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Philosophical Methodologies of the Greek Philosophers

Joseph KARUZIS

1 The Origin of Philosophy–a way towards truth and wisdom–

Perhaps the best way to understand the conception of philosophy as an academic subject and its inherent value in life and the internal mechanics of its logical operations is to explore its origins. Western philosophy originated in ancient Greece in the sixth century BC amongst a diverse group of thinkers that came to be known as the pre-Socratic philosophers. These thinkers were discontent with the mythological explanations of the world, and they used the faculty of reason to facilitate abstract conceptualizations and theoretical hypotheses in their search for a rational comprehension of the world. Through the abstractions and observations of the earliest pre-Socratics, these philosophers also realized that nature reveals patterns in its movements that underlie the world and its chaos. If there are patterns, then it is possible to search for a primary substance, and that is a way towards understanding, and a way towards truth and wisdom, and away from chaos. The spark that ignited this superior type of thinking, philosophical thinking, is the capacity to wonder, and both Plato and Aristotle agree on that point. In Plato' s Theaetetus, Socrates and Theaetetus are engaged in a discussion concerning the Heraclitean doctrine that all is motion, and Socrates makes the following remark concerning the origin of philosophy:

Theaetetus: Yes, Socrates, and I am amazed when I think of them; by the Gods I am! And I want to know what on Earth they mean; and there are times when my head quite swims with the contemplation of them.

Socrates: I see, my dear Theaetetus, that Theodorus had a true insight into your nature when he said that you were a philosopher, for wonder is the feeling of a philosopher, and philosophy begins in wonder. (*Theaetetus*, 155D. (Platonis Opera, tr. B. Jowett))

Aristotle acknowledges the truth of Socrates' theory in the following passage from the Metaphysics in which he discusses the nature and origin of philosophy.

That it is not a science of production is clear even from the history of the earliest philosophers. For it is owing to their wonder that men both now begin and at first began to philosophize; they wondered originally at the obvious difficulties, then advanced little by little and stated difficulties about the greater matters, e.g. about the phenomena of the moon and those of the sun and the stars, and about the genesis of the universe. And a man who is puzzled and wonders thinks himself ignorant (whence even the lover of myth is in a sense a lover of wisdom, for myth is composed of wonders); therefore since they philosophized in order to escape ignorance, evidently they were pursuing science in order to know, and not for any utilitarian end. And this is confirmed by the facts; for it was when almost all the necessities of life and the things that make for comfort and recreation were present, that such knowledge began to be sought. Evidently then we do not seek it for

> the sake of any other advantage; but as the man is free, we say, who exists for himself and not for another, so we pursue this as the only free science, for it alone exists for itself. (*Metaphysics*, Book I2, $982^{b}11$-27. (Aristotelis Opera, ed. J. Barnes))

There exists a set of requirements that need to be accomplished or realized in order to establish a society and environment which is conducive to the emergence of wonder. Wonder is a type of passageway or entry point into philosophical analysis, and the rational contemplation of the origins of the universe and the meaning of life itself. It must be that the ancient Greek city of Miletus, in Ionia, in the 6th century BC, when it was flourishing because of robust trade, had existed in conditions that fostered the human ability to wonder. Those conditions were composed of systems that fostered ways of living that provided a sustainable, relatively safe and flourishing city. In addition to that, Thales came from a wealthy family, which was therefore able to further provide for a stable, free and safe environment in which one is able to be engaged with the capacity of wonder. Aristotle stresses that when a person is fully free, i.e., completely independent, in the finest sense of the state of freedom, then he or she is able to access the capacity of wonder and may therefore be able to make investigations into the science that is most free, which, like the philosopher, exists for the sake of itself, that is, in the case of the subject of philosophy, it exists without any dependence upon the other sciences. Inquiries and investigations carried out by the ancient Greek philosophers included studies in astronomy, mathematics, cosmology, ontology, logic, metaphysics, biology and geology. All of these subjects were all part and parcel of the generalized investigations that belonged to natural philosophy.

2 Natural Philosophy

Thales of Miletus is considered to be the first philosopher and the founder of the Milesian school of thought. Thales' way of thinking is regarded as philosophical because it diverged from the common accepted explanations of the world, explanations which were based on mythological cosmogonies. Thales hypothesized naturalistic theories grounded in reason, used proofs to demonstrate his theories, and generalized the conclusions derived from philosophical thinking. His thinking was based on deductive reasoning and logic that led to discoveries in astronomy, mathematics and metaphysics. Thales posited that the first principle in nature from which all things originate was water, and this type of thinking was one of the first analyses of substance, and Aristotle considers this to be directly related to the understanding of matter and form.

> Of the first philosophers, most thought the principles which were of the nature of matter were the only principles of all things; that of which all things that are consist, and from which they first come to be, and into which they are finally resolved (the substance remaining, but changing in its modifications), this they say is the element and the principle of things, and therefore they think nothing is either generated or destroyed, since this sort of entity is always conserved, as we say Socrates neither comes to be absolutely when he comes to be beautiful or musical, nor ceases to be when he loses these characteristics, because the substratum, Socrates himself, remains. So they say nothing else comes to be or ceases to be; for there must be some entity-either one or more than one-from which all other things come to be, it being conserved. Yet

> they do not all agree as to the number and the nature of these principles. Thales, the founder of this school of philosophy, says the principle is water (for which reason he declared that the earth rests on water), getting the notion perhaps from seeing that the nutriment of all things is moist, and that heat itself is generated from the moist and kept alive by it (and that from which they come to be is a principle of all things). He got this notion from this fact, and from the fact that the seeds of all things have a moist nature, and that water is the origin of the nature of moist things. (*Metaphysics*, Book I3, 983^{b}6-27.)

For Thales, the arche, the originating principle of all matter was water. He reached this conclusion by his observations of the natural world, observations that originated from wonder. Also, his investigations into the natural world were accompanied by the capacity to generalize. Life requires water. Oceans, lakes and rivers are filled with life, and all animals require a clean supply of water in order to continue life processes. Trees, plants and seed bearing vegetables also all require water to germinate and grow. Perhaps investigations into the biological processes of various types of living organisms led Thales to the conclusion that water is the originating principle. In addition to that, with the assistance of Aristotle' s advanced terminology, Thales' s thinking concerning the nature of water is framed in quite complex philosophical terminology and abstraction, and it is a type of analytical thinking that earned him the recognition and position as the first philosopher in the ancient Greek tradition. Even if Thales was not in his own capacity using the advanced terminology developed by Aristotle, the complexity and abstraction needed to propose the theory that water is the primary substance requires wonder, reason, abstraction, and generalization. The theoretical

substructure provided by Aristotelian terminology and thought assists with the comprehension and analyses of those abstractions. The *arche*, or primary substance, or originating principle, or first principle, of Thales, is analyzed by Aristotle as being the substratum, the underlying foundation upon which all life springs forth.

Anaximander, a student of Thales, is the second Greek philosopher that belongs to the Milesian school of thought, i.e. the Ionian school of natural philosophy. Anaximander is credited for constructing a sundial, and for calculating solstices and equinoxes, and he is also credited for creating a map of the Earth, and a celestial globe, which has been lost to history. The cosmological theory of Anaximander influenced all of ancient Greek thought, and he posited the concept of the *apeiron*, (the boundless, the unlimited, the infinite, or indefinite) to be the arche, or the primary substance of all things. Aristotle raises the subject of infinity as it relates to the apeiron in the following passage.

> The physicists, on the other hand, all of them, regard the infinite as an attribute of a substance which is different from it and belongs to the class of the so-called elements-water or air or what is intermediate between them. (*Physics*, IV4, 203^{a}16-19.)

The *apeiron* is not one of the four classical elements, that being fire, air, water and earth. The classical elements are what all matter found in the perceptible world is composed of. The *apeiron*, the boundless, is the ultimate and unlimited from which all things come. The apeiron is the boundless. It is eternal and infinite, and it is non-perceptible. It made no sense to Anaximander to posit that a perceptible, naturally occurring element would be prior to any

of the other elements found in the world, for if something is prior, it is infinite and non-perceptible. In positing the *apeiron*, Anaximander, through reasoning and observation, abstraction and generalization, went beyond the idea that it was perceptible matter out of from which all things come. For Anaximander there had to be a foundation lying beyond the classical elements that is prior and boundless.

3 Physicists' material indefiniteness and infinity lead to introduce Plato's forms and Aristotelian potentiality

Greek philosophers subsequent to Anaximander had to examine and confront his theories, including Aristotle.

> The physicists on the other hand have two modes of explanation. The first set makes the underlying body one-either one of the three or something else which is denser than fire and rarer than air-then generate everything else from this, and obtain multiplicity by condensation and rarefication. (Now these are contraries, which may be generalized into excess and defect. Compare Plato's 'Great and Small' -except that he makes these his matter, the one his form, while the others treat the one which underlies as matter and the contraries as differentiae, i.e. forms.) The second set asserts that the contrarieties which are contained in the one emerge from it by segregation, for example Anaximander and also all those who assert that what is is one and many, like Empedocles and Anaxagoras; for they too produce other things from their mixture and segregation. These differ, however, from each other in that the former imagines a cycle of such changes, the latter a single series. (*Physics*, I4,187^{a}12-25.)

The physicists, i.e. the Ionian natural philosophers, posited that there were two fundamental ways in which the universe came into existence. The first way, or, first mode of explanation as presented by Aristotle, is in reference to the philosophical conceptions of Thales as water being the first principle of all things. Multiplicities arise out of the natural change of states of matter found within the water cycle. During condensation, the state of water changes from a gas to a liquid, and during rarefication the opposite occurs, water is made less dense, i.e., into a gas. Aristotle immediately makes reference to Plato' s theory of forms as a comparison to Thales' s conception of the universe. For Plato there exist transcendent forms that underlie all matter, yet this theory is criticized by Aristotle and is answered in part with the positing of immanent forms. For Aristotle it is writ large that the forms are immanent and are not transcendent. The second mode of explanation is the theory that it is the apeiron that is the first principle, the arche, which was posited by Anaximander. Multiplicities are formed out of the boundless through segregation, i.e., through separation and division. Aristotle asserts in the following passage that the *apeiron* cannot exist without the classical elements.

> The same argument applies to all, proving that there is no single one of them out of which they all originate. But neither is there anything else beside these four-something intermediate, e.g., between Air and Water (coarser than Air, but finer than Water), or between Air and Fire (coarser than Fire, but finer than Air). For the supposed intermediate will be Air and Fire when a pair of contrasted qualities is added to it; but, since one of every two contrary qualities is a privation, the intermediate never can exist-as some thinkers assert the 'Boundless' or the 'Environing' exists-in isolation. It is, therefore, indifferently any one of them, or else it is

nothing. (*On Generation and Corruption*, II5, 332[a]19-26.)

Aristotle finds it quite troubling that Anaximander posited that the arche is the apeiron and not a specific element found in nature as the prime candidate for the primary substance. The four classical elements are characterized by sets of contrasting qualities, (hot, cold, wet, and dry), and these contrasting qualities or attributes create a constant state of strife amongst the classical elements. When two opposite elements are mixed together, such as air and water, the quality of the element that is existing with the greatest quantity acts as a privation on the opposite element. That is, if there is a greater amount of water than air, then we will observe condensation, and if the opposite occurs, rarefication will be observed. Contrary qualities act as privations, and there is no intermediate existing between those qualities or the elements that those qualities belong to. The *apeiron* is also quite troubling for Aristotle because it introduces the idea of infinity as the foundation for all things found in the world.

> Nor can an infinite body be one and simple, whether it is, as some hold, a thing over and above the elements (from which they generate the elements) or is not thus qualified. There are some people who make this the infinite, and not air or water, in order that the other elements may not be annihilated by the element which is infinite. They have contrariety with each other-air is cold, water moist, fire hot; if one were infinite, the others by now would have ceased to be. As it is, they say, the infinite is different from them and is their source. (*Physics*, III5, 204[b]22-28.)

Again, it is the contrary qualities found within the four classical

elements that Aristotle appeals to in his criticism of Anaximander' s *apeiron*. If infinity existed in any one of the elements then the remaining elements would be destroyed. The concept of infinity is a difficult concept for Aristotle. Aristotle posited that the cosmos is finite, and so are extensions and things found within the cosmos. Infinity does exist potentially for Aristotle in the sense that certain processes are infinite.

> But on the other hand to suppose that the infinite does not exist in any way leads obviously to many impossible consequences: there will be a beginning and an end of time, a magnitude will not be divisible into magnitudes, number will not be infinite. If, then, in view of the above considerations, neither alternative seems possible, an arbiter must be called in; and clearly there is a sense in which the infinite exists and another in which it does not. Now things are said to exist both potentially and in fulfillment. Further, a thing is infinite either by addition or by division. Now, as we have seen, magnitude is not actually infinite. But by division it is infinite. (There is no difficulty in refuting the theory of indivisible lines.) The alternative then remains that the infinite has a potential existence. (*Physics*, III6, 206^{a}9-17.)

In some ways, then, the infinite exists, and in other ways it does not. Infinity exists potentially and is furthermore expressed through processes such as addition and division. Therefore, infinity exists for Aristotle in a mathematical sense, it exists potentially as an expression of mathematical processes, yet it does not exist as in the sense that Anaximander posited, as the primary substance of all things. Aristotle' s cosmos is finite, but the movements of the stars and celestial objects have no beginning and no end

and are therefore in a sense potentially infinite. For Aristotle, however, there cannot be a principle of the infinite, because that would contain internal contradictions that would render such a concept indefensible.

> We cannot say that the infinite exists in vain, and the only power which we can ascribe to it is that of a principle. For everything is either a principle or derived from a principle. But there cannot be a principle of the infinite, for that would be a limit of it. Further, as it is a principle, it is both uncreatable and indestructible. For there must be a point at which what has come to be reaches it end, and also a termination of all passing away. That is why, as we say, there is no principle of this, but it is this which is held to be the principle of other things, and to encompass all and to steer all, as those assert who do not recognize, alongside the infinite, other causes, such as Mind or Friendship. Further, they identify it with the Divine, for it is deathless and imperishable as Anaximander says, with the majority of the physicists. Belief in the existence of the infinite comes mainly from five considerations: From the nature of time-for it is infinite; From the division of magnitudes-for the mathematicians also use the infinite; again, if coming to be and passing away do not give out, it is only because that from which things come to be is infinite; again, because the limited always finds its limit in something, so that there must be no limit, if everything is always limited by something different from itself. Most of all, a reason which is peculiarly appropriate and presents the difficulty that is felt by everybody-not only number but also mathematical magnitudes and what is outside the heaven are supposed to be infinite because they never give out in our thought.

(*Physics*, III4,203^{b}5-25)

It is made plain and evident in the above passage found in the *Physics* that infinity exists for Aristotle in a potential sense, in the sense that certain mathematical processes exhibit unlimited iterations. Aristotle also states that Anaximander believed that the *apeiron* was divine, because it exists without limit and is itself outside of destruction and extinction.

4 Socrates on elenchus (refutation by dialectic method)

In the expositions of the philosophies of Thales and Anaximander, several philosophical methodologies that were cultivated in ancient Greece were presented as passageways towards philosophical thinking. Another fundamental philosophical methodology that emerged from ancient Greece was the Socratic method. Socrates, even though he did not write anything, developed the elenctic method of argument, also known as the Socratic method of inquiry. The method of *elenchus* is a particular form of dialectic that is composed of questions and answers that incite refutation and scrutiny. Aristotle presents the philosophical achievements of Socrates in the following passage from the *Metaphysics*:

> But it was natural that Socrates should seek the essence. For he was seeking to deduce, and the essence is the starting-point of deductions. For there was as yet none of the dialectical power which enables people even without knowledge of the essence to speculate about contraries and inquire whether the same science deals with contraries. For two things may be fairly ascribed by Socrates-inductive arguments and universal definition, both of which are concerned with the starting-point of science. But

> Socrates did not make the universals or the definitions exist apart; his successors, however, gave them separate existence, and this was the kind of thing they called Ideas. (*Metaphysics*, XIII4, $1078^{b}22$-32.)

In distinction from his predecessors who philosophized mostly about cosmology and the nature of the universe, Socrates was in addition to all of that concerned with ethics and issues concerning human nature. This is illustrated most lucidly in the dialogues of Plato, in which Socrates is a main character. The Socratic method is characterized by a series of techniques including questioning by an individual to another individual or interlocutors in order to gain knowledge and wisdom and to expose false beliefs. The Socratic method of inquiry is also known as the dialectical method. In Book VI of Plato' s *Republic*, Socrates and Adeimantus are engaged in dialectic in order to acquire knowledge concerning the essence of a philosopher.

> *Socrates*: And let us ask and answer in turn, first going back to the description of the gentle and noble nature. Truth, as you will remember, was his leader, whom he followed always and in all things; failing in this, he was an impostor, and had no part or lot in true philosophy. *Adeimantus*: Yes, that was said.
> *Socrates*: Well, and is not this one quality, to mention no others, greatly at variance with present notions of him?
> *Adeimantus*: Certainly, he said.
> *Socrates*: And have we not a right to say in his defence, that the true lover of knowledge is always striving after being-that is his nature; he will not rest in the multiplicity of individuals which is an appearance only, but will go on-the keen edge will not be blunted,

nor the force of his desire abate until he have attained the knowledge of the true nature of every essence by a sympathetic and kindred power in the soul, and by that power drawing near and mingling and becoming incorporate with very being, having begotten mind and truth, he will have knowledge and will live and grow truly, and then and not till then, will he cease from his travail.

Adeimantus: Nothing, he said, can be more just than such a description of him.

Socrates: And will the love of a lie be any part of a philosopher's nature? Will he not utterly hate a lie?

Adeimantus: He will.

Socrates: And when truth is the captain, we cannot suspect any evil of the band which he leads?

Adeimantus: Impossible.

Socrates: Justice and health of mind will be of the company, and temperance will follow after?

Adeimantus: True, he said. (*Republic*, Book VI, 490.)

In their search for the true nature of the philosopher, Socrates raises a series of questions to Adeimantus which require logical and commonsensical answers for the attainment of knowledge. The statements and questions posed by Socrates elicit responses from his interlocutor. The search for the true nature of the philosopher is dialectical in nature, and Socrates' insights are utilized to generate thinking and logical responses which both deepen and clarify that search. Adeimantus is in agreement with the questioning carried out by Socrates which is a typical component of Plato's dialogues. It is with these special capacities of skillfulness in dialectic and reasoned questioning by which Socrates conducted his philosophical investigations. Questioning is a

type of reasoning, and this type of reasoning is also what is called inquiry. Hintikka defines inquiry as the following:

> **Inquiry**: (1) The action of seeking for truth, knowledge, or information about something; search research, investigation, examination. (2) The action of asking or questioning; interrogation. (*What If...Toward Excellence in Reasoning*, p. 4.)

Hintikka formulated the interrogative model of reasoning based on the internal mechanics and processes involved with the Socratic method of inquiry, namely, the mechanics and logic of questioning. Some of the mechanics and processes involved within the Socratic method of inquiry are outlined by Hintikka in the following passage:

> The ultimate conclusion at which Socrates is tacitly aiming is usually the denial of an assertion his discussion partner had made in the beginning of the dialogue. The only essential thing here is that the questioning procedure has a definite end or aim. From the point of view of our general theory of reasoning, it does not matter how this predetermined ultimate conclusion comes about, for example, whether it is put forward by one of the dialogue partners, whether it is the denial of such an assertion, whether it is agreed by all parties, or whether it is chosen by a lone investigator...In a Socratic dialogue, the source of answers is normally the dialogue partner's tacit knowledge. Hence the questions might as well have been asked by Socrates' s dialogue partner himself. Socrates' s role is to guide the choice of the questions. These features do not characterize interrogative reasoning in general. Usually we are

dealing with only one inquirer who chooses his or her questions without the help of a mentor like Socrates. This peculiarity of the Socratic questioning method is what lends it its special flavor. For Socrates' s role in his partner' s reasoning is like the role of the partner' s own intellectual conscience, as it were. Socrates tells him what he ought to ask even though the other person may be perfectly capable of choosing questions on his own. (*What If...Toward Excellence in Reasoning*, p. 167.)

5 What Aristotle succeeded from Socratic inquiry of the thing itself

Aristotle was a student in the Academy for twenty years, and he learned about the ways of the Socratic method of inquiry directly from his teacher Plato. Aristotle' s brilliance as a philosopher and his capacity for logic, classification and categorization expedited the development of theories of inquiry that were more precise and intricate than anything presented by Plato, Socrates, or any of the pre-Socratics. In the following passage Chiba examines the relationship between Aristotelian methods of inquiry and Socratic inquiry:

> Aristotle' s inquiry theory is, no doubt, to be located within the traditional framework he inherited from his predecessors. In a fundamental way, Socratic inquiry into the thing itself or, more generally, into the identity of a thing, largely determines the nature and course of inquiry theory in the Academy. In this sense, Socrates sets strict identity as the goal of inquiry. He wants to know what things are in themselves, taken by themselves, and not in relation to other things. Thus, Socratic inquiry into *what it is* (*ti esti*) provides a touchstone for the success (or failure) of any

> general theory of inquiry. This extends to Aristotle's own theory of inquiry. If its employment is limited in scope and fails to lead to knowledge of such objects or items, Aristotle's theory of demonstration will not constitute an attractive method of inquiry in terms of scope and function. (*Aristotle on Heuristic Inquiry and Demonstration of What It Is*, pg. 174.)

The Socratic method of inquiry into the thing itself is an essential part of Plato's and Aristotle's theories of inquiry. In the above passage Chiba is concerned about possible limiting components within methods of inquiry in the determination of knowledge. If a general theory of inquiry, such as Plato's theory of division, which is based on induction, does not demonstrate that which is causally prior, then a philosopher cannot determine the substance of a thing. Plato's theory of division is based on induction, and even if it is successful at identifying causes, this is not sufficient for Aristotle because if a general theory of inquiry fails to provide definitions that are composed of a unity, then it fails to demonstrate what the substance of the subject of inquiry is, and is therefore limited in its ability in determining causal structures.

> According to Aristotle, this is an insurmountable shortcoming to the method of division, since a theory of demonstration must outline the explanatory conditions which establish what is prior. Aristotle intends his own theory to overcome the limitations in the theory of division so as to meet the unity condition of thing itself by specifying for each object of inquiry into *what it is*. To succeed in this endeavour, Aristotle must show the superior efficacy of his method of demonstration by indicating how demonstration of *what it is* and of substance is possible and how it overcomes the

shortcomings inherent in the theory of division as well as other rival theories. The shortcomings of these theories, he contends, are made clear when they are syllogized according to his underlying logic. (*Aristotle on Heuristic Inquiry and Demonstration of What It Is*, pg.175.)

One of the ways in which Aristotle' s method of demonstration overcomes the shortcomings of Plato' s theory of division and other general theories of inquiries is the presentation of the categories. In his treatise *Categories*, Aristotle locates every object of human comprehension, awareness, and thought, into one of ten categories in order to specify all of the things which could be considered to be a subject or a predicate of a proposition. Substance, or ousia, is the first, most primary, and most important of the categories because it cannot be predicated of anything. Aristotle presents the categories in the following passage.

> Of things said without any combination, each signifies either substance or quantity or qualification or a relative or where or when or being-in-a-position or having or doing or being-affected. To give a rough idea, examples of substance are man, horse; of quantity: four-foot, five-foot; of qualification: white, grammatical; of a relative: double, half, larger; of where: in the Lyceum, in the market-place; of when; yesterday, last-year; of being-in-a-position: is-lying, is-sitting; of having: has-shoes-on, has-armour-on; of doing: cutting, burning; of being affected: being-cut, being-burned. (*Categories*, $1^{b}25$-$2^{a}4$.)

The classification of every object of human comprehension in the

Categories is the foundation of inquiry for many of Aristotle carried out the philosophical investigations of unity and priority conditions of substance as the investigation of *being-qua-being* found within the *Metaphysics* and the construction of deductive logic. Substance is the first category of being. On the importance of the categories and the impact on the ability for a philosopher to have knowledge of substance Brentano states the following.

> The course of this chapter has shown that the categories bear the name "being" all with respect to one being, namely, with respect to the being of the first category. It would be more proper to say of every other category that it is of a being than that it is a being. Hence it is substance which has being in the preeminent sense, i.e., which is not only something, but simply is. There are many senses in which something can be first, but substance is among all being the first in every sense, in concept, in cognition, as well as in time. Its being is the terminus to which all stand in analogy, just as health is the terminus with respect to which everything that is healthful is called healthful, either because it has it, or because it brings it about, or shows it, etc. If now metaphysics is the science of being as such, then it is clear that its main object is substance. For in all cases of such analogies science treats mainly of the first, upon which others depend, and from which they receive their name. Hence the first philosopher must research the principles and grounds of substance. His primary, most distinguished, and in a sense only, task is to consider what it is. (*On the Several Sense of Being in Aristotle*, pg. 148.)

The philosopher is now equipped with several philosophical

methodologies and theories of inquiry that assist in investigations into truth. The capacity to wonder is a faculty of intelligence that commences inquiries into truth, being and substance. This wonder is the desire to comprehend something with the faculties of reasoning, with knowledge of its proper definition. Observations and perceptions of the natural world analyzed through reason and logic and considered philosophically in the most general sense leads to *epistēmē*, or scientific knowledge. The Socratic method of inquiry is the backbone of advanced theories of inquiry, including the interrogative model such as 'What a thing is' . Plato presents the theory of division that is criticized by Aristotle for its incomplete treatment of prior causes. Then in turn, Aristotle, with great technicality and philosophical and logical acuity presented a set of ideas in the *Posterior Analytics* and the *Metaphysics* that served as investigations in the science of *being qua being* and the search for *epistēmē*.

In addition to the theory of heuristic inquiry analyzed by Chiba, Aristotle also incorporated the endoxic method and the aporetic method into his philosophical investigations. The endoxic method is an examination of *endoxa*, i.e., the accepted opinions and beliefs of other philosophers. The aporetic method is another philosophical methodology incorporated into Aristotle' s investigations, and it is centered on an examination and attempted resolution of existing *aporias*, or puzzles, that are part of a particular philosophical subject of inquiry.

The philosopher possesses the knowledge to analyze the components of the syllogism and the dialectical syllogism of public speech, the probable statement within the rigorous logical system. Probable opinions, along with possession of the understanding of the first principles and the starting points of demonstration, assist the philosopher in his or her quest for truth. The syllogism is a crucial component to Aristotle' s logic and in determining the

validity of an argument. The philosophical tools and methodologies of inquiry invented by the ancient Greek philosophers have had an impact on science, thinking, and pursuits of the truth that cannot be overstated.

6 'Know thyself'

At the entrance to the temple of Apollo at Delphi was inscribed the ancient Greek phrase '*know thyself*.' At his trial for impiety and the corruption of the youth of Athens, Socrates, as here recounted in Plato' s *Apology*, utters a similar, but more compelling phrase during his defense.

> Some one will say: Yes, Socrates, but cannot you hold your tongue, and then you may go into a foreign city, and no one will interfere with you? Now I have great difficulty in making you understand my answer to this. For if I tell you that to do as you say would be a disobedience to God, and therefore that I cannot hold my tongue, you will not believe that I am serious; and if I say again that daily to discourse about virtue, and of those other things about which you hear me examining myself and others, is the greatest good of man, and that the unexamined life is not worth living, you are still less likely to believe me. Yet I say what is true, although a thing of which it is hard for me to persuade you. Also, I have never been accustomed to think that I deserve to suffer any harm. (*Apology*, 38.)

For Socrates, the aphorism '*know thyself*,' takes on a very deep meaning that is crucial in his defense against the charges brought upon him. The philosophizing and investigations that Socrates takes part in are essential and necessary in his search for the good life. Without such philosophizing one

just passes through life without wonder, without focus, and without any concern with what is true and what is not. For Socrates, 'The unexamined life is not worth living,' and therefore the philosopher is compelled to seek what is true, and the conditions and proper activities and investigations that act as passageways to the truth. These aphorisms were relevant to the minds of the ancient Greeks, and they are still relevant today to modern philosophers that seek the truth, and attempt to disentangle lies and hypocrisy that are embedded within arguments that are propagandized as being true. It takes a keen insight, dedication, and a possession of the proper philosophical tools in order to partake in such important investigations. These tools are imparted during education, and if a student is able to acquire such tools, he or she will be better equipped to navigate the complexities inherent in the modern world. It seems in terms of categorization, a person would be considered to be a generalist or a specialist, yet, as Chiba posits in the following passage, it is important that today' s world citizens possess the characteristics and qualities of both the generalist and the specialist.

> On the other hand, training in general arts such as dialectic, logic, and mathematics provides a generalist with a basic power of thinking, so that they can quickly analyze concrete matters raised in any subject in terms of formal structure, and put them into analyzed and ordered groups and systems. But generalists may be inclined to be involved in abstract thought so much that they lose contact with concrete realities. This kind of thought is pejoratively described as being like a 'Rocking chair' . They may have a tendency to be aloof from ordinary and basic human matters. We can say, following Kant' s maxim on the relationship between concept and intuition, that without being a specialist, a generalist

> is empty, and without being a generalist, a specialist is blind. Given that these tendencies exist in each discipline, it is important to confirm that a person can be both a generalist and a specialist at the same time. It is because these two types are determined not by the extension of people but by the modes of thinking and the areas of thoughts. If a specialist talks about a general element in his/her activity by pursuing the possibility of general applicability of the particular method and by finding a general underlying method or underlying elements in his/her specific activity, he/she acts as a generalist. This suggests that everybody should try to have both perspectives of being a specialist and a generalist. This will give us a balanced as well as sharp power of thinking. (*What is it like to be a generalist?* p. 57.)

It seems as if the modern world and the systems contained within it has produced more people that hold perspectives that are attributed to specialists rather than generalists. It also seems as though there are not so many philosophers in the world. The complexities that are part of the systems of the modern world seem to necessitate the existence of many different types of specialists. The study of philosophy could be considered to be the most general investigation into the nature of the universe and human life, and therefore those that have studied to become philosophers could also be considered to be generalists. Specialists are necessary in our world for many things, yet if they have formal study in broad range of philosophical areas, it is possible for a specialist to possess the tools of the philosopher, and this will assist the specialist in thinking about and forming generalizations related to his or her activities in the widest sense possible. The possession of the capacity to think philosophically is critical for understanding the endless

complexities modern humans are confronted with because without such a capacity, specialists will be unable to comprehend or perceive that which is most apparent.

It now seems that in order to recognize the most apparent truths, the capacity to produce generalizations based on logic and reason is a necessary and crucial component in such knowledge generation. This is because the capacity to generalize creates a perspective on a situation or idea that goes beyond available data and/or current, i.e. limited knowledge. Perhaps the capacity to generalize about the world is a philosophical tool that was developed in ancient Greece along with the accompanying philosophical methodologies. We find in ancient Greek philosophy many compelling philosophical methodologies, including but not limited to: the capacity to wonder, as found originally in the thinking of Thales and Anaximander, the search for truth through reason and perception, inductive arguments and the search for universal definitions as first ascribed to Socrates and all of the techniques that are part of the Socratic method, the dialectic of Plato and Aristotle, and the classificatory and logical systems of Aristotle. The ability to develop the capacity to form generalizations holds as its foundation the capacity to ask the correct questions.

This type of inquiry was invented by the ancient Greek philosophers, and is utilized today by philosophers that are in pursuit of truth.

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Great Memories at Hokkaido University with Dr. Chiba

It is with great fondness to think back on my days as a graduate student in philosophy at Hokkaido University. Professor Kei Chiba worked with me for years on the study of Greek and ancient Greek philosophy, especially Aristotle, and for that I am very thankful. Our many discussions about Aristotle' s philosophical treatises took place mainly in the offices of Dr. Chiba, and his office in the historical Furukawa Hall was especially wonderful and conducive to the study of philosophy. Sometimes after meeting with Professor Chiba I

would go for long walks on Hokkaido University' s beautiful campus and think about what we had discussed. Professor Chiba and his family also held Christmas parties at their home during the holiday season, and to be welcomed into his home to celebrate the holidays together was indeed very special. It was a great privilege and an honor to be able to study philosophy at Hokkaido University with Professor Chiba. As a teacher and philosopher, Professor Chiba approached his duties with great seriousness and attention to detail and cared deeply about his students. His presence on the campus at Hokkaido University and his classes and seminars uplifted the spirit of the academic community and inspired many, many undergraduate and graduate students to seek meaning, excellence and virtue through hard work.