

Bryan Goodrich
Philosophy 20
Sunday, March 16, 2008

The Socratic Fallacy and the Error of Essentialism
with addendum: Inductive Essentialism?

There are two general positions one can take when it comes to knowledge and predicating some truth of an object. In both cases we identify what it means to know what something is or is not. I will refer to this as its “F-ness,” or simply just F. The Socratic fallacy is declared to be a faulty—invalid—way of thinking which it is supposed that Socrates subscribed to this fallacy. The purpose of this paper will be to assess the two forms of this knowledge claim, whether or not Socrates did subscribe to it and conclude whether or not it is a fallacy. In the latter part of this paper I will demonstrate that it is only an error in essentialism that could possibly make this way of thinking a fallacy.

It will be fruitful to begin this analysis by understanding what it means for something to be a necessary or sufficient condition. The claim that something is a necessary or sufficient condition for some other thing is to express a relationship between the truth of one and the value of the other. If we consider the material implication $F \rightarrow P$, we can describe two conditions to make this statement true. First, this implication tells us that F is a sufficient condition for P because if F is true then P is true to make the implication true. Second, the implication tells us that P is a necessary condition for F because if P were not true, then the implication would be false. Therefore, the implication states that F is a sufficient condition for P and P is a necessary condition for F. Understanding these two conditions will help clarify what exactly the Socratic Fallacy states and entails.

To define the Socratic fallacy we can state it as an implication like the one above, except instead of arbitrary predicates F and P we have statements of knowledge. The two possible implications are listed as:

- (1) If a knows (the form of) F then a knows (any) x is F.
- (2) If a knows (any) x is F then a knows (the form of) F.

From what we know of necessary and sufficient conditions it is clear that (1) claims for someone knowing the form of the predicate F is sufficient for them to know that any object is F. On the other hand, (2) states that if someone claims to know some object is F then it is sufficient for them to know the form of F. The Socratic Fallacy, or SF for short, is what is stated by (2). The first statement should not be controversial since it follows rather clearly that if you know what is meant by F then you can predicate it on an object, e.g., if we know what it means to be round we can clearly identify when we see round objects—empirical verification aside. Thus, the focus will be on the issues with (2).

To ascertain whether Socrates acknowledged the SF as a valid epistemological position, we will compare two competing views: First, we shall evaluate Peter Geach (1966). Geach claims Socrates makes the SF by appealing to (2). However, Geach attaches a further condition he says derives from (2)¹. He adds, “It is no use to try and arrive at the meaning of F by giving examples of things that are F.” We can call this the inductive rejection condition for the Socratic fallacy. The reason for this is that inductive reasoning extrapolates the approximate meaning of some thing from examples; e.g., if we observe what we consider to be swans as white, for every enumeration of swans we encounter, then we conclude that being white is a property of being a swan. This kind of position is tentative, because some k^{th} swan we encounter might just happen

¹ It is not clear exactly how this is derived, but he associates it with Socrates’ position in regard to the SF. I will not take this up in this discussion. What is important is that the condition is theoretically important to whether or not we can say there is a problem with the SF. Whether or not that problem arises can be taken up elsewhere.

to be black, forcing us to re-evaluate what it means to be a swan and whether the white-ness, is a necessary condition in F. Therefore, we can conclude by Geach's criterion that part of the SF is both (2) and this rejection of inductive reasoning, which I will refer to here on as the IR.

This picture Geach paints is very different from Gregory Vlastos'. In (Vlastos 1994), Vlastos states (2) in its contrapositive form², which we will take as semantically equivalent. Vlastos states Geach's position as:

(3) If *a* does *not* know (the form of) F then *a* does *not* know that (any) x is F.

He claims Geach is confusing (3) for (1) and what it means for something to be a necessary or sufficient condition. Vlastos is incorrect in his critique of Geach since Geach does not error unless we say (2) is not semantically the same as (3), but there is no apparent reason to consider that, nor does Vlastos justify it. Additionally, Vlastos does not address the deductive requirement of the SF that Geach demands Socrates holds to with the IR condition. This will appear below as an important factor of whether we have a fallacy or not. If we accept that Geach is correct in his understanding of the Socratic fallacy, and that (2) or (3) are different from (1), then the question relies solely on whether (2) is something Socrates subscribes, and if it is an actual problem.

To investigate whether Socrates accepts the Socratic fallacy we shall consider two of Plato's dialogs and it will be argued that Socrates does, in fact, accept the SF. In Plato's *Euthyphro*,³ we can extract our first premise. Socrates questions Euthyphro a number of times for an answer to what it means to be pious. In short, Euthyphro attempts to satisfy Socrates' desire to know this fact, and we see Euthyphro, frustrated, give up on this line of inquiry. It appears that our casual implication would be Euthyphro claims that some x is F, but he cannot articulate what F is. Therefore, if he does not know F, then he should not be able to say some x is F. Was

² The contrapositive form of "If P then Q" is "If not Q then not P."

³ This, and subsequent texts of Plato's, referenced from (The Internet Classics Archive), Benjamin Jowett, translator.

Socrates' challenge of Euthyphro meaningless? The question seems to imply that his challenge was exactly in correspondence with (3). He does not claim to say Euthyphro is wrong that some x is F , but it seems by Socrates intentions that Euthyphro *really* did not know if this x was F , i.e., whether he really knew if persecuting his father was pious. This is our first casual premise for Socrates' subscription to the Socratic fallacy, which will be further supported below.

Another source of information to the SF comes from Plato's *Apology*. In it, Socrates describes the mission he sets out on, to find someone wiser than he, so that he might go to Delphi and proclaim there must have been a mistake, for Socrates cannot be the wisest of men if he has found someone wiser. Let this be another of our premises, bound with the fact he claims "I will tell you the tale of my wanderings ... which I endured only to find the oracle *irrefutable*" (emphasis mine). He concludes those of high status failed to be wise. The poets were masters of what they say, but they, too, did not *know* the content of what they say; therefore they were not wise of those matters. The artisans and craftsmen were masters of their trade as Socrates was ignorant, but they were as unwise as the rest. It appeared, as Socrates concludes, that he had found no one wiser, but at least Socrates was aware of his ignorance. This is what we can conclude from this literature.

There need, then, be no further proof that Socrates believes he has failed in his mission. The *Apology* provides as much, and the *Euthyphro* demonstrates a case in question. To show Socrates accepts the SF it will suffice to show that he accepts (3), i.e., if someone cannot state the form of F then they must not really know that whatever x they say is F actually is F , or that if someone claims to know some x is F then they can tell us the form of F . Our list of premises and conclusion follow as such:

- (P.1) Socrates has found no one wiser than himself.
- (P.2) Socrates affirms his ignorance of such matters, e.g., piety, for that is why he sought Euthyphro's expertise, but Euthyphro could not supply an account of piety.
- (P.3) Euthyphro failed to provide an answer for F, from (P.2).
- (P.4) If the SF is a valid conditional, then (P.3) will imply that Euthyphro did not truly know if some x were F.
- (P.5) From our casual implication, we can infer that Socrates concludes Euthyphro did not know F, and was not able to truly say that some x was F.
- (C.1) From the premises given, it follows that Socrates accepts the SF as given in (3), and contrapositively in (2). Hence, Socrates subscribes to the Socratic fallacy.

This concise argument draws the direct relation that Socrates did, in fact, most likely adhere to the use of the Socratic fallacy. He asserts the matters of fact as he sees them in the *Apology*, and demonstrates his implied use of it in the *Euthyphro*. The only plausible rejection of this stems from saying Euthyphro did, in fact know x is F, but just could not articulate it, and Socrates was fine with that. That seems to contradict his position in the *Apology*, however. He would have to treat Euthyphro as a poet who has divine knowledge of which he does not know the meaning of that knowledge. But that contradicts Socrates challenge to know about piety, to which Euthyphro *claimed to know* but could not offer an account. Euthyphro later had to reject all accounts given and leave in frustration due to Socrates' questioning. Therefore, it seems implausible to think Socrates did not accept the SF and considered Euthyphro to have knowledge of F, especially since Socrates later claimed in the *Apology* he never met someone with such knowledge.

If we now accept that Socrates subscribed to the Socratic fallacy, it still remains to be examined whether or not the SF actually is a fallacy. Geach, stated above, added a second condition to the Socratic fallacy as Socrates accepted it. He claimed part of (2) in Socrates' usage was that the induction rejection condition must follow. Socrates makes this into a fallacy, by Geach's argument, by rejecting that we can use examples to conclude an approximate property F for which we predicate on the object. Socrates asserts this in Euthyphro's first attempt at

describing what piety is, to which Socrates replies, “Remember that I did not ask you to give me two or three examples of piety, but to explain the general idea which makes all pious things to be pious.” If this IR condition is true, then we are bound to deductive reasoning for which it can be stated that “if a knows F , then it is necessary and sufficient that a knows that some x is F .”⁴

Socrates adopts this biconditional and the IR, but why must the IR condition hold? If it is shown we can relax the IR condition then the SF can be shown not to be fallacious. If it is the case that Socrates requires the IR and it leads to it being fallacious, then the SF, along with the IR condition, is really a fallacy. Since the IR does not seem to be a cogent condition to maintain, the remainder of this essay will examine the IR condition and what really makes the SF a fallacy.

The condition under which (2) is a fallacy rests solely on the IR condition being true. However, this does not seem to work under most normal ways we define things in the real-world. Empirical knowledge, for instance, only approximates truths to some degree of confidence. Like the scientific method, we come to validate claims based on trial and error—based on examples. Contrary to those empirical notions, Socrates seems to be after something essential to F —something that captures F completely. This alternative would be a discrete system of finite values of truth. Mathematics is a good example of such a discrete system. Let’s say we want to define a triangle; we can find necessary conditions grouped together for which they become sufficient to define F . Then we can use this cluster to identify that some x is F . In other words, let $F = \{A, B, C\}$ for some values necessary of being a triangle, e.g., three straight sides, 2-D plane figure, connected vertices, etc. If x has A , B and C , then we can say x is (or belongs to) F , because of A , B and C . However, these kinds of systems articulate from a discrete set of axioms in mathematics, each of which is conditionally accepted and contingently true. Take, for

⁴ Since (1) is not controversial and (2) can be referred to as accepted as the SF, we have between the two of them an “if, and only if statement (iff),” i.e., $P \text{ iff } Q$ entails that P is necessary and sufficient for Q . Therefore, there should be no confusion in referring to the SF as accepting a biconditional statement since (1) adjoins with (2) in this case.

instance, plane, lines and points. You cannot define any of them without the others.⁵ Taken as a whole we develop an axiomatic system that provides us with, for instance, Euclidean geometry. We could, however, alter the axioms and have a non-Euclidean, and sound, geometry. Each of these systems is equally valuable, and what defines F in one system may not work in another system. F becomes contingently true part in parcel on the axiomatic system it adheres to. Even if we admit of such IR systems, like mathematics might be called, we find they do not provide us necessary truths.⁶ We must then evaluate the alternatives.⁷

Since it is the case that essentialism demands something to be necessarily true, and Socrates is after the essential nature of F, he subscribed to the IR, and accepted the SF as a valid rule of inference. Mathematical examples like above fail to provide necessary conditions; thus, we should reject the essentialism we might ascribe to those examples. Furthermore, most natural evaluations come as inductively true, requiring the IR to be false, and thus making the Socratic fallacy, actually, a fallacy. The consequence of this is that we may not ever be able to say something *necessarily* is F, but only that we are confident to say that something is F.⁸ It is a further consequence that when we define something our set F need not be closed or completely known. What defines some x as F may be that F is “good enough” F. In other words, let x obtain 95% of what constitutes F, where $F = \{Y_1, Y_2, \dots, Y_n\}$, then we can be confident that x is “F

⁵ For instance, a plane is defined by describing the place where points reside. A line is defined as an infinite continuum of points. This is why geometry as, say, an algebraic system requires the whole set of axioms to make it what it is, at least at the most rudimentary sense. It takes certain kinds of postulates about what is being described for it to be about something *geometric*.

⁶ A further point to characterize this fact is that the truths of the system depend on an interpretation. Based on logic, the mathematical system, the theory, only obtains truth under an interpretation. In this case, based on the axioms and rules of deduction, etc.

⁷ This mathematical idea of axioms is more adequately explained in section 1.2 of Chapter 1 in Edward Wallace, et al., *Roads to Geometry* (New Jersey: Prentice-Hall Inc., 1998), 7-17. More accurately, the axioms of the system are not even defined. “These terms are known as the *undefined* or *primitive terms* of our axiomatic system,” (pg. 8). All proofs linearly follow definitions back to these undefined terms.

⁸ It may be the case that it is the case it is necessarily implied, but even if that is true, it may not be epistemologically accessible to humanity by the kinds of inferences or knowledge we can obtain. Even if the mathematical representation we build models that necessity, we may never be in a position to justifiably assent to it being true about the world.

enough.” This is a simplified model of how empirical claims are made. Take, for example, all humans vary to some degree, and genetically a small change could be a big difference, but it is not enough that we do not any longer meet some definition of what we call human. The set will never idealistically be closed, and, say, 10,000 years from now we might have something bordering on being human and being not-human, to which we can definitely say IR fails, as it does in other examples of evolution and taxonomy. We are left saying that “human” is not some discrete thing we can identify what is essential to it, but that it obtains only in the members we ascribe to it; human is human inasmuch as we call the members of it human in their similarity. Reality comes in degrees of truth, then, and we can reject the inductive rejection. In other words, accepting inductive truths allows someone to say some x is F , but not precisely identify what F essentially is. At most, we can say (2) works under closed axiomatic systems, but then we have an error in our essentialism since that admits of being contingently true. This is not to say the SF is dangerous, or never true. That is a short coming of the material conditional claiming it necessarily follows. But it does not necessarily follow that to know x is F , is necessary and sufficient to know F . That modal analysis, however, escapes the scope of this paper.

In conclusion, Geach was correct in his assertions about Socrates accepting the Socratic fallacy, and Vlastos was incorrect in saying Geach got his necessary and sufficient conditions mixed up. We all agree on the sufficiency condition, (1). It has been shown that Socrates most likely accepted the necessary condition of knowing F as well, (2). It may be true in some cases, but does not necessary have to hold deductively. It would hold if the inductive rejection was true, but there is no justified reason to accept it, even in some mathematical sense. To appeal to that kind of system is to try and justify the SF by appealing to where the IR may hold, but then we lose the essentialism sought after in that move. Avoiding the error of this essentialism, we have

to consider the fact the Socratic fallacy is a fallacy since it does not hold necessarily. That is not to say it is always wrong, however. Was it the case Socrates was wrong in the Euthyphro case? It will remain a mystery. What seems confidently true is that Socrates accepted the form of the SF and believed in rejecting inductive inferences to discover essential truths about things.

Bibliography

Brown, James Robert. *Philosophy of Mathematics: A Contemporary Introduction to the World of Proofs and Pictures*, 2nd ed. New York: Routledge, 2008.

Geach, Peter. "Plato's Euthyphro," *Monist* 50, no. 3 (1966), computer printout, California State University, Sacramento, 2008.

Jowett, Benjamin, trans., "Apology by Plato," The Internet Classics Archive,
<http://classics.mit.edu/Plato/apology.html> (accessed March 16th, 2008).

———, "Euthyphro by Plato," The Internet Classics Archive,
<http://classics.mit.edu/Plato/euthyphro.html> (accessed March 16th, 2008).

Wallace, Edward C. and Stephen F. West. *Roads to Geometry*, 2nd ed. New Jersey: Prentice-Hall Inc., 1998.

Vlastos, Gregory. "Is the 'Socratic fallacy' Socratic?" in *Socratic Studies*, New York: Cambridge University Press, 1994, computer printout, California State University, Sacramento, 2008.

Appendix

Inductive Essentialism?

The argument for the fallacious nature of the Socratic fallacy rests largely on a rejection of induction. The following argument seeks to expand on the relation between induction and essentialism, to bring a more accurate characterization of what it means for something to have some property. Therefore, this addendum will focus on what is meant by an essential property, and how induction provides adequate characterization of those properties.

The assessment of the Socratic fallacy considered two possible cases where it might apply. What was required of the argument was that essentialism is an accurate description of a property. In short, if something is said to be P, then it necessarily must follow that said object obtains whatever P consists of. In the area of mathematics this description is accurate; however, mathematics has contingent truths within the formal system. Certainly some naturalists (Penelope Maddy, e.g.) might argue for a real-world basis for these formal systems, thus making them not conditional statements, i.e., they won't be of the form "if these axioms are taken as true, then this definition or property is true." If that is even permitted, then it will fall to the second case. Besides these formal systems, we have the real-world examples of how we define what something is. I will return to the mathematical examples as necessary, but I will focus on real-world situations. Since this is the framework this argument will proceed from, the following will be a symbolic way of determining what P essentially consists of when we say "*a* is P."

Consider the abstracted case that "*a* is P." When we say this, we can think of a conditional statement that describes the properties of *a* in such a way that it obtains P. In other words, let's say $P = \{X_1, X_2, \dots, X_n\}$. We have a finite set of properties that it takes for something

to be P. For the moment we will say it must be finite. If this is true, then it is accurate to say “*a* is P because *a* is X_1 , and *a* is X_2 , etc. We can define the predicate we assign *a* in terms of the conditional clause:

if *a* is X_1 , and *a* is X_2 , and ..., *a* is X_n , then *a* is P.

This is a reductionist approach to what it means for something to be P. For instance, if we say “Chris is a dog,” then we are saying that all of the properties which characterize a dog, Chris obtains. These properties may be having four legs, a coat of fur, etc. Of course, many animals belong to the set of things with four legs, or have a coat of fur, etc. What makes it unique to being a dog is that it is the intersection of all the relevant sets which define “dog-ness.”

Therefore, we can really change our clause to a set theoretical definition as follows:

$$a \text{ is } P \leftrightarrow a \in \bigcap_{i=1}^n X_i$$

$$\Rightarrow P \equiv \bigcap_{i=1}^n X_i$$

This simplistic way of describing what it means for something to be P leads to two consequences. Either this intersection is equivalent to the empty set, or it is a set itself we call P, (see figure 1). This conceptual model only holds,

however, given that we have a finite set. The

properties for which *a* might obtain can,

theoretically, be infinite. If that becomes the case, then in our intersection definition of P, *n* is

equal to infinity. To say we have a finite set is either (A) to admit we are only going to define it

given the finite set of knowledge we have for which *a* might obtain said properties, or (B) we

have already set up the set for which to define P. Since (B) is an ad hoc approach that begs the

question, we can only say something is finite given any time *t*, for which we can claim to know *a*

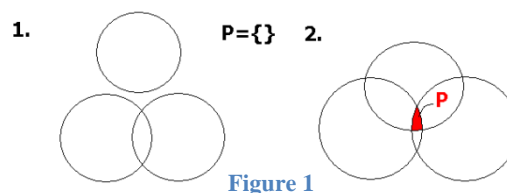


Figure 1

obtains whatever properties it obtains. Consequently, this definition for P becomes time dependent; thus making it contingent on a given set of knowledge at a given time.

Considering that when we define something as obtaining P, we are saying it belongs to a set that is the possibly infinite intersection of properties it can obtain. When we limit it to something precisely that we define, we are saying that within our limited knowledge-set for which we know *a* can obtain, we can say that it is the finite intersection of properties it can obtain. Take, for instance, the basic inductive by enumeration example. If I have a growing knowledge-set for every swan that is observed happens to be white, then we claim that the set of white things is one of the sets in the intersection for what it means to be a swan. If, however, on some k^{th} swan that is observed just happens to be black, then we have to redefine what it means to be a swan. This is an inductive measure and not problematic. It would be like moving from case 2 to case 1 in figure 1. At some time t_0 we observed that the set of white things intersected what it means to be a swan. Later, we found it did not need to be the case. We can then say that case 1 does still state what it means to be a swan, namely, the intersection of the other sets not now excluded. This poses a number of problems.

One problem that becomes apparent if we use an inductive method is that we are never certain if we are correct in claiming the essentialism of P. Not only does the set P become time-contingent, it becomes knowledge-set contingent, too. Consequently, it could also be an empty set, which means P is not even really P. The main problem in this case is that P is not essentially P. Just like the case with mathematics, it becomes contingently P given the state of knowledge we have at any given time. That is how induction works, and is not a problem in that case. For the essentialist, however, it is critical.

A second problem that arises out of this is the reduction problem. There are two possible consequences to which we might arrive: (i) if we continue to reduce the set, by finding a disjoint set that no longer belongs to the intersection family, then we might reduce the set to the empty set; (ii) if we continue to reduce the set, then what something essentially becomes is not what it means to be P. Take, for instance, a mathematical example. We can, through a number of notations, describe numbers in numerous ways. For example, look at the number 7. The number 7 can be described in infinitely many ways, e.g., $6+1$, $5+2$, etc. We can reduce numbers, however, to a set notation. $0 = \{\} = \emptyset$, the empty set. We can then say $1 = \{\emptyset\}$, $2 = \{\emptyset, \{\emptyset\}\}$, $3 = \{\emptyset, \{\emptyset\}, \{\emptyset, \{\emptyset\}\}\}$, etc. We can also say it is equal to $\{\emptyset\}$, $\{\{\emptyset\}\}$, $\{\{\{\emptyset\}\}\}$, respectively. We can call 7 ssssss0, for seven successors from 0.⁹ The problem is apparent if we consider other properties of 7 for which the reductionist position fails to address, such as odd-ness or primeness. These properties of 7 are not explained if we reduce it, because the reduction loses the “higher level” relational properties that give 7 the characteristics that it has. This is a case where reducing mathematics to set theory or logic fails to maintain, in this case, the number theoretical properties of the number. Analogously, if we reduce the set for which P consists, we may very likely lose what it means to be P.

The essentialist position grows weak if it has to be contingently true, and suffers from a problem of reduction. Induction, however, does not have an issue with these under certain circumstances. In the outset, the point of essentialism is to capture that “something” we can call P, but it does not seem to be a finite set for which we can say “that is P.” That is the error of essentialism. Instead, if we permit, an “inductive essentialism” more accurately captures what we are trying to achieve by saying “a is P” and then figuring out what it means to be P. The reason

⁹ This takes the assumption of what 0 actually is, otherwise, we still have to give a definition for what 0 is. It may be, under an axiomatic system, a primitive term. See Wallace, et al., *Roads to Geometry*, for more.

induction can solve these problems inherent in defining the properties of our predicate are that induction only looks for degree of accuracy. It does not require a precise and discrete set that is P. Using fuzzy set theory, in addition to our inductive method of obtaining what P consists, we can correctly define P.

The idea of inductive essentialism consists of defining a conceptual range, that can be adaptive to changes over time and knowledge, to assess the degree of membership some a will have to the set defined by this range. Therefore, expanding on the old definition, we can redefine P as such:

$$P \equiv (a < \bigcap_{i=1}^{\infty} X_i < b)$$

This definition says that “ a is P” implies a obtains, to a high enough degree, the properties for which we characterize P. Therefore, if we say “ a is a chicken” then we are saying “ a is chicken-enough.” We are not looking for a Platonic Chicken (with a capital-C) for which we see if a resembles. In fact, since nothing can be as perfect as the Form, we are well aware that we can only inductively decide whether something actually is “chicken-enough.” There is a problem with this concept, however. How do we understand the bounds? That is the real question we should ask when we are trying to determine what P actually is.

The idea of inductive essentialism takes care of the problems that arise in how we try to assess what characterizes some property P. It more accurately shows what is meant when we say of what that P consists.

However, it also brings up a new issue that is at the heart of analysis, and for which no easy answer can be given. Looking to (Brown 2008) for inspiration, maybe a picture will help. As

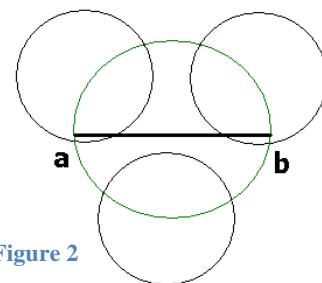


Figure 2

Figure 2 demonstrates,¹⁰ the sets in our infinite intersection, which at any given time can be considered finite to a current-state knowledge-set, need not even produce a set. In other words, P , by our first definition, could be empty.¹¹ What the length (a,b) provides is the size of a fuzzy set placed over the convergence of this intersection family. It is not as if the set is arbitrarily decided, but it is what we are aiming at when we take an intersection family. In other words, if we asymptotically look at the intersection family, it will consist of the empty set. In the limit to that empty set (where eventually all relevant sets may become disjoint from our definition of P) there is a convergence. Where we establish the length (a,b) provides the lower and upper bounds of our conceptual space through which we define P .

With the addition of this fuzzy containment we can take any real-world example and determine what it means to be any P , given that what we are observing is “ P -enough” at any given time. In the case of the mathematical reduction problem, this model also proves a solution. Whether we look at 7 as a prime, or as a series of successors simply depends on which boundary you are looking at when defining 7. It is the case that both definitions are true, but both describe radically different things *given the context* we define the bounds for. It is not that we have two different 7’s, but that we are “drilling down” in the intersection family to a point that is effective for our purposes. Seven being prime is useful in number theory, but looking at the logical arithmetic by defining it as successors we do not need that prime characterization. Therefore, reducing it becomes fruitful. In the real-world, we can define anything at the molecular, atomic

¹⁰ It should be noted that this is purely conceptual. There is no set “space” through which we can define an actual length and measure. The point is about a fuzzy inclusion by capturing “enough” of the rings whether they completely intersect or not. The inclusion will focus on a convergence point to which the intersections gravitate toward.

¹¹ It doesn’t have to be empty, but I will deal with the extreme case. Even if we do ultimately have a finite convergence to a single set, that set may be meaningless, just as defining something too broadly is an overgeneralization that becomes meaningless. The fuzzy set that encompasses what we are trying to get out of P still remains the aim of this model.

or sub-atomic level, but none of those give us the macro-level characteristics that we deal with as humans. Therefore, the scope we are viewing P in becomes critical to how we define it, because in that determination we establish the length (a,b). Lastly, looking to the basic enumeration example, whether we want to include the black swan in our set of being swans really just depends on how we define our taxonomy of the organisms. Maybe the different characteristic means it is not a swan anymore. It is through this kind of fuzzy membership that we get a picture much like how our sciences operate.

What Socrates looked for in searching for the form of something, e.g., piety, was to find the essential characteristic that made any instance of it in reality match that form. Whether or not Socrates subscribed to the induction rejection is irrelevant, because how we can really make the determination is inductively. Such a form does not exist, and even if we abstract it like a mathematical form, it still is the case its cogency depends on a degree inductively determined in reality. That determination is the process of deciding the bounds for which the characteristics we discover for P converge. It can be found many definitions can be discovered, depending on the level you reduce your bounds. If one goes too far, then they may end up with nothing, and if they go too broad, then they speak too general. The goal is to find the balance so that we define some P appropriately. What makes it appropriate? That depends on the context of what is being defined. But the answer does not rest within some object, inherent to its property, as a static form we can carry with us as a weight and measure to point to anything similar saying “that is P.” Instead, we enumerate our data of like objects and see what relates between them. The convergence of that property allows us to make use of what we can call P. This may not prove a solution to the Euthyphro Dilemma, but it may, nevertheless, lend support to his first approach at defining piety.