Strategies of Research: Peirce's Enlightenment Maxims

This chapter reviews what could be called Peirce's three Enlightenment maxims: the Pragmatic Maxim, 'Symbols Grow', and 'Do not block the way of inquiry.' The three of them constrain the growth of knowledge in Peirce's cognitive semiotics conception of the progress of science converging in the limit. Thus, they characterize Peirce's semiotics as an Enlightenment doctrine.

   The fact that Charles Peirce's theory of science implies a scientific optimism is well known. From early on, Peirce held the idea that progress not only of science but of truth in general depends upon the collective effort of scholars – leading to his well-known definition of truth as convergence of human knowledge in the limit (in, for instance, *How to Make Our Ideas Clear*, 1878, EPI), and, correlatively, reality as the sum of states-of affairs which are referred to by true sentences of scientific knowledge in the limit. This doctrine of reality and truth with its emphasis on the cognitive effort of mankind Peirce aptly calls 'cognitionism'.[i] This correlation between truth, reality and the community of researchers in a broad sense has been taken as inspiration by later philosophers of democracy – in Germany, Karl-Otto Apel (e.g., 1974) and Jürgen Habermas (e.g., 1968)[ii] have taken these Peircean ideas as central to their political philosophies making public deliberation crucial to democracy; recently Peircean themes have been discussed in American political philosophy by Robert Talisse (2007) and Rosa Maria Mayorga (2009).

   More rarely, however, have these basic Peircean ideas been brought into connection with what could be called his Enlightenment maxims regarding the semiotics of the research process. The whole of Peirce's semiotics and logic is developed in order to serve the overall aim of the development of the sciences and epistemology. Convergence to truth in the limit is subject to a complicated set of constraints in Peirce – hedged by the maxims of his 'methodeutic', the

doctrine of the heuristics of the research process. The fact that these maxims are indeed developed from Enlightenment standards may be seen from the often-overlooked fact that basic tenets of Peirce's pragmatism come directly out of central Enlightenment figures such as Spinoza, Locke, Berkeley, and Kant. In Peirce's renewed focus upon pragmatism in the years after the turn of the century, this appears again and again, as when he characterizes his own position in the third person:

"... yet in the writings of some philosophers, especially Kant, Berkeley, and Spinoza, he sometimes came upon strains of thought that recalled the ways of thinking of the laboratory, so that he felt he might trust to them; all of which has been true of other laboratorymen."
(*What Pragmatism Is*, 1905, EPII, 332; 5.412)[iii]

This inheritance is crystallized in Peirce's brief Enlightenment maxims of which at least three may be counted – one stated conditionally, one in the indicative, and one in the imperative.

The Pragmatic Maxim

In the public emergence of philosophical pragmatism around 1900 after the publication of William James's *The Will to Believe* (1896), James pointed back to Peirce's 1878 papers and their discussions in the Metaphysical Club in the early 1870s as the origin of the doctrine (even if the term pragmatism was used by neither of them in print at that time), and Peirce vigorously entered the discussion of the basics of pragmatism (or 'pragmaticism' as he would rename it in 1905 in order to distinguish his own version from that of James). The famous first articulation of the maxim goes as follows: "Consider what effects, which might conceivably have practical bearings, we consider the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object" (*How to Make our Ideas Clear*, 1878, EPI, 132; 5.402). In the years after 1900, Peirce reformulated the maxim numerous times, for instance as follows:

"Pragmatism is the principle that every theoretical judgment expressible in a sentence in the indicative mood is a confused form of thought whose only meaning, if it has any, lies in its tendency to enforce a corresponding practical maxim expressible as a conditional sentence having its apodosis in the imperative mood." (*Lectures on Pragmatism*, 1903, 5.18).

The basic intention of the maxim is that of clarifying the meaning of propositions. The idea is that all sorts of metaphysical ideas which do not have any 'practical bearings' or 'effects' (1878), any ensuing 'imperative practical maxims' (1903), are null and void. It goes without saying that Peirce did not host any positivist ideas that this would do away with metaphysics as such – rather it would cleanse science, including metaphysics, of empty and superfluous assumptions of all kinds. As a meaning theory, it may be compared to the mature Peirce's idea that the immediate meaning of a sign is the sum of all the obvious logical implications of that sign (to be distinguished from the dynamic meaning of the sign, inferable from the context of utterance, on the one hand, and the final meaning of the sign, on the other, comprising all implications of it in the state of knowledge in the limit). At the same time, the pragmatic maxim is a generalization of the lab experience of the empirical scientist to science and meaning in general, cf. the reference to 'thinking of the laboratory' in the Enlightenment philosophers. The practical effects which are found to follow, in the laboratory experiment, from a specific setup, constitute a special case of meaning more generally, where the sum of conceivable implications of any belief forms the exhaustive definition of its meaning. The relation of that meaning to practical issues comes from Alexander Bain's definition of belief, often quoted by Peirce, as "that upon which a man is prepared to act." (e.g. 5.12), ruling out lip-service paid to all sorts of ideas which are not, in reality, connected to possible action. A basic Enlightenment urge thus characterizes the maxim: that of getting rid of superfluous metaphysical assumptions. An important tension, of course, remains between the conceived effects of a conception at any given time, on the one hand, and the conceivable effects of that conception in the limit; the research process having the aim of approaching from the former to the latter.

Symbols Grow

With this motto, the process of convergence to the limit is taken to be part and parcel of the historical development of man's symbol use – and, by extrapolation, of the growth of symbols already in pre-human nature. This forms an often misunderstood aspect of Peirce's doctrine (such as when Habermas takes symbols to refer to human linguistic usage only and thus reduces Peircean semiotics to a sort of human transcendental pragmatics): the biosemiotic claim that the growth of semiotics is a process inherent in nature, predating the origin of man. This idea gives rise to an indicative maxim (but, as the pragmatic maxim above made clear, indicatives are concealed conditional imperatives), the brief Enlightenment proverb that 'Symbols Grow' – competing in brevity with Horace's and Kant's more well-known imperative 'Sapere aude.' In his *Grand Logic* of 1894 (2.301), Peirce explains this idea:[iv]

"A symbol, as we have seen, cannot indicate any particular thing; it denotes a kind of thing. Not only that, but it is itself a kind and not a single thing. You can write down the word 'star,' but that does not make you the creator of the word, nor if you erase it have you destroyed the word. The word lives in the minds of those who use it. Even if they are all asleep, it exists in their memory. So we may admit, if there be reason to do so, that generals are mere words without at all saying, as Ockham supposed, that they are really individuals. Symbols grow. They come into being by development out of other signs, particularly from icons, or from mixed signs partaking of the nature of icons and symbols. We think only in signs. These mental signs are of mixed nature; the symbol-parts of them are called concepts. If a man makes a new symbol, it is by thoughts involving concepts. So it is only out of symbols that a new symbol can grow. *Omne symbolum de symbolo.* A symbol, once in being, spreads among the peoples. In use and in experience, its meaning grows. Such words as *force, law, wealth, marriage,* bear for us very different meanings from those they bore to our barbarous ancestors. The symbol may, with Emerson's sphynx, say to man,

Of thine eye I am eyebeam."

The basic idea of Peirce's cognitive semiotics that all thought takes place in signs,[v] has the converse corollary that as soon as you have signs giving rise to other signs, however simple, you have thought – and the process of the development of signs and thoughts can be studied not only apart from the individual mind, but apart from any special symbolisms put to use by man. Thus Peirce holds a special version of objective idealism: thought and ideas have intrinsic structures which are not invented by man (or by any other thinking being); rather the signs and minds of man, animals and other possible thinking beings must evolve in order to conform to the structure of thoughts. Such intrinsic structures of thoughts, however, are not conceived of in isolation from the world – general structures of the world (in a broad sense) are the same as those of thought, cf. the identification of reality with knowledge in the limit. The growth of symbols, then, is the Enlightenment process of self-evolving semiotic systems approaching reality in the limit. In an important quote from the "Minute Logic" in 1902, this process is directly linked to the concept of Enlightenment:

"... there is no more striking characteristic of dark ages, when thought was little developed, than the prevalence of a sentiment that an opinion was a thing to be chosen because one liked it, and which, having once been adopted, was to be fought for by fire and sword, and made to prevail. Take any general doctrine you please, and it makes no difference what facts may turn up: an ingenious logician will find means to fit them into the doctrine. Ask the theologians if this is not true. As civilization and enlightenment advance, however, this style of thought tends to weaken. Natural selection is against it; and it breaks down. Whatever one's theory may be as to the invalidity of human reason, there are certain cases where the force of conviction practically cannot be resisted; and one of these is the experience that one opinion is so far from being as strong as another in the long run, though it receives equally warm support, that on the contrary, ideas utterly despised and frowned upon have an inherent power of working

their way to the governance of the world, at last. True, they cannot do this without machinery, without supporters, without facts; but the ideas somehow manage to grow their machinery, and their supporters, and their facts, and to render the machinery, the supporters, and the facts strong. As intellectual development proceeds, we all come to believe in this more or less. Most of us, such is the depravity of the human heart, look askance at the notion that ideas have any power; although that some power they have we cannot but admit. The present work, on the other hand, will maintain the extreme position that every general idea has more or less power of working itself out into fact; some more so, some less so. Some ideas, the harder and more mechanical ones, actualize themselves first in the macrocosm; and the mind of man receives them by submitting to the teachings of nature. Other ideas, the more spiritual and moral ones, actualize themselves first in the human heart, and pass to the material world through the agency of man. Whether all this be true or not, it must at any rate be admitted by every candid man that he does believe firmly and without doubt that to some extent phenomena are regular, that is, are governed by general ideas; and so far as they are so, they are capable of prediction by reasoning." ("Minute Logic*", 1902, 2.149; see also 2.24).

The commonplace Enlightenment idea of Dark Ages gradually yielding to the spread of reason is interpreted in two surprising ways: it takes the shape of a process of natural selection, gradually letting better ideas survive at the expense of lesser ideas; and it is a process in which ideas themselves are agents attracting instantiations in signs and sign-users rather than being passive memes as in our days' parallel proposals regarding the selection and survival of ideas. The laws of physics are taken to be the most obvious example of general ideas having effect in the behavior of particulars. At the same time, ideas do not form an isolated realm apart from their instantiation in signs: it is only this incarnation that makes possible their expression and mutual fight for survival: "A pure idea without metaphor or other significant clothing is an onion without a peel" ("The Basis of Pragmaticism in the Normative Sciences", 1906, EPII, 392).[vi] It is the growth of symbols which allows for ideas to become explicit and thus influence

the course of evolution of the world. This is why diagrams and diagrammatical reasoning form the royal road to the development of ideas: they facilitate the direct observation of as well as the manipulation and experimentation with ideal entities, quite in parallel to the observation and experiment with empirical objects (cf. previous ch.; Stjernfelt 2007). In this doctrine of evolutionary convergence towards knowledge in the limit lies an important insensitivity to specific points of departure. Even if the present position is highly path-dependent, the attractor in the limit remains identical. No matter where one begins reasoning, knowledge in the limit forms an attractor making thought gravitate towards it. Thus, reasoning may reach the same results by very different trajectories from very different points of departure. Cultural, psychological, and historical particularities may slow down or force the process into long detours, but in the long run, the process is insensible to such particularities of individuals or particular groups of arguers. This does not imply, on the other hand, that all cultural or other differences will necessarily vanish in the limit: all signs necessarily retain some degree of 'material' aspects of their expression which are bound to their particular users – as long as they do not bar their trajectory towards the limit.

Given the Pragmatic Maxim and the naturalist doctrine of Symbols Grows, it might seem that the Enlightenment process towards the limit is an automatic, natural process of organic growth. In some sense it indeed is, but among the many different trajectories towards the limit, some are more direct than others which are delayed or even forever blocked by sticking to false conceptions. The better trajectories, however, may be found by adhering to Peirce's third Enlightenment maxim, smoothing the process of inquiry.

Do Not Block the Way of Inquiry

The development of reason as an objective process in the universe does not preclude us from influencing it. Quite on the contrary, as we are ourselves co-constituents of the universe, our actions may have effects on the process. This is why the indicative ascertainment of the existence of the growth of symbols is compatible with normative claims about how to further it most efficiently:

"... the development of Reason requires as a part of it the occurrence of more individual events than ever can occur. It requires, too, all the coloring of all qualities of feeling, including pleasure in its proper place among the rest. This development of Reason consists, you will observe, in embodiment, that is, in manifestation. The creation of the universe, which did not take place during a certain busy week, in the year 4004 B.C., but is going on today and never will be done, is this very developement of Reason. I do not see how one can have a more satisfying ideal of the admirable than the development of Reason so understood. The one thing whose admirableness is not due to an ulterior reason is Reason itself comprehended in all its fullness, so far as we can comprehend it. Under this conception, the ideal of conduct will be to execute our little function in the operation of the creation by giving a hand toward rendering the world more reasonable whenever, as the slang is, it is 'up to us' to do so. In logic, it will be observed that knowledge is reasonableness; and the ideal of reasoning will be to follow such methods as must develop knowledge the most speedily ..." (*Ideals of Conduct – Lowell Lectures* 1903, 1.615)

That it is 'up to us' to further the ongoing process of making the world more reasonable entails we should do some things rather than others in order to promote the process. This imperative governing what we should do is articulated in 1898 under the headline of *The First Rule of Logic* – taken in the broad, heuristic sense of the logic of inquiry. This rule is taken to be that in order to learn, you must desire to learn – in short: you must wonder. But wondering implies you are not satisfied with the present state of knowledge and so refuse at least some part of tradition and aim to correct and further the process of inquiry:

"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." (EPII, 48; 1.135)

In some sense, this imperative may seem so self-evident as to be easily overlooked. Why should any researcher wish to block the way of inquiry? Peirce's elaboration of this corollary, however, takes important implications from it. Most importantly, he claims that the central sin of metaphysicians of all times is exactly that of blocking the way of inquiry. In that sense, this maxim is a further detailing of the impetus against established metaphysics (and ideologies, religions, etc.) contained in the pragmatic maxim already from 1878.[vii] Such blocking may take, Peirce claims, four basic shapes.

1) One is "absolute assertion" or "over-confident assertion" (EPII, 49; 1.137) – Peirce here takes the Euclidean parallel axiom as his example, being careful to note that Euclid himself did not make of it more than a postulate. Later geometers, however, skipped this hypothetical aspect of the parallel postulate to make it into an absolute assertion (thereby halting the development of geometry for two thousand years until the emergence of non-Euclidean geometries in the 19th C). Peirce's hypothesis is that such over-confident assertion is a fault for third- or fourth-rate men interested more in teaching than in learning, that is, more oriented towards appearing as sources of truth to an audience than in actually searching for truth.

2) The second road block is the converse of the first: the claim "... maintaining that this, that, and the other never can be known" (EPII, 49, 1.138) thereby effectively attempting to halt further research in that direction. Peirce takes as his example Comte's famous claim that the chemical composition of stars will forever be beyond the reach of science – which was refuted not long after by the discovery of spectral line radiation patterns, specifically characterizing each element. Had Comte's contention been generally accepted by bodies governing the funding of research, we may imagine an alternative timeline in which spectral analysis had never been discovered.

3) The third and fourth blocking strategies temporalize, in effect, the two first ones: the third consists in "... maintaining that this, that, or the other element of science is basic, ultimate, independent of aught

else, and utterly inexplicable – not so much from any defect in our knowing as because there is nothing beneath it to know" (EP II, 49, 1.139). It is the claim that some ultimate point has been reached beyond which further research can never penetrate. To some extent, this characterizes the role which the Big Bang has held for decades in cosmology – or, more generally physicalism, psychologism, historicism or any other sweeping reduction claim in the sciences. Peirce does not offer an example but rather an a priori refutation: such a claim of unattainabilty can be reached by abduction only, but abduction provides a possible explanation, and thus cannot possibly declare anything inexplicable.

4) The fourth strategy is "... holding that this or that law or truth has found its last and perfect formulation – and especially that the ordinary and usual course of nature never can be broken through" (EP II, 49–50, 1.140). The claim of perfection regarding a certain piece of knowledge immunizes it from further scrutiny. The special example Peirce adds pertains to his 'tychism' – the Maxwellian idea that real chance exists and makes larger or lesser deviations possible in any empirical law. Peirce himself makes use of the anti-roadblock maxim over and over, mostly implicitly, as when refusing rationalist dogmatism as well as empiricist beliefs in beginning with absolute, simple facts, or when introducing fallibilism requiring us to admit that every single piece of our current knowledge at any time could in principle be doubted, at the same time as claiming that the overall sum of that knowledge is probably sound and parts of it should only actually be doubted when some particular reason calls for it.

  That the refutation of such roadblock stratagems is closely connected to Peirce's own pragmatist methodology and fallibilism comes as little surprise; its connection to his own metaphysics may be less evident. Peirce, of course, was a monist; the refutation of all sorts of dualisms comes directly from the refusal to block the way of inquiry: claiming the world consists of two (or more) irreconcilable realms is the same as claiming that the road to finding laws of regularities for the interaction between those realms is forever blocked – for if not they would, effectively, merge into one. Similarly, the refusal of roadblocks is what makes Peirce's metaphysics inclusive,

going against excessive ontological reduction. Most significantly, of course, in his refusal of nominalism claiming the non-existence of any universals of thirdness as the result of excessive use of Occam's razor – but also more generally in his refusal of all 6 types of metaphysical systems which do not allow the full triad of Peircean categories to co-exist (*The Seven Systems of Metaphysics*, EP II,179ff., 5.93ff.). Finally, Peirce's adherence to the Principle of Continuity is connected to this maxim: science proceeds by constructing continuous connections between realms earlier believed unconnected. This is why the scientist must assume – until proven wrong – continuity to reign rather than discontinuity which might lead to blocking the way of inquiry. An explicit example of Peirce's use can be seen when we find him writing to Dewey in order to refute his claim that all scientific explanations be genetic: "Never permanently bar the road of any true inquiry ..." (1905, 8.243). Effectively, it is the fourth roadblock stratagem he finds put to use in Dewey when he claims that all scientific explanations should be genetic; Peirce of course realizing that such an idea will inevitably entail relativism.[viii]

Hintikka once claimed that the only thing preventing Peirce's dialogical conception of logic from being fully fledged game-theoretical semantics was his lack of a notion of *strategy*. Hintikka claims the closest Peircean equivalent to such a notion is his concept of *habit*.[ix] To Hintikka, an important distinction in epistemology is that between constitutive rules and strategic rules (cf. Hintikka 2009) – with the basic illustration of the simplicity of chess rules vs. the vast complexities of chess strategies. The implication, of course, is logic needing the addition of strategic rules of investigation in order to bridge the way to the understanding of scientific investigations. Here, however, Peirce's Enlightenment maxims form, as part of his heuristic theory of science, his "methodeutics", an elementary set of such strategic rules with huge consequences. They may not translate directly into individual competitive stratagems of Hintikkan proof games, but they do provide important rules of scientific strategy: do not assume absolute starting points, do not accept separated ontological realms, do not accept fields definitely closed to any investigation, do never take questions to be completely settled, do not believe in absolute doubt, do not refuse the existence of universals, do

not believe in the wholesale reduction of one field to another, do not accept the erroneous hypostatization of limit cases into independent objects, prefer bundles of inferences over single counterexamples ... such roadblock assumptions may bar the player from moves which may, unexpectedly, prove fruitful ...

Peirce's Enlightenment

The three maxims discussed briefly here frame, taken together, a Peircean conception of Enlightenment as the ongoing reasoning process carried on intersubjectively by humanity. The beginning as well as the end of that process are not absolute and may never be made explicit – both of them are subject to Peirce's continuism and may be grasped as limits only. Before man, this implies that the process of Enlightenment was already brewing in organic nature. In the opposite end, Enlightenment continues indefinitely, its end point only existing at the limit. Peirce's main emphasis, as a scientist and philosopher of science, obviously lies on the cognitive content of the process. But he is not blind to ethical or even political aspects of the process. Peirce generally saw established morality as conservative, conformist and traditionalist and thus blocking the way of the reasoning process[x] – but at the same time he envisioned a future development of ethics intertwined with scientific progress on the basis that both of them prosper from the increasing self-control of reasoners. Thus the collaboration of scientists prefigures the ethical collaboration of human beings more broadly, supported by the dialogic structure of logical argumentation (cf. ch. 6). Peirce did not develop these ideas anywhere nearly as deeply as his theory of science, and we cannot go further into them here; suffice to say that the standard of self-control, common to science and ethics, individually and intersubjectively, also in this respect places Peirce in the Enlightenment tradition emphasizing human autonomy and liberty.

Given the ongoing discussion of 'moderate' versus 'radical' Enlightenments after Jonathan Israel's important 2001 book, you might ask, a bit anachronistically, to which camp Peirce might be counted. Israel's distinction mainly turns upon whether to politically

compromise with princely or clerical authorities (moderates) or not (radicals), and Peirce only marginally treats political issues explicitly. His ontological monism, of course, pulls him towards the radical side, while his religious sentiments rather draw him towards moderate Enlightenment. His staunch refusal of religious institutions as power apparatuses,[xi] however, along with his equally strong refusal of authority arguments in the reasoning process and his emphasis on intersubjective deliberation in science, rather tend to place him in the radical camp.

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[i] In "Quest of Quest", 1910 (Ms. 655), Peirce uses 'cognitionism' to describe the convergence stance that reality is what reasoning would finally result in, a stance inherited from Chauncey Wright and shared with James.

[ii] Habermas, it is true, finds a tension between Peirce's convergence definition of reality and truth, on the one hand, and his scholastic realism on the other, claiming the former implies a 'linguistic-logic' foundation, ultimately basing science in structures of intersubjectivity. Habermas, however, commits the mistake of taking Peirce's semiotics to be a theory of communicative language only, thereby failing to realize its general cognitive and logical status, transcending human language in order to cover processes of cognition in general. This paves the way for Habermas' erroneous identification of specific human interests with certain scientific objects in *Knowledge and Human Interest*.

[iii] Another example: "Of those who have used this way of thinking [pragmaticism, FS] Berkeley is the clearest example, though Locke (especially in the fourth book of his Essay), Spinoza, and Kant may be claimed as adherents of it." (Letter to Signor Calderoni, 1905, 8.206)

[iv] This quote contains a seeming contradiction: first we learn that symbols may come into being out of other signs such as icons, a bit later we are taught that all symbols come from symbols. I think this tension may be solved by assuming that all signs, also from the earliest biological beginning, have a symbolic aspect. These symbols may, as is most often the case, contain icons which may evolve into separate symbols themselves. See the discussion in Stjernfelt 2012.

[v] "... all thought is in signs." ("Questions Concerning Certain Faculties Claimed For Man", 1868, 5.253).

[vi] On Peirce's recurrent use of the onion metaphor to underline the necessary support of ideas by signs see de Tienne 2003 and Redondo 2008.

[vii] Religiously, Peirce's background was Unitarian though he converted to Evangelicalism when marrying Melusina Fay; he seemed to be a sort of Christian with Buddhist leanings, approaching a version of deism – while at the same time being deeply sceptical against established churches as instruments of

power (cf. "... can anybody who understands the procedure of science [...] assent for a moment to the idea that any science, be it theology or any other, can be rightly developed under the impulses of ecclesiastical ambition and the **odium** of priests?", "Politics and Religion", c. 1895, 6.450). We shall not go deeply into Peirce's writings pertaining to religion here, suffice it to say that his anti-institutional type of faith has similarities to Enlightenment stances such as that of Voltaire, or even that of Spinoza: "The **raison d'être** of a church is to confer upon men a life broader than their narrow personalities, a life rooted in the very truth of being. To do that, it must be based upon and refer to a definite and public experience. Fears of hell and hopes of paradise have no such reference; they are matters all sane men confess they know nothing about. Even for the greatest saints, the active motives were not such hopes and fears, but the prospect of leaving behind them fertile seeds of desirable fruits here on earth." (ibid. 6.451) The idea that the true purpose of religion is social cohesion and earthly influence on people's behaviour is close to the Spinozist stance of the *Tractatus*.

[viii] In an earlier letter from the same year, Peirce warns Dewey against letting logic depend genetically upon sciences which, themselves, depend upon logic: "There are three sciences according to me to which Logic ought to appeal for principles, because they do not depend upon Logic. They are Mathematics, Phenomenology, and Ethics. There are several sciences to which logicians often make appeal by arguments which would be circular if they rose to the degree of correctness necessary to that kind of fallacy. They are Metaphysical Philosophy, Psychology, Linguistics [...], History, etc." (1905, 8.242). Evidently, this argument is a generalization of Peirce's thoroughgoing anti-psychologism of logic (see ch. 2); at the same time, the argument is that such genetic explanation blocks the way of inquiry.

[ix] As Hintikka says, often quoted by Pietarinen: "I suspect, in other words, that inside each Peircean habit there lurks (at least in the area of epistemology) a strategic rule trying to get out" ("What is abduction? The fundamental problem of contemporary epistemology", in Hintikka (1999) 100). Pietarinen (2011a) provides a strong argument for the fact that Peirce's notion of habit, in his attempts at articulating a proof of pragmaticism after 1900, actually came very close to a concept of strategy.

[x] As to seminal political questions of the period, Peirce's father was an anti-abolitionist; Peirce's stance on that issue is harder to determine. Peirce sometimes proposed a distinction between the role of reason in science and in "human affairs" which may have taken observers to portray him as a conservative (e.g. Louis Menand in his 2001 book): "Men many times fancy that they act from reason when, in point of fact, the reasons they attribute to themselves are nothing but excuses which unconscious instinct invents to satisfy the teasing "whys" of the *ego.* The extent of this self-delusion is such as to render philosophical rationalism a farce. Reason, then, appeals to sentiment

in the last resort. Sentiment on its side feels itself to be the man. That is my simple apology for philosophical sentimentalism. Sentimentalism implies conservatism; and it is of the essence of conservatism to refuse to push any practical principle to its extreme limits -- including the principle of conservatism itself" ("Detached Ideas", 1898, 1.631-1.633). In the very same paper, however, he continues: "I would not allow to sentiment or instinct any weight whatsoever in theoretical matters, not the slightest. Right sentiment does not demand any such weight; and right reason would emphatically repudiate the claim if it were made. True, we are driven oftentimes in science to try the suggestions of instinct; but we only *try* them, we compare them with experience, we hold ourselves ready to throw them overboard at a moment's notice from experience. If I allow the supremacy of sentiment in human affairs, I do so at the dictation of reason itself; and equally at the dictation of sentiment, in theoretical matters I refuse to allow sentiment any weight whatever" (ibid. 1.634). Sentiment seems to play the role of guiding reason on selecting the most fertile abductions for further testing, rather than forming a conservative ground immune to reason. You can add that with all we know about Peirce's tumultuous personal life it is difficult to believe much in any portrayal of him as a conservative. Rather, science and reason act as radical dissolvents with respect to conservative morals: "Hence, morality is essentially conservative. Good morals and good manners are identical, except that tradition attaches less importance to the latter. The gentleman is imbued with conservatism. This conservatism is a habit, and it is the law of habit that it tends to spread and extend itself over more and more of the life. In this way, conservatism about morals leads to conservatism about manners and finally conservatism about opinions of a speculative kind. Besides, to distinguish between speculative and practical opinions is the mark of the most cultivated intellects.
Go down below this level and you come across reformers and rationalists at every turn – people who propose to remodel the ten commandments on modern science. Hence it is that morality leads to a conservatism which any new view, or even any free inquiry, no matter how purely speculative, shocks. The whole moral weight of such a community will be cast against science. To inquire into nature is for a Turk very unbecoming to a good Moslem; just as the family of Tycho Brahe regarded his pursuit of astronomy as unbecoming to a nobleman." (*Lessons from the History of Science*, c. 1896, 1.50)
[xi] As when he comments upon the method of tenacity (authority) in religions by the following classical Enlightenment quip: "Every distinctive creed was as a historical fact invented to harm somebody" (Note added to "The Fixation of Belief" 1893, 5.380n).