a useful tool for bringing to the fore essential elements in the work of both thinkers. Given this basic agreement, I will here indicate, for the sake of discussion, a couple of points where my views depart from Kaag’s. Kaag sees the third *Critique* as demanding a relevant transformation of Kant’s position in the *Critique of Pure Reason*. In my view, even though it is undeniable that the *Critique of Judgment* introduces relevant novelties and revisions, it is better to see the latter book as integrating the first *Critique*. On the one hand, the ‘Appendix to the Transcendental Dialectic’ of the *Critique of Pure Reason*, where Kant analyses the regulative use of ideas and the hypothetic proceeding of reason (cf. CPR A 642ff. B 670 ff.), already anticipates themes that will be later developed in relationship with reflective judgments. On the other hand, Kant already uses the concept of a talent and a natural gift [*Naturgabe*] to discuss the power of judgment in the first *Critique* (CPR, A 133 B 172), but he does not seem to believe that this

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formulation caused any fracture in his transcendental idealism. In a similar way, I do not think that we have to read Kant's claims on nature in the third *Critique*, considering also his discussion of genius, as revolutionizing his ontology. We should keep in mind that Kant's consideration of the purposefulness of nature in the *Critique of Judgment* remains always analogical and regulative.

Chapters 3 to 6 are dedicated to Peirce. In chapter three, 'C.S. Peirce and the Growth of the Imagination', Kaag argues that aesthetics play a central role in the philosophy of Peirce (59). He then maintains that, even though Peirce has never directly commented on the third *Critique* and there is no evidence that he ever read the book,⁴ Peirce could have been indirectly influenced by the *Critique of Judgment* through Friedrich Schiller's *Aesthetic Letters*, which he studied with close attention in his youth (60ff.). According to Kaag, Peirce develops the insights he received from Schiller in an extremely original way, drawing their consequences on epistemology and the theory of inquiry (72ff.). Chapter 4 and 5 are then dedicated to furthering our understanding of abduction. In the first of these two chapters, 'Abduction: Inference and Instinct', Kaag considers how we should account for abduction within Peirce's theory of logic, and what Peirce's treatment of this form of inference teaches us about his theory of logic in general. The difficulty of placing abduction within a theory of logic can be approached by means of Peirce's seemingly contradictory claim that abduction is a logical inference that rests on a particular instinct or insight, a claim that has often been discussed in the literature (81). Kaag notes that the reason

⁴ In a forthcoming article ('The Lot of the Beautiful: Pragmatism and Aesthetic Ideals', *British Journal of the History of Philosophy*), Kaag actually corrects this claim, insofar as Peirce quotes the *Critique of Judgment* at least once in a draft of a definition of 'Absolute Good.' This quotation to the third *Critique* is however quite cursory and Peirce does not seem to regard the book as having had a relevant influence on him (for example in comparison with the first *Critique*). Kaag's analysis of the indirect influence of the *Critique of Judgment* through the work of Schiller is accordingly still quite important for understanding the relationship between Peirce and Kant's aesthetics, the presence of this quotation notwithstanding.

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why the task of placing abduction within a theory of logic has often been taken as a hopeless enterprise might lie in a narrow understanding of what logic is, or should be. In this respect, Kaag claims that abduction ‘cannot be formalised in terms of syllogistic or quantified logic’ (76). In a similar way, he argues that PEIRCE, a computational model developed in the 1990s to simulate the process of abduction, failed to capture its essential creative and hypothetic characters, precisely because it focuses on some of its aspects whilst neglecting others for the sole purpose of providing an orderly formalization (87-92). Kaag then suggests that the logic of abduction is better understood in a broader framework, which could be approached either by means of the strategic rules identified in game theory (77), or through the rules proper to a logic of inquiry (80). It is in this sense that we should understand abduction as being properly part of a normative logic (80-1). According to Kaag, Peirce’s claim that abduction is both a logical inference and the result of an instinctive process becomes in this framework less problematic. Peirce’s contention should be seen as part of a theory of human thinking that regards reasoning as an embodied process that is in continuity with nature (81).

In chapter 5, ‘Imagining Nature,’ Kaag elaborates on this latter point, claiming that abduction, with its reliance on instinct and ‘*il lume naturale*,’ should be seen as a process of reasoning grounded in our own embodied nature (in a way similar to what Kaag maintains with reference to Kant’s account of artistic genius) (98). What is particularly interesting in this chapter is Kaag’s suggestion that it is possible to offer a model of the process of abduction by means of Peirce’s existential graphs (106ff.). The existential graphs are a system of conventions for visually representing logical relationships, which Peirce began to develop in the 1880’s. In Peirce’s view, this visual rendering of logical relationships was not only an alternative to symbolic logic, but also provided a much more powerful tool. This becomes evident in what Peirce calls ‘theorematic reasoning’ (115). Theo-

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rems do not only represent logical relationships in a visual way, but they experiment with the imagination on the diagrams they produce in order to obtain conclusions that are not immediately apparent in the original illustration of the premises.⁵ Kaag interestingly suggests that a good way to grasp and describe the imaginative and creative moments of abduction is by means of a comparison with diagrams and existential graphs (116).

The last chapter on Peirce, ‘Ontology and Imagination: Peirce on Necessity and Agency’, addresses the relationship between Peirce’s logic of abduction and his metaphysics. As I have already noted, Kaag maintains that, according to Peirce, a logic of abduction should be understood as an embodied logic, where the boundaries between nature and mind, between instinct and logical forms, blur. In line with this reading, he criticizes those interpreters who separate Peirce’s logic from his metaphysics, claiming that they constitute two incompatible strands within Peirce’s philosophy (121). By contrast, Kaag maintains that Peirce’s metaphysics should be seen as his ‘guess at the riddle’ about human imagination and abductive capacities (125). Human thinking, with its essential imaginative and creative features, can only be understood if we do not characterize it as opposed to nature, but as a part of it. Only in this way can we explain our capacity to ‘guess right’; that is to say, only by hypothesizing a continuity between the evolution of nature and the way in which our thought develops can we understand how we can get things right in our attempts to explain the world (127ff.).

The chapters on Peirce further our understanding of his philosophy in a multiplicity of respects: the elucidation of the indirect influence of the *Critique of Judgment* through the work of Schiller, the analysis of the role of imagination in abduction – just as the attempt to represent this role by means of the existential graphs – the examination of the

⁵ Here there is an interesting parallelism with Kant’s mathematical constructions, which is not discussed by Kaag.

strong ties between Peirce's logic of abduction and his evolutionary metaphysics, are just a few examples of the insights on Peirce's work contained in this book.

There are some points that I think need further discussion. Kaag repeatedly stresses that Peirce's analysis of abduction, as well as his claim that the latter is both an instinct and a form of inference, make clear that for Peirce logic should be an embodied logic, which should not be sharply distinguished from psychology and other empirical sciences (128). However, Peirce argues at various points, for example when he criticizes Dewey's logic, that logic should be distinguished from psychology. How should we understand these statements? How do they relate to Peirce's attempts to provide evidence for a continuity between nature and thought in his metaphysics? Another issue, which would deserve further attention is the use of existential graphs and theorematic reasoning to depict the function of imagination in abduction. I think this is a promising direction of investigation, but it is important to keep in mind that Peirce presents theorematic reasoning as a particular kind of deduction. In 'diagrammatizing' abduction we should then be careful in identifying where it differs from diagrammatic deductions.

Chapter 7 and 8 follow the way opened by Peirce's metaphysics and try to offer some evidence of a continuity between nature and mind. They do so by providing a scrutiny of the findings of various empirical sciences, with the aim of showing that the picture of nature suggested by current science is not the mechanistic and reductionist portrayal so feared by those philosophers willing to maintain a separation between nature and mind. According to Kaag, this non-mechanistic picture of nature shows that nature and mind should be seen as continuous, and that imagination should not be regarded as a mysterious power possessed only by human beings. By contrast, imagination is a capacity that finds in human being its most complex and elaborated expression, but has its roots in processes that are natural through and through. To defend these claims, Kaag

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considers studies in linguistics and metaphors, where George Lakoff and Mark Johnson have argued that the elaboration of the most abstract concepts is based on embodied experience (142ff.). These findings are supported by cognitive neuroscience, where it has been demonstrated that there is an essential coordination between the neural sensory-motor domains and the domains normally attributed to abstract concepts (152ff.). Furthermore, research in neuroscience by Donald Tucker (165ff.) and Gerard Edelman (171ff.) provide a picture of the functioning of the nervous system which presents many analogies with the phenomenological description of the process of imaginative thinking, thus suggesting that there is continuity between the way in which we describe our thinking and the way in which scientists describe the functioning of the brain.

To conclude, Kaag's book presents original and interesting views on the role of imagination in our thinking, on the relationship between Peirce and Kant, as well as on the relevance of Peirce's metaphysics for providing a framework for placing the findings of various contemporary empirical sciences. It will be of interest for Peirce scholars, for people studying the relationship between pragmatism and classical German philosophy, just as for those working on the role of aesthetics in human life and on the elaboration of a non-reductionist naturalist metaphysics.

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