



The Socratic Method, *Die sokratische Methode,* by Leonard Nelson

translated by Thomas K. Brown III



Editorial Note

Leonard Nelson's lecture, "Die sokratische Methode," was delivered on 11 December 1922, before the Pedagogic Society of Göttingen. It was originally published in the *Abhandlungen der Fries'schen Schule*, V, Göttingen, 1929, No. 1. In German, it is now found in *Die Schule der kritischen Philosophie und ihre Methode*, Volume I of the *Gesammelte Schriften in Neuen Bänden* of Leonard Nelson, Felix Meiner Verlag, Hamburg, 1970, pp.269-316. This English translation, by Thomas K. Brown III, was originally published in *Socratic Method and Critical Philosophy*, Yale University Press, 1949, copyrighted by the Leonard Nelson Foundation. The book was reprinted by Dover Publications, 1965. The Leonard Nelson Foundation ceased to exist in the 1970's, and the book has been out of print since then. I have inquired whether Dover has any interest in reissuing the book, and whether they now consider this material to be in the public domain, but I have received no response.

Nelson's hope for a reformation and revival of philosophy through the Socratic Method has, of course, though he did not live to see it, been bitterly dashed. When it is common to say that the greatest philosophers of the 20th century were [Heidegger](#) and [Wittgenstein](#) -- philosophers who didn't think that philosophy could accomplish much of anything of substance -- the perceptive observer would have to conclude that the outcome of philosophy in the 20th century was little short of a disaster.

So Nelson's reformation failed. Although his students continued to practice his Socratic pedagogical technique, and a subsequent generation continues to practice it at the [Philosophisch-Politische Akademie](#), its effect on contemporary philosophy, or even notice of it, has been all but non-existent. So perhaps Nelson didn't quite get it right.

Indeed he didn't. There is no such thing as "regressive abstraction," as though principles of demonstration are plucked right out of Socratic dialogue. It doesn't happen. What Nelson regards as the fruit of abstraction is actually the product of imagination. Indeed, Nelson makes the same mistake with induction. As I have recently discussed [elsewhere](#), induction neither discovers nor verifies scientific knowledge. Imagination is key there also. Nelson appreciates how in Socratic Method what questions to ask are the key. But he doesn't appreciate so well, as is now more widely [understood](#), the form of the answer is often already implicit in the kind of question that is asked.

It is paradoxical for Nelson to identify his technique so closely, and so equally, with Socrates and Plato. Socrates is the one asking the questions, but in his method Nelson doesn't ask any. The historical Socrates, as in Plato's early dialogues, never gets an answer that holds up. The very idea that Socratic Method can produce answers belongs entirely to Plato -- demonstrated in dialogues with just the kind of leading questions that Nelson says should not be used. For real progress in philosophy with original ideas, Nelson would have needed to wait a very long time for students to come up with the appropriate questions. Indeed, he would have needed to wait for the next Plato, Kant, Fries, or.... Nelson.

Nevertheless, once the right questions are in play, the fruit of some great imagination or other, Nelson is quite right about Socratic Method, if we understand it just as practiced by Socrates, which is a means of evaluating beliefs by examining contradictions among their implications. This is a form of [falsification](#), as described for science by [Karl Popper](#), taking care of both "regressive abstraction" and induction. Nelson was in the right

ballpark here, even as he properly appreciated and explored the trail blazed by Kant and Fries. And so now I let him speak for himself.

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The Socratic Method

As a faithful disciple of Socrates and of his great successor Plato, I find it rather difficult to justify my acceptance of your invitation to talk to you about the Socratic method. You know the Socratic method as a method of teaching philosophy. But philosophy is different from other subjects of instruction; in Plato's own words: "It does not at all admit of verbal expression like other studies, but as a result of continued application to the subject itself and communion therewith, it is brought to birth in the soul on a sudden, as light that is kindled by a leaping spark, and thereafter it nourishes itself" [Plato, *Epistles*, R. G. Bury, tr., in Loeb Classical Library, London, New York, 1929, VII, 531].

I therefore find myself in a quandary, not unlike that of a violinist who, when asked how he goes about playing the violin, can of course demonstrate his art but cannot explain his technique in abstract terms.

The Socratic method, then, is the art of teaching not philosophy but philosophizing, the art not of teaching about philosophers but of making philosophers of the students. So, in order to give a true idea of the Socratic method, I should halt my discourse right here and, instead of lecturing to you, take up with you a philosophical problem and deal with it according to the Socratic method. But what did Plato say? Only "continued application to the subject itself and communion therewith" kindle the light of philosophical cognition.

Despite the short time at my disposal I shall nevertheless venture a description of the Socratic method and attempt through words to bring home to you its meaning and significance. I justify this compromise by limiting my task, the sole object of my exposition being to direct your attention to this method of teaching and thereby to promote an appreciation of it.

A person who knows no more about the Grand Inquisitor's speech in Dostoevsky's novel, *The Brothers Karamazov*, than that it is a most magnificent discussion of a fundamental ethical problem, knows little enough about it; yet that little will make him more disposed to read the speech attentively. Similarly, whoever looks at the memorial tablet here in the former Physics Institute [Göttingen] that tells of the first electric telegraph invented by Gauss and Wilhelm Weber and how it served to connect that institute with the astronomical observatory will at least feel inclined to follow up the history of this invention with greater reverence. And so I hope that in presenting my subject I, too, may arouse your interest in the significant and, for all its simplicity, profound method that bears the name of the Athenian sage to whom we owe its invention.

A stepchild of philosophy, slighted and rejected, the Socratic method has survived only in name beside its more popular older sister, the more insinuating and more easily manipulated dogmatic method.

You may perhaps suspect me of a personal inclination for the younger of the two sisters. And, indeed, I freely confess that the longer I enjoy her company, the more I am captivated by her charms; so that it has become a matter of chivalry with me to lead her back to life who has been forgotten and pronounced dead, and to win her here that place of honor hitherto reserved for the wanton sister who, though dead at heart, has time and again appeared all decked out.

Let me add, however -- and this much I hope to demonstrate to you today -- that it is not blind partiality that actuates me; it is the inner worth of her whose appearance is so plain that attracts me to her. But, you say, her sad fate -- being disdained by the overwhelming majority of philosophers -- could not have been undeserved and it is therefore idle to try to breathe new life into her by artificial means.

In reply I shall not resort to the general proposition that history shows no pre-established harmony between merit and success, for, indeed, the success or failure of a *method* as a means to an end is a very real test of its value.

However, a fair judgment requires consideration of a preliminary question, namely, whether a particular science is so far advanced that the solution of its problems is sought in a prescribed way; in other words, whether generally valid methods are recognized in it.

In mathematics and in the natural sciences based on it this question of method was long ago decided affirmatively. There is not a mathematician who is not familiar with and who does not employ the progressive method. All serious research in the natural sciences makes use of the inductive method. In fact, method enjoys in these sciences a recognition so unchallenged and matter of course that the students following its guidance are often hardly conscious of the assured course of their researches. All dispute about methods here turns exclusively on their reliability and fruitfulness. If, in this field, a method is dropped or retains merely a historic interest, the presumption is justified that it can offer nothing more to research.

It is quite otherwise, however, in a science where everyone still claims the right to make his own laws and rules, where methodological directives are evaluated *ab initio* as temporally or individually conditioned, subject only to historical appraisal. With luck one method may find favor and for a time determine the direction of future work. But in such a science errors, concomitants of every scientific achievement, do not inspire efforts in the already established direction to correct the defects; errors here are looked upon as faults of construction and must give way to entirely new structures, which in their turn all too soon meet the same fate.

What passes for philosophical science is still in this youthful stage of development. In this judgment I have the support of Windelband, the renowned historian of philosophy. He tells us that "even among the philosophers who claim a special method for their science" -- and by no means all philosophers make such a claim -- "there is not the least agreement concerning this 'philosophical method'" [Wilhelm Windelband, *Präludien*, Freiburg and Tübingen, 1884, p.9].

This conclusion appears the more depressing in view of his previous admission that it is impossible to establish a constant criterion even for the very subject matter of philosophy.

In view of this, one wonders what such philosophers really think of their science. At any rate, in this anarchy the question is left open whether the disesteem into which a philosophical theory falls in itself proves that the theory is scientifically worthless. For how can we expect to judge the scientific value or lack of value of a philosophical achievement when generally valid criteria for passing judgment do not exist?

Now, it is not that the diversity of the *results* made it difficult for philosophers to set up a systematic guide to their science. On the contrary, the great philosophical truths have been from the beginning the common property of all the great thinkers. Here, then, a common starting point was provided. But the verification of these results according to unequivocal rules that preclude arbitrariness and even the mere formulation of the pertinent methodological task with definiteness and precision, both these tasks in the general interest of philosophy have thus far been given so little attention that we must not be surprised that the devoted efforts of a few men to satisfy this interest have proved in vain. True, the lifelong work of Socrates and of [Kant](#) in the service of this methodological task has earned immeasurable historical glory. But, as far as its revolutionary significance for the establishment of philosophy as a science is concerned, it has remained sterile and ineffectual.

Twice in its history there was some prospect of getting philosophy out of its groping stage and onto the certain path of science. The ancient world punished the first courageous attempt with death: Socrates was condemned as a corrupter of youth. The modern world disdains to execute the heretic. It has passed sentence by "going beyond" Kant -- to let Windelband speak once more [Windelband, *Präludien*, p.vi].

But there is no need for labored interpretation to appreciate the significance of these two men. They themselves stressed the meaning of their endeavors, explicitly and unceasingly. As everyone knows, Socrates constructed no system. Time and again he admitted his not-knowing. He met every assertion with an invitation to seek the ground of its truth. As the *Apology* shows, he "questioned and examined and cross-examined [Plato, *Apology*, H. N. Fowler, tr., in Loeb Classical Library, London, New York, 1913, I,109] his fellow citizens, not to convey a new truth to them in the manner of an instructor but only to point out the path along which it might be found.

His ethical doctrine, in so far as this designation is appropriate to his inquiries, is based on the proposition that virtue can be taught, or, to put it in more precise terms, that ethics is a science. He did not develop this science because the initial question, *How* do I gain knowledge about virtue? continued to absorb him. He held fast to this initial question. He accepted the absence of fruitful results with composure, without a trace of skepticism as to the soundness of his method, unshakable in the conviction that with his question he was, in spite of everything, on the only right road.

All subsequent philosophy, with the sole exception of Plato, stands helpless before that memorable fact. Plato took over and adhered to the method of Socrates, even after his own researches had carried him far beyond the results reached by his master. He adopted it with all its imperfections, He failed to eliminate its weaknesses and inflexibilities, surely not because of reverence for the memory of his teacher but because he could not overcome these defects. Like Socrates, he was guided by a feeling for truth. Having dealt so boldly with the content of the Socratic philosophy that philosophical philologists are still quarreling about what is Socratic in Plato's doctrine and what Platonic, he turned this boldness into homage by putting all his own discoveries into the mouth of his great teacher. But he paid Socrates even greater homage by clothing these discoveries in the uneven, often dragging, often digressive form of the Socratic dialogue, burdening his own teachings with his teacher's faults. In this manner, of course, he safeguarded the yet unmined treasure and thus gave posterity the opportunity of taking possession of it anew and of developing its riches.

But in vain. Today, after two thousand years, opinion on Socrates is more uncertain and more divided than ever. Over against the judgment of an expert like Joel, that Socrates was "the first and perhaps the last quite genuine, quite pure philosopher" [Karl Joel, *Geschichte der antiken Philosophie*, Tübingen, 1921, p.770], there is Heinrich Maier's statement "that Socrates has been labeled as what he quite certainly was not, a philosopher" [Heinrich Maier, *Sokrates*, Tübingen, 1913, p.157].

This difference of opinion has its roots in the inadequacy of the criticism, which still exercises its ingenuity on the conclusions of Socrates' philosophy. But as these conclusions were handed down only indirectly and perhaps were never even given definite form by Socrates, they remain exposed to the most contradictory interpretations. Where criticism touches on the method, it either praises trivialities or assigns the value of the Socratic method exclusively to the personality of Socrates, as shown in the opinion voiced by Wilamowitz in his *Plato*: "The Socratic method without Socrates is no more than a pedagogy that, aping how some inspired spiritual leader clears his throat and spits, bottles his alleged method and then imagines it is dispensing the water of life" [Ulrich von Wilamowitz-Moellendorff, *Platon*, Berlin, 1919, I,108].

If Socrates' philosophy, lively as it was and rooted in concrete problems, found no emulators, it is little wonder then that the truth content of Kant's far more abstract methodological investigations failed to be understood and adopted -- except by those few who comprehended his doctrine and developed it further, but who in their turn were pushed completely into the background by the irresistible *Zeitgeist* and passed over by history. The preconditions were lacking for the realization that Kant's critical method was the resumption of Socratic-Platonic philosophizing, and for the acceptance of the *Critique of Pure Reason* as a "treatise on the method," which its author, according to his own words, intended it to be [Immanuel Kant, *Critique of Pure Reason*, Norman Kemp Smith, tr., London, New York, 1933, p.25].

In addition to this treatise on method, Kant produced a system. He enriched the broad domain of philosophy with an abundance of fruitful results. It was these results that became the subject of controversy; but the hope of a satisfactory settlement was bound to remain illusory as long as no attempt was made to retrace the creative path by which Kant had reached his conclusions. Dogmatism remained dominant, more triumphant than ever in the erection of arbitrary systems that vied with one another in bizarreness and estranged public interest altogether from the sober and critical philosophizing of the Kantian period. Such fragments of Kant's results as were transplanted to this alien soil could not thrive there and maintained only an artificial existence, thanks to a fancy for the history of philosophy that displaced philosophy itself.

Why is it, asked Kant, that nothing is being done to prevent the "scandal" which, "sooner or later, is sure to become obvious even to the masses, as the result of the disputes in which metaphysicians . . . without critique inevitably become involved" [Kant, *Critique of Pure Reason*, pp.31-32, translation revised by T.K.B.].

It is manifestly the aim of every science to verify its judgments by reducing them to more general propositions, which themselves must be made certain. We can then proceed from these principles to the erection of the scientific system through logical inference. However difficult this may be in its details, in its

essence it is accomplished in all sciences by the same method, that of progressive reasoning. The methodological problems are encountered in every science where the regress from the particular to the general has to be accomplished, where the task is to secure the most fundamental propositions, the most general principles.

The brilliant development of the science of mathematics and its universally acknowledged advance are explained by the fact that its principles -- ignoring for the moment the problems of axiomatics -- are easily grasped by the consciousness. They are intuitively clear and thus completely evident, so evident that, as Hilbert recently remarked on this same platform, mathematical comprehension can be forced on everyone. The mathematician does not even have to perform the laborious regress to these principles. He is free to start from arbitrarily formed concepts and go on confidently to propositions; in short, he can immediately proceed systematically, and in this sense dogmatically. He can do so because the fact that his concepts lend themselves to construction is a criterion of their reality, a sure indication that his theory does not deal with mere fictions.

The natural sciences, on their part, do not enjoy this advantage. The laws underlying natural phenomena can be uncovered only by induction. But since induction proceeds from the observation of facts, from which accidental elements are eliminated by experimentation; since, moreover, all events in space and in time are susceptible of mathematical calculation; and, finally, since the theoretical generalizations obtained are, as empirical propositions, subject to check by confirmatory or contradictory experience, the natural sciences have, in close relation to mathematics, likewise achieved the ascent to the scientific level. Where this claim is still contested, as in biology, the metaphysical premises within the inductive science are involved. There, to be sure, we find at once the confusion that is encountered whenever we pass into the realm of philosophy.

Philosophy does not rest on principles that are self-evident truths. On the contrary, its principles are the focus of obscurity, uncertainty, and controversy. There is unanimity only with respect to the concrete application of these principles. But the moment we try to disregard the particular instance of application and to isolate the principles from experience, that is, if we try to formulate them in pure abstraction, then our search gets lost in metaphysical darkness unless we illuminate our way by the artificial light of a method.

Under these circumstances one would expect to find interest in the problem of method nowhere so great as among philosophers. It should be noted, however, that the consideration just put forward itself depends on a methodological point of view. It raises, in advance of any philosophical speculation proper, the question of the nature of philosophical cognition; and it is only through this preliminary question that light is shed on the real content of the problems besetting philosophy.

Let us pause here a moment and take a closer look at the concept of the method with which we are concerned. What, precisely, is meant by a method that subjects the thinking of philosophers to its rules? Obviously, it is something other than just the rules of logical thinking. Obedience to the laws of logic is an indispensable precondition of any science. The essential factor distinguishing a method of philosophy can therefore not be found in the fact that it avails itself of logic. That would too narrowly circumscribe the function devolving on it. On the other hand, the demands made on method must not go too far, nor should the impossible be expected of it, namely, the creative increase of philosophical knowledge.

The function to be performed by the philosophical method is nothing other than making secure the contemplated regress to principles, for without the guidance of method, such a regress would be merely a leap in the dark and would leave us where we were before -- prey to the arbitrary.

But how to find the clarity requisite for discovering such a guide, since nothing is clear save only judgments relative to individual instances? For these judgments the concrete use of our intelligence, as applied in every empirical judgment in science and in daily life, suffices. Once we go beyond these judgments, how can we orient ourselves at all? The difficulty that seems to be present here is resolved upon critical examination of these empirical judgments. Each of them comprises, in addition to the particular data supplied by observation, a cognition hidden in the very form of the judgment. This cognition, however, is not separately perceived, but by virtue of it we already actually assume and apply the principle we seek.

To give a commonplace illustration: If we were here to discuss the meaning of the philosophical concept of substance, we should most probably become involved in a hopeless dispute, in which the skeptics would very likely soon get the best of it. But if, on the conclusion of our debate, one of the skeptics failed to find his

overcoat beside the door where he had hung it, he would hardly reconcile himself to the unfortunate loss of his coat on the ground that it simply confirmed his philosophical doubt of the permanence of substance. Like anyone else hunting for a lost object, the skeptic assumes in the judgment that motivates his search the universal truth that no thing can become nothing, and thus, without being conscious of the inconsistency with his doctrine, he employs the metaphysical principle of the permanence of substance.

Or, suppose we discussed the universal validity of the idea of justice. Our discussion would have the same outcome and once more seem to favor the skeptic who denies the universal validity of ethical truths. When, however, this skeptic reads in his evening paper that farmers are still holding back grain deliveries to exploit a favorable market and that bread will therefore have to be rationed again, he not readily be disposed to suppress his indignation on the ground that there is no common principle of right applicable to producer and consumer. Like everyone else he condemns profiteering and thereby demonstrates that in fact he acknowledges the metaphysical assumption of equal rights to the satisfaction of interests, regardless of the favorableness or unfavorableness of any individual's personal situation [\[note\]](#).

It is the same with all experiential judgments. If we inquire into the conditions of their possibility, we come upon more general propositions that constitute the basis of the particular judgments passed. By analyzing conceded judgments we go back to their presuppositions. We operate regressively from the consequences to the reason. In this regression we eliminate the accidental facts to which the particular judgment relates and by this separation bring into relief the originally obscure assumption that lies at the bottom of the judgment on the concrete instance. The regressive method of abstraction, which serves to disclose philosophical principles, produces no new knowledge either of facts or of laws. It merely utilizes reflection to transform into clear concepts what reposed in our reason as an original possession and made itself obscurely heard in every individual judgment.

It seems as though this discussion has carried us far from our real theme, the method of teaching philosophy. Let us then find the connection. We have discovered philosophy to be the sum total of those universal rational truths that become clear only through reflection. To philosophize, then, is simply to isolate these rational truths with our intellect and to express them in general judgments.

What implications does this hold for the teaching of philosophy? When expressed in words, these universal truths will be heard, but it does not necessarily follow that they will be comprehended. We can understand them only when, beginning with their application in our judgments, we then personally undertake the regress to the premises of these empirical judgments and recognize in them our own presuppositions.

It is accordingly impossible to communicate philosophy, the sum total of these philosophical principles, by instruction as we communicate historical facts or even geometrical theorems. The facts of history as such are not objects of insight; they can only be noted.

True, the principles of mathematics are comprehensible, but we gain insight into them without treading the circuitous path of our own creative thinking. They become immediately evident as soon as attention is directed to their content. The mathematics teacher who anticipates his pupil's independent investigation by presenting these principles in lectures does not thereby impair their clarity. In this case the pupil is able to follow even though he does not himself travel the exploratory path to them. To what extent such instruction makes sure that the pupil follows with real comprehension is of course another question.

But to present philosophy in this manner is to treat it as a science of facts that are to be accepted as such. The result is at best a mere history of philosophy. For what the instructor communicates is not philosophical truth itself but merely the fact that he or somebody else considers this or that to be a philosophical truth. In claiming that lie is teaching philosophy, he deceives both himself and his students.

The teacher who seriously wishes to impart philosophical insight can aim only at teaching the art of philosophizing. He can do no more than show his students how to undertake, each for himself, the laborious regress that alone affords insight into basic principles. If there is such a thing at all as instruction in philosophy, it can only be instruction in doing one's own thinking; more precisely, in the independent practice of the art of abstraction. The meaning of my initial remark, that the Socratic method, as a method of instruction in philosophy, is the art not of teaching philosophy but of teaching philosophizing, will now become clear. But we have gone further than that. We also know now that, in order to succeed, this art must be guided by the rules of the regressive method.

We have still to examine the subsidiary question, whether this, the only appropriate method of teaching philosophy, is rightfully called the Socratic method. For my earlier references to the significance of Socrates bore only on the fact that his procedure pertained to method.

To begin with, it goes without saying that his way of teaching is full of faults. Every intelligent college freshman reading Plato's dialogues raises the objection that Socrates, at the most decisive points engages in monologues and that his pupils are scarcely more than yes men -- at times, as [Fries](#) remarks, one does not even quite see how they arrived at the "yes" [J. F. Fries, *Die Geschichte der Philosophie*, Halle, 1837, I, 253]. In addition to these didactic defects, there are grave philosophical errors, so that we often find ourselves concurring in the dissenting opinions of some of the participants.

In order to reach a conclusion concerning truth and error, the valuable and the valueless, let us take another glance at Plato's account. No one has appraised Socrates' manner of teaching and its effect on his pupils with greater objectivity or deeper knowledge of human nature. Whenever the reader is moved to protest against long-windedness or hair splitting in the conversations, against the monotony of the deductions, against the futility of the battle of words, a like protest arises at once from some participant in the dialogue. How openly Plato allows the pupils to voice their displeasure, their doubt, their boredom -- just think of the railing of Callicles in the *Gorgias* [Plato, *Gorgias*, W. R. M. Lamb, tr., in Loeb Classical Library, London, New York, 1926, V, 381-395]. He even has conversations breaking off because the patience of the participants is exhausted; and the reader's judgment is by no means always in favor of Socrates. But does this criticism reveal anything except the sovereign assurance with which Plato stands by the method of his teacher for all its shortcomings? Is there any better proof of confidence in the inherent value of a cause than to depict it with all its imperfections, certain that it will nevertheless prevail? Plato's attitude toward his teacher's work is like that displayed toward Socrates, the man, in the well-known oration by Alcibiades in the *Symposium*. There, by contrasting the uncouth physical appearance of Socrates with his inner nature, he makes his noble personality shine forth with greater radiance and compares him to a Silenus who bears within him the mark of the gods.

What, then, is the positive element in the work of Socrates? Where do we find the beginnings of the art of teaching philosophy? Surely not in the mere transition from the rhetoric of the sophists to the dialogue with pupils, even though we ignore the fact that, as I have already indicated, the questions put by Socrates are for the most part leading questions eliciting no more than "Undoubtedly, Socrates!" "Truly, so it is, by Zeus! How could it be otherwise?"

But suppose Socrates' philosophical ardor and his awkwardness had allowed the pupils more self-expression. We should still have to inquire first into the deeper significance of the dialogue in philosophical instruction and into the lessons to be derived from Plato's use of it.

We find dialogue employed as an art form in fiction and drama and as a pedagogic form in instruction. Theoretically these forms are separable but actually we require of every conversation liveliness, clarity, and beauty of expression, as well as espousal of truth, decisiveness, and strength of conviction. Even though the emphasis varies, we like to recognize the teacher in the artist and the artist in the teacher.

We must furthermore distinguish between a conversation reduced to writing -- even though it is a reproduction of actual speech -- and a real conversation carried on between persons. Conversations that are written down lose their original liveliness, "like the flower in the botanist's case." If, in spite of this, we are to find them satisfactory, the atmosphere must be spiritualized and purified, standards must be raised; and then there may come forth some rare and admirable production as the conversation of the Grand Inquisitor, which is carried on with a silent opponent who by his silence defeats him.

Conversation as a pedagogic form, however, must sound like actual talk; otherwise it does not fulfill its task of being model and guide. To catch, in the mirror of a written reproduction, the fleeting form of such talk with its irregularities, to strike the mean between fidelity to the sense and fidelity to the word -- this is a problem that can perhaps be solved didactically; but the solution serving as it does a definite purpose will rarely meet the demands of free art and therefore as a whole will nearly always produce a mixed impression. I know of only a few didactic conversations in literature from which this discord has been even partially eliminated. I have in mind, for instance, some passages in the three well-known dialogues by Solovyeff; then there is the Socratic dialogue with whl:-Ch the American socialist writer Bellamy opens his didactic novel,

Looking Backward; and finally -- by no means the least successful -- the conversations in August Niemann's novel, *Bakchen und Thyrsoträger*, which is imbued with the true Socratic spirit.

To the difficulty just described one must add another, more basic objection, that to reduce the evolving didactic conversation to writing borders on the absurd. For by offering the solution along with the problem, the transcription violates, with respect to the reader, the rule of individual effort and honesty and thus, as Socrates puts it in the *Phaedrus*, imparts to the novice "the appearance of wisdom, not true wisdom" [Plato, *Phaedrus*, H. N. Fowler, tr., in Loeb Classical Library, London, New York, 1913, I,563]. Such writing has meaning only for those to whom it recalls their own intellectual efforts. On all others it acts as an obstacle to insight -- it seduces them into the naive notion that, as Socrates says further on, "anything in writing will be clear and certain" [*Ibid.*, p.565]. Thus Plato speaks of his own "perplexity and uncertainty" [Plato, *Epistles*, p.537] in setting down his thoughts in writing.

It does not at all admit of verbal expression. . . . But were I to undertake this task it would not, as I think, prove a good thing for men, save for some few who are able to discover the truth themselves with but little instruction; for as to the rest, some it would most unseasonably fill with mistaken contempt, and others with an overweening empty aspiration, as though they had learnt some sublime mysteries. [*Ibid.*, pp. 531-533]

. . . Whenever one sees a man's written compositions -- whether they be the laws of a legislator or anything else in any other form -- these are not his most serious works, if so be that the writer himself is serious: rather those works abide in the fairest region he possesses. If, however, these really are his serious efforts, and put into writing, it is not "the gods" but mortal men who "then of a truth themselves have utterly ruined his senses." [Plato, *Epistles*, p.541]

We must bear this discord in mind as we scrutinize the Platonic dialogue to discover how Socrates accomplished his pedagogic task.

One achievement is universally conceded to him: that by his questioning he leads his pupils to confess their ignorance and thus cuts through the roots of their dogmatism. This result, which indeed cannot be *forced* in any other way, discloses the significance of the dialogue as an instrument of instruction. The lecture, too, can stimulate spontaneous thinking, particularly in more mature students; but no matter what allure such stimulus may possess, it is not *irresistible*. Only persistent pressure to speak one's mind, to meet every counterquestion, and to state the reasons for every assertion transforms the power of that allure into an irresistible compulsion. This art of *forcing* minds to *freedom* constitutes the first secret of the Socratic method.

But only the first. For it does not take the pupil beyond the abandonment of his prejudices, the realization of his not-knowing, this negative determinant of all genuine and certain knowledge.

Socrates, after this higher level of ignorance is reached, far from directing the discussion toward the metaphysical problems, blocks every attempt of his pupils to push straight on to them with the injunction that they had better first learn about the life of the weavers, the blacksmiths, the carters. In this pattern of the discussion we recognize the philosophical instinct for the only correct method: first to derive the general premises from the observed facts of everyday life, and thus to proceed from judgments of which we are sure to those that are less sure.

It is astonishing how little understood this simple guiding idea of method is even in our own day. Take, for example, the assertion that his use of the affairs of the workaday world as a point of departure exhibits merely the practical interest Socrates took in the moral jolting of his fellow citizens. No, had Socrates been concerned with natural philosophy rather than with ethics, he would still have introduced his ideas in the same way.

We arrive at no better understanding of the Socratic method when we consider the way it works back from particulars to universals as a method of regressive inference, thereby identifying it with the inductive method. Though Aristotle praised him for it, Socrates was not the inventor of the inductive method. Rather, he pursued the path of abstraction, which employs reflection to lift the knowledge we already possess into consciousness. Had Aristotle been correct in his interpretation, we should not be surprised at the failure of Socrates' endeavors. For ethical principles cannot be derived from observed facts.

The truth is that in the execution of his design Socrates does fail. His sense of truth guides him surely through the introduction of the abstraction; but further on so many erroneous methodological ideas intrude that the success of the conversation is almost always frustrated.

In this process of separation from the particulars of experience and in his search for the more universal truths, Socrates concentrates his attention wholly on the general characteristics of concepts as we grasp them and devotes himself to the task of making these concepts explicit by definition. Without concepts, of course, there is no definite comprehension of general rational truths; but the elucidation of concepts and the discussion of their interrelations do not suffice to gain the content of the synthetic truths that are the true object of his quest.

What holds Socrates on his futile course is a mistake that comes to light only in Plato and gives his doctrine of ideas its ambivalent, half-mystic, half-logicizing character. This doctrine assumes that concepts are images of the ideas that constitute ultimate reality. This is why the Socratic-Platonic dialogues see the summit of scientific knowledge in the elucidation of concepts.

It is not difficult for us to discern in retrospect the error that caused philosophy here to stray from the right path, and consequently hindered the elaboration of methods of abstraction requisite for scientific metaphysics. However, it would be beside the point to dwell on the shortcomings of a philosophy that made for the first time an attempt at critical self-analysis. Our present concern is not with its errors or with the incompleteness of its system but with its bold and sure beginnings that opened the road to philosophical truth.

Socrates was the first to combine with confidence in the ability of the human mind to recognize philosophical truth the conviction that this truth is not arrived at through occasional bright ideas or mechanical teaching but that only planned, unremitting, and consistent thinking leads us from darkness into its light. Therein lies Socrates' greatness as a philosopher. His greatness as a pedagogue is based on another innovation: he made his pupils do their own thinking and introduced the interchange of ideas as a safeguard against self-deception.

In the light of this evaluation, the Socratic method, for all its deficiencies, remains the only method for teaching philosophy. Conversely, all philosophical instruction is fruitless if it conflicts with Socrates' basic methodic requirements.

Of course, the development of philosophical knowledge had to free from its entanglement with Platonic mysticism the doctrine of reminiscence, the truth of which constitutes the real and most profound reason for the possibility of and necessity for the Socratic method. This liberation was achieved after two thousand years by the critical philosophies of Kant and Fries. They carried the regressive method of abstraction to completion. Beyond this, they firmly secured the results of abstraction -- which as basic principles do not admit of proof but as propositions must nevertheless be verified -- by the method of deduction [regarding the use of the word "deduction," see ["The Foundations of Value, Part II"](#)].

In the idea of this deduction -- with which only Fries really succeeded -- the doctrine of reminiscence experienced its resurrection. It is not too much to say that the Socratic-Platonic concept was thus transmuted from the prophetic-symbolic form, in which it had been confined by the two Greek sages, into the solidly welded and unshakably established form of a science.

Deduction, this master achievement of philosophy, is not easy to explain. If I were to attempt to convey some idea of it, I could not indicate its nature more succinctly than by saying that it is quite literally the instrumentality for carrying out the Socratic design to instruct the ignorant by compelling them to realize that they actually know what they did not know they knew.

Kant and Fries did not pursue the problem of instruction in philosophy beyond some incidental pedagogic observations of a general character. But, thanks to critical philosophy, philosophical science has made such progress in surmounting its inherent methodological difficulties that now the most urgent task of critical philosophy is the revival and furtherance of the Socratic method, especially in its bearing on teaching. Must another two thousand years elapse before a kindred genius appears and rediscovers the ancient truth? Our science requires a continuous succession of trained philosophers, at once independent and well schooled, to avert the danger that critical philosophy may either fall a victim of incomprehension or, though continuing in name, it yet may become petrified into dogmatism.

In view of the importance of this task, we shall do well to pause once more and scrutinize the whole of the difficulty we must face. The exposition of our problem has disclosed the profound relation between critical philosophy and the Socratic method, on the basis of which we determine that the essence of the Socratic method consists in freeing instruction from dogmatism; in other words, in excluding all didactic judgments from instruction. Now we are confronted with the full gravity of the pedagogic problem we are to solve. Consider the question: How is any instruction and therefore any teaching at all possible when every instructive judgment is forbidden? Let us not attempt evasion by assuming that the requirement cannot possibly be meant to go to the extreme of prohibiting an occasional discreet helpful hint from teacher to student. No, there must be an honest choice: either dogmatism or following Socrates. The question then becomes all the more insistent: How is Socratic instruction possible?

Here we actually come up against the basic problem of education, which in its general form points to the question: How is education at all possible? If the end of education is rational self-determination, i.e., a condition in which the individual does not allow his behavior to be determined by outside influences but judges and acts according to his own insight, the question arises: How can we affect a person by outside influences so that he will not permit himself to be affected by outside influences? We must resolve this paradox or abandon the task of education.

The first thing to note is that in nature the human mind is always under external influences and, indeed, that the mind cannot develop without external stimulus. We then are confronted with the still broader question: Is self-determination compatible with the fact that in nature the mind is subject to external influence?

It will help us to clarify our thinking if we distinguish between the two senses in which the term "external influence" is used. It may mean external influence in general or an external determinant. Similarly, in teaching it may mean external stimulation of the mind or molding the mind to the acceptance of outside judgments.

Now, it is clearly no contradiction to hold both that the human mind finds within itself the cognitive source of philosophical truth and that insight into this truth is awakened in the mind by external stimuli. Indeed, the mind requires such external stimulation if the initial obscurity of philosophical truth is to grow into clear knowledge. Within the limits set by these conditions, instruction in philosophy is possible and even necessary if the development of the pupil is to be independent of mere chance.

Philosophical instruction fulfills its task when it systematically weakens the influences that obstruct the growth of philosophical comprehension and reinforces those that promote it. Without going into the question of other relevant influences, let us keep firmly in mind the one that must be excluded unconditionally: the influence that may emanate from the instructor's assertions. If this influence is not eliminated, all labor is vain. The instructor will have done everything possible to forestall the pupil's own judgment by offering him a ready-made judgment.

We are now arrived at a point from which we have a clear view both of the task of the Socratic method and of the possibility of fulfilling it. The rest must be left to the experiment and the degree of conviction it may carry.

But it would be underrating the difficulty resented not to consider what the experiment must call for if from its outcome we are to decide whether or not our goal is attainable. Although I have been taxing your patience for some time, I should render a poor service to our cause, and thus to you too, if I did not engage your attention a while longer to consider the *procedure* of such an experiment.

There is a danger inherent in the nature of an exacting enterprise, whose success has met with little recognition, and it is this: that the participants in it, once they become involved in its mounting difficulties and unexpected distractions, will repent of their good intentions or at least will begin to think of ways of modifying the method to make it easier. This tendency, springing from purely subjective discomfort, is likely to distort or completely frustrate the object of the undertaking. It is therefore advisable, lest expectations be disappointed, to envisage in advance as clearly as possible the manifold difficulties that will surely arise and, with due appreciation of these difficulties, to set down what will be required of teachers and students.

We must bear in mind that instruction in philosophy is not concerned with heaping solution on solution, nor indeed with establishing results, but solely with learning the method of reaching solutions. If we do this, we

shall observe at once that the teacher's proper role cannot be that of a guide keeping his party from wrong paths and accidents. Nor yet is he a guide going in the lead while his party simply follow in the expectation that this will prepare them to find the same path later on by themselves. On the contrary, the essential thing is the skill with which the teacher puts the pupils on their own responsibility at the very beginning by teaching them to go by themselves -- although they would not on that account go alone -- and by so developing this independence that one day they may be able to venture forth alone, self-guidance having replaced the teacher's supervision.

As to the observations I am about to make, I must beg to be allowed to cull incidental examples from my own long experience as a teacher of philosophy, for unfortunately the experiences of others are not at my disposal.

Let me take up first the requirements imposed on the teacher and then go on to those placed on the pupil. Once a student of mine, endeavoring to reproduce a Socratically conducted exercise, presented a version in which he put the replies now into the teacher's mouth, now into the pupil's. Only my astonished question, "Have you ever heard me say 'yes' or 'no'?" stopped him short. Thrasyarchus saw the point more clearly; in Plato's *Republic* he calls out to Socrates: "Ye gods! . . . I knew it . . . that you would refuse and do anything rather than answer" [Plato, *The Republic*, Paul Shorey, tr., in Loeb Classical Library, London, New York, p.41]. The teacher who follows the Socratic model does not answer. Neither does he question. More precisely, he puts no philosophical questions, and when such questions are addressed to him, he under no circumstances gives the answer sought. Does he then remain silent? We shall see. During such a session we may often hear the despairing appeal to the teacher: "I don't know what it is you want!" Whereupon the teacher replies: "I? I want nothing at all." This certainly does not convey the desired information. What is it, then, that the teacher actually does? He sets the interplay of question and answer going between the students, perhaps by the introductory remark: "Has anyone a question?"

Now, everyone will realize that, as Kant said, "to know what questions may reasonably be asked is already a great and necessary proof of sagacity and insight" [Kant, *Critique of Pure Reason*, p.97]. What about foolish questions, or what if there are no questions at all? Suppose nobody answers?

You see, at the very beginning the difficulty presents itself of getting the students to the point of spontaneous activity, and with it arises the temptation for the teacher to pay out a clue like Ariadne's thread. But the teacher must be firm from the beginning, and especially at the beginning. If a student approaches philosophy without having a single question to put to it, what can we expect in the way of his capacity to persevere in exploring its complex and profound problems?

What should the teacher do if there are no questions? He should wait -- until questions come. At most, he should request that in the future, in order to save time, questions be thought over in advance. But he should not, just to save time, save the students the effort of formulating their own questions. If he does, he may for the moment temper their impatience, but only at the cost of nipping in the bud the philosophical impatience we seek to awaken.

Once questions start coming -- one by one, hesitantly, good ones and foolish ones -- how does the teacher receive them, how does he handle them? He now seems to have easy going since the rule of the Socratic method forbids his answering them. He submits the questions to discussion.

All of them? The appropriate and the inappropriate?

By no means. He ignores all questions uttered in too low a voice. Likewise those that are phrased incoherently. How can difficult ideas be grasped when they are expressed in mutilated language?

Thanks to the extraordinary instruction in the mother tongue given in our schools, over half of the questions are thus eliminated [note]. As for the rest, many are confused or vague. Sometimes clarification comes with the counterquestion: "Just what do you mean by that?" But very often this will not work because the speaker does not know what he means himself. The work of the discussion group thus tends automatically either to take up the clear, simple questions or to clear up unclear, vague ones first.

We are not so fortunate in the problems of philosophy as we are in the problems of mathematics, which, as Hilbert says, fairly call to us: "Here I am, find the solution!" The philosophical problem is wrapped in obscurity. To be able to come to grips with it by framing clear-cut, searching questions demands many trials

and much effort. It will therefore scarcely surprise you to learn that a semester's work in a seminar in ethics yielded nothing except agreement on the fact that the initial question was incongruous. The question was, "Is it not stupid to act morally?"

Of course, the instructor will not submit every incongruous question to such protracted examination. He will seek to advance the discussion through own appraisal of the questions. But he will do no more than allow a certain question to come to the fore because it is instructive in itself or because threshing it out will bring to light typical errors. And he will do this by some such expedient as following the question up with the query: "Who understood what was said just now?" This contains no indication of the relevance or irrelevance of the question; it is merely an invitation to consider it, to extract its meaning by intensive cross-examination.

What is his policy as regards the answers? How are they handled? They are treated like the questions. Unintelligible answers are ignored in order to teach the students to meet the requirements of scientific speech. Answers, too, are probed through such questions as:

"What has this answer to do with our question?"

"Which word do you wish to emphasize?"

"Who has been following?"

"Do you still know what you said a few moments ago?"

"What question are we talking about?"

The simpler these questions, the more flustered the students become. Then, if some fellow student takes pity on his colleague's distress and comes to his aid with the explanation, "He surely wanted to say . . .," this helpful gesture is unfeelingly cut short with the request to let the art of mind reading alone and cultivate instead the more modest art of saying what one actually wants to say.

By this time you will have gathered that the investigations run a far from even course. Questions and answers tumble over one another. Some of the students understand the development, some do not. The latter cut in with groping questions, trying to reestablish contact, but the others will not be stopped from going ahead. They disregard the interruptions. New questions crop up, wider of the mark. Here and there a debater falls silent; then whole groups. Meanwhile, the agitation continues, and questions become constantly more pointless. Even those who were originally sure of their ground become confused. They, too, lose the thread and do not know how to find it again. Finally, nobody knows where the discussion is headed.

The bewilderment famed in the Socratic circle closes in. Everyone is at his wit's end. What had been certain at the outset has become uncertain. The students, instead of clarifying their own conceptions, now feel as though they had been robbed of their capacity to make anything clear by thinking.

And does the teacher tolerate this too?

"I consider," says Meno to his teacher Socrates, in the dialogue bearing his name, "that both in appearance and in other respects you are extremely like the flat torpedo fish; for it benumbs anyone who approaches and touches it. . . . For in truth I feel my soul and my tongue quite benumbed and I am at a loss what answer to give you" [Plato, *Meno*, W. R. M. Lamb, tr., in Loeb Classical Library, London, New York, 1924, IV, 297].

When Socrates replies, "It is from being in more doubt than anyone else that I cause doubts in others," Meno counters with the celebrated question: "Why, on what lines will you look, Socrates, for a thing of whose nature you know nothing at all?" And this draws from Socrates the more celebrated answer: "Because the soul should be able to recollect all that she knew before" [*Ibid.*, pp.299 ff.]. We all know that these words are an echo of the Platonic doctrine of ideas, which the historic Socrates did not teach. Yet there is in them the Socratic spirit, the stout spirit of reason's self-confidence, its reverence for its own self-sufficient strength. This strength gives Socrates the composure that permits him to let the seekers after truth go astray and stumble. More than that, it gives him the courage to send them astray in order to test their convictions, to separate knowledge simply taken over from the truth that slowly attains clarity in us through our own reflection. He is unafraid of the confession of not-knowing; indeed, he even induces it. In this he is guided by

an attitude of thinking so far from skeptical that he regards this admission as the first step toward deeper knowledge. "He does not think he knows . . . and is he not better off in respect of the matter which he did not know?" he says of the slave to whom he gives instruction in mathematics. "For now he will push on in the search gladly, as lacking knowledge" [Plato, *Meno*, p. 313].

To Socrates the test of whether a man loves wisdom is whether he welcomes his ignorance in order to attain to better knowledge. The slave in the *Meno* does this and goes on with the task. Many, however, slacken and tire of the effort when they find their knowledge belittled, when they find that their first few unaided steps do not get them far. The teacher of philosophy who lacks the courage to put his pupils to the test of perplexity and discouragement not only deprives them of the opportunity to develop the endurance needed for research but also deludes them concerning their capabilities and makes them dishonest with themselves.

Now we can discern one of the sources of error that provoke the familiar unjust criticisms of the Socratic method. This method is charged with a defect which it merely reveals and which it must reveal to prepare the ground on which alone the continuation of serious work is possible. It simply uncovers the harm that has been done to men's minds by dogmatic teaching.

Is it a fault of the Socratic method that it must take time for such elementary matters as ascertaining what question is being discussed or determining what the speaker intended to say about it? It is easy for dogmatic instruction to soar into higher regions. Indifferent to self-understanding, it purchases its illusory success at the cost of more and more deeply rooted dishonesty. It is not surprising, then, that the Socratic method is compelled to fight a desperate battle for integrity of thought and speech before it can turn to larger tasks. It must also suffer the additional reproach of being unphilosophical enough to orient itself by means of examples and facts.

The only way one can learn to recognize and avoid the pitfalls of reflection is to become acquainted with them in *application*, even at the risk of gaining wisdom only by sad experience. It is useless to preface philosophizing proper with an introductory course in logic in the hope of thus saving the novice from the risk of taking the wrong path. Knowledge of the principles of logic and the rules of the syllogism, even the ability to illustrate every fallacy by examples, remains after all an art *in abstracto*. An individual is far from learning to think logically even though he has learned to conclude by all the syllogistic rules that Caius is mortal. The test of one's own conclusions and their subjection to the rules of logic is the province of one's faculty of judgment, not at all the province of logic. The faculty of judgment, said Kant, being the power of rightly employing given rules, "must belong to the learner himself; and in the absence of such a natural gift no rule that may be prescribed to him for this purpose can ensure against misuse" [Kant, *Critique of Pure Reason*, p.178]. If, therefore, this natural gift is weak, it must be strengthened. But it can be strengthened only by exercise.

Thus, after our instructor breaks the spell of numbness by calling for a return to the original question, and the students trace their way back to the point from which they started, each must, by critical examination of every one of his steps, study the sources of error and work out for himself his own school of logic. Rules of logic derived from personal experience retain a living relation with the judgments they are to govern. Furthermore, the fact that dialectics, though indispensable, is introduced as an auxiliary only prevents attaching an exaggerated value to it in the manner of scholasticism, to which the most trivial metaphysical problem served for the exercise of logical ingenuity. Segregation of the philosophical disciplines with a view to reducing the difficulties of instruction by separate treatment would be worse than a waste of time. Other ways will have to be found to satisfy the pedagogic maxim that our requirements of the pupil should become progressively more stringent.

This question, if examined carefully, presents no further difficulties for us. If there is such a thing as a research method for philosophy, its essential element must consist of practical directives for the step-by-step solution of problems. It is therefore simply a question of letting the student himself follow the path to the regressive method. The first step, obviously, is to have him secure a firm footing in experience -- which is harder to do than an outsider might think. For your adept in philosophy scorns nothing so much as using his intelligence concretely in forming judgments on real facts, an operation that obliges him to remember those lowly instruments of cognition, his five senses. Ask anyone at a philosophy seminar, "What do you see on the blackboard?" and depend on it, he will look at the floor. Upon your repeating, "What do you see *on the*

blackboard?" he will finally wrench out a sentence that begins with "If" and demonstrates that for him the world of facts does not exist.

He shows the same disdain for reality when asked to give an example. Forthwith he goes off into a world of fantasy or, if forced to stay on this planet, he at least makes off to the sea or into the desert, so that one wonders whether being attacked by lions and saved from drowning are typical experiences among the acquaintances of a philosopher. The "if" sentences, the far fetched examples, and the premature desire for definitions characterize not the ingenuous beginner but rather the philosophically indoctrinated dilettante. And it is always he, with his pseudo-wisdom, who disturbs the quiet and simple progress of an investigation.

I recall a seminar in logic, in which the desire to start from general definitions -- under the impression that otherwise the concepts being discussed could not be employed -- caused much fruitless trouble. Despite my warning, the group stuck to the opening question: "What is a concept?"

It was not long before a casual reference to the concept "lamp" as an example was followed by the appearance of the "lamp in general" provided with all the essential characteristics of all particular lamps. The students waxed warm in vehement dispute regarding proof of the existence of this lamp furnished with all the essential features of all particular lamps. My diffident question, whether the lamp-in-general was fed with gas, electricity, or kerosene, went unanswered as unworthy of philosophical debate until, hours later, the resumption of this very question of the source of energy forced the negation of the existence of the lamp-in-general. That is to say, the disputants discovered that different illuminants for one and the same lamp, be it ever so general, were mutually exclusive. Thus, starting with practical application, they had unexpectedly found the law of contradiction by the regressive method. But to define the concept of a concept had proved a vain endeavor; just as in the Socratic circle the definitions nearly always miscarried.

Are we justified, however, in assuming that the cause of such failures always lies in conditions unconnected with the Socratic method itself? Does not this method perhaps suffer from an inherent limitation that makes the solution of deeper problems impossible?

Before coming to a final decision on this point, we must consider one more factor that creates difficulty in the employment of the Socratic method. Though intimately associated with the latter, it lies outside it, yet demands consideration before we can set the limits of the method itself.

The significance of the Socratic dialogue has been sought in the assumption that deliberating with others makes us more easily cognizant of truth than silent reflection. Obviously, there is much soundness in this view. Yet many a person may be moved to doubt this praise after he has listened to the hodgepodge of questions and answers at a philosophical debate and noted the absence, despite the outward discipline, of the tranquility that belongs to reflection. It is inevitable that what is said by one participant may prove disturbing to another, whether he feels himself placed in a dependent position by intelligent remarks or is distracted by poor ones. It is inevitable that collaboration should progressively become a trial of nerves, made more difficult by increasing demands on personal tact and tolerance.

To a great extent these disturbances can be obviated by an instructor who, for instance, will ignore the innumerable senseless answers, cast doubt on the right ones with Socratic irony, or ease nervous unrest with some understanding word. But his power to restore harmony to the play of ideas is limited unless the others are willing to pursue the common task with determination.

It should be admitted that many disturbances are unavoidable because of the students' imperfect understanding; but the obstacles I have in mind do not lie in the intellectual sphere and for that reason even the most skillful teacher finds them an insurmountable barrier. He can enforce intellectual discipline only if the students are possessed of a disciplined will. This may sound strange but it is a fact that one becomes a philosopher, not by virtue of intellectual gifts but by the exercise of will.

True, philosophizing demands considerable power of intellect. But who will exercise it? Surely not the man who relies merely on his intellectual power. As he delves more deeply into his studies and his difficulties multiply, he will without fail weaken. Because of his intelligence he will recognize these difficulties, even see them very clearly. But the elasticity required to face a problem again and again, to stay with it until it is solved, and not to succumb to disintegrating doubt -- this elasticity is achieved only through the power of an iron will, a power of which the entertaining ingenuity of the mere sophist knows nothing. In the end, his

intellectual fireworks are as sterile for science as the intellectual dullness that shrinks back at the first obstacle. It is no accident that the investigators whom the history of philosophy records as having made the most decisive advances in dialectics were at the same time philosophers in the original meaning of the word. Only because they loved wisdom were they able to take upon themselves the "many preliminary subjects it entails and [so] much labor," as Plato says in a letter that continues:

For on hearing, this, if the pupil be truly philosophical, in sympathy with the subject and worthy of it, because divinely gifted, he believes that he has been shown a marvelous pathway and that he must brace himself at once to follow it, and that life will not be worth living if he does otherwise. . . .

Those, on the other hand, who are in reality not philosophical, but superficially tinged with opinions -- like men whose bodies are sunburnt on the surface -- when they see how many studies are required and how great labor, and how the disciplined mode of daily life is that which benefits the subject, they deem it difficult or impossible for themselves. [Plato, *Epistles*, pp.527 ff.]

That is the clear and most definite characteristic of "those who are luxurious and incapable of enduring labor, since [the test] prevents any of them from ever casting the blame on his instructor instead of on himself and his own inability to pursue all the studies which are necessary to his subject" [Plato, *Epistles*, p.527 ff.].

"In one word, neither receptivity nor memory will ever produce knowledge in him who has no affinity with the object, since it does not germinate to start with in [*sic*] alien states of mind" [Plato, *Epistles*, p.539].

We, in common with Plato, require of the philosopher that he strengthen his will power, but it is impossible to achieve this as a by-product in the course of philosophical instruction. The student's will power must be the fruit of his prior education. It is the instructor's duty to make no concession in maintaining the rigorous and indispensable demands on the will; indeed, he must do so out of respect for the students themselves. If, for the want of requisite firmness, he allows himself to be persuaded to relax his stand, or if he does so of his own accord to hold his following, he will have betrayed his philosophical goal. He has no alternative: he must insist on his demands or give up the task. Everything else is abject compromise.

Of course, the student should know the details of the demands to be made on his will. They constitute the minimum required for examining ideas in a group. This means, first, the communication of thoughts, not of acquired fragments of knowledge, not even the knowledge of other people's thoughts. It means, further, the use of clear, unambiguous language. Only the compulsion to communicate provides a means of testing the definiteness and clarity of one's own conceptions. Here, protesting that one has the right feeling but cannot express it will not avail. Feeling is indeed the first and best guide on the path to truth, but it is just as often the protector of prejudice. In a scientific matter, therefore, feeling must be interpreted so that it may be evaluated in accordance with concepts and ordered logic. Moreover, our investigation demands the communication of ideas in distinctly audible and generally comprehensible speech, free from ambiguities. A technical terminology is not only unnecessary for philosophizing but is actually detrimental to its steady progress. It imparts to metaphysical matters, abstract and difficult in any case, the appearance of an esoteric science, which only superior minds are qualified to penetrate. It prevents us from considering the conclusions of unprejudiced judgment, which we have seen to be the starting point of meaningful philosophizing. Unprejudiced judgment, in its operation, relies on concepts that we have, not on artificial reflections, and it makes its conclusions understood by strict adherence to current linguistic usage.

In order to grasp those concepts clearly it is necessary, of course, to isolate them. By the process of abstraction it is possible to separate them from other ideas, to reduce them gradually to their elements, and through such analyses to advance to basic concepts. By holding fast to existing concepts, the philosopher guards himself against peopling his future system with the products of mere speculation and with fantastic brain children. For, if he does not consult unprejudiced judgment, he will allow himself to be lured into forming philosophical concepts by the arbitrary combination of specific characteristics, without any assurance that objects corresponding to his constructions actually exist. Only the use of the same vocabulary still connects him with the critical philosopher. He denotes his artificial concept by the same word the critical philosopher uses to denote his real concept, although, to be sure, he uses this word in a different sense. He says "I" and means "cosmic reason." He says "God" and means "peace of mind." He says "state" and means "power subject to no law." He says "marriage" and means "indissoluble communion of love." He says

"space" and means "the labyrinth of the car." His language is full of artificial meanings. Although it is not apparent, his is actually a technical language; and because this is so, the situation is far more dangerous than it would be if the philosopher indicated the special sense of his language by coining specific new terms. For the sameness of the words tricks the unwary into associating their own familiar concepts with them, and a misunderstanding results. What is more pernicious, this artificial language tempts its own creator to the covert use of the same words in different meanings, and by such a shift of concepts he produces sham proofs. In this abuse of purely verbal definitions we encounter one of the most prevalent and profound of dialectical errors, an error that is rendered more difficult to track down by the fact that the shift of concepts cannot be discovered simply by calling on intuition. However, it betrays itself through its consequences, through the curious phenomenon that with the help of the same verbal definition the pseudoproof presented can be confronted with a contrary proof that has the same air of validity.

The most celebrated and memorable instance of such antitheses is found in the [antinomies](#) that Kant discovered and solved. Kant said of these classic examples of contradiction that they were the most beneficent aberration in the history of reason because they furnished the incentive to investigate the cause of the illusion and to reconcile reason to itself. This remark is applicable to every instance of such dialectical conflict.

It will seem, perhaps, that in these last considerations we have strayed somewhat from our subject: the requirement that the student use distinctly audible and generally comprehensible language. But, as a matter of fact, we have secured a deeper understanding of the significance of that requirement.

After all that we have said, what is it that we gain with this demand on the pupil? Only those who, by using comprehensible language, adhere to the concepts we have and become practiced in discussing them will sharpen their critical sense for every arbitrary definition and for every sham proof adroitly derived from such verbal definition. If the requirement of simple and clear language is observed, it is possible, in Socratic teaching, merely by writing the theses of two mutually contradictory doctrines on the blackboard, to focus attention on the verbal definition underlying them, disclose its abuse, and thereby overthrow both doctrinal opinions. The success of such a dialectical performance is achieved -- and this is its significant feature -- not by flashes of inspiration but methodically, i.e., through a step-by-step search for the hidden premise at the bottom of the contradictory judgments. This method will succeed if the student, struck with suspicion at such a sophism, attends closely to the meaning of the words, for these words, when used in an inartificial [*sic*] sense, put him on the track of the error.

Do not misunderstand me. I do not advocate the point of view that so-called common sense and its language can satisfy the demands of scientific philosophizing. Nor is it my purpose, in dwelling on simple elementary conditions seemingly easy to fulfill, to veil the fact that the pursuit of philosophizing requires rigorous training in the art of abstraction, one difficult to master. My point is this: We cannot with impunity skip the first steps in the development of this art. Abstraction must have something to abstract from. The immediate and tangible material of philosophy is language which presents concepts through words. In its wealth, supplied from many sources, reason dwells concealed. Reflection discloses this rational knowledge by separating it from intuitive notions.

Just as Socrates took pains to question locksmiths and blacksmiths and made their activities the first subject of discussion with his pupils, so every philosopher ought to start out with the vernacular and develop the language of his abstract science from its pure elements.

I am now done with the requirements that apply to the students. Their difficulty lies not in the fulfillment of details but in the observance of the whole. I said earlier that the working agreement with the students requires of them nothing but the communication of their ideas. You will understand if I now express the same demand in another form: It requires of the students submission to the method of philosophizing, for it is the sole aim of Socratic instruction to enable the students to judge for themselves their observance of the agreement.

Our examination of the Socratic method is nearing its conclusion. Now that we have discussed the difficulties of its application, there remains only one query: May not the reason for the unfavorable reception of the method lie, in part at least, within itself? Is there not perhaps some limitation inherent in it that restricts its usefulness?

One singular fact, more than any other, is calculated to make us consider this doubt seriously. Fries, the one man who actually completed critical philosophy and restored the Socratic-Platonic doctrine of reminiscence and the self-certainty of intelligence, Fries, the most genuine of all Socrateans, gave the Socratic Method only qualified recognition because he considered it inadequate for achieving complete self-examination of the intellect. He acknowledged its capacity to guide the novice in the early stages; he even demanded emphatically that all instruction in philosophy follow the spirit of the Socratic method, the essence of which, he held, lay not in its use of dialogue but in its "starting from the common things of everyday life and only then going on from these to scientific views" [J.F. Fries, *System der Logik*, 3d ed., reissued, Leipzig, 1914, p.449]. "But as soon as higher truths, further removed from intuition and everyday experience, are involved" [Fries, *Die Geschichte der Philosophie*, I, 253], Fries did not approve of letting the students find these truths by themselves. "Here the instructor must employ a language molded upon subtle abstractions, of which the student does not yet have complete command, and to which he must be educated by instruction" [Fries, *System der Logik*, p.436].

In Fries's own words, this lecture method of instruction "step by step invites cooperative thinking" [*Ibid.*]. An illustration of it is given in his didactic novel, *Julius und Evagoras*. And indeed it is not a form of Socratic instruction.

I should not think of choosing a really successful dialogue of Plato's -- were there such -- as subject matter for a philosophy seminar as it would forestall the creative thinking of the students, but there is nothing in *Julius und Evagoras* to preclude its use for such a purpose. For the development of abstract ideas which it presents to the reader does indeed "invite" critical verification by the students, as Fries desires. However, though otherwise exemplary, it offers no assurance that the students will accept the invitation or, if made to stand on their own feet, that they will master such difficulties as they may encounter on their way. Have your students study the fine and instructive chapter on "The Sources of Certainty," and I stand ready to demonstrate in a Socratic discussion that those students will still lack everything that would enable them to defend what they have learned. The key to this riddle is to be found in Goethe's words: "One sees only what one already knows."

It is futile to lay a sound, clear, and well-grounded theory before the students; futile though they respond to the invitation to follow in their thinking. It is even useless to point out to them the difficulties they would have to overcome in order to work out such results independently. If they are to become independent masters of philosophical theory, it is imperative that they go beyond the mere learning of problems and their difficulties; they must wrestle with them in constant practical application so that, through day-by-day dealing with them, they may learn to overcome them with all their snares and pitfalls and diversities of form. However, the instructor's lecture that Fries would have delivered "in language molded upon subtle abstractions," just because of its definiteness and clearness, will obscure the difficulties that hamper the development of this very lucidity of thought and verbal precision. The outcome will be that in the end only those already expert in Socratic thinking will assimilate the philosophical substance and appreciate the solidness and originality of the exposition.

Fries underrated the Socratic method because, for one thing, he did not and could not find the Socratic method in the method of Socrates, and he considered this fact as confirming his opinion of the inadequacy of the Socratic method. Another reason -- and the more profound, I think -- lay in the particular character of Fries's genius. He combined with a sense of truth unparalleled in the history of philosophy a linguistic gift that produced with the assurance of a somnambulist the words that were most appropriate to a philosophical idea. A man with a mind so superior, rich, and free will always find it difficult to maintain close contact with the minds of less independent thinkers. He is prone to overlook the danger of dogmatism that threatens the more dependent mind even when the instructor's lecture has reached the highest degree of lucidity and exactitude of expression. A man of such superiority can become a leader of generations of men. But this is contingent on the appearance of teachers who will find the key to his language by resorting to the "maieutic" services [note] of the Socratic method, instituting the laborious and Protracted exercises that must not frighten away those who plan to dedicate themselves to philosophy.

I maintain that this art has no limitations. I have seen a Socratic seminar not only deal successfully with such an abstract subject as the philosophy of law but even proceed to the construction of its system.

This is claiming a good deal, you will say. Well, I have enough Socratic irony to acknowledge the awkwardness of my position, which, incidentally, I admitted in the opening sentence of my address. For when all is said and done, no one will be won over to the cause I am pleading here except by the evidence of the experiment, that is, through his own experience.

But let us look about us: Can we not find some sufficiently simple and well-known control experiment that permits a valid conclusion on the question at issue? What sort of experiment might that be? If non-Socratically conducted instruction could accomplish the designated end in philosophy, such a procedure should succeed all the more readily in a science that does not have to struggle with the particular difficulties of philosophical knowledge -- a science in which, on the contrary, everything from first to last becomes absolutely and completely clear even when set forth in a dogmatic lecture.

If we inquire whether there is such a science and, if so, whether it has a place among the subjects of instruction in our schools and universities, we find that such a science actually does exist. Mathematics satisfies both conditions. "We are in possession," said a classic French mathematician. The relevant experiment is thus available, and we need only consider its outcome with an unprejudiced mind.

What does it teach? Just among ourselves and without glossing over anything or blaming anyone, we teachers might as well confess to what is a public secret: on the whole the result is negative. We all know from personal experience that diligent and even gifted students in our secondary schools and colleges, if seriously put to the test, are not sure of even the rudiments of mathematics and discover their own ignorance.

Our experiment therefore points to the conclusion I spoke of; as a matter of fact, there is no escaping it. Suppose someone were to say there is no such thing as understanding, regardless of the kind of instruction. That is arguable, but not for us as pedagogues. We start from the assumption that meaningful instruction is possible. And then we must come to the conclusion that, if there is any assurance that a subject can be understood, Socratic instruction offers such assurance. And with that we have found more than we sought, for this conclusion applies not only to philosophy but to every subject that involves comprehension.

An experiment conducted by history itself on a grand scale confirms the fact that the pedagogic inadequacy in the field of mathematics is not due merely to incompetent teachers but must have a more fundamental cause; or, to put it differently, that even the best mathematics instruction, if it follows the dogmatic method, cannot, despite all its clearness, bring about thorough understanding. This experiment deserves the attention of everyone interested in the teaching of mathematics.

The basic principles of calculus (nowadays included in the curricula of some of our high schools) became the secure and acknowledged possession of science only about the middle of the nineteenth century, when they were first established with clarity and exactitude. Although the most important results had been a matter of general knowledge ever since Newton and Leibniz, their foundations remained in dispute. Endlessly repeated attempts at elucidation only resulted in new obscurities and paradoxes. Considering the state of this branch of mathematics at that time, Berkeley was not unjustified when he undertook to prove that in the unintelligibility of its theories it was not one whit behind the dogmas and mysteries of theology [George Berkeley, *The Analyst; or a Discourse Addressed to an Infidel Mathematician, Wherein It Is Examined Whether the Object, Principles, and Inferences of the Modern Analysis Are More Distinctly Conceived, or More Evidently Deduced, Than Religious Mysteries and Points of Faith*. Selected Pamphlets, Vol. XVI, London, 1734]. We know today that those riddles were solvable, that, thanks to the work of Cauchy and Weierstrass, they have been solved, and that this branch of mathematics is susceptible of the same clarity and lucidity of structure as elementary geometry. Here, too, everything becomes evident as soon as attention is focused on the decisive point. But it is precisely this that is hard to achieve, an art each student must acquire by his own efforts.

To demonstrate how true this is, I shall mention two especially noteworthy facts. The first is this: Newton's treatise, widely known and celebrated since its appearance, not only expounds the decisive point of view established by Cauchy and Weierstrass but formulates it with a clarity, precision, and succinctness that would satisfy the most exacting requirements contemporary science could lay down. Moreover, it contains an explicit warning against that very misunderstanding which, as we now know, kept succeeding generations of mathematicians so completely in bondage that their minds remained closed to the emphatic "Cave!" of the classic passage in Newton's work [Isaac Newton, *Philosophiae naturalis principia mathematica*, 1687) Liber Primus, scholium], familiar to all of them.

The second, the complement, as it were, of the first, is that, even after Weierstrass and after the argument had at long last been settled, it was possible to revive it not only among dilettanti, whom we shall always have with us, but even under the leadership of a man of research as distinguished for his work on the theory of functions as Paul du Bois-Reymond. In his own words, his "solution is that it remains and will remain a riddle" [Paul du Bois-Reymond, *Die allgemeine Funktionentheorie*, Tübingen, 1882, Pt. I, p.2].

There is an impressive warning in this instance of the disparity between the objective lucidity and systematic completeness of a scientific theory, on the one hand, and any pedagogic assurance that it will be understood, on the other. It is precisely the man with a philosophical turn of mind who is unwilling, in mathematics as elsewhere, simply to accept a result; he philosophizes about it, i.e., he strives to understand its fundamentals and bring it into harmony with the rest of his knowledge. But it is just he who is sure to fail unless he is one of the few who find their way to clarity by their own efforts. We thus discover that even mathematics, instead of remaining the unassailable standard and model that might help philosophy, is drawn along by it into the whirlpool of confusion.

Herewith, I believe, I have also answered the weightiest comment I know on the value of the Socratic method in teaching mathematics. It comes from no less a man than Weierstrass. He devoted a special essay to the Socratic method [Karl Weierstrass, *Mathematische Werke*, Berlin, 1903, III, Appendix, 315-329], an indication of the esteem and comprehension this profound mathematician and pedagogue had for our subject. His detailed argument is proof of this. He demonstrated the basic practicability of the Socratic method in philosophy and pure mathematics, in contradistinction to the empirical sciences. That he nevertheless rated it as of little value for use in the school was due, for one thing, to the fact that he considered insurmountable the external difficulties which undeniably exist, and which I have dwelt on extensively. For another, he was obviously partial to the coherent lecture with its large perspectives and architectonic beauty of structure, a partiality easily understandable in a scientist of his genius. Still, he admitted that such a lecture "presupposes students of rather more mature intelligence, if it is to be effective." Since, however, it was also his opinion that "the Socratic method, carried out in its true spirit. . . is less suitable for boys than for more mature youths," one is impelled to ask (but in vain) how maturity of mind can develop that will assure success to a non-Socratic mode of instruction.

What maturity of mind our students must have if they are to surpass Paul du Bois-Reymond, the pupil of Weierstrass, and Euler, the pupil of Newton, in depth of understanding!

Our findings might lead us to pessimism. But, if we view the matter rightly, we are not yet finished. What we have found actually indicates the way we can remove the cause of this lamentable state of affairs, which itself can hardly be regarded pessimistically enough.

The way lies in mathematics. It is within the power of the mathematicians to end the scandal that not only has completely undermined the authority of philosophy but also threatens mathematics itself with the loss of the prestige that, thanks to its powerful position in education, it has until now maintained in the intellectual life of mankind. In view of the deplorable situation in which the cause of the Socratic method finds itself, help can come only through a science that combines the several advantages I have discussed, advantages that only mathematics has and that assure it a head start which philosophy can never overcome by its own efforts.

The character and repute of mathematics as a science still stand quite firm. In the long run, the evidence of its results cannot be obscured by any teaching, however wretched, and it will always offer a means of orientation though all else be plunged into darkness and confusion. I therefore appeal to the mathematicians. May they become aware of the spiritual power they hold and of their consequent mission of leadership in the fields of science and education. Philosophy, cannot now assume the role, originally hers, of guardian of the intellectual values whose fate is bound up with that of the Socratic method. Having disowned her stepchild and thus deprived herself of its vitalizing and rejuvenating influence, philosophy has become so infirm that she must now beg of her sister science asylum and aid for her cast-off daughter.

Though I said at the beginning that a sense of chivalry has made me champion of the disdained one, I am nevertheless far from blind to my powerlessness. I can fulfill this command of chivalry only by commending my protégée to the care of mathematics -- confident that the outcast will be nurtured by it and grow vigorously until, her strength renewed, she returns to her own home and there establishes law and order, thus requiting with good the evil done her.

[Leonard Nelson \(1882-1927\)](#)[Epistemology](#)[History of Philosophy](#)[Home Page](#)Copyright (c) 2004 [Kelley L. Ross, Ph.D.](#) All [Rights](#) Reserved

The Socratic Method, by Leonard Nelson, Note 1

This is an interesting example. Nelson, of course, was a socialist. Even people who are not really socialists, however, usually object to "profiteering" or "price gouging," which the farmers in question may be thought to have been doing. On the other hand, when governments assume responsibility for agricultural prices, which is what socialists, Nelson, and others may have in mind, they either set the prices too high, or too low, in relation to what the market price would have been. If what we want are market prices, of course, then government intervention is unnecessary, except to make sure that there is free entry into the market and fraud and coercion are not used by transactors.

When governments set agricultural prices too high, through price fixing, price supports, tariffs, and other devices, which is pretty much the policy in the United States, the European Union, and Japan, this obviously makes food cost more to consumers than it would otherwise, and many of the devices require tax money, which also must be extracted from consumers. This protects farmers as a political interest group, though many subsidies end up making their way into the pockets of people whose primary business is not farming, but who know a good deal when they see it. Although a manifestation of at least a partially socialized economy, this merely supplies monopoly [rents](#) to a particular political interest group, at the expense of everyone else. It is a negative sum game and a diseconomy in general. It violates Adam Smith's dictum that the [purpose of production is consumption](#), not the benefit of producers.

When governments set agricultural prices too low, usually through simple price fixing, which may be more what Nelson has in mind and was the practice of the Soviet Union and various post-colonial governments in Africa, this removes any reason for farmers to be in the business or produce food at all. When Russian farmers realized that their crops were simply to be confiscated, they often burned them instead -- something the United States government did in the 1930's to *drive up* prices. Stalin discovered that he could starve to death recalcitrant farmers by seizing *all* their food. Nelson did not live to see Stalin's Terror Famine. He probably would have said that the farmers, after all, were entitled to the fruit of their labor, but then he had never understood how market prices strike the balance between the desires of producers for the highest prices and the desires of consumers for the lowest prices. Just what price will actually balance supply and demand, as Ludwig von Mises and [F.A. Hayek](#) argued, in Nelson's lifetime, cannot be anticipated or calculated by bureaucrats or politicians who cannot know all the variables of either, and who have other incentives and other goals to achieve through price fixing.

Nelson's example, therefore, although superficially appealing now just as it was in 1922, overlooks the consequences of applying the principle he has in mind. Economies can limp along for years with rent seeking farmers or poor agricultural productivity, but it is all on a downward spiral -- in the former case because every business or interest wants its own subsidies, in the latter because food shortages become acute, as in the 1970's when the Soviet Union began importing grain from the United States. Nelson misses the real world aspect of his example, that farmers can withhold their grain only for so long, since they make no money at all in the meantime. And even slight price increases, if there is free trade, mean that foreign suppliers will be eager to jump into the market. When Nelson spoke, the United States had already been contributing food -- free food -- to overcome war-related shortages in Europe.

Nelson's "metaphysical assumption of equal rights to the satisfaction of interests" reflects his own theory of the fundamental principle of [morality](#), which itself is defective. Everyone has an equal right to satisfaction

only of those interests *to which they **have** a right*, like their property. In the economic case, each transactor was thought in the Middle Ages to have a right to a "just price," but a "just price" in practical terms ends up meaning a market price. Nelson, like every socialist since, was uninterested in how that worked.

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The Socratic Method, by Leonard Nelson, Note 2



The original note to the Yale/Dover text runs thus:

Nelson refers, of course, to German schools. The reader may judge to what degree this criticism also applies to schools in the United States and England.

If the editor thought that the schools were perhaps so bad in 1949, it is easy to imagine how appalled he would be at the state of public schools, in both the United States and Britain, in 2004. Now Nelson's prerequisite could easily eliminate *all* questions from students.

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The Socratic Method, by Leonard Nelson, Note 3



The original note to the Yale/Dover text runs thus:

Maieutic: "The word means performing midwife's service (to thought or ideas); Socrates figured himself as a midwife (*maia*) bringing others' thoughts to birth with his questionings; . . ." (H.D. Fowler, *A Dictionary of Modern English Usage* [New York, 1944], p.339.) See the quotation from Plato's *Theaetetus* at the end of this essay.

I have not provided the *Theaetetus* quote. This was, of course, already a middle Platonic dialogue, and the theory midwifery was long removed from the practice of Socrates himself.

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