Emptiness and desire in the first rule of logic

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Abstract. Charles Sanders Peirce's first rule of logic (EP 2.48, 1898) identifies the inception point of human inquiry. Taking a closer look at this principle, we find at its core a necessary relationship between emptiness and desire that underlies all genuine instances of human learning and adaptation. This composite relationship plays a critical role in the function or failure of learning but has received scant attention in the literature. As a result, the complexities of the first rule of logic are not well understood, often being mistakenly conflated with the rule's famous corollary, 'do not block the way of inquiry', or passed over with cursory definitions, including 'wonder', 'doubt' and 'the will to learn'. Following a background discussion highlighting the nature of reflexive inquiry and fallibilism that situate human consciousness both within and beyond animal being, I draw on multiple layers of evidence from a range of disciplines to better reveal the complex dynamics intrinsic to the first rule of logic. These layers include a closer reading and exegesis of the original passage and surrounding text; a semiotic reanalysis of this reading in light of recent advances in the semiotic theory of learning; a resituation of these distinctions within broader contemporary discussions of emptiness ontology to which I contribute in part via an original semantic/rhetorical analysis of a linguistic construction in Laozi; the introduction of a closely related pedagogical tool under development in the context of my own university-level teaching in ethnography and research methods; and the dialogic situation of this diagram within discourses of psychotherapy, philosophy and literature. Building on these principles and distinctions, the paper closes with a perspective shift on obstacles and desire in human learning and an expanded reformulation of the first rule of logic.

Keywords: learning; growth of understanding; research; constraints; absentials; pragmaticism; logic as semiotic

Fallibilist learning and the first rule of logic

"To err is human", the old adage goes – a point that may be more apparent now than ever. But proverbial wisdom tells us little in this case. After all, to err is also dolphin. To err is skink, tortoise, elk, baboon, giraffe, rhinoceros, and dog. To err may be *especially* human, but every other kind of animal also messes up.[1] Every living thing makes mistakes aplenty; and as long as our mistakes don't kill us, we all tend to learn from them and try to "do better next time". Properly understood, survival of the "fittest" has little to do with being able to annihilate the competition by summoning superior powers of physical "fitness" (a semantic anachronism). Instead, it has everything to do with better adapting and learning what best "fits" in relation to our variable, changing environments (see also Olteanu 2018: 103). When it comes to learning, then, the odd thing about being human is not that we are capable of doing better next time but, rather, that we are capable of admitting we might be wrong about this time, last time *and* next time. All animals learn by trial and error, and part of that learning requires that we sometimes come to mistrust what we once trusted; but somehow human beings have developed a reflexive capacity to mistrust *ourselves*, including many of our basic beliefs and traditions (whether biologically or socially inherited). We are even able to develop general theories of inadequacy and error as I am doing in this paper. Put differently, while animal learning in general might be described as adapting or self-correcting to prevent the repetition of error, human learning also involves an ability to adapt to discoveries of personal and collective ignorance. Indeed, as I argue below, human consciousness (insofar as it is distinct from animal consciousness) is, in no small part, the consciousness of our own ignorance. The story behind this unenviable endowment is semiotic, as I describe further below, following Deely 2010, Cobley 2018, and others; but first we turn to the broader argument of the paper at hand and its inspiration: a lecture delivered in Cambridge, Massachusetts, on 21 February 1898 by Charles Sanders Peirce.

Entitled "The first rule of logic" (EP 2.48, 1898), the lecture is an attempt to account for our ability to correct ourselves as we reason, even when grave error is introduced during the process. The rule, or principle, in question is not presented as a principle of formal logic. On the contrary, as Susan Haack (2014: 321) reminds us, "Peirce's understanding of the nature and scope of logic is far broader than the modern conception we have inherited from Frege and Russell: it encompasses not only deductive but also abductive and inductive reasoning". Abductive reasoning, that which proceeds by guessing or adopting hypotheses, is especially important

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[1]   Even cats.

for understanding how Peirce's theory and method of logic diverges from strictly formalist accounts.

As the lecture proceeds, Peirce eventually pinpoints the wellspring of logic, conceived as general semiotic: i.e., the inception point of a general method for making real progress in finding out the truth about things. As I will demonstrate below, a closer look at this principle reveals a necessary relationship between emptiness and desire that underlies all genuine instances of human inquiry and learning. The composite relationship in question plays a critical role in the function or failure of learning; but so far it has received scant attention in the literature. As a result, I argue that the complexities of the first rule of logic are not well understood, often being mistakenly conflated with the rule's famous corollary, 'do not block the way of inquiry', or passed over with cursory definitions such as 'wonder', 'doubt' or 'the will to learn'.

In what follows, I draw on layers of evidence from a range of perspectives to better reveal the complex dynamics intrinsic to the first rule of logic. In addition to a closer reading and exegesis of the text in question, I offer a reanalysis of the passage in light of recent advances in the semiotic theory of learning (e.g., Nöth 2018a, 2018b) followed by a resituation of these distinctions within broader contemporary discussions of emptiness ontology (e.g., Deacon 2012; Brier 2017). I contribute to these discussions in part via an original analysis (syntactic, semantic and rhetorical) of a linguistic construction in Laozi. I also introduce a closely related pedagogical tool under development in the context of my own university-level teaching in ethnography and research methods. I then attempt to situate this pedagogical tool dialogically within discourses of psychotherapy, philosophy and literature. Building on these principles and distinctions, I close the paper with a shift in perspective on the blockage vs. desire relation followed by an expanded reformulation of Peirce's famous first rule, to which we now turn. Here is the statement in question:

> Upon this first, and in one sense this sole, rule of reason, that in order to learn you must desire to learn, and in so desiring not be satisfied with what you already incline to think, there follows one corollary which itself deserves to be inscribed upon every wall of the city of philosophy:
>
> Do not block the way of inquiry. (EP 2.48, 1898)

Before proceeding, it will be helpful to consider two items of intertextual historical context implicit in this passage along with two items requiring careful attention for adequate interpretation of the passage. First consider the implicit connections.

Peirce has two focal critiques or responses in mind: one contra René Descartes, his long-term historical nemesis; the other contra William James, his life-long friend and confidant. His critique of the latter is in response to James' recent publication of an essay entitled "Will to believe" (James 1896), which Peirce found to be misguided (EP 2.42, 1898). Instead, what drives human inquiry should be thought of as our "will to learn", as Peirce makes clear earlier in the lecture. As for his implicit critique of Descartes, Peirce alludes to the 17th-century philosopher's similar attempt to formulate a "method of rightly conducting one's reason and seeking truth in the sciences" (Descartes 1637). In so doing Descartes finds four rules to be sufficient to stand "in place of the large number of rules that make up logic […] provided that I made and kept to a strong resolution always to obey them". Descartes' first rule of logic is the following:

> […] never to accept anything as true if I didn't have evident knowledge of its truth: that is, carefully to avoid jumping to conclusions and preserving old opinions, and to include in my judgments only what presented itself to my mind so vividly and so clearly that I had no basis for calling it in question. (Descartes 1637: 8[2])

Peirce contrasts his first rule with that of Descartes in two important ways: first, on principles of parsimony by asserting that his system requires only a single rule (instead of four) and, second, on principles of validity by asserting (in the next lecture in this series and elsewhere in his writings) that the vast majority of our beliefs are simply not open to doubt since they are grounded in instinctual behaviours and "common experience, which nobody doubts or can doubt" (CP 5.120, 1898).

Next we should consider a pair of cautionary reminders in order to foster a more careful parsing of the argument structure in this passage. First, it is important to take care that the salient framing of the *corollary* to the first rule of logic ("Do not block the way of inquiry") not be allowed to upstage the first rule itself – especially not to the point that it comes to be conflated or confused with the first rule. In other words, the first rule is decidedly *not* the corollary prohibition. This is a point which many scholars (both authors and peer reviewers apparently) have at one time or another forgotten to check (see e.g., Reynolds 2001[3]; Beauclair 2007[4];

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[2]   Descartes, René 2005[1637]. *Discourse on the Method of Rightly Conducting one's Reason and Seeking Truth in the Sciences.* (Bennett, Jonathan, trans.) *Discours de la méthode pour bien con-duire sa raison, et chercher la vérité dans les sciences.* Some Texts from Early Modern Philosophy, Online: http://www.earlymoderntexts.com/authors/descartes.

[3]   Reynolds, Andrew S. 2001. Tychism. In: *The Digital Encyclopedia of Charles S. Peirce.* Online: http://www.digitalpeirce.fee.unicamp.br/home.htm.

[4]   Beauclair, Alain 2007. Continuing education: Peirce and morality in the 1898 Cambridge Lectures. *Annual Meeting of the Society for the Advancement of American Philosophy* 34, UNC

Nöth 2018a: 97). Second, contrary to accounts implied by others, it is important to note that there is more to Peirce's first rule than mere "wonder" or the "will to learn" (as implied variously in e.g., Burgh, Thornton 2016: 169; Nichols *et al.* 2017: 251; Houser 2006; Bakalis 2011). Still others have identified Peirce's first rule with genuine doubt (Chiasson 2001[5]; Haack 2014); but I contend that this position also sells the principle short. What, then, is the first rule? Peirce (EP 2.48, 1898; my emphasis, J. P.) answers clearly: "… *in order to learn you must desire to learn, and in so desiring not be satisfied with what you already incline to think*".

Note the composite relation: desire and discontent work together in the first rule of logic; and, if anything, discontent is logically and temporally prior to desire. This is the overlooked point at the heart of my argument in this paper; but, before unpacking it in any detail, further context is needed. The next layer to consider is the relationship between Peirce's argument in this passage and his philosophical position of "contrite fallibilism" (CP 1.14, 1893).

Nathan Houser (2006: 6) reminds us that Peirce's lecture "The first rule of logic" is an indirect but extended statement of his philosophical fallibilism: a position that assumes "our knowledge is never absolute but always swims, as it were, in a continuum of uncertainty and indeterminacy" (CP 1.71, c.1897). Peirce's fallibilism is "a linchpin of his philosophy" (Houser 2006: 3). And yet the "continuum" in which our knowledge "always swims" also holds pivotal significance for Peirce, being at the core of a complementary position he discusses as "synechism" (< Greek ʿσυνεχής,ʾ ʿcontinuousʾ). Synechism is the assumption that everything is continuous with or related to everything else, both logically and temporally. The principle is evolutionary or developmental, rooted in and oriented toward processes of growth. This grounding assures us in spite of our fallibilism, of a fundamental affinity between human minds and nature or "the affinity of the human soul to the soul of the universe, imperfect as that affinity no doubt is" (1903: CP 5.47, 1903). Thus, Peirce embraces both a contrite fallibilism, combined with a high faith in the reality of knowledge: a position that might also be summed up as "fallible realism".

This brings us back to the question of difference between human learning and alloanimal learning. In most ways we are not so different from our animal next-of-kin. Both humans and alloanimals learn from their mistakes against an experiential backdrop of implicit naïve realism – assuming that the world is simply that which is "given" to experience – our experience being filtered through various patterns

[5]   Chiasson, Phyllis 2001. Peirce and educational philosophy. In: Bergman, Mats; Queiroz João (eds.), *The Commens Encyclopedia: The Digital Encyclopedia of Peirce Studies. New Edition*, Pub. 131013-2018a. Retrieved from https://bit.ly/2OUfWpP.

of embodiment, habits of sensory perception and processes of social construction so strong that they come to seem merely obvious.[6] It is important to note that, for both humans and in alloanimals, these habits rely on the use and recognition of signs. Signs are representations of reality that are interpreted in a variety of environments for a variety of ends according to particular biological endowments, among other factors. Thus, what honeybees, rabbits, and humans "see" or expect in a given flower are widely divergent, in spite of the fact that the underlying reality being represented remains largely the same.

The mere generation of this example is itself a way of summing up the distinction between human learning and alloanimal learning. John Deely (2010) points out that while all animals are generally 'semiosic' (i.e., capable of using and recognizing signs), only humans are 'semiotic' (i.e., capable of recognizing signs as signs). As a result, we are able to use signs to comment on and study other signs in a way that can be described as 'metasemiosis' (Deely 2010: 48). This would also mean that only humans are capable of discerning the difference between 'being' or *ens reale* – that which is mind-independent – and 'non-being' or *ens rationis*, that which is mind-dependent (Deely 2010: 78). We are capable of noting that any species-specific way of experiencing the thing we call a 'flower' is in large part an object of perception and social construction that is severely constrained, lacking or limited in its scope compared to all other possible ways of experiencing or knowing the same underlying thing. We are, in other words, capable of realizing how limited our inborn perspectives are. Paul Cobley (2018: 23) employs a version of the iceberg analogy to illustrate further:

> […] through signs the human can be aware of the possibility of what s/he does not know. An important corollary of this is that whatever is beneath the tip of the iceberg cannot be approached as a thing. It is possible that experience could make it an object but, even then, through the sensations it provokes, the feelings about them and their consequences, it is only available as a sign.

As I have argued elsewhere, human beings are not so much 'rational' or 'discerning' as we are capable of admitting how wrong we are, have been, or might yet be. We are, in other words, not only capable of understanding but also in the unique and unenviable position of being capable of understanding how little we understand (see also Pelkey 2016: 450–451). Whatever other unique capabilities we might possess as human beings, it is worth considering the possibility that this is what we are at bottom. Identifying this as a fundamental difference between ourselves and other creatures might even help us better adapt to the world we inhabit.

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6   As Alin Olteanu (2018: 103) puts it, "the organism–environment relation itself constitutes the hermeneutic framework, both enabling and setting limits to our learning".

Discontent is first, desire second

The two composite elements identified above in Peirce's first rule of logic are desire and discontent: once again, "in order to learn you must *desire to learn*, and in so desiring *not be satisfied* with what you already incline to think" (EP 2.48, 1898). While desire comes first syntagmatically and chronologically in this statement, it does not come first logically. The phrase "in so desiring" determines that not being satisfied emerges either simultaneously with or as a pre-requisite to the act of desiring itself. Discontent is not a consequence of desire, in other words; instead, it is either a prior condition *of* or co-requisite presence *with* desire.

Among other things, this means that the first rule of logic cannot be reduced to desire or the will to learn any more than it can be reduced to dissatisfaction or genuine doubt – in spite of all suggestions to the contrary both implicit and explicit (see again, e.g., Burgh, Thornton 2016: 169; Nichols *et al.* 2017: 251; Houser 2006; Bakalis 2011; Chiasson 2001; Haack 2014). But if the statement is so clearly a composite of desire and discontent, as I am suggesting, why has it not been clearly recognized and developed as such in the literature?

Michael Raposa has perhaps come closest, but only by way of claiming first that the will to learn presupposes dissatisfaction and then going on to argue that dissatisfaction is generated by an act of will (Raposa 2015: 72). Could both be true? A better understanding of this puzzle may trace back to apparently contradictory statements by Peirce himself elsewhere in the text. Earlier in the lecture, for example, we find this passage:

> […] there is but one thing needful for learning the truth, and that is a hearty and active desire to learn what is true. If you really want to learn the truth, you will, by however devious a path, be surely led into the way of truth, at last. No matter how erroneous your ideas of the method may be at first, you will be forced at length to correct them so long as your activity is moved by that sincere desire. (EP 2.47, 1898)

Here, desire is clearly framed not only as primary but also as sufficient. Desire: hearty, active, sincere and solo; no mention of discontent or dissatisfaction in sight. But even though genuine desire is framed as the "one [and only] thing needful for learning the truth" in this passage, Peirce immediately switches gears in the next. He suggests that we take a closer look at "Will to learn", and when we peer inside, "to note what is essentially involved", what do we find? Peirce promptly declares that the "first thing that the Will to Learn supposes is a dissatisfaction with one's present state of opinion" (EP 2.47, 1898). Once again, then, discontent is found subtending desire.

Peirce goes on to bolster the case for discontent, arguing that effective teachers must also be dedicated learners and that, in order for them to "have any measure of success in learning, [they] must be penetrated with a sense of the unsatisfactoriness of [their] present condition of knowledge" (EP 2.48, 1898). Here discontent is once more focal. Only a few sentences later in this passage, though, desire surfaces with equal force, as we are instructed that a "fever for learning […] must consume the soul of the [person] who is to infect others with the same apparent malady" (EP 2.48, 1898). In this passage desire and discontent can be said to function in tandem without it being necessary to say one way or the other which is the logical antecedent.

Then, just before moving into the focal presentation of the first rule of logic itself (see above), Peirce sees fit to make the following prefatory remarks on the method of logical induction:

> The Inductive Method springs directly out of dissatisfaction with existing know-ledge. The great rule of predesignation, which must guide it, is as much as to say that an induction to be valid must be prompted by a definite doubt or at least an interrogation; and what is such an interrogation but first, a sense that we do not know something; second, a desire to know it; and third, an effort – implying a willingness to labor – for the sake of seeing how the truth may really be. If that interrogation inspires you, you will be sure to examine the instances; while if it does not, you will pass them by without attention. (EP 2.48, 1898)

Here discontent is presented as logically prior to both desire and the will to learn in at least two ways: not only as the primary motivation for inductive reasoning but also as the first characteristic of inquiry in an inductive mode. Inductive inquiry or "interrogation" is characterized by the following three qualities:

(1) Discontent: "a sense that we do not know something";
(2) Desire: "a desire to know it";
(3) Will: "an effort … [toward] seeing how the truth may really be".

Once again discontent is first and desire is second. Only, what I have been calling 'discontent' might more accurately be identified as a sense that something is lacking or missing – something of unknown identity. Note also that in this passage Peirce supplies the hermeneutic key to unlock the riddle I have presented above. To understand how this is so, it is necessary to return to the triadic logic of the categories. After all, Peirce's broader programme is a dynamic theory (and method) that is always grounded in three ontological categories or "modes of being" (CP 6.342, 1908), discussed variously as feeling, brute force, and reason or "quality,

reaction, and mediation", but correspondingly most generally with what he dubs "Firstness, Secondness, and Thirdness", respectively (CP 1.530, 1903; CP 4.3, 1898). Staat (1993) reminds us that, at this point in his career, Peirce was still thinking of inductive reasoning as a mode of Thirdness (abduction being a mode of Firstness and deduction being a mode of Secondness), though he would later waver somewhat on this decision.[7] Nöth (2018b) argues, nonetheless, that accepting induction as a mode of Thirdness is the most consistent with Peirce's overall system of thought since deduction features compulsive reasoning, which is characteristic of Secondness. Induction, on the other hand, "is most typical of learning as a process since it combines logic with experiment", also involving "elements of continuity and habit so that it is able to bring the element of reinforcement into the process of learning" (Nöth 2018b: 85). All such qualities are characteristic of Thirdness (CP 2.96, 1902).

Hence, according to the passage above regarding the inductive method of inquiry, discontent (or "the sense that we do not know something") is its firstness of thirdness – i.e., in this case, the qualitative, feeling-oriented component of inductive reasoning. Desire, on the other hand, is its secondness of thirdness, or "Thirdness degenerated to Secondness" (Nöth 2018b: 73), since it "adds an element of compulsion, of efficient causality to the phenomenon, whose Thirdness is therefore no longer genuine" (Nöth 2018b: 75). Nöth (2018b: 79) observes that "Peirce attributes to the desire to learn an element of compulsivity, which characterises it as a phenomenon predominantly of Secondness". But neither is the secondness of desire a genuine secondness, since "to desire also means to have purpose" (Nöth 2018b: 79), regardless of how vague or distant that purpose may seem to be.

Considered in this way, as the firstness and secondness of a triadic relation, we come to see that Peirce is not assuming an either–or scenario, nor is he being inconsistent by focusing on one and then the other and then implying that the two work in tandem. Where firstness is found, secondness will be found there as well in some measure, and *vice versa*. Where there is discontent, there will be desire; where there is desire there will be discontent, but the two are fundamentally different phenomena that should not be conflated and cannot be reduced to each other when attempting to understand the motivation behind the will to learn that gives rise to inductive inquiry that Peirce typifies as the first rule of logic. It is also important to consider that this formulation of the triadic ground of induction was no mere passing fancy.

Six years earlier, Peirce frames the relationship this way:

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7   In his own words, "Concerning the relation of these three modes of inference to the categories [. . .] my opinions, I confess, have wavered" (CP 5.146, 1903).

> the first step toward finding out is to acknowledge you do not satisfactorily know already; so that no blight can so surely arrest all intellectual growth as the blight of cocksureness [...] Indeed, out of a contrite fallibilism, combined with a high faith in the reality of knowledge, and an intense desire to find things out, all my philosophy has always seemed to me to grow. (CP 1.13–14, 1893)

Here contrite fallibilism is first, intense desire is second and finding things out is third – all in the service of the growth of understanding. In fact, this is the same pattern Peirce frames with more care and attention in his 1898 lecture under consideration in this paper.

While scholars such as Chiasson (2001) and Haack (1997, 2014) do well to draw connections between "The first rule of logic" lecture and themes of belief and doubt that are focal elsewhere in the work of Peirce, my argument in this paper is that Peirce is up to something quite different in the lecture, something that places belief and doubt well in the background.[8] Rather, he is drawing attention to the triadic structure of inductive inquiry, with a focal emphasis on elements of its firstness and secondness. While we might be justified in suggesting that doubt is somehow a nexus of discontent and desire, Peirce's purpose in highlighting their difference and relation seems to be far more important than categorizing their *Aufhebung* synthesis into a single lexical cover-term.

My suggestion that discontent is a firstness of thirdness, while (following Nöth 2018b) desire is a secondness of thirdness, also makes sense of claims that would seem otherwise to be contradictory elsewhere in Peirce's 1898 lecture (as pointed out above). This scenario also clarifies the tandem nature and logical priority of their relation in the "first rule" itself. How do we learn? Peirce answers, in brief, that "you must *desire to learn*, and in so desiring *not be satisfied*". Clearly, desire depends on the presence of discontent, and discontent is both necessary for and co-requisite with desire. Since the dissatisfaction in question is actually oriented toward "what you already incline to think", we find that dissatisfaction initiates desire. The first rule of logic could then also be stated thus: "that in order to learn you must be discontent with what you already incline to think and thus desire to move beyond this state of dissatisfaction".

And now we are poised to inquire into the nature of what I have been calling discontent and desire. It will be most helpful to focus on the first of these first. To be sure, 'discontent' and 'dissatisfaction' are convenient shorthands for this element of inquiry and growth; but are there more general, more fundamental ways of characterizing the phenomenon? How can we better understand what lies at the

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8   Direct discussion of 'doubt' surfaces only three times in the lecture; references to 'belief'/ 'believe', fewer than ten.

core of the firstness of thirdness that we call 'learning' or 'inquiry'? In passages already discussed above, Peirce himself provides alternative ways of framing this aspect of inquiry when he refers to it as not already knowing something satisfactorily (CP 1.13, 1893) and as "a sense that we do not know something" (EP 2.48, 1898). Such statements draw attention to a more fundamental characteristic of the firstness that functions as the qualitative ground of inquiry: something *missing*.

Emptiness ontology: Finding purpose in what is missing

Terrence Deacon draws attention to a closely related point in his recent treatise (Deacon 2012) on the indispensable, but under-theorized, role played by constraints on information in the development and adaptation of complex systems. The thesis of his book is hinted at in title: *Incomplete Nature*. Deacon argues that "absences" are just as important, if not more so, than "presences" for explaining and understanding the evolution of anything – especially the development of life, consciousness and meaning from physical and chemical processes. He opens the book with a complaint that "our current 'Theory of Everything' implies that we don't exist, except as a collection of atoms" (Deacon 2012: 1). What is missing from such theories? "Ironically and enigmatically, something missing is missing" (Deacon 2012: 1). Ordinary phenomena such as "function, reference, purpose or value" are intrinsically "incomplete". "Longing, desire, passion, appetite, mourning, loss, aspiration – all are based on an analogous intrinsic incompleteness, an integral without-ness" (Deacon 2012: 2–3), and unless we take this point seriously in our theorizing, we are left with an incoherent (and irresponsible) account of objects and events – one that is merely descriptive of physical features without being able to account for what matters most.

Deacon argues that in order to make progress in understanding what really matters, we have to take seriously the "intrinsic quality of existing with respect to something missing" as a "*defining property of life and mind*" (Deacon 2012: 3, emphasis in the original). He proposes the term 'absential' to better sharpen our focus on such features of existence so that we can establish "a causal role for absence" in the natural sciences (see also Tandoc, Logan 2018; Pelkey 2015). This causal action is set in motion by the sense, however vague or unwitting, of a possibility – the sense of a virtual future – that nonetheless plays an active role in influencing and determining the present (Deacon 2012: 12). John Deely, developing ideas from Peirce, refers to this same neglected mode of causation as the action of signs, or semiosis: "the *virtual influence* of the future upon the present

changing the relevance of the past" (Deely 2008: 481, emphasis in the original). In both accounts, something virtual or absent is crucial for the experience and emergence of meaningful relations.

Part of the difficulty we face in attempting to focus on what is absent as the cause of what is present is cultural. The traditions, social systems and habits of mind we have inherited do not seem to foster so much as a passing interest in 'absential' features or the vital influence of something missing. The very idea seems absurd or inconsequential. As others have begun to suggest, however, this predisposition does not hold across cultures and is even inconsistent with contemporary quantum field theory and big bang cosmology (Brier 2017). Many so-called "Eastern" cultures, by contrast, and the philosophical traditions that undergird them, do indeed give absential features their due, if not pride of place, in theory building about the nature of things. Brier (2017), discusses such ideas as 'emptiness ontology', drawing connections between the role of absentials in Deacon's dynamic systems theory, Peirce's concept of 'Absolute Zero' (CP 6.215–217, 1893; see also Ji 2017) and various concepts associated with the world emerging from nothing in the Hindu Rig Veda and the Hebrew Torah. In the opening lines of the latter, a primeval state of *tohu wa-bohu* (וֹהֹת‎ ו·בֹהוּ), 'formless and void', is taken for granted prior to the beginning of the universe. This finds echo in Mandala 10.129:3–4 of the Rig Veda[9], an excerpt from the creation hymn:

> Darkness there was: at first concealed in darkness
>   this All was indiscriminate chaos.
>   All that existed then was void and formless:
>   by the great power of Warmth was born that Unit.
> Thereafter rose Desire in the beginning,
>   Desire, the primal seed and germ of Spirit.
>   Sages who searched with their heart's thought
>   discovered the existent's kinship in the non-existent.

In these traditions and others, there is no quarrel with the "idea of placing one's ontology, not on matter, or energy or information, but on emptiness" (Brier 2017: 381). In the Rig Veda tradition, we even find a fecund connection between emptiness ontology and Peirce's First Rule of Logic. As discussed above, in the first rule of logic, emptiness is first and desire second. In the Rig Veda, at first all was "void and formless", and "Thereafter rose Desire". We even find an explicit connection in the passage between emptiness ontology at the cosmic scale and

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9   The Rig Veda c.1500BCE. (Griffith, Ralph T. H., trans.) 1 July 2018. In *Wikisource*; retrieved from https://bit.ly/2Ok7ACG.

the microcosmic activity of genuine human inquiry: "Sages who searched with their heart's thought discovered the existent's kinship in the non-existent." To anyone who takes Peirce's continuity thesis seriously (or even to anyone who takes evolution seriously, for that matter), this move will seem less like a leap and more like a logical development.

Such connections may seem grand and sweeping, but elsewhere in ancient Eastern traditions we find that the same dynamics are characterized as being active in the mundane details of our everyday lives. The Daoist tradition provides many such examples. One of the best is found in Chapter 11 of Laozi's *Daode Jing* (c.500 BCE: 11[10]; Waley 1934):

> 三十幅共一轂，
> 當其無，有車之用。
> 埏埴以為器，
> 當其無，有器之用。
> 鑿戶牖以為室，
> 當其無，有室之用。
> 故有之以為利，
> 無之以為用。

We put thirty spokes together and call it a wheel;
But it is on the space where there is nothing that the usefulness of the wheel depends.
We turn clay to make a vessel;
But it is on the space where there is nothing that the usefulness of the vessel depends.
We pierce doors and windows to make a house;
And it is on these spaces where there is nothing that the usefulness of the house depends.
Therefore just as we take advantage of what is, we should recognize the usefulness of what is not.

Note the repeated construction "當其無，有__ 之用" *dāng qí wú, yǒu ___ zhī yòng*, which Waley translates "But it is on the space where there is nothing that the usefulness of _____ depends." This construction is repeated three times in the passage, hence its textual and interpretive salience for the passage is manifest. Let me suggest that Waley's translation misses something important by being content with rendering 無 *wú* as 'nothing'. His "space where there is nothing" draws attention to the space itself, which is not the point. The original is more concerned with the surprising, reversible nature of the existential *lack* characterized by the emptiness itself. This interpretation is supported textually by the pivotal juxtaposition of

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[10]   Laozi c.500BCE. 道德經. *Daode Jing*. Accessed via 溫故知新 *wēn gù zhī xīn*: http://wengu.tartarie.com/wg/wengu.php.

無 *wú* and 有 *yǒu* in the construction, as I illustrate in the interlinear analysis provided in Example 1 below followed by my own recommended translation:

Example 1:
當其無，有［…］之用

當	其	無，	有	［…］	之	用
dāng	*qí*	**wú,**	**yǒu**	［…］	*zhī*	*yòng*
is	such.that	**to.lack**,	**to.have**	［…］	POSS	use

where it is most lacking […] has its usefulness

The syntactic juxtaposition of 'lacking' with 'having' draws repeated attention to the functional reversibility of the two terms. Then the structural ordering of the pair is reversed in the final two lines …有之以為利 / 無之以為用, drawing further attention to their chiastic relationship: to lack is to have; to have is to lack. In this passage, to lack is to have potential – i.e., for *use*. Wheels, vessels and houses are functional or useful (i.e., '有用' *yǒu yòng* in contemporary Chinese parlance) precisely because of their emptiness: what they are missing, or "where they are most lacking", my recommended alternative for translating the first half of the construction.

Function and purpose alike require emptiness. They require that something be missing. The lack might be obvious, or it might be hidden in plain view until we have our attention drawn to it, or it might remain hidden to all but a few who struggle at length to make its absence apparent to others. Whatever the case, in order to learn, we must first experience or acknowledge "a sense that we do not know something". What I wish to argue in the next section is that this sense of something missing should be acknowledged as present in a wide range of emotional states (as a quality of firstness) that subtend desire (as a phenomenon of secondness), the absence of which may be characterized as 'despair', and the presence of which requires a far more gradient model.

Being on to something (missing)

In his award-winning novel *The Moviegoer* (1961), Walker Percy prefaces the text with an epigraph from Søren Kierkegaard's (1849) book *The Sickness unto Death*: "The specific character of despair is precisely this: it is unaware of being despair." Kierkegaard identifies this level of despair as "inauthentic" since it is not yet acknowledged by those to whom it applies and so cannot be dealt with. This state of being characterizes the novel's lead character, Binx Bolling. Binx, who has lost

his father to suicide, is himself a listless stock broker who enjoys mild diversions like radio and television programming (but especially the movies). Occasionally he finds himself musing on the meaning of things. Then one morning something different happens:

> This morning, for the first time in years, there occurred to me the possibility of a search […] "What is the nature of the search?" You ask. […] the search is what anyone would undertake if he were not sunk in the everydayness of his own life […] To become aware of the possibility of the search is to be onto something. Not to be onto something is to be in despair. (Percy 1961: 10–13)

To despair is to give up hope; and, in the context of this paper, let me suggest that what is relinquished in a state of despair is the hope of adapting, learning and growing. To be "on to something" is to be learning, and in order to learn, as we have established, we must first admit to emptiness. As illustrated in the previous section, this does not mean the embrace of nothingness, but the acknowledgement of the absence of something: the identification of something *missing* – just like Binx Bolling in his search. Walker Percy can be characterized as an existential novelist, philosopher and semiotician. I draw on this illustration from the borderlands of philosophy and fiction to further embed the discussion within the vagaries of emotion and the tedium of everyday life.

The desire to learn works best in ordinary experience when we are nonetheless smitten with an extraordinary preoccupation: absorbed by that which we do not yet understand but need to understand. Being obsessed with or enchanted by that which we lack means that such desire is more likely to carry us forward at an accelerated pace in spite of temptations to fear the unknown, or surrender to despair. The desire driving the will to learn at this level overlaps with Mihály Csikszentmihályi's (1990) experience of 'flow', Paul Ricoeur's (1981) experience of hermeneutic 'appropriation' and C. S. Peirce's 'fever for learning' (EP 2.48, 1898). In such states, anxiety over what is missing is swallowed up in a state of preoccupation with the search to find it out.

From my own perspective as a learner or "searcher" for things missing who has been consumed by this fever to varying degrees toward a variety of ends over the course of four decades, my greatest hope as an educator is "to infect others with the same apparent malady" (EP 2.48, 1898). But I have to be honest with myself both about the waxing and waning of the fever and about the limitations of my contagion. If you will pardon my sudden shift to the autoethnographic mode of self-disclosure, and self-examination, I think this mode will be better suited for what I am about to propose, especially since its origin and intended point of return

are both grounded in the context of teaching and learning. Not only are learning and teaching deeply personal, but we learn best when the models at our disposal are better suited to reality. In reality, our desire to learn often fluctuates widely, as do our levels of discontent, which may lead to fear (and consequent blockage) of what is unknown just as surely as they may lead to genuine wonder and preoccupation with the search; and if I have learned anything about teaching and learning, I have learned that a desire to learn cannot be forced or manufactured.

In the process of teaching a course in Ethnography to a mixed group of graduates and undergraduates over the course of six semesters, between 2010–2013, I began to develop a tool to help guide students toward the discovery of some latent interest that had captured their attention in their chosen social settings, where they were engaged for the course of the semester in participant observation through guided tasks. Since no one can observe and interpret everything in a social situation, especially in a mere three months, my teaching assistants and I required that students find an ethnographic focus in the situation to pursue – preferably something that had piqued their curiosity or intrigued them more than anything else. For the first few semesters it surprised me that a substantial proportion of students would simply draw a blank when we reached this point in the course. Nothing seemed more interesting than anything else to them. The assignments were simply a necessary inconvenience, or worse, a boring drudgery that needed to be endured. Others knew exactly where they would focus: something had already piqued their curiosity and they were glad I had asked them to pay closer attention to it. Still others had so many things they found fascinating that it seemed difficult to decide.

By the third semester, working partly from the inspiration of several thinkers and sources cited above, I began to develop the model that I now present in Fig. 1. The model provided a way for students to find themselves along a spectrum of emotional reactions experienced during their observations so far in their social situation. If nothing had intrigued a given student, something may have at least annoyed them or bored them more than anything else. Or, for those brave enough to venture to inquire into various fears and anxieties being reflected back at them as they observed, the lower half of the diagram may have been more fruitful. Was something shocking that they were trying to ignore? Were they bracketing or blocking out the observation of activity in a certain area because they found it too confusing? Suddenly the task became more comprehensible.

I continue to coach my ethnographers and qualitative researchers in training to remember that what we need to understand most in a given setting will necessarily correspond with that which we understand poorly – hence the hermeneutic principle of seeking out Otherness (Schuster 2013: 197) or seeking out the things

we understand least (Haack 2014: 331). I also encourage them to remember that the ultimate goal of finding a focus of interest is so that their levels of attention might tend more and more toward pure absorption. This allows the anxiety over what we do not know to be overwhelmed by intrigue, play or absorption in "the desire to learn". This, in turn, not only accelerates the learning process but also leads more quickly to personal development, as we adapt and grow into inquirers more and more in the habit of surrendering our maladapted habits (see Nöth 2016).
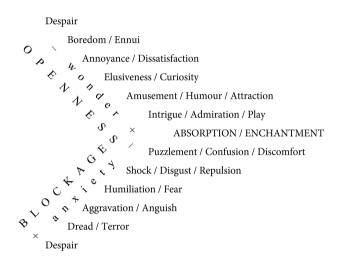
Despair
Boredom / Ennui
Annoyance / Dissatisfaction
Elusiveness / Curiosity
Amusement / Humour / Attraction
Intrigue / Admiration / Play
ABSORPTION / ENCHANTMENT
Puzzlement / Confusion / Discomfort
Shock / Disgust / Repulsion
Humiliation / Fear
Aggravation / Anguish
Dread / Terror
Despair

Figure 1. Being on to something missing: Oppositional signs of blockage and openness subtending desire. A proposed continuum of emotional interpretants mediating indexes of human inquiry.

The Fig. 1 diagram is a working model, not a watertight paradigm. I recommend it merely as an applied hypothesis or practical theory in need of further testing and refinement. In fact, my motive in presenting it here is because of something missing. I want to call attention to, and begin addressing, a gap that I perceive to extend beyond the bounds of my ethnography classroom. A key motivation in writing this paper is my own sense that our theory of learning stands in need of models more logically gradient and emotionally grounded than simple references to discontent and desire (or doubt and belief) can afford.

Consider more of the explanatory and predictive functions of the Fig. 1 diagram. The experience of anxiety over something missing tends toward emotional blockage: I may be too afraid of being wrong or too concerned about the prospect

of humiliation or too repulsed by the unsavory task at hand to admit that I do not understand. The experience of wonder over something missing, by contrast, tends toward emotional openness: I may be annoyed by a statement or attitude and wonder why. This in turn may lead to a state of curiosity. The state of curiosity may lead to further connections that I find revealing or amusing, and so the process of opening up may progress toward full-on absorption. I may have a repeated experience or repeated observation that seems impossible to account for or summarize with available resources such that it attracts more and more of my time and attention, whether in daydreaming or in discussing it with others until I find that it requires me to spend months or years of my time in research and writing to better understand it.

Or, starting from the other end of the spectrum, suppose I read a poem that is simply confusing the first time through. The immediate temptation is to turn the page or close the book and never return; but suppose I then re-read it anyway, only to find that the experience of confusion has now shifted into a mode of puzzling over patterns and potential connections. Then, by the third or fourth reading I find myself having reversed from the mild blockage of puzzlement to the robust wonder of intrigue, only to find after further readings that the poem has now taken over my imagination: I find myself mulling over it in odd hours and eventually memorizing it and identifying related patterns in contexts far removed from the poem itself.

Shifting to the bottom of the diagram, we may recall Marshall McLuhan's (1964) observation that technological revolutions tend to increase anxiety to the point that the experience of exposure and adoption escalates into a sense of dread or terror, which then tends to reverse into a state of numbness as the new technology reshapes our consciousness. This state of numb indifference might be characterized as "despair". In despair there is either no acknowledgement of something missing (i.e., no sense of discontent with the current state of my knowledge), or what is missing seems so pervasive and indistinct that all seems utterly void. Either way, there can be no desire to learn. But should despair shift even slightly toward boredom, there is hope. Boredom may not seem worthy of considering, especially in the context of learning; but it makes for an interesting diagram-internal test of the model's viability since boredom is perhaps the most liminal state of the desire to learn – one motivated only by the weakest admission that my present state of knowledge is unsatisfactory.

Psychoanalyst Adam Phillips (1993: 68) describes boredom as "that state of suspended anticipation in which things are started and nothing begins, the mood of diffuse restlessness which contains that most absurd and paradoxical wish, the wish for a desire". The reflexive nature of boredom speaks to its borderline-level of attention – a level of inquiry almost non-existent. To be bored is to be

"preoccupied by [my] lack of preoccupation" (Phillips 1993: 69) or "absorbed by [my] lack of absorption" (Phillips 1993: 72). In a state of boredom, we find "two impossible options: there is something I desire, and there is nothing I desire" (Phillips 1993: 76). However, Phillips goes on to argue that the affirmation and cultivation of boredom can be formative since it allows us to reach "a recurrent sense of emptiness out of which […] real desire can crystalize" (Phillips 1993: 69). Michael Raposa (1999) agrees. Although boredom may be a sign of "failure to interpret" (Raposa 1999: 126) or "an incapacity to love deeply" (Raposa 1999: 34), it is also a prelude to discovering fresh meaning. According to Phillips, this is because boredom opens up a space useful for the discovery of our own interests. Hence, it should not be despised as an incapacity in ourselves or in our students but, rather, respected as an opportunity (Raposa 1993: 69).

Blockage, openness and desire in the way of inquiry

To be aware of our ignorance is to be aware of something missing. This awareness is promising since it triggers desire, which can result in inquiry: the search. This, in turn, leads us toward meaningful growth, away from despair, as we find ourselves adapting better to reality. Although "human learning can be seen as part of the wider process of evolution" (Stables 2018: 44; see also Deely 2001: 429, 635), awareness of our own ignorance is a species-specific endowment that we may be more willing to block out than open up to. The question of blockage, as something opposed to desire, is introduced in the previous section. It also serves to bring us back full circle to the first rule's corollary: "Do not block the way of inquiry". Susan Haack (2014) summarizes the four principal ways of blocking inquiry according to Peirce as follows:

(1) Absolute Assertion (e.g., we hold these truths to be self-evident);
(2) The Unknowable (e.g., such things are beyond the capacity of human intelligence);
(3) The Inexplicable (e.g., no theory could ever account for such phenomena);
(4) The Perfect Formulation (e.g., we now have the final word on the matter).

Such blocking strategies tend to emerge (for the sake of convenience, control, safety, comfort and the like) when we are confronted with a grand challenge from some opposing system of thought or worldview, or when someone reopens imposing, consequential questions that others assume would be better left as they are. Such high profile strategies for blocking inquiry deserve attention, to be sure;

but, as I illustrate in the previous section, there are plenty of other blockages in the way of inquiry that are far subtler, more gradient and more mundane. These are also worth examining. After all, human development is not only rational and logical but also material and bodily, moral and ethical, aesthetic, ecological and biological (Stables 2018: 45–46). Inquiry blocking can occur in any of these domains in conscious and subconscious layers and at personal, interpersonal and social levels alike.

It should be clear that Peirce's conceptual metaphor for making progress in learning relies on source-path-goal and blockage schemas (*à la* Johnson 1987): to learn is to be "*on* the way"; to block is to be "*in* the way". It is important to recall that just as our desire to reach some destination cannot exist without some prior and simultaneous sense of discontent with our present location, making progress along the way will require the ongoing removal of obstacles that are in the way. We tend to think of obstacles as undesirable since they are unpleasant and inconvenient. Who would volunteer to be subjected to any of the grades of anxiety listed in the bottom half of Fig. 1 after all? And yet Phillips (1993: 92) observes that "without obstacles the notion of development, at least in its progressivist sense, is inconceivable." And why? Because "there would be nothing to master" (Phillips 1993: 92).

Such unsavoury things as humiliation, dread, disgust and confusion also count as obstacles in the path of inquiry. This shift in focus can help us reconsider the nature of adaptation as an agentive activity more so than a passive process or product. We aren't always led by a sense of wonder to reach our conclusions, after all; we often have to fight towards them in spite of various anxieties. Are these anxieties, then, not also a form of desire? Phillips (1993: 83) argues that it is "impossible to imagine desire without obstacles, and wherever we find something to be an obstacle, we are at the same time desiring". Even though he suggests that we "never know if obstacles create desire or desire creates obstacles", we must acknowledge the "inevitable twinning" of the two (Phillips 1993: 83).

With this in mind, we are prepared to consider the possibility that states of desire for something missing are not restricted to the various degrees of wonder illustrated in the range of open, positive emotions in the upper half of Fig. 1. Desire for something missing is also to be found in anxiety, illustrated in the range of *closed*, negative emotional states in the lower half of the diagram. Emotional blockage presages desire just as much as emotional openness, according to Phillips, who argues that, indeed, "the obstacle reveals the desire" (Phillips 1993: 82). If so, then searching out blockages (emotional or otherwise) in the path of inquiry would be just as important for learning as surrendering to psychological states of flow that carry us forward of their own momentum. Susan Haack identifies a

related tension in Peirce's broader theory of inquiry, summarizing the tension as differences in approach: one "reactive", the other "proactive":

> one strand of Peirce's theory of inquiry describes what prompts inquiry (real doubt), and what ends the process (a settled belief) – what one might call a *reactive* or homeostatic process. But another strand of Peirce's theory of inquiry prescribes how to expedite the process, how to get more, and more important truth more efficiently: instead of simply waiting for contrary experience to occur by happenstance, the scientific inquirer should actively seek out such experience – a *proactive* process. (Haack 2014: 329)

A reactive approach to learning might emphasize states of wonder and go on to make real progress among learners who happen to be emotionally open to adaptation. On the other hand, the approach might also be more likely to dead-end for the same learners when the sense of wonder dissipates or when some conclusion or plateau is reached or when some sudden blockage is encountered. A proactive approach, by contrast, would also validate the presence of anxiety as a sign of desire when encountered in processes of learning or adaptation. The equal validation of anxiety and wonder in the search for what is missing, then, would stand a better chance of bringing more learners along and at keeping them going longer.

To block the path of inquiry is to curtail the desire for learning by (among other ways) fostering a sense of satisfaction with one's present state of belief about how things really are or by ignoring one's own gnawing suspicion that something is missing: the sense of emptiness or dissatisfaction with our present state of knowledge. To open the path of inquiry is to stoke the desire for learning that grows from attending to the sense of something missing. Such desire may manifest itself not only in states of wonder and openness but also in states of anxiety and blockage. Phillips (1993: 9) reminds us that "obstacles are the clue to desire, [the clue] that the world is full of meaning". But a world full of meaning is a world gone missing: the world for which we search.

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Пустота и желание в первом правиле логики

Первое правило логики Ч. С. Пирса (1898: EP2.48) определяет начальный пункт человеческого любопытства. Присматриваясь к этому принципу, мы находим в его ядре неизбежную связь между пустотой и желанием, которая лежит в основе всех случаев обучения и адаптации у человека. Это многогранное отношение играет решающую роль в удаче или неудаче обучения, но при этом оно крайне скудно описано. Первое

правило логики часто путают с известным расширением правила: "не блокируйте путь запроса", или пользуются поверхностными определениями типа "удивление", "сомнение" и "желание учиться". В вводной дискуссии обсуждается природа рефлексивного запроса и фаллибилизм, которые располагают человеческое сознание как внутри, так и вне животного бытия. Затем привлекается множество доказательств из разных дисциплин, чтобы лучше показать сложную динамику, присущую первому правилу логики. Сюда включается и тщательное чтение и толкование оригинального отрывка в его контексте; семиотический анализ результатов подобного чтения в свете недавних достижений в семиотической теории обучения; перестановка этих различий в рамках современной онтологии пустоты, которая дополняется автором оригинальным семантико-риторическим анализом одной языковой конструкции Лао-цзы; введение педагогического инструмента, разрабатываемого в контексте моего собственного опыта преподавания в университете; а также диалог с дискурсами психотерапии, философии и литературы. В заключении предлагается новый взгляд на препятствия и желание в процессе обучения и переформулируется первое правило логики.

Tühjus ja iha loogika esimeses reeglis

Charles Sanders Peirce'i loogika esimene reegel tuvastab inimeste teadasaamissoovi algus-punkti. Seda põhimõtet lähemalt vaadeldes avastame selle tuumast paratamatu suhte tühjuse ja iha vahel, mis peitub kõigi ehedate inimliku õppimise ning kohanemise juhtude taga. See mitmetahuline suhe mängib otsustavat rolli õppimise toimimises või luhtumises, ent on selleteemalises kirjanduses vähe tähelepanu leidnud. Selle tulemusena ei mõisteta hästi esimese loogikareegli keerukust ning seda aetakse eksklikult segamini reegli kuulsa tuletusega "ära tõkesta teadmishimu teed" või siis libisetakse sellest üle pinnapealsete definitsioonidega nagu 'üllatus', 'kahtlus' ja 'õpitahe'. Pärast taustarutelu, mis rõhutab refleksiivse teadmissoovi ja fallibilismi olemust, mis paigutavad inimteadmise nii loomsuse piiridesse kui ka väljapoole seda, kasutan arvukaid erinevatest distsipliinidest pärinevaid tõendusmaterjali kihte, et paremini näidata loogika esimesele reeglile olemuslikku keerukat dünaamikat. Nende kihtide hulka kuuluvad algse tekstilõigu ja seda ümbritseva teksti lähilugemine ning eksegees; selle lugemise semiootiline uusanalüüs semiootilise õppimisteooria hiljutiste edusammude valguses; nende erisuste ümberpaigutamine laiematesse nüüdisaegsetesse aruteludesse tühjuse ontoloogiast, millesse osalt lisan oma panuse Laozi ühe keelelise konstruktsiooni algupärase semantilis-retoorilise analüüsi näol; sellega seotud pedagoogilise töövahendi kasutuselevõtt, mida töötan välja oma etnoloogia ja uurimismeetodite kursuse kontekstis; ja selle diagrammi dialoogiline situatsioon psühhoteraapia, filosoofia ja kirjanduse diskursustes. Neile põhimõtetele ja eristustele toetuv artikkel lõpeb perspektiivi nihkumisega takistustele ja soovidele õppimises ning loogika esimese reegli laiendatud ümbersõnastusega.