Although Peirce came to recognize the nature and role of the normative sciences only late in his career, he was nonetheless convinced that his account of the hierarchical dependence of logic on ethics and of ethics on esthetics was a discovery of fundamental importance for a correct understanding of his thought, and one that distinguished his "pragmaticism" from other, more familiar, interpretations of his own famous maxim. It would be a mistake to think that because this was a late development in Peirce's thought, it was an afterthought. It would also be a mistake to think that because Peirce's exposition of that role was short and unsatisfactory, it was not an integral part of what he conceived to be his "architectonic" system. More correctly, Peirce thought that his realization of the place of these sciences put in his hands the capstone that unified all that he had been trying to do for some forty years.

In a letter to William James, dated November 25, 1902, Peirce remarks that many philosophers who call themselves pragmatists "miss the very point of it," and he tells us why:

But I seem to myself to be the sole depositary at present of the completely developed system, which all hangs together and cannot receive any proper presentation in fragments. My own view in 1877 was crude. Even when I gave my Cambridge lectures I had not really got to the bottom of it or seen the unity of the whole thing. It was not until after that I obtained the proof that logic must be founded on ethics, of which it is a higher development. Even then, I was for some time so stupid as not to see that ethics rests in the same manner on a foundation of esthetics,—by which, it is needless to say, I don't mean milk and water and sugar. (8.255)

Other pragmatic positions, then, are only fragmentary.\textsuperscript{1} They lack the unity provided by a theory of the normative sciences, and this deficiency has led them into a serious error: the error of making action the be-all and the end-all of thought.\textsuperscript{2} If other pragmatists had a correct view of the normative sciences, they would see how intimately these sciences are connected with his categories.

These three normative sciences correspond to my three categories, which in their psychological aspect, appear as Feeling, Reaction, Thought. I have advanced my understanding of these categories much since Cambridge days; and can now put them in a much clearer light and more convincingly. The true nature of pragmatism cannot be understood without them. It does not, as I seem to have thought at first, take Reaction as the be-all, but it takes the end-all as the be-all, and the End is something that gives its sanction to action. It is of the third category. (8.256)

I will not examine in detail here the connection between the categories and the normative sciences. I will simply note Peirce’s insistence thereupon.\textsuperscript{3} When he did see it, he realized how crude his first presentation of the maxim was. In the 1878 papers (“How to Make Our Ideas Clear” and “The Fixation of Belief”) he seemed to identify meaning with action-reaction,\textsuperscript{4} because he had not yet seen that action-reaction is to be understood only in terms of purpose, and that purpose is essentially thought. Thought may well involve action, but it cannot be identified with it since Secondness and Thirdness are irreducible.\textsuperscript{5} The acknowledgment of the role of ends in action is the insight into the role of the normative sciences, and this acknowledgment brought about Peirce’s successive attempts to formulate the pragmatic maxim in a more sophisticated and adequate way. Meaning is the rational purport of a concept.\textsuperscript{6} It is essentially a third, not a second, even though a second may be involved in its recognition.

Peirce goes on to explain to James how the correct and systematic understanding of pragmatism involves synechism, that is, the doctrine of law in the cosmos:

one must not take a nominalistic view of Thought as if it were something that a man had in his consciousness. Consciousness may mean any one of the three categories. But if it is to mean Thought it is more without us than within. It is we that are in it, rather than it in any of us. . . .
This then leads to synechism, which is the keystone of the arch. (8.256–257)

The line of thought begins to become clearer: All action supposes ends, but ends are in the mode of being of thought because they are general. Thought, however, is not merely in consciousness; thought, rather, pervades everything so that consciousness is in thought. Generals, then, are real, and so authentic pragmatism is realistic. In the lectures on pragmatism given at Harvard in 1903 Peirce explicitly suggests that the normative sciences get us “upon the trail of the secret of pragmatism” (5.129). Consequently, we may say that for Peirce the categories, the normative sciences, pragmatism, synechism, and “scholastic realism” are of a piece.

The conclusion to be drawn is that despite the relatively short time he spent working out his conception of the normative sciences, despite his many hesitations as to what ought to be included under that rubric, and despite the promissory character of the development which he left us, Peirce was convinced that he had seen how and where they fitted into his view of philosophy, uniting the whole thing and molding his earlier attempts to formulate the pragmatic maxim into a comprehensive and highly subtle analysis of meaning.

Even as a boy Peirce was interested in the normative sciences. He recounts how he picked up his elder brother’s textbook in logic and worked right through it on his own. Undoubtedly, his mathematician father encouraged and directed this interest. But logic was not the only normative science to which he early applied himself. He tells us that as an undergraduate at Harvard (ca. 1855) he expounded as best he could Schiller’s Aesthetische Briefe to his friend Horatio Paine (2.197). Almost fifty years later he expressed regret that he had not followed up this study in a serious way, because he then saw how fundamental it is to a theory of knowledge (2.120, 2.197, 5.129ff.).

Although logic received most of Peirce’s attention throughout his long career, still he tells us that he was always interested in ethical systems (2.198). But until the 1880s he considered ethics to be nothing more than an art or practical science that relied little upon theoretical principles. It should be remembered that the first formulation of the pragmatic maxim—which he later called “a
rough approximation" (5.16)—and his analysis of belief in terms of what one is willing to act upon appear in the 1870s. Peirce says that he first began to see the importance of ethical theory around 1882 (2.198). At that time he started to distinguish morality from "pure" ethics. As a result of this illumination he took up serious study of the great moralists (5.111, 5.129) and began to suspect that there was some important connection between ethics and logic (5.111). It was only some ten years later (ca. 1894) that this suspicion became a firm conviction (2.198), and only in about 1899 was he ready to say that ethics is truly a normative science (5.129). Peirce's judgment in this matter, therefore, was certainly not hasty. Rather, it was the result of long reflection during the height of his intellectual powers (in 1899 Peirce was only 58 years old). Finally, in 1903, in the Lowell Lectures of that year, Peirce made his conclusions public for the first time (5.533); but even then he was not prepared to say apodictically that esthetics is a normative science and indeed the science upon which both ethics and logic ultimately rest. He was content with the modest proposal of an opinion and an hypothesis (5.129, 2.197).

In the Cambridge lectures of 1903, Peirce explicitly related his doctrine about the normative sciences to the correct understanding of pragmatism as he first used the term. He tells us that once one sees that the normative sciences in general examine the laws of conformity of things to ends, one begins "to get upon the trail of the secret of pragmaticism" (5.130). What, then, was the development of the "pragmatic maxim" from about 1893 onward? Just how did Peirce's speculation concerning the normative sciences modify his thinking about the meaning of his 1878 statement (5.402)?

Peirce considered the first formulation of the maxim "crude" (8.255) and only approximate (5.16). His first emendation (5.402, note 2) was made in 1893 at approximately the time he began to see a connection between logic and ethics. This note was meant to meet the objection that the maxim is "skeptical and materialistic." Peirce defends himself with an appeal to a collective finality governing the "realization of ideas in man's consciousness and in his works." We must be on our guard, he warns us, against understanding the maxim in too individualistic a sense. The fruit born of an individual is not limited just to what he aims his endeavors at;
whether he knows it or not, his efforts contribute to a collective result: a growth of reasonableness in the world.

Individual action is a means and not our end. Individual pleasure is not our end; we are all putting our shoulders to the wheel for an end that none of us can catch more than a glimpse at—that which the generations are working out. But we can see that the development of embodied ideas is what it will consist in. (5.402, note 2)

Three years later, William James's *Will to Believe* pushed the pragmatic maxim "to such extremes as must tend to give us pause." Peirce interpreted his old friend's position to be that man's end is action, and, in an article for Baldwin's *Dictionary of Philosophy and Psychology* (1902), criticizes him for not seeing that, far from action's being man's end, action itself supposes an end.

If it be admitted, on the contrary, that action wants an end, and that that end must be something of a general description, then the spirit of the maxim itself, which is that we must look to the upshot of our concepts in order rightly to apprehend them, would direct us towards something different from practical facts, namely, to general ideas, as the true interpreters of our thought. (5.3)

Action, then, cannot be the final logical interpretant of thought, because it is not general, while thought is. Thought can be interpreted only in terms of thirds; the general can be understood only in terms of the general. The meaning of a conception can be found, not in action, but in the end for which the action (resulting from the conception) is done (cf. 1.343–344). Of course, the practical facts must not be overlooked or ignored. And if one chooses to call the attention that must be paid to them the "pragmatic maxim," then it should be applied in a thoroughgoing way indeed. But:

when that has been done, and not before, a still higher grade of clearness of thought can be attained by remembering that the only ultimate good which the practical facts to which it directs attention can subserve is to further the development of concrete reasonableness; so that the meaning of the concept does not lie in any individual reactions at all, but in the manner in which those reactions contribute to that development. (5.3)

The meaning of a concept, therefore, is judged in terms of the contribution which the reactions it evokes make toward the realiz-
tion of thought’s ultimate end. In other words, Peirce introduces in the pragmatic maxim itself a normative function. The pragmatic maxim is a way of recognizing the reality of the objects of general ideas in their generality. But general ideas “govern” action; they are really laws of growth; they are really final causes; they are really normative.

In this *Dictionary* article Peirce himself admits that his early formulation of the maxim did lend itself to the sort of interpretation given it by James and others, but he implies that he never meant it to be the “stoical maxim” that man’s end is action. He explains:

> Indeed, in the article of 1878 referred to above, the writer practised better than he preached; for he applied the stoical maxim most unstoically, in such a sense as to insist upon the reality of the objects of general ideas in their generality. (5.3)

Now, if one rereads carefully “How to Make Our Ideas Clear” in the light of subsequent clarification by Peirce, it will become clear that, in truth, he did not make action man’s end; nor did he make action the end of man’s thinking. Action, no doubt, is involved in thinking both in the sense that thinking is a form of action and in the sense that thinking normally results in action. Action is, therefore, certainly a criterion of thought. But he does not say that action is the purpose of thinking. Its purpose is the establishment of “a belief, a rule of action, a habit of thought.” 12 A habit is not an action. It is in an entirely different category. A habit is general; an action, singular. A habit is a third; an action, a second. Still, although this is what Peirce meant and what, strictly, he said, a superficial reading of the paper could lead to misunderstanding, especially if one were not acquainted with Peirce’s subsequent development of the nature of habit as general. Then, too, his examples of how the maxim is to be applied are misleading and betray perhaps a certain hesitation and unclarity in the new doctrine he was trying to work out. For example, he applies the maxim to elucidate the meaning of the term “hard”:

> Suppose, then, that a diamond could be crystalized in the midst of a cushion of soft cotton, and should remain there until it was finally burned up. Would it be false to say that that diamond was soft? . . . We may, in the present case, modify our question, and ask what prevents us from saying that all hard bodies remain perfectly soft
until they are touched, when their hardness increases with the pressure until they are scratched. . . . there would be no falsity in such modes of speech. They would involve a modification of our present usage of speech with regard to the word "hard" and "soft," but not their meanings. (5.403)

This certainly seems to be a rather strong expression of the very sort of operationalism that Peirce branded nominalistic and hence erroneous because it reduces potentiality to actuality. In another place and at a later date (ca. 1905) he criticized and modified the misleading character of his illustration (cf. 5.403, note 3; 1.615; 8.208). He regretted the infelicitous example because it tended to obscure rather than to clarify what he intended to say.

In any case, in 1903, Peirce decided to make pragmatism the subject of a series of lectures at Harvard. This gave him the opportunity of comparing his doctrine with others of the same name but of a different spirit. In those lectures he tells us that he has no particular fault to find with the numerous definitions of pragmatism he had lately come across, but "to say exactly what pragmatism is describes pretty well what you and I have to puzzle out together" (5.16). Then, in a playfully ironic passage, he teases the "new pragmatists" for not acknowledging their debt to him:

To speak plainly, a considerable number of philosophers have lately written as they might have written in case they had been reading either what I wrote but were ashamed to confess it, or had been reading something that some reader of mine had read. For they seem quite disposed to adopt my term pragmatism. I shouldn't wonder if they were ashamed of me. What could be more humiliating than to confess that one had learned anything of a logician? (5.17)

Peirce is delighted to share the opinions of such a brilliant company and has no complaint to make against them except that they are "lively":

The new pragmatists seem to be distinguished for their terse, vivid and concrete style of expression together with a certain buoyancy of tone as if they were conscious of carrying about them the master key to all the secrets of metaphysics. (5.17)

No doubt, Peirce has in mind "cocksuredness," not merely quality of literary style, when he chides this liveliness. One thing he could
not tolerate was a cocksure attitude. For him this was the very antithesis of the scientific attitude, humble "fallibilism" or willingness to learn (cf. 1.9ff., 1.55, 1.141). Peirce clearly had in mind those who enthusiastically pushed the pragmatic maxim "to extremes." The maxim was not intended to be an open-sesame to all metaphysical problems or a panacea for all intellectual ills. It was proposed, not as a principle of speculative philosophy, but as a logical, or, perhaps better, a semantic maxim that would guide all types of investigation.  

Indeed, Peirce recognized that

one of the faults that I think they [the new pragmatists] might find with me is that I make pragmatism to be a mere maxim of logic instead of a sublime principle of speculative philosophy. (5.18)

And, with tongue in cheek, he continues:

In order to be admitted to better philosophical standing I have endeavored to put pragmatism as I understand it into the same form of a philosophical theorem. I have not succeeded any better than this:

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. (5.18)

Peirce managed to get his logical principle into the form of a philosophical theorem, but he immediately appends his original statement of the maxim, thereby leaving his audience to judge whether the new form is really an improvement. In any case, he never uses that form again. Still, there is one important point made in it, that is, that the pragmatic maxim must be interpreted in terms of conditionals. Indeed, the burden of the Harvard lectures is to show that meaning is intimately bound up with real laws of nature, that is, with real potentialities in things expressible in conditional sentences. The conditional necessity of law is expressed not only by a "will be," but also by a "would be," because law deals with the realm of the possible—what would be the case whenever certain conditions are fulfilled. What the conditional expresses is not merely the juxtaposition of an antecedent and a consequent, but also the consequence or connection between them. "If such and such were the case (or were done), then such and such would
follow." When Peirce came to see this more clearly, he corrected what he had said about the relationship between the hardness of a diamond and scratching with carborundum. A diamond never scratched is nevertheless hard, because if it were brought into contact with carborundum it would be scratched. Thus the meaning of hardness is not in an action but in an intention or "intellectual purport."

During this whole period (ca. 1896–1903), then, due to the sudden popularity of "pragmatism," Peirce was very much preoccupied with dissociating his views from those circulating. Again, in 1905, he felt that he ought to try once more to explain what his notion of pragmatism entailed and even went so far as to coin a new word for it, "pragmaticism," which was "ugly enough to be safe from kidnappers" (5.414). So he published a series of three articles in The Monist, which contains perhaps the clearest presentation of his case he ever wrote.

In the first of these essays ("What Pragmatism Is") he re-expressed the maxim like this:

Endeavoring, as a man of that type [a "laboratory-man"] naturally would, to formulate what he so approved, he framed the theory that a conception, that is, the rational purport of a word or other expression, lies exclusively in its conceivable bearing upon the conduct of life; so that, since obviously nothing that might not result from experiment can have any direct bearing upon conduct, if one can define accurately all the conceivable experimental phenomena which the affirmation or denial of a concept would imply, one will have therein a complete definition of the concept, and there is absolutely nothing more in it. (5.412)

This formulation makes it clear that the maxim has very little, indeed, to do with the practical. And Peirce explains that his awareness of this fact determined his choice of the name "pragmatism" or "pragmaticism" rather than "practicism" or "practicalism."

But for one who had learned philosophy out of Kant, as the writer, along with nineteen out of every twenty experimentalists who have turned to philosophy, had done, and who still thought in Kantian terms most readily, praktisch and pragmatisch were as far apart as the two poles, the former belonging to the region of thought where no mind of the experimentalist type can ever make sure of solid ground under his feet, the latter expressing relation to some definite
human purpose. Now quite the most striking feature of the new theory was its recognition of an inseparable connection between rational cognition and rational purpose; and that consideration it was which determined the preference for the name Pragmatism. (5.412)

It is not, therefore, the practical consequences of a conception that make it true and meaningful. They are, of course, criteria of its truth and meaningfulness (since one might expect a true and meaningful concept to have consequences), but do not in some crude sense constitute truth and meaning. This is but another way of repudiating the notion that action is man’s end and the purpose of man’s thinking. The key to meaning and to truth is the relation of a conception “to some definite human purpose,” to some end which governs actions in the same way thirds govern seconds. Rational cognition is in the category of Thirdness and must be interpreted in terms of some other third. For Peirce, this is nothing other than rational purpose. The pragmatic maxim, then, is but a way of expressing this relation. Thus once again we see that Peirce intends meaning to be identical with rational purport and not with action alone. Of course, Peirce realizes that a proof that this is so would require a sustained exposition of his entire philosophy of logic, cosmology, and metaphysics, or, in his words, “the establishment of the truth of synechism” (5.415).

In the same article Peirce tries to answer certain objections to his position in the form of a little dialogue. The dialogue is particularly enlightening because it indicates as clearly as anyone could wish the connection he saw, or at least thought he saw, between pragmaticism and the normative sciences. It is objected, first, that according to the pragmatic position nothing enters into the meaning of a concept but an experiment; yet, an experiment in itself cannot reveal anything more than a constant conjunction of antecedent and consequent (5.424). This typically Humean objection, Peirce observes, betrays a misunderstanding of pragmaticism’s fundamental point. In the first place, it misrepresents what is involved in an experiment. An experiment is not an isolated, “atomic” event; an experiment always forms a part of a connected series or system. An experiment essentially requires the following ingredients: (1) an experimenter, (2) a verifiable hypothesis concerning the experimenter’s environment, and (3) a sincere doubt in the ex-
perimenter's mind about the truth of the hypothesis. The experimenter, by an act of choice, must single out certain identifiable objects on which to operate. Then, by an external (or quasi-external) act, he modifies those objects. Then comes a reaction of the world upon the experimenter through perception. Finally, he must recognize what the experiment teaches him. Now, while the chief elements in the event of the experiment are action and reaction, the unity of essence of the experiment, what makes the experiment an experiment, lies in its purpose and plan (5.424). In the second place, this sort of objection fails to catch the pragmaticist's attitude of mind. Rational meaning consists, not in an experiment, but in experimental phenomena. These phenomena, to which the pragmaticist refers, are not particular events that have already happened to someone or to something in the dead past, but are "what surely will happen to everybody in the living future who shall fulfill certain conditions" (5.425). Essential to experimental phenomena is that they have been predicted.

The phenomenon consists in the fact that when an experimentalist shall come to act according to a certain scheme that he has in mind, then will something else happen, and shatter the doubts of sceptics, like the celestial fire upon the altar of Elijah. (5.425)

In the third place, this sort of objection overlooks in a very nominalistic way the fact that the experimenter is not interested in this single experiment or in that single experimental phenomenon. He is interested in general kinds of experimental phenomena, for what is conditionally true in futuro can only be general. In other words, experimental method, implicitly at least, affirms the reality of generals (5.426).

Notes

1. Cf. 5.494 (ca. 1906) where Peirce sketches the differences between his own position and those of James, Schiller, and Papini in a less polemical way.

2. "It [calculations of probabilities] goes to show that the practical consequences are much, but not that they are all the meaning of a concept. A new argument must supplement the above. All the more active functions of animals are adaptive characters calculated to insure the con-
tinuance of the stock. Can there be the slightest hesitation in saying, then, that the human intellect is implanted in man, either by a creator or by a quasi-intentional effect of the struggle for existence, virtually in order, and solely in order, to insure the continuance of mankind? But how can it have such effect except by regulating human conduct? Shall we not conclude then that the conduct of men is the sole purpose and sense of thinking, and that if it be asked why should the human stock be continued, the only answer is that that is among the inscrutable purposes of God or the virtual purposes of nature which for the present remain secrets to us?

“So it would seem. But this conclusion is too vastly far-reaching to be admitted without further examination. Man seems to himself to have some glimmer of co-understanding with God, or with Nature. The fact that he has been able in some degree to predict how Nature will act, to formulate general “laws” to which future events conform, seems to furnish inductive proof that man really penetrates in some measure the ideas that govern creation. Now man cannot believe that creation has not some ideal purpose. If so, it is not mere action, but the development of an idea which is the purpose of thought; and so a doubt is cast upon the ultra pragmatic notion that action is the sole end and purpose of thought” (8.211–212, letter to Mario Calderoni, ca. 1905).

3. As early as ca. 1875 Peirce distinguished action and conduct in terms of his categories: “Action is second, but conduct is third. Law as an active force is second, but order and legislation are third” (1.337).

4. Cf. 5.403 and the discussion below.

5. Cf. 1.322–323, where Peirce explicitly takes up the objection that law is essential to the very notion of one thing’s acting upon another. To deny the distinction between action and action governed by law is to attack Peirce’s categorical scheme. Tychism develops this distinction.

6. “In general, we may say that meanings are inexhaustible. We are too apt to think that what one means to do and the meaning of a word are quite unrelated meanings of the word “meaning” or that they are only connected by both referring to some actual operation of the mind. Professor Royce has done much to break up this mistake. In truth the only difference is that when a person means to do anything he is in some state in consequence of which the brute reactions between things will be moulded into conformity to the form to which the man’s mind is itself moulded, while the meaning of a word really lies in the way in which it might, in a proper position in a proposition believed, tend to mould the conduct of a person into conformity to that to which it is itself moulded. Not only will meaning, more or less, in the long run, mould reactions to itself, but it is only in doing so that its own being consists. For this reason
I shall call this element of the phenomenon or object of thought the element of Thirdness. It is that which is what it is by virtue of imparting a quality to reactions in the future" (1.343).

7. In a letter to John Dewey, June 9, 1904, concerning a review of *Studies in Logic* about to appear in the September issue of *The Nation*, Peirce deplores the way in which his former pupil turns logic into a "natural history," instead of pursuing it as a normative science, "which in my judgment is the greatest need of our age" (8.239).

8. Peirce has in mind those who would make his maxim "stoical" (cf. 5.3). For his analysis of classical stoicism, cf. 6.36.

9. Under "Pragmatic and Pragmatism."


11. Cf. 5.475–493 for Peirce's discussion of interpretants. He distinguished three: (1) the emotional, (2) the energetic, and (3) the logical. The final logical interpretant is habit. Action is the energetic, not the logical interpretant. But cf. 4.536 for a slightly different arrangement.

12. Elsewhere—for example, in a paper on the classification of the sciences (ca. 1902)—Peirce distinguishes "purpose" from "final cause." Purpose is one kind of final cause, the one "most familiar to our experience" (1.211). But he is not always careful to observe the distinction. The point he is making is that final cause does not always require consciousness (1.216).

13. "I also want to say that after all pragmatism solves no real problems. It only shows that supposed problems are not real problems. ... The effect of pragmatism here is simply to open our minds to receiving any evidence, not to furnish evidence" (from a letter to James, March 7, 1904, 8.259; cf. also 5.13, note 1).