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Letter from the Editors

It is a great pleasure and privilege to present the 18th volume of *The Hemlock Papers*. *The Hemlock* strives to feature exemplary undergraduate scholarship and promote fruitful discourse. We chose to call for a wide range of philosophical subjects this year; the enclosed works, we hope, will present the reader with a richly diverse set of perspectives, styles of argument, and academic engagement.

I want to give special thanks to the members of the PST society for thoughtfully reviewing our paper submissions. We had to conduct all of the journal's proceedings remotely this year, so I'm especially proud of the work we all put in to make this happen. I would also like to thank our chapter advisor, Dr. Graham Hubbs, and administrative assistant Omni Francetich for their unwavering support throughout this process.

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Proof that Intuitionistic Logic is not Three-Valued

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Abstract: In this paper, we give an introduction to intuitionistic logic and a defense of it from certain formal logical critiques. Intuitionism is the thesis that mathematical objects are mental constructions produced by the faculty of *a priori* intuition of time. The truth of a mathematical proposition, then, consists in our knowing how to construct in intuition a corresponding state of affairs. This understanding of mathematical truth leads to a rejection of the principle, valid in classical logic, that a proposition is either true or false (put symbolically, $a \vee \sim a$). The rejection of this principle leads to a different system of formal logic. This logic has been critiqued as being three-valued in such a way that it is self-contradictory. That this is a misunderstanding of intuitionistic logic can be proven formally on the basis of Heyting's axioms and rules of inference for intuitionistic logic. A proposition that is neither true nor false does not, on an intuitionist view, have some third truth value, but lacks any truth value whatsoever. In the process of proving that this is the case we will also prove several other theorems which will give us some insight into the formal similarities and differences between intuitionistic and classical mathematics, specifically with regard to the validity of different proof techniques.

I. Introduction

Intuitionism is the theory that mathematics is derived from the universal *a priori* intuition of time. Time is understood by intuitionism as an essential structure of experience which cannot be derived from experience, but which first makes experience itself possible. As Kant puts it, "Time is not an empirical concept that is somehow drawn from an experience. For simultaneity or succession would not themselves come into perception if the representation of time did not ground them *a priori*" (Kant 1998, 162). It is this universal temporal structure of experience, on the intuitionist view, which ultimately grounds mathematical truth. For example, the formal structure "two" is, first and foremost, a structure of time, the basic form of which is one experience following another (Brouwer 1981, 4–5).

Intuitionistic logic is the logical system which gives the rules of mathematical inference valid according to such a constructivist

philosophy of mathematics. Although initially developed by L. E. J. Brouwer, intuitionistic logic was not formalized until Andrei Kolmogorov's "On the principle of the excluded middle," which was published in 1925 but not widely known outside of the Soviet Union (van Atten 2017). As such, we will mainly be dealing here with Arend Heyting's formalization and axiomatization of intuitionistic logic.

Philosophically, intuitionism is interesting because it means that mathematics is non-contingent and non-empirical, being derived as it is from a universal intuition, but mathematical objects are still mental constructions. This is opposed to the Platonist view that mathematical objects exist independently of time and human consciousness. Because of this, mathematical statements are not true or false independently of our knowledge of them on the intuitionist view. So, what is a tautology in classical logic, the law of excluded middle (put symbolically, $a \vee \sim a$), is not universally valid in intuitionistic logic. A proposition in intuitionistic logic simply does not have a truth value until it has been proven true or false. This has been misinterpreted as meaning that there are three possible truth values in intuitionistic logic. If this were the case, intuitionistic logic would be inconsistent and thus, insofar as intuitionism demands this reform of mathematical logic, intuitionism would be implausible as a philosophy of mathematics. Our aim in this paper is to give a brief introduction to intuitionism and intuitionistic logic, before proceeding to give a formal proof that intuitionistic logic is not three-valued. From this it follows that intuitionism cannot be rejected on these formal grounds.

II. Intuitionism as a Philosophy of Mathematics and the Proof Interpretation

Though intuitionism has its roots in Kant and Schopenhauer, its father, properly speaking, is the Dutch mathematician and philosopher L. E. J. Brouwer. For Brouwer, mathematical knowledge is based on an *a priori* intuition of time preceding empirical experience (van Atten 2015). This intuition is pre-linguistic and pre-conceptual, meaning that mathematics can by no means be seen to derive from logic (as on a logicist view), and it gives mathematics a peculiar content independent of its being expressed in a formal system, meaning that mathematics can by no means be seen to derive from such a formal system (as on a formalist view). Further, this intuition does not give us access to objects existing independently of us. It is merely a spontaneous act of our own

ego, meaning that mathematics can by no means be seen as a way of describing an independently existing realm of objects (as on a Platonist view).

Insofar as mathematics is grounded in such pre-conceptual and pre-linguistic acts of intuition for Brouwer, logic loses its normative significance of giving to mathematics the principles of valid inference. Rather, what inferences are valid will be based on the nature of this faculty of intuition itself, which logic can only describe (van Atten 2015). Further, insofar as mathematical objects do not exist prior to or independently of such acts of intuition, a mathematical proposition ρ will only be true insofar as "we have (or have a method to obtain) a mental construction that is correctly described by ρ " (van Atten 2015, 86). This implies that a mathematical proposition a can be, at the same time, both not true and not false. This is because it is entirely possible that we have neither a method to construct in intuition the state of affairs a nor a method to transform any construction of a into a contradiction. Thus, the principle of excluded middle ($a \vee \sim a$) is not valid in intuitionistic logic.

Another important tautology in classical logic is double negation elimination, which says that a proposition a is not false if and only if a is true (put symbolically, $\sim\sim a \equiv a$). That this is also not true for all a in intuitionistic logic should be clear, insofar as this would imply the principle of excluded middle. However, a deeper reason as to why it is not intuitionistically valid can be seen by an examination of the proof interpretation. The proof interpretation is a way of translating our familiar logical symbols into the language of intuitionism, so as to be about our possessing or not possessing methods of constructing mathematical objects in intuition rather than about the ideal holding or non-holding of mathematical states of affairs. Similar versions of the proof interpretation were developed independently by Heyting and Kolmogorov. On this interpretation, we define the truth of $a \wedge b$ as our having a proof for a and a proof for b (where "proof" is understood, for mathematical but not merely formal logical propositions, as a method for construction in intuition) (van Dalen, 2013). The statement $a \vee b$ is defined as a pair $\langle x, y \rangle$ where x is a positive integer and the truth of $a \vee b$ consists in y proving a if $x = 0$ and y proving b if $x \neq 0$. The truth of $a \supset b$ consists in our having a method to convert any proof of a into a proof of b . \perp is a statement that is, in principle, unprovable. It is equivalent to a contradiction. The truth of $\forall x \in D (\rho(x))$ consists

in our possessing a method to prove that b falls under the concept p (put symbolically, $p(b)$) from any b such that b is in the set D (put symbolically, $b \in D$). The statement $\exists x \in D (p(x))$ is defined as a pair (b, c) where the truth of $\exists x \in D (p(x))$ consists in the truth of $b \in D$ and in c 's being a proof for $p(b)$. Finally, the truth of $\sim a$ consists in our possessing a construction that converts any proof of a into a proof of \perp (Moschakis 2009). It should be clear from this why $\sim\sim a \equiv a$ is not valid. That $\sim\sim a$ means we possess a method to convert any construction that converts a proof of a into a contradiction into a contradiction. In other words, the truth of $\sim\sim a$ is equivalent to a 's being non-contradictory, which does not amount to our having a method to construct a and so is insufficient to show that a is true on an intuitionist view (van Dalen 2013).

III. Formal Proof that Intuitionistic Logic is not Three-Valued

One objection to intuitionistic logic, raised by the Belgian mathematicians Marcel Barzin and Alfred Errera, is that it is three-valued and therefore inconsistent. Their attempt to prove this was flawed in multiple ways, notably in their use of theorems that are not intuitionistically valid and in their insistence that one who denies the law of excluded middle must accept the negation of it, effectively applying the law of excluded middle in a discussion where this law itself is in question (Mancosu and van Stigt 1998). They used the term "tierce" to refer to a hypothetical third value and denoted " p is tierce" by p' . By a tierce proposition they understood one that was not only undecided but undecidable and so at the same time not true and not false (Mancosu 2010). In other words, $p' \supset (\sim p \wedge \sim(\sim p))$ (Church 1928). Thus, there cannot be a tierce proposition, because if there were then it would both be false and not false.

That this is not the only way to think about a three-valued logic can be seen by the fact that Łukasiewicz had already developed a consistent three-valued logic by leaving the third value formally undefined (Mancosu 2010). By distinguishing between a formal level and a meta level, it becomes possible to say that a proposition is both not true and not false on the meta level without asserting that the contradictory $\sim p \wedge \sim(\sim p)$ is a theorem on the formal level. Nonetheless, intuitionistic logic is distinct from such many-valued logics because a proposition in intuitionistic logic that is neither true nor false does not have

some third truth value. Rather, it lacks a truth value altogether, only having one if or when we have a valid proof or disproof of it.

There have been various different attempts to refute the claim that intuitionistic logic is three-valued in Barzin and Errera's sense and therefore inconsistent. Of these, we will draw primarily on the work of Ukrainian mathematician Valery Glivenko, who proved that the assertion of a third truth value is invalid in intuitionistic logic. Although we will be essentially using Glivenko's proof for this refutation, we will attempt to reconstruct this proof directly from Heyting's axioms for a formalized intuitionistic logic, which are given as follows (Heyting 1998):

$$\underline{2.1 \ a \supset (a \wedge a)}$$

$$\underline{2.11 \ (a \wedge b) \supset (b \wedge a)}$$

$$\underline{2.12 \ (a \supset b) \supset ((a \wedge c) \supset (b \wedge c))}$$

$$\underline{2.13 \ ((a \supset b) \wedge (b \supset c)) \supset (a \supset c)}$$

$$\underline{2.14 \ b \supset (a \supset b)}$$

$$\underline{2.15 \ (a \wedge (a \supset b)) \supset b}$$

$$\underline{3.1 \ a \supset (a \vee b)}$$

$$\underline{3.11 \ (a \vee b) \supset (b \vee a)}$$

$$\underline{3.12 \ ((a \supset c) \wedge (b \supset c)) \supset ((a \vee b) \supset c)}$$

$$\underline{4.1 \ \sim a \supset (a \supset b)}$$

$$\underline{4.11 \ ((a \supset b) \wedge (a \supset \sim b)) \supset \sim a}$$

From these axioms and Heyting's "rules of operations" (the most important of which are that, if a and b are valid, then $a \wedge b$ is valid and if $a \supset b$ is valid and a is valid, then b is valid), we can determine all the theorems of intuitionistic logic.

In what follows, we are mostly concerned with proving the theorem that $((a \vee \sim a) \supset \sim b) \supset \sim b$, which is necessary for Glivenko's proof. These proofs are almost all reconstructions of Heyting's, for which he typically only gives the theorems and axioms he used, not the proof itself. We will not be noting uses of axiom 2.11 and 3.11 (commutativity of \wedge and \vee). We will be using Heyting's numbering system for these theorems, as we have for the axioms given above:

2.2 $(a \wedge b) \supset a$

Proof: Assume $a \wedge b$. From axiom **2.12**, we know that $(p \supset q) \supset ((p \wedge r) \supset (q \wedge r))$. Plugging in a for p , $b \supset a$ for q and b for r , $(a \supset (b \supset a)) \supset ((a \wedge b) \supset ((b \supset a) \wedge b))$. From axiom **2.14**, we know that $a \supset (b \supset a)$. Thus, $(a \wedge b) \supset ((b \supset a) \wedge b)$. Because we assumed $a \wedge b$, we get $(b \supset a) \wedge b$. From this and axiom **2.15**, we get a . \square

2.23 $((a \supset b) \wedge (c \supset d)) \supset ((a \wedge c) \supset (b \wedge d))$

Proof: Assume that $(a \supset b) \wedge (c \supset d)$. From axiom **2.12**, $(a \supset b) \supset ((a \wedge c) \supset (b \wedge c))$. By theorem **2.2**, $a \supset b$, so $(a \wedge c) \supset (b \wedge c)$. Also from axiom **2.12**, $(c \supset d) \supset ((c \wedge b) \supset (d \wedge b))$. By theorem **2.2**, $c \supset d$, so $(c \wedge b) \supset (d \wedge b)$. This gives us $((a \wedge c) \supset (b \wedge c)) \wedge ((c \wedge b) \supset (d \wedge b))$. Axiom **2.13** says that $((p \supset q) \wedge (q \supset r)) \supset (p \supset r)$. Plugging in $(a \wedge c)$ for p , $(b \wedge c)$ for q and $(b \wedge d)$ for r , we get that $((a \wedge c) \supset (b \wedge c)) \wedge ((b \wedge c) \supset (b \wedge d)) \supset (a \wedge c) \supset (b \wedge d)$. Thus, $(a \wedge c) \supset (b \wedge d)$. \square

2.24 $((a \supset b) \wedge (a \supset c)) \equiv (a \supset (b \wedge c))$

Proof: From theorem **2.23**, we get that $((a \supset b) \wedge (a \supset c)) \supset ((a \wedge a) \supset (b \wedge c))$. By axiom **2.1**, $a \supset (a \wedge a)$, so $((a \supset b) \wedge (a \supset c)) \supset (a \supset (b \wedge c))$.

Assume $a \supset (b \wedge c)$. By theorem **2.2**, we get that $(b \wedge c) \supset b$ and $(b \wedge c) \supset c$. Axiom **2.13** says that $((p \supset q) \wedge (q \supset r)) \supset (p \supset r)$. So, $a \supset b$ and $a \supset c$. \square

2.25 $(b \wedge (a \supset c)) \supset (a \supset (b \wedge c))$

Proof: Assume $b \wedge (a \supset c)$. From theorem **2.2**, we get b and $a \supset c$. By axiom **2.14** $b \supset (a \supset b)$, meaning $a \supset b$. As such, $(a \supset b) \wedge (a \supset c)$ holds. From these and theorem **2.24**, we can conclude $a \supset (b \wedge c)$. \square

2.26 $b \supset (a \supset (a \wedge b))$

Proof: By theorem **2.1**, $a \supset (a \wedge a)$. So, by theorem **2.2**, $a \supset a$. Now, assuming b , from axiom **2.14** we get that $a \supset b$. As such, $(a \supset a) \wedge (a \supset b)$. From theorem **2.24**, we get that $a \supset (a \wedge b)$. \square

2.27 $(a \supset (b \supset c)) \equiv ((a \wedge b) \supset c)$

Proof: Assume that $a \supset (b \supset c)$. Taking axiom **2.12** and plugging a in for p , $b \supset c$ in for q and b in for r ,
 $(a \supset (b \supset c)) \supset ((a \wedge b) \supset ((b \supset c) \wedge b))$. So, $(a \wedge b) \supset ((b \supset c) \wedge b)$.
 By axiom **2.15**, $((b \supset c) \wedge b) \supset c$. By axiom **2.13**,
 $((a \wedge b) \supset ((b \supset c) \wedge b)) \wedge (((b \supset c) \wedge b) \supset c) \supset ((a \wedge b) \supset c)$.
 So, $(a \wedge b) \supset c$.

Assume that $(a \wedge b) \supset c$. It follows that
 $((a \wedge b) \supset c) \wedge ((a \wedge b) \supset c)$ holds. Taking theorem **2.25** and plugging
 in $a \wedge b$ for a , $(a \wedge b) \supset c$ for b and c for c ,
 $((a \wedge b) \supset c) \wedge ((a \wedge b) \supset c) \supset ((a \wedge b) \supset (((a \wedge b) \supset c) \wedge c))$.
 So, $(a \wedge b) \supset (((a \wedge b) \supset c) \wedge c)$. By theorem
2.2, $((a \wedge b) \supset c) \wedge c \supset c$. From this and axiom **2.13**,
 we get $(a \wedge b) \supset c$. \square

4.2 $(a \supset b) \supset (\sim b \supset \sim a)$

Proof: From axiom **2.14** we know that $\sim b \supset (a \supset \sim b)$. By axiom
2.12, $(\sim b \supset (a \supset \sim b)) \supset ((\sim b \wedge (a \supset b)) \supset ((a \supset \sim b) \wedge (a \supset b)))$.
 Thus, $((a \supset b) \wedge \sim b) \supset ((a \supset b) \wedge (a \supset \sim b))$. By axiom **4.11**,
 $((a \supset b) \wedge (a \supset \sim b)) \supset \sim a$. So, by axiom **2.13**, $((a \supset b) \wedge \sim b) \supset \sim a$. By
 theorem **2.27**, $((a \supset b) \supset (\sim b \supset \sim a)) \equiv (((a \supset b) \wedge \sim b) \supset \sim a)$.
 Thus, $(a \supset b) \supset (\sim b \supset \sim a)$. \square

4.21 $(a \supset \sim b) \supset (b \supset \sim a)$

Proof: From axiom **2.14** we know that $b \supset (a \supset b)$. Because by axi-
 om **2.12** $(b \supset (a \supset b)) \supset ((b \wedge (a \supset \sim b)) \supset ((a \supset b) \wedge (a \supset \sim b)))$, we
 get that $((a \supset \sim b) \wedge b) \supset ((a \supset \sim b) \wedge (a \supset b))$. From
4.11, $((a \supset b) \wedge (a \supset \sim b)) \supset \sim a$, meaning that, by axiom **2.13**,
 $((a \supset \sim b) \wedge b) \supset \sim a$. Finally, from this and theorem **2.27**, we con-
 clude $(a \supset \sim b) \supset (b \supset \sim a)$. \square

4.22 $(a \supset b) \supset (\sim \sim a \supset \sim \sim b)$

Proof: Assume that $a \supset b$. Theorem **4.2** says
 that $(a \supset b) \supset (\sim b \supset \sim a)$, so $\sim b \supset \sim a$. Also by theorem
4.2, $(\sim b \supset \sim a) \supset (\sim \sim a \supset \sim \sim b)$. Thus, $\sim \sim a \supset \sim \sim b$. \square

4.3 $a \supset \sim\sim a$

Proof: Axiom 2.1 says that $\sim a \supset (\sim a \wedge \sim a)$. By theorem 2.21, we know that $(\sim a \wedge \sim a) \supset \sim a$. So, by axiom 2.13, $\sim a \supset \sim a$. Because by theorem 4.21, $(\sim a \supset \sim a) \supset (a \supset \sim\sim a)$, $a \supset \sim\sim a$. \square

4.32*¹ $\sim\sim\sim a \equiv \sim a$

Proof: By theorem 4.2, $(a \supset \sim\sim a) \supset (\sim\sim\sim a \supset \sim a)$. Because theorem 4.3 says that $a \supset \sim\sim a$, $\sim\sim\sim a \supset \sim a$. From theorem 4.3, we get that $\sim a \supset \sim\sim\sim a$ by plugging in $\sim a$ for a . \square

4.8 $\sim\sim(a \vee \sim a)$

Proof: From axiom 3.1, we get that $a \supset (a \vee \sim a)$ and $\sim a \supset (a \vee \sim a)$. Now, by theorem 4.2, $(a \supset (a \vee \sim a)) \supset (\sim(a \vee \sim a) \supset \sim a)$ and $\sim a \supset (a \vee \sim a) \supset (\sim(a \vee \sim a) \supset \sim\sim a)$. As such, $\sim(a \vee \sim a) \supset \sim a$ and $\sim(a \vee \sim a) \supset \sim\sim a$. By axiom 4.11, then, $((\sim(a \vee \sim a) \supset \sim a) \wedge (\sim(a \vee \sim a) \supset \sim\sim a)) \supset \sim\sim(a \vee \sim a)$, meaning $\sim\sim(a \vee \sim a)$. \square

4.82 $(a \vee \sim a) \supset b) \supset \sim\sim b$

Proof: Assume that $(a \vee \sim a) \supset b$. By theorem 4.22, $((a \vee \sim a) \supset b) \supset (\sim\sim(a \vee \sim a) \supset \sim\sim b)$, meaning $\sim\sim(a \vee \sim a) \supset \sim\sim b$. By theorem 4.8, $\sim\sim(a \vee \sim a)$. Thus, $\sim\sim b$. \square

4.83 $(a \vee \sim a) \supset \sim b) \supset \sim b$

Proof: Assume that $(a \vee \sim a) \supset \sim b$. By theorem 4.82, $((a \vee \sim a) \supset \sim b) \supset \sim\sim\sim b$. By 4.32*, $\sim\sim\sim b \equiv \sim b$, meaning $\sim\sim\sim b \supset \sim b$. As such, by axiom 2.13, $(a \vee \sim a) \supset \sim b) \supset \sim b$. \square

This is the theorem that we need for Glivenko's proof, which is as follows (Glivenko 1998):

¹ Heyting's theorem 4.32 is merely that $\sim\sim\sim a \supset \sim a$. However, Brouwer gives a proof of the theorem listed here as 4.32* (Brouwer 1998).

Intuitionistic logic is not a three-valued logic.

Proof: Suppose p may have a truth value of "true," "false" or "terce," and that p can only have one truth value. As such, $p \supset \sim(p')$ and $\sim p \supset \sim(p')$, because p can only have one truth value. By axiom **3.12**, $((p \supset \sim(p')) \wedge (\sim p \supset \sim(p'))) \supset ((p \vee \sim p) \supset \sim(p'))$. Thus, $(p \vee \sim p) \supset \sim(p')$. As such, by theorem **4.83**, we can conclude $\sim(p')$. \square

IV. Valid Proof Techniques in Intuitionistic Mathematics

Now, then, working backwards from this logic, what sort of proof is valid in the mathematics that this logic, according to Brouwer's philosophy of mathematics, is supposed to mirror? At first, the validity of a direct proof is seemingly trivial. That is to say, we can show $a \supset b$ by constructing b from a . However, regarding propositions of the form $a \supset b$, Brouwer's statements on the matter admit different interpretations. The concern is that, in taking a hypothetical statement and then performing operations on it to reach a mathematical construction, we are in some sense deriving mathematics from logic. After all, we have no guarantee that the state of affairs given in the hypothetical statement can actually be constructed in intuition. Dirk van Dalen suggests that, in order to prevent this, we must prove a before we can prove $a \supset b$ (van Dalen 2004, 250-251). This would severely limit the circumstances in which a direct proof can be done, in addition to preventing the use of mathematical induction. Mark van Atten provides a competing account, suggesting that we merely have to switch from conceiving of a and b as statements to thinking about them as "conditions on constructions, and to show that from the conditions specified by A one obtains the conditions specified by B " (van Atten 2009, 128). This account maintains the stress on the importance of constructability while removing the requirement that we have a proof for a .

Proofs by contradiction are generally invalid in intuitionism, as they rely on the law of excluded middle or double negation elimination. However, proofs by contradiction for negative statements, statements of the form $\sim a$, are valid. This is because disproofs in intuitionism are identical to disproofs in classical mathematics, as reflected by the relationship between intuitionistic and classical logic. Glivenko demonstrated that a statement a is provable in classical logic if and only if its double negation, $\sim\sim a$, is provable in intuitionistic logic (Gliv-

enko 1998). Because of theorem 4.32*, which originates in Brouwer, we get that a statement $\sim a$ is provable in intuitionistic logic if and only if it is provable in classical logic. The result of this is that, if a statement is false in classical mathematics, then it is also false in intuitionistic mathematics, and vice-versa. As such, not only do disproofs work the same way in intuitionistic mathematics as they do in classical mathematics, disproofs in classical mathematics are valid in intuitionistic mathematics. Brouwer also demonstrates that equivalence proofs work the same way in intuitionistic mathematics as they do in classical mathematics by presenting us with an example of one in his proof for theorem 4.32*. That is, we must simply show that $a \supset b$ and $b \supset a$.

Finally, there is the question of whether or not proofs by contrapositive, proofs of $a \supset b$ by constructing $\sim a$ from $\sim b$, are valid intuitionistically. Theorem 4.2, $(a \supset b) \supset (\sim b \supset \sim a)$, might give us hope that they are, but without double negation elimination this is not sufficient. In the absence of a proof for the validity of contrapositives, we might want to try to prove that they are not valid. This could be done by finding some a, b for which $\sim a \supset \sim b$ and $\sim(a \supset b)$ are both valid. However, here we run into our result above. Because all negative statements in classical logic are valid in intuitionistic logic, we cannot disprove the validity of contrapositives. To disprove the validity of contrapositive proof in intuitionistic logic would imply that the law of contraposition is false in classical logic, which we know is incorrect. However, at the same time, we have no way to prove the validity of proof by contraposition, at least in general, and as such we cannot use this method in intuitionistic mathematics. Thus, we can neither prove nor disprove the law of contraposition in intuitionistic logic. Although this gives us no further information regarding proof techniques, it does provide a concrete example of what double negation means in intuitionism. We have shown, informally, that we cannot provide a disproof of the validity of proof by contraposition.

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Heidegger and Sartre on the Problem of Other Minds

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Abstract: Existentialists such as Martin Heidegger and Jean-Paul Sartre have offered some interesting responses to the skeptical problem of other minds. However, their contributions are sometimes overlooked in the analytic study of this problem. A traditional view may think the existentialists focus on the ethical issues among conscious minds and take for granted that individuals' experiences are within a world with others. This paper aims to identify and reconstruct two transcendental arguments on other minds from Heidegger's and Sartre's philosophy. I argue that their arguments are strong enough to ward off skeptics and suggest that their existential starting points and methodologies might be our best way out of the puzzle.

Introduction

About four hundred years ago, René Descartes wrote his well-known *Meditations on First Philosophy*, in which many modern skeptical problems can find their foundations. The conclusions of Descartes' ostensibly sound reasoning have been detrimental to our understanding of other minds. The problem of other minds claims that we should be skeptical about other consciousness because we lack evidence: we cannot rule out the possibility that our fellow human-like beings are not robots or zombies. Existentialists offer some interesting responses to this problem. Some commentators argue that existentialists "take for granted" that individuals' experiences are within a world.¹ Thus, they do not offer arguments against the skeptics. However, I argue that although they focus on issues "after" the existence of other minds, such as one's relationship with the world or the others, existentialists do have solid transcendental arguments for the existence of other minds. I will first introduce the skeptical problem. Then I will discuss Martin Heidegger's and Jean-Paul Sartre's argument in length. After describing each philosopher's argument, I will defend them against some critics.

¹ Anita Avramides, "Other Minds," in *Stanford Encyclopedia of Philosophy* (Stanford: Stanford University, Summer 2019), 21.

I. The Problem of Other Minds

The problem of other minds comes from a Cartesian starting point that we should only accept clear and distinct knowledge. There might be other things we take ourselves to know; however, we should remain skeptical about them until we have evidence or justification. Admittedly, skepticism is only a methodological tool Descartes used; however, this way of thinking becomes foundational in philosophy. This starting point is modest, easy to understand, and intuitively attractive. However, it is also problematic because it sets a low standard for doubt but a high standard for knowledge. To grant everything the skeptics want, we would lose our history, induction, empirical world, and, most relevantly, the existence of other minds. Although it can secure a solid foundation of knowledge, the high “false positive rate” seems to be too high a price to pay. Thus, most philosophers, including the existentialist I will discuss, aim to solve the problem instead of giving in to the skeptics.

The problem of other minds is based on the commonly accepted belief that we do have evidence of our own consciousness, but we do not have evidence for others’ consciousness. The evidence we use is the direct access to our mental activities, which we do not have to other people. The skeptics ask how we can tell between a conscious being and a highly sophisticated robot without this subjective evidence. If we cannot answer this question, we cannot know that our lively fellow beings are conscious minds. This conditional suggests that we need to accept the possibility that I am the only conscious being in the universe, which is unsettling because, in our everyday life, we do not, to the least extent, question the consciousness of our fellow beings. How can we answer the skeptics to defend our everyday life experience?

Before I delve into the existentialists’ response, I wish to briefly state the most common and intuitive response from the analytic tradition, the analogy argument. This argument “cites similarities between two things and uses this as support for concluding that further similarities may be taken to exist.”² We know that we are similar to our fellow beings in almost all aspects. For example, we look like the same animal; we speak languages; we have similar genes. Thus, by induction, we can conclude that we have good reasons to believe that others are

² Ibid, 6.

indeed conscious beings just like us. Next, I will introduce Heidegger's responses.

II. Heidegger's Transcendental Response

Before describing Heidegger's responses to the problem of other minds, I wish first to introduce a central concept of Martin Heidegger's philosophy—Dasein. In German, "da-" means "there," and "sein" means "being." Heidegger suggests that "by Dasein we mean that entity in its Being which we know as human life."³ Wheeler suggests that "we might conceive of [Dasein] as Heidegger's term for the distinctive kind of entity that human beings as such are."⁴ Heidegger offers descriptions of Dasein; however, this term cannot be easily defined, which invites different interpretations. In this paper, I will evaluate two interpretations of Dasein, disagreeing on whether each Dasein corresponds to one human being or one human community.

Depending on the interpretations, Heidegger could have two responses to the problem of other minds. On one interpretation, "Dasein" is individual, each corresponding to one person. A Dasein would mean the special existence of one human person. According to this interpretation, Heidegger would need to argue for the existence of other minds. On another interpretation, "Dasein" is collective, each corresponding to a community, where individuals are only "cases of Dasein." A Dasein would mean the special existence of a human community. According to this interpretation, intersubjectivity is presupposed in a community, granting other minds' existence for free. I argue for the first interpretation because the second one may be overly generous when granting consciousness for one's participation within a community. Thus, Heidegger does have an adequate response to the skeptics instead of taking intersubjectivity for granted.

Heidegger first shows the existence of other non-beings, including the tools and objects in our everyday life. In his lecture, *The Concept of Time*, Heidegger claimed that "[Dasein] is grounded in a fundamental possibility of its Being."⁵ The possibility of Dasein's being refers to the

³ Martin Heidegger, *The Concept of Time*, trans. William McNeill, 6E.

⁴ Michael Wheeler, "Martin Heidegger," in *Stanford Encyclopedia of Philosophy* (Stanford: Stanford University, Fall 2020).

⁵ Heidegger, *The Concept of Time*, 10E.

futural possibility we have in life: what I can do in the future, what might happen to me in the future, and so forth. Heidegger argues that human existence is essentially grounded in possibility. The possibility is essential for Dasein because the concept of possibility brings Dasein temporality, which roots Dasein's existence. Here I offer an illustration: before I toss a coin, I have both possibilities: heads and tails. Once that coin is tossed, one of the possibilities is manifested and the other lost. With different possibilities, one can distinguish different moments in time and therefore derive temporality. Without time, Dasein cannot exist. Heidegger thinks that the determination of possibility brings us time, and having undetermined possibilities brings us future. In general, possibility, time, and existence are closely connected in Heidegger's philosophy. I argue that possibility as an essence of Dasein can help Heidegger achieve the existence of other minds.

Where do the possibilities come from? Can I form possibilities alone in my mind? I argue that I cannot. Please note that on day one, Heidegger characterizes Dasein as being-in-the-world.⁶ The solipsistic Dasein is only a thought experiment, offering a *reductio ad absurdum* for the external world's existence instead of taking the external world for granted. Suppose solipsism is true, and I am the only existing thing, then there would be no other being, either Dasein or non-Dasein. Nothing can distinguish one moment from the other because there is nothing on which I can count to know the time. Dasein must receive possibilities instead of creating them. I propose an illustration: when I flip a coin, I have two possible results: heads or tails. When I flip two coins, I have three possible results: two heads, one of each, and two tails. And so forth. The more coins I can toss, the more possible results I have. Although my Dasein has to do the flipping, which is analogous to moving forward in time, some objects must be outside of my Dasein, representing different results to create possibilities for my Dasein. Moreover, to account for all the possibilities we have in life, countless objects outside of ourselves need to exist. By flipping those "coins," my Dasein gains its temporality. Now imagine a world with no "coins" to toss; I would have no possibilities at all. Even worse, I would have no determinacy either. The situation is similar to how I have no possibilities after my death when my Dasein no longer exists. In

⁶ *Ibid.*, 7E.

short, Dasein cannot exist alone because it would lose its possibility. Dasein must exist as a “being-in-the-world.”

The next step is to argue for other minds’ existence based on the existence of other objects. We are “being-with” other beings in the world who holds the same relation to the world as we do. Heidegger claims that “being-with is an existential constituent of being-in-world.”⁷ My “being-with” is essential to my “being-in-the-world” because our involvement with instruments or objects always comes back to other beings. When we see an object, we always relate it with some persons. Heidegger offers some examples: “the field along which we stroll ‘outside’ shows itself as belonging to so-and-so keeping it in good order; the book I make use of is one I purchased at..., received as a gift from..., and the like.”⁸ The existence of others is already implied in the shared world. Thus, the others always arise from the objects.

One may argue that what if I venture to a yet undiscovered island and dig 100 yards underground for a stone that nobody has ever seen before. How can that stone be related to anybody else in the world? Heidegger could argue that, although nobody interacted with that stone directly, others still arise from the objects because I cannot complete the discovery alone. In this example, the boat which carries me to the island is made by some person; the tools I use are designed by someone else; the mining method I use is probably invented by yet another person, and so on. Also, even when I am alone, I have to use language or to think conceptually, to carry out my “project.” I cannot invent languages or concepts alone. Moreover, these activities, e.g., inventing, cannot be done by objects; instead, they must be done by other “being-in-world,” who has the same relation to the world just as we do. Heidegger claims that “the world essential to being-there releases beings not just different from instruments and things of any kind, but ones that, in accordance with the way they have their being as being-there, are themselves ‘in’ the world in the manner [earlier described] of being-in-world.”⁹ Because other people have the same relation with the world as we do, they are also Dasein. Other people must have the consciousness to be Dasein. Thus, the problem of other minds is solved.

⁷ Martin Heidegger, *Being and Time: An Annotated Translation*, trans. Cyril Welch, unpublished manuscript, January 2017, 158.

⁸ *Ibid.*, 149.

⁹ *Ibid.*, 150.

Besides, Heidegger points out our experience of “absence.” Sometimes we can feel the lack of another person when we feel alone. Russell and Reynolds argue that “such an experience cannot be generated by some external object, since there is no external object to provoke it.”¹⁰ For example, a gun can provoke my fear; a great lake can generate my awe. However, my experience of loneliness cannot be generated by any object. “A disappointed anticipation of others”¹¹ can only exist if the structure of my being wants something while that wish is unfulfilled, i.e., my “being-with.” Thus, other minds must exist. These are the arguments from the individual perspective.

III. The Collective Interpretation of Dasein

The community also plays a role in Heidegger’s response to the problem of other minds. A collective Dasein corresponds to a human community, which “contains an inherent form of intersubjectivity to which we must ‘return’ in order to achieve authenticity.”¹² K. M. Stroh argues that Heidegger does not limit the number of people related to one Dasein: “[Dasein is] this entity which each of us is himself.”¹³ At least one person corresponds to one Dasein; however, an entire community of people may also correspond to one Dasein. One benefit of this interpretation is that it captures both the individual and communal perspectives of persons.¹⁴ This interpretation presupposes that other “cases of Dasein” in our community are also conscious beings just like us. Thus, other minds are presupposed in Heidegger’s argument. I argue against Stroh’s interpretation because we cannot rule out non-consciousness within our community to be “cases of Dasein.” If Heidegger presupposes other minds in Dasein, unwelcomed consequences will follow.

I wish to offer an illustration with a somewhat contentious and non-conventional presupposition. My goal is to show that potential problems similar to what I will describe below only apply to the “top-

¹⁰ Matheson Russell and Jack Reynolds, “Transcendental Arguments about Other Minds and Intersubjectivity,” *Philosophy Compass* 6, no. 5 (2011), 304, doi:10.1111/j.1747-9991.2011.00394.x.

¹¹ *Ibid.*

¹² K. M. Stroh, “Intersubjectivity of Dasein in Heidegger’s Being and Time: How Authenticity is a Return to Community,” *Human Studies* 38, no. 2 (Jul 01, 2015), 243. doi:10.1007/s10746-015-9341-9. <https://www.jstor.org/stable/24757333>.

¹³ Martin Heidegger, *Being and Time* 27/7, qtd. in Stroh, 246.

¹⁴ Stroh, 246.

down” interpretation of Dasein, where one assumes intersubjectivity within a community and distinguishes those having consciousness from the rest. As technology develops, we have evidence that some “non-Dasein” can also partake in our linguistic and epistemic life. I can ask my phone about the weather. I have to talk to a robot for five minutes every time I call customer service. Some software can call places such as restaurants or barbershops to make appointments without being noticed as non-persons. I take for granted that computers do participate in our linguistic community. As technology develops, we will have to incorporate them into our philosophy. However, computers do not have consciousness. How can we rule “Siri” or “Alexa” out of being a case of Dasein? If each Dasein corresponds to one person, we can have the equipment or other non-Dasein within our linguistic or epistemic community. However, if a linguistic community corresponds to one Dasein and we take Dasein’s intersubjectivity within such community for granted, we also need to take the consciousness of “Siri” in that package. One possible way out is to argue that Siri does not have Dasein’s features, e.g., temporality. However, if we try to separate “cases of non-Dasein” out carefully, we need to repeat Heidegger’s argument for Dasein on “cases of Dasein,” which dissolves the distinction.

At least in my arguments described in section II, Heidegger only argues for other minds’ existence. However, a perfect method to distinguish non-Dasein from Dasein is unnecessary. It would be acceptable to have “Siri” involved in our community as part of our “being-in-the-world.” However, it would be less so acceptable to have “Siri” in our “being-with.” I acknowledge that my presupposition that “Siri” is part of our linguistic community could be contentious. However, this illustration only aims to show that “the bottom-up interpretation of Dasein,” i.e., defining each individual as a “Dasein” and then give a transcendental argument for the existence of other minds, is less problematic than assuming intersubjectivity by interpreting Dasein as a community.

In brief, I have argued that Heidegger did not take other minds for granted. He could derive other minds from the concepts of possibilities, which is required for the mere existence of Dasein. Furthermore, I argued against the interpretation that Dasein is collective of an unwelcomed consequence that non-consciousness can also be a case of Dasein. However, is Heidegger’s argument the best one ever? Does it capture everything we want as an answer to the problem of other minds? A further defense of Heidegger is beyond the scope of this

paper. For example, another existentialist, Jean-Paul Sartre, thinks Heidegger's argument is unsatisfactory, whose argument I will discuss in the next section.

IV. Sartre's Shame Argument

Heidegger is criticized for "his lack of discussion of how the body functions in this being-in-the-world."¹⁵ Although he does argue for the existence of other minds, his account of our relations with one another, viz., "being-with," seems inadequate. According to Heidegger's description, our relations with another being are rather detached because "being-with" is only "an existential constituent" of our relationship with the world. Do I have to "be with" another being? Why cannot I and other beings have a more direct relationship? Sartre argues the existence of other minds with the concept of the look.

Imagine that I am captivated by something behind a closed door, peering through the keyhole. No one is around me. The corridor is quiet and empty. I am so curious that I peer and listen with my full attention. I give no thoughts about my stance, my environment, or my belongings around me. As Sartre puts it, "my consciousness sticks to my acts." Suddenly, I hear footsteps in the hall, and I realize that someone is looking at me. The thought of myself as an object irrupts into my consciousness. I am being seen! I suddenly feel ashamed for my action because of the look that other person gives me.¹⁶ Sartre argues that our emotions, such as shame, require a subject to "look" at us. There must be another consciousness to teach me to look at myself as an object because we do not look at ourselves on a pre-reflective level. Guignon and Pereboom claim that "my 'inner' experience of shame is something I can discover only through the look of another person, for shame necessarily involves seeing myself as another sees me."¹⁷ Without other consciousness to look at me, I would never learn the experience of shame.

There are two ways of looking at ourselves: as an object, in-itself, or as a subject, for-itself. When I was peering through the keyhole, my con-

¹⁵ M. E. Peters, "Heidegger's Embodied Others: On Critiques of the Body and 'intersubjectivity' in Being and Time," *Phenomenology and the Cognitive Sciences* 18, no. 2 (Apr 15, 2019), 444. doi:10.1007/s11097-018-9580-0.

¹⁶ Jean-Paul Sartre, *Being and Nothingness*, trans. Barnes, Hazel, (Washington Square Press, 1993), 259.

¹⁷ Charles Guignon and Derk Pereboom, "Sartre," in *Existentialism: Basic Writings*, (Indianapolis: Hackett Publishing Company, Inc., 2001), 273.

sciousness focused on that thing behind the locked door. I am aware of my consciousness; however, this awareness is for myself: I explore the world for my curiosity as if I am not part of this world. When I noticed that somebody is looking at me, my self-awareness suddenly changed into the objective form. I am aware of myself as an object in another person's eyes: I act as if I am only a part of the external world for another consciousness. I am the consciousness inside the object of me. These two ways of looking at oneself are necessary for our existence, and a transcendental argument for the consciousness of other minds arises out of these necessities. If we are the only consciousness in the universe, we would not have looked at ourselves as objects. In order for us to be an "in-itself," there needs to be at least another "for-itself," who can look at me and "demand" me to be the object. One may wonder what if the other person looking at me is just another in-itself, e.g., a human-like robot. Guignon and Pereboom argue that in-itself cannot teach me the concept of shame. The other person must present herself as "a conscious and free subject who is capable of interpreting and evaluating what [she] sees."¹⁸ I am aware that the other person can evaluate my voyeuristic activity so that I can feel shame. Thus, if we try to look for other minds as the subjective consciousness ourselves, it would be hard to find other minds; however, once we realize our objective aspect of self-awareness, we can easily see that another consciousness must exist for the mere possibility of our existence.

Russell and Reynolds consider an interesting counterargument that we could be mistaken about another person's look and still feel shame.¹⁹ For example, the footsteps I hear in the hall come from another closed room. I can still feel shame even if no consciousness is around. A look from a consciousness happens to exist on most occasions when I feel certain emotions; however, it might not be necessary. Thus, Sartre's example of shame cannot prove other minds' existence because it lacks necessity.

Sartre could respond that "our feeling of vulnerability before the Look of the Other is actually far from dissipated."²⁰ It is unnecessary for us to feel ashamed, proud, or afraid every time we encounter another consciousness. However, this illustrates a structural need for our exist-

¹⁸ Ibid.

¹⁹ Russell and Reynolds, 306.

²⁰ Ibid.

ence. Although it is possible that we sometimes feel certain emotions, e.g., shame, with no other consciousness around, it is impossible that we can feel shame without ever encountering another consciousness. There have to be some other minds who teach me to the concepts of shame before I can even make any mistakes. Thus, in order to explain some of our emotions, there must be other consciousness.

One may argue that Sartre's argument is inadequate to ward off the skeptics because Sartre admits that the problem of Other-as-object is insoluble. They may quote Sartre for claiming "no proof is possible, no reasons can be provided, no argument can be mounted to ward off solipsism, if we are limited to the Other-as-object, since 'the Other on principle...is outside my experience.'"²¹ However, I have to disagree with this reading of Sartre because he offers so much more argument on other minds' existence. Instead of giving in to the skeptics, I think Sartre criticizes how the skeptical question is posed. He claims that "each look makes us prove concretely—and in the indubitable certainty of the *cogito*—that we exist for all living men; that is, that there are (some) consciousnesses for whom I exist."²² He points out that the cartesian starting point is not the only method to gain certainty of our knowledge. I think this is because the cartesian starting point focuses only on the subjective or for-itself part of our self-consciousness; however, this is an inadequate view for Sartre. Each look that another person gives, trying to win over me to be the subject, is assuring enough for me to know that I exist as an object for them. Thus, I can know they are conscious. However, if we think the only possible way to ward off skeptics is to access others' mental activity directly, we fell into the skeptic's trap.

Conclusion

In her entry *Other Minds* of the Stanford Encyclopedia of Philosophy, Anita Avramides claims that Heidegger's question is "how can we explain/understand the structures of the being of subjectivity in such a way as to include the world and others," while Sartre's question is "how do I encounter the Other."²³ Although I agree that Heidegger focuses on the structure of being including others, and Sartre focuses on the

²¹ Jean-Paul Sartre, *Being and Nothingness*, 251, qtd. in Alec Hyslop, "Sartre and Other Minds," *Sartre Studies International* 6, no. 1 (Jan 01, 2000), 50.

doi:10.3167/135715500782368540. <https://www.jstor.org/stable/23512944>.

²² Sartre, 281.

²³ Avramides, 21-22.

structure of being encountering others, I do not think this is a fair summarization of the existentialists' effort on this traditionally analytic puzzle. The transcendental method Heidegger and Sartre use, i.e., to argue for other minds' existence from our existence's very structure, is strong enough to answer the skeptical question.

Recall the traditional analytic arguments from analogy. They are always unsatisfactory because an analogy from descriptions leaves the essential difference between conscious and non-conscious beings untouched, which is the distinctive conscious structure of existence. Although existentialists may disagree on our existence's best description, they share the correct starting point and methodology. We can only ward off the skeptics by arguing that we cannot exist in the way we do without other minds. When the skeptics are willing to pay prices as high as other minds, the only leverage we have left will be our existence.

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Did God Create Mathematics? The Role of God in Seventeenth-Century Notions of Eternal Truths

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Abstract: Both René Descartes and Marin Mersenne studied at La Flèche in the seventeenth century in the midst of the humanist movement that began to place new emphasis on the importance of mathematics, despite its devaluation throughout the Renaissance due to supposed lack of practicality. This movement explains why both men place such prominence upon the metaphysical discussion of mathematics; however, while Descartes argues for mathematical voluntarism, in which the eternal mathematical truths were freely created by God in the same manner as his other creations, Mersenne argues that voluntarism does not extend to mathematical truths, instead suggesting that the truths emanate from God's essence. I will argue that Descartes' extension of voluntarism to mathematics creates a contradiction between the implicit necessity of an eternal truth and its supposed contingency upon God's will, but that it can be dissolved by Mersenne's metaphysical explanation, independent of God's will. Further, I will demonstrate how these differing discussions of mathematical truth shed light upon Mersenne's atheist mathematician objection to Descartes' entire philosophical project of *Meditations*, ultimately concluding that Mersenne's explanation for the eternal truths provides a more robust basis for human certainty in mathematical truths.

Introduction

Mathematical truths have long provided a distinct issue for philosophers because they are known not through observation and induction as the natural sciences are, but instead through logical deductions of first principles. In the seventeenth century, philosophical thought was continually underscored by religion and theology, making it impossible for mathematics, philosophy, and religion to avoid convergence in philosophical theories. As philosophers sought to find explanations for the nature of mathematical truths that seemed to exist outside of the natural world, they also inevitably sought to find how God was able to fit into the larger discussion of these truths.

Marin Mersenne (1588-1648), a seventeenth century Minim friar, was a regular correspondent and friend of philosopher René Descartes (1596-1650). Despite being a few years apart, both studied at La Flèche in France, receiving Jesuit educations emphasizing both philosophy and mathematics, which would later influence their metaphysical positions concerning both God and the mathematical eternal truths. Though both men regard God's influence upon the eternal truths and their subsequent existence within the mind as incontestable, the two differ in their discussion of voluntarism, or the notion of God's voluntary contributions to those eternal truths. While Descartes maintains God's voluntary creation of the eternal truths, Mersenne believes that the eternal truths are not created by God but are instead emitted from his own divine nature. Considering this distinction, I will show that Descartes' extension of voluntarism to the eternal truths produces a contradiction between the necessity of their truth and their apparent contingency upon God's will. I will then demonstrate how Mersenne's metaphysical explanation is able to resolve this contradiction, ultimately providing a more compelling argument for the lack of extension of voluntarism to those truths. Further, I will argue that Mersenne's discussion of those truths also eliminates the need for belief in God to affirm the veracity of these truths, thus resolving a critical objection to Descartes' *Meditations* whilst providing a more robust basis for human certainty.

Mathematics in medieval and Jesuit curriculums

In the mid-sixteenth century, particularly in France, mathematics and the other subjects of the medieval quadrivium – arithmetic, geometry, music, and astronomy – were heavily neglected within most academic curriculums, mainly due to the widespread belief that mathematics was not utilitarian enough to be valuable. However, as the humanist movement gained popularity and prompted the revisitation of the philosophers and intellectuals of antiquity, a renewed emphasis was placed upon mathematics with the justification that it could facilitate a deeper understanding of Aristotle's works.¹ Furthermore, some humanists argued that mathematics was applicable to all other subjects, and as such should be integrated within the pre-existing academic curriculums. Mathematics was beginning to be seen not solely as an asset towards understanding logic and physics, but also increasingly as being

¹ Peter Dear, *Marin Mersenne and the Probabilistic Roots of "Mitigated" Scepticism*, 188.

beneficial to understanding the metaphysical spheres, theology and the divine creation, and all other branches of philosophy.

As mathematics began to rise further into prominence, Jesuit schools – seeking to remain at the forefront of education – began to integrate mathematics programs more heavily into their own curriculum; by the seventeenth century, most Jesuit schools, including La Flèche, championed mathematics for its ability to inform natural philosophy as well as for its demonstrative certainty. Though Descartes and Mersenne were eight years apart in their educations, the Jesuit emphasis on mathematics is echoed within their own respective metaphysics surrounding the eternal truths; specifically, Mersenne argues that mathematics is capable of describing the objects that God’s intellect considered when he created the world, and thus mathematics can be viewed as the science of the metaphysically necessary attributes of all things.² Ultimately, both Mersenne and Descartes regard mathematical propositions as certain and eternally true due to their intimate connection with the divine intellect, but take different approaches when considering the manner in which those truths manifest themselves within, or without, God.

Differing conceptions of God and truth

In order to compare Descartes’ and Mersenne’s differing views regarding God’s influence upon the eternal truths, it is necessary to understand each philosopher’s respective notion of God. Descartes’ and Mersenne’s metaphysics consist of a very similar conception of God, influenced by their shared Jesuit education and the commonplace beliefs of philosophical thinking in the seventeenth century. Both give ontological arguments for God’s existence, which establish a perfect, omnipotent and benevolent God that exists. Additionally, both Descartes and Mersenne argue for a version of voluntarism, the notion that God is essentially free regarding his creation. This notion was a conventional position in the medieval scholastic tradition, in which all nature and laws of creation are united under God’s contingent will. Mersenne writes that “all that is produced is finite but God’s *potentia* [might] is without measure,”³ highlighting the view that God’s ability and will is without limit thus allowing him to create anything he wished, yet that God would not

² Dear, *Mersenne*, 188.

³ Marin Mersenne, *Quaestiones celeberrimae in Genesim*, Col 435.

do other than he does.⁴ Essentially, God has the capacity to act in any manner, yet would never act in any way other than he does since, being a supremely good being, God would only ever choose the most righteous path. Voluntarism also appears in Descartes' metaphysical discourse, in which he writes that God is "independent, all-knowing, all-powerful, and by which I myself and everything else ... have been created,"⁵ and thus is able to act through his own free will with regards to his creation due to his omnipotence. Ultimately, both philosophers conceive of a limitless, all-knowing God who acts upon his will however he wishes.

Though the notion of God in both Mersenne's and Descartes' discourses essentially follows the standard Jesuit positions of the time period, the two philosophers diverge when assessing the nature and divine creation of the eternal truths. The eternal truths specifically referred to by Mersenne, and those that concern his later correspondences with Descartes, are mathematical propositions that are seen as eternally true and could not be possible without the eternal mind; in this view, God's eternal truths coexist with him, and thus he understands the universe with the same rationality as humans. However, Descartes directly objects to this scholastic view as he argues that rationality is not required of God's essence, as it would undermine God's own power.⁶ Despite Descartes' and Mersenne's differing views of the relation between God's nature and the eternal truths, the intimate connection between the two, as well as the aforementioned increasingly popular humanist interest in mathematics as a descriptor for metaphysical phenomenon, highlight why both philosophers are interested in discussing the metaphysical consequences of the existence of such eternal truths. Though both philosophers promote notions of an omnipotent and free God as creator, the two differ when discussing God's free creation, or lack thereof, of the eternal mathematical truths.

In Descartes' conception of the existence of the eternal mathematical truths, he asserts that God created those truths, and as such those truths depend on him just as all his other creations. In a letter to Mersenne, he writes that "God is the author of everything, and these eternal truths are something, and therefore he is their author."⁷ From the ontological argument set forth in Descartes' *Meditations*, God is known

⁴ Dominique Descotes & Marin Mersenne, *L'Impiété des déistes, athées et libertins*, 2.304

⁵ René Descartes & A.P. Martinich, *Meditations*, 102.

⁶ Harry Frankfurt, *Descartes, God, and the Eternal Truths*, 54.

⁷ René Descartes, *Selected Correspondences*, 17.

to exist infinitely and to be omnipotent. Since Descartes knows this about God and also that God is a creator, it follows that God must be the creator of all creation, including the eternal mathematical truths. Further, Descartes believes that, regardless of the ontological argument, this conclusion is the only viable option, since to discuss truths as veracities outside of the power of God is to challenge the supreme power of God – it is a contradiction to suggest that God is subject to some external fate or force, so instead it must be that he created the mathematical truths and laws of nature, just as a king establishes law.⁸

Since these truths are dependent upon God's will, and God is omnipotent, it seems as if God possesses the power to make eternal truths false, and that any truth's necessity is merely apparent rather than absolute. However, Descartes is able to eliminate this possibility through his previous discussion of the nature of God in his *Meditations*. When discussing the human capacity for error, Descartes argues that if God is the cause of human reason, then human reason could only be defective if God were a deceiver. However, he disproves this since from a supreme being only perfection may be exuded, and falsity is imperfect; thus, God may not exude falsity and therefore cannot be the source of human error.⁹ Relying upon this proof, since God is not a deceiver, and since he is the creator of the eternal truths, the veracity of the eternal truths themselves must be ensured.

Though Descartes claims that the eternal truths are necessarily true because God willed them to be so and because God is not a deceiver, the eternal truths do not actually appear to be necessary since God's will itself is not necessary. In a letter to Denis Mesland, a Jesuit correspondent of his, Descartes writes "and even if God has willed that some truths should be necessary, this does not mean that he willed them necessarily; for it is one thing to will that they be necessary, and quite another to will this necessarily, or to be necessitated to will it."¹⁰ Descartes has situated himself in a position where the direction of God's will is not necessary, for if God's will was fixed in some necessary path then Descartes would find himself undermining God's omnipotence. Still, the discussion of God's unnecessary will creates new problems for Descartes' position, for if God has contingently created these truths on the basis of his own

⁸ *Ibid.*, 16.

⁹ Descartes & Martinich, *Meditations*, 106.

¹⁰ Descartes, *Correspondences*, 166.

unnecessary will, then the supposedly eternal truths lose their objective significance, and an immutable standard of veracity is effectively eliminated.¹¹ If God is free to do as he wills, but need not will as he does, it seems impossible that a mutable God could create an immutable truth. Overall, it appears that Descartes shifts away from his previous definition of an eternal truth that ensures its necessity and moves increasingly towards a definition of eternal truth that is no longer eternally true, but rather contingent upon God's will.

In order to fix the evident tension between God's will to create the eternal truths and the truths' necessary and essential standard of veracity, Descartes is forced to find a way to ensure the eternal truth of the eternal truths without contradicting God's nature and power; to do this, he argues that God's will is immutable, thus creating an immutable basis for the truths themselves. In a letter to Mersenne, Descartes writes that God cannot alter his decrees because the divine will cannot change, thus creating a stable foundation for all eternal truths to rest upon, and from which they may receive their veracity.¹² However, the need for this defense of the immutability of the eternal truths stems from the contingency of those truths upon God's unnecessary and free will. Now Descartes directly contradicts himself, as his previous claim that the eternal truths are contingent upon God's unnecessary will conflicts his claim that the eternal truths are based upon the immutability of God's will. God's will is immutable – yet is not required to exist as it does! – rendering the eternal truths eternal, yet contingent upon God's willing that they be so.

Despite Descartes' inability to resolve the contradictions within his notions of God and eternal truths, Mersenne's metaphysical explanation of the eternal truths eliminates the contradiction, while simultaneously discussing a relation between God and the eternal truths that Descartes' account leaves entirely unaddressed. Throughout his discourse, Descartes considers two ways that God and the eternal truths may be related: either God creates the truths and thus they are dependent upon him, or God is dependent upon the truths as they exist outside of God's creation, and thus God's power is undermined.¹³ However, this entirely disregards a third possibility that was widely discussed by the scholastics as well as Mersenne himself – a possibility in which the eternal truths

¹¹ Beatrice K. Rome, *Created Truths and Causa Sui in Descartes*, 72

¹² Descartes, *Correspondences*, 166.

¹³ Frankfurt, *Eternal Truths*, 40.

are not dependent upon God's will, yet God's power is not subverted by this independence. This viewpoint, termed exemplarism, is one in which the eternal truths are ideas present in God's intellect, and from his intellect are able to influence man's intellect. Though they proceed from his nature, the eternal truths are not freely created by God as in Descartes' voluntarist conception.

In *Traité de l'harmonie Universelle*, Mersenne writes that the divine essence is "an eternal and infinite sun, which darts an infinity of rays on which depend all our perfections [one of which is] eternal truth, whence proceed all our truths and our sciences."¹⁴ Here, the metaphor of sunlight clearly portrays the eternal truths not as a free creation of God, but rather as an idea that emanates directly from God's being and is illuminated into the human mind. Mersenne views the mathematical laws as direct insights into the divine mind, in such a way that the human mind perceives the same laws, but with less clarity,¹⁵ explaining how man is able to obtain and use his reason. The coexistence of the eternal truths and God implies causality *ad intra*, in which the eternal truths belong to God's nature, and are thus in God and coeternal with him, but are not seen as created or necessitated, since God is not free towards his own nature. By assigning the eternal mathematical truths to God's essence, Mersenne is able to suggest that the eternal truths are necessary since God must necessarily be as he is, while simultaneously implying that the eternal truths would not exist without God since his essence may not exist without him. Rather than situating the eternal truths within two options as Descartes does, Mersenne asserts that eternal truths are outside of God's creation yet still dependent upon his existence.

This third option presented by Mersenne addresses both issues of contingency and verity that Descartes' own argument fails to amend. Descartes' explanation of the eternal truths, as previously shown, leads to the truths' contingency upon God's will that they be so, but this contradiction between the necessity of the truths and their apparent contingency is solved by Mersenne's assignment of the eternal truths to God's essence. Since the truths are contained in God's essence, or nature, itself, "the necessity of the eternal truths can be derived directly from the necessity that God be what he is."¹⁶ The eternal truths are not eternal due

¹⁴ Dear, *Mersenne*, 158.

¹⁵ Paul DeHart, *The Ambiguous Infinite: Jünger, Marion, and the God of Descartes*, 86.

¹⁶ Frankfurt, *Eternal Truths*, 39.

to God's immutable and infinite will, and in fact do not rely upon his will at all, but rather because God himself is eternal and thus all things radiated from his being must also be eternal.

Can an atheist be certain of mathematical truths?

When situated amongst the existence of God, eternal truths may appear to be inaccessible to those who do not believe in God; if eternal truths – such as incontrovertible mathematical and logical principles – are dependent upon God's existence, what epistemic basis would an atheist have for believing those truths? This question is an indefensible objection that Mersenne raises against Descartes' connection between God and eternal truth as posed in Descartes' *Meditations*, yet is again rectified through Mersenne's own promotion of exemplarism.

Throughout *Meditations*, the meditator concludes that clear and distinct knowledge is only available to the human intellect because of the proven and accepted existence of a God that does not deceive; if this is not accepted, then certain knowledge is impossible, because there would not exist an unchanging standard of certain truth like that which comes from the existence of God and his creation of those certain truths. However, Mersenne objects to this reasoning, as he believes that atheists, too, can clearly and distinctly know the eternally verifiable mathematical propositions, while not believing in the existence of God.¹⁷

Descartes' main defense against this objection is that while the atheist may know that an eternal truth is true, and may be accurate in his belief, he is incapable of knowing whether or not he can be certain, as he could be deceived by whatever being or power placed those propositions within his reason. Verifiably true propositions do not constitute true science for Descartes; rather, science can only be composed of clear and distinct knowledge, which as he discusses, only comes from accepting the perfect and undeceiving nature of God. Nevertheless, Descartes' defense of this objection seems to undermine his previous justification for the eternal truths' creation by God. Descartes reasons that the eternal truths must have been created, because otherwise, by existing outside of God, they would undermine his divine omnipotence. Similarly, Descartes states that rationality is not required of God's essence, because God is omnipotent and is capable of conceiving even the

¹⁷ Marin Mersenne, A.P. Martinich, René Descartes, *The Second Set of Objections with Replies*, 125.

irrational¹⁸ – to even suggest otherwise would again undermine his supreme power. However, by allowing God to act outside of rationality in defense of his omnipotence, it seems as if Descartes should similarly allow God to exist as a deceiver, since to suggest otherwise would also limit God's powers to only those that do not deceive. In attempting to sustain God's authority in the realm of rationality by allowing his power to encompass the irrational, Descartes has lost proof of God's verity and thus loses another criterion that his eternal truths require. Descartes himself cannot escape the lack of necessity and truth within his discussion of the eternal truths.

Even more unfortunately for Descartes, this objection is inapplicable when considering Mersenne's own metaphysical conception of the eternal truths. Since Mersenne's God emanates these truths, there can be no deception; the truths are not willed one way or another, but instead originate from God's essence and thus could never deceive. Even if God was to be a deceiver – which Descartes vehemently argues against – he could never lead to an untrue logical proposition or contradictory mathematical principle, because as the truths emit themselves from God's perfect nature, they too are destined to be perfect. Even God's own omnipotence cannot help but allow for the existence of the perfect and eternally true mathematical principles that atheists and theists alike must acknowledge as true and certain.

Conclusion

Overall, while Mersenne and Descartes share a common education and emphasis upon mathematics that pervades their metaphysics regarding God and truth, the two differ in discussing how God is able to influence those truths. Though Descartes discusses an extension of voluntarism towards the eternal truths, in which God creates the truths as he does all his other creations, his argument simultaneously contradicts his previous claims about God and truth while undermining eternal truth outside of the belief in God. Mersenne's metaphysics addresses and solves this contradiction while supporting the certainty of human reason outside of belief in God, making his argument not only more logically sound than Descartes', but also more robust when considering the capabilities of the human intellect.

¹⁸ Frankfurt, *Eternal Truths*, 54.

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Aristotle's Defence of Final Causality

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Abstract: This essay aims to analyze Aristotle's defense of the final cause against the mechanistic objections. I will first show how mechanists can attempt to dismiss the final cause by explaining nature in the framework of the material and efficient causation only. I shall then present Aristotle's argument that the mechanistic system presents itself as insufficient since it fails to take into account regularity that occurs in nature.

1. Introduction

Aristotle believed that in order to conduct a proper investigation of nature we need to understand its causes. What causes are necessary for attaining proper knowledge is, however, a matter of dispute. Hence in this paper, I will investigate book II of Aristotelian Physics to provide an analysis of a debate that takes place between Aristotle (representing what we may call natural teleology) and Empedocles (representing mechanism.) In the first two sections, I will illustrate chronologically (as in book II) Aristotle's explanation of the four causes and his understanding of chance. Then, having briefly explained those concepts, I shall proceed to (1) show how Aristotle applies mechanistic understanding of chance to nature (the occurrence of rain and the development of biological organisms) and formulates an objection against the crucial component of natural teleology, namely, the final cause; (2) I will show how Aristotle defends the final cause and points out that the mechanist's understanding of chance is insufficient and their worldview not capable of explaining regularity that occurs in nature.

2. Aristotle's Four Causes and Natural Teleology

In order to explain Aristotle's natural teleology let me briefly demonstrate his understanding of αἰτίαι, that is, causes. The philosopher distinguishes between the four following types of αἰτίαι: the material cause, the efficient cause, the formal cause, and the final cause. But before going into details, it is worth mentioning that Aristotle's understanding of causality differs from that of a layperson. By a cause, Aristotle does not simply mean a physical force acting upon something; he

rather thinks of a cause as some kind of explanation or an answer to certain questions. To illustrate the point let us take a look at how Aristotle uses the causes to explain different phenomena.

Firstly, the material cause explains out of what something is made out of. For instance, a bronze statue is made out of bronze; therefore, it is the bronze that constitutes the material cause of the statue. Secondly, the efficient cause explains “the primary source of the change or the staying unchanged” (Phys. ii 3, 194a30). Here, Aristotle provides an example of a father whom we can treat as a primary source of his child; after all, the father is the one who made what the child is made out of. Thirdly Aristotle describes the formal cause as a “genre” of a being; it defines “on account of what” something is (Phys. ii 3, 194b27-194b28). Consequently, to use Aristotle's example, an octave is explained on account of the ratio of two to one. To elaborate, I think it would be more clear to say that the formal cause points out what is essential for a thing. An octave could not be an octave if it were not defined as the ratio of two to one, but because the definition of an octave is, precisely the ratio of two to one, it is that ratio that constitutes its formal cause. Lastly, having explained—via formal causation—what something is, we can move to the final cause which ought to explain *τέλος* that is the end or what something is for (Phys. ii 3, 194b30–194b35). To show what *τὸ ὄνενκα* explains, he provides a quick dialogue, “On account of what does he walk? We answer: To keep fit.” (Phys. ii 3, 194b30–194b35) The purpose of such exchange is to indicate that the end (*τέλος*) of walking is health and, therefore, it is health that constitutes the final cause of walking. (Perhaps a more clear example of some-thing being for the sake of health would be actions such as regular exercise or the use of medicines).

Thus, the final cause provides what is often called, not by Aristotle, a teleological explanation, that is, an explanation that points to the essential ends of things. Those upholding such a view will postulate that to give an adequate account of nature we must answer every question posed by the explained above causes.

3. The Mechanist's Rainfall Argument and their Account of Chance

In this section, I shall define the mechanistic understanding of chance to then show what role it plays in the Rainfall Objection against the final cause. To first understand what chance (*τάρματον*) means, let

us consider the following scenario. If I go to the market to find my debtor and ask him to repay my debt, then I am entitled to claim that having my debt repaid is a result of my action. However, let us suppose I went to the market without expecting to find my debtor, but ran into him while doing the groceries, then the result of having my debt repaid came about even though it was not intended. We are faced with a situation in which by virtue of doing X (going to the market), I happen to do Y (running into the debtor) which brings about Z (having my debt repaid). Mechanists would say that Y is an accidental cause in virtue of concurrence. Y is accidental since it represents something that I have done, but something I did not choose; such an event we can consider to be the result of chance. Also, it should be kept in mind that chance is explained in terms of two accidental causes, that is to say, luck, and the automatic. The range of the former is more restrictive because “nothing done by an inanimate object, beast, or a child” (Phys. ii 6, 197b7) can be treated as its outcome. Hence, the above example of going to the market is a result of luck. The automatic, on the other hand, is wider because it extends to non-human animals and “many inanimate objects” (Phys. ii 6, 197b11). It can be, therefore, deduced that the main difference between luck and the automatic is that the former does not require intentionality; in other words, it doesn’t require species like humans to make intentional decisions. Considering the fact that this paper is concerned more with nature and non-human animals, I will pay more attention to the automatic. To explain how the automatic works let me examine one of the arguments that Aristotle seems to provide on behalf of mechanists. In book II, chapter 8 of Physics, the philosopher begins¹ with the question “Why should not everything be like the rain?” (Phys. ii 8, 198b18-198b19) To answer this question, he points out that Zeus does not send rain for any specific reason but it is rather a result of

¹ My interpretation of Aristotle suggests that he uses an example of rain to illustrate the point made by mechanists. However, such a view might be controversial because it is not clear what the scope of Aristotelian teleology is. To put it differently, it is debatable whether Aristotle himself considers rain as taking place for the sake of something, or rather he considers it as an example of a phenomenon without any final cause. After all, one could maintain that Aristotle does not argue on the behalf of mechanists only but also agrees with them (in the case of the rain at least). For the sake of this paper, I shall not attempt to resolve this problem. Hence to avoid potential controversies, I will just present rain as part of the mechanistic argument, without mentioning Aristotle’s position on it.

necessity; it is a consequence of what we nowadays would identify as the processes of transpiration, condensation, precipitation, and evaporation. Therefore, it seems as though nature can be explained by appeal to the material and efficient causes only; the final and formal cause is not needed.

Nevertheless, one may argue that there is actually something for the sake of which rain takes place. We can for instance point to the corn growing or being spoiled as a result of rain; such an event seems to suggest that a teleological explanation is needed. Here, mechanists, however, would come back to the concept of the automatic and use it to replace what one, in their view mistakenly, identifies as final causality. They would say that the example of corn growing only creates the illusion of rain “being for the sake of something”; however, the potential benefits that rain provides are just a result of chance. Or to put it more precisely, rain is the outcome of the automatic—an accidental cause referring to inanimate objects. Thus, to put it in terms of Aristotelian causality, it appears as if the rain does not have to be explained by appealing to the final cause; all one needs to understand such a natural phenomenon is the material and efficient cause.

4. Mechanistic Account of Chance Applied to Animals

Finally, I will show how mechanists are forced to make an argument by extension and think of biological organisms and their process of development as about rain, that is, without any final cause. First, the objector could argue that if we put a rainfall example aside and take a look at animals we can make an interesting observation, to wit, it appears as if the teeth of biological organisms must grow for the sake of something. Our everyday experience shows that the teeth of animals usually grow “sharp and suitable for biting” (Phys. ii 8, 198b25) and, as a result, enable them to consume food. Hence, it can be hardly denied that the development of jaws is beneficial almost as if there were a goal or an end behind it. (The reason for which it really is the case will be discussed in the next section).

Mechanists, however, would argue that the jaws example does not differ much from the rain. They could in some sense agree that there is some truth to the objection mentioned because the way jaws develop indeed looks as if to help animals consume food whereas in the case of rain it is not that clear. However, just because it seems to us that such a state of affairs is for the sake of something does not mean that it actually

is for the sake of something. On the contrary, this “for the sake of something” is, once again, just a result of the automatic. Teeth develop out of necessity, but the benefits they provide are just a result of a coincidental cause. Therefore, if the teeth of a creature come out of necessity (and its beneficial effects are just a result of chance), then it seems pointless to ask what the end of animals’ jaws is.

5. Aristotle’s Defence of the Final Cause

To reject the reasoning presented above, Aristotle argues that there is something to chance that mechanists ignore, namely, the requirement of rarity. To explain what the requirement consists of, let me analyze the connection Aristotle draws between rainfall and seasons. The philosopher claims that “we do not think it is the outcome of luck or coincidence that there is a lot of rain in winter” (Phys. ii 8, 198b37-199a3). It is so precisely because rain in winter seems to occur on a regular basis.² The rain in August, on the other hand, clearly appears to us a result of coincidence. (The reason being that we are not used to seeing any rain in August). Thus, Aristotle claims that only rain in summer is rare and, therefore, can be said to result out of chance.

If we apply the reasoning above to non-human animals, we will see that the process in which they develop teeth enabling them to consume food is not a rare phenomenon. Similarly as in the case of winter rains, we think of the growth of teeth as of something regular. The point of this line of argumentation is that such a regularity requires some kind of explanation that mechanists are not capable of providing; all they can do is, as it seems to me, argue that such undeniable regularity is just a result of chance, which as Aristotle’s winter rain example shows is not plausible. Thus, even if the structure of jaws is just a result of material necessity, mechanists must still explain why it happens on a regular basis. If they are unable to (as it seems to be the case), then the final cause is needed and Aristotle is right in upholding that material and efficient cause are not sufficient to explain all changes in nature. Thus, for the sake of this paper I shall conclude that the final cause remained untouched since the argument presented in *Physics* do not prove it to be

² For the sake of clarity, when Aristotle talks about regular rains in winter it must be kept in mind that he refers to the weather in Ancient Athens where the majority of rains indeed took place in winter months.

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The Conferralism of Women's Sexual Serviceability

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In her book, *Categories We Live By: The Construction of Sex, Gender, Race, and Other Social Categories* (2018), Ásta offers us a conferralist framework, which depicts how properties are conferred or ascribed onto an individual. She then uses this framework to develop her theories on the social construction of sex, gender, race and other social categories. In the fourth chapter of her book—which focuses specifically on the conferralism of sex and gender—Ásta, in order to demonstrate how these properties get conferred, creates a five-part configuration of the conferralism of sex and gender. The purpose of this paper will be to consider Linda LeMoncheck's article "Feminism and Promiscuity" (2011) and its context-dependent articulation of women's sexual serviceability in relation to Ásta's conferralist framework. More specifically, we will consider LeMoncheck's work on women's sexual serviceability in reference to Ásta's five-part configuration of the conferralism of gender as found in *The Categories We Live By*. Finally, we will break down the conferralism of LeMoncheck's sexually serviceable woman into a five-part configuration, the format of which is offered by Ásta, which will function in relation to the different categories of women's sexual subjectivity as offered by LeMoncheck in her article.

Ásta's main argument about the conferralism of gender is that gender is radically context dependent (Ásta 73). For the purpose of this paper, I take context to represent both the environment and situation. In arguing that gender is highly context-dependent, Ásta is arguing that different aspects of ourselves are important or noticed depending on the context, that is, the environment or situation, in which we find ourselves. According to Ásta, in any given context, an individual X attempts to track certain properties about another individual Y, which X believes will help them in determining Y's gender. Ásta calls the properties that are sought while attempting to track someone's gender "base properties" (Ásta 75). Examples of some base properties that we may use to track someone's gender include sex assignment, bodily presentation, role as a sexual partner, presumed role in biological reproduction, and so on. Ásta argues that the base property that gets tracked in order to confer gender,

depends on the context the individuals are in. Therefore what makes Ásta's theory of gender so context-dependent are the base properties that individual X attempts to track in Y as they vary by environment and situation – context. That is, while in context A, we might intend to track an individual's bodily presentation – how they present themselves physically – to determine gender. In context B, we might track the individual's role as a sexual partner in order to confer a gender onto them. The question that arises here is “How do we decide which properties to track in any given context in order to confer a gender onto another individual?” To answer this question, Ásta offers us a concept which she calls “gender maps” (Ásta 75).

Ásta explains that all individuals carry different gender maps with them, developing and bringing these gender maps with them unconsciously when they travel through different contexts. These different contexts through which we travel are our everyday environments, including our school, home, parties, clubs, organizations and the like. The chosen gender map that functions in a particular context creates “gender roles that have constraints and enablements attached to them” (Ásta 75). In turn, the individuals within that context are responsive to and evaluated with respect to the functioning gender map. Ásta notes that although some individuals may not agree with the functioning gender map, either for themselves or for others, they are nevertheless subject to it (Ásta 75). Whichever gender map is in play in a context, determines which properties will function as base properties in order to confer gender onto the individuals present, as well as determines the constraints and enablements that fall onto the individuals present.

Regardless of the acceptance by any one individual of the given gender map, it still holds, as do the constraints, enablements, gender roles, and functioning base properties that come with the gender map. The question of how a gender map gets chosen as the functioning gender map in any given context still remains. Ásta argues that within any context it is the individual “with standing in the particular context” (Ásta 74) who determines which gender map will be utilized. I take this individual with standing to hold a sort of position of power over the others in the specific context in order to be able to determine which gender map is used. Ásta is not clear on what it means for an individual to have standing in any particular context, or how any group of individuals determines who has standing and can determine which gender map will be used, and who

does not. Ultimately, the five-part break down of Ásta's theory of the conferralism of gender is as follows:

Conferred property: being of a gender G, for example, a woman, man, trans

Who: the subjects with standing in the particular context

What: the perception of the subject S that the person has the base property P

When: in some particular context

Base property: the base property P, for example, the role in biological reproduction; in others it is the person's role in societal organization of various kinds, sexual engagement, bodily presentation, preparation of food at family gatherings, self-identification, and so on (Ásta 74-75).

A base property is tracked through the use of the given gender map, which is enforced by the individuals with standing in the particular context in an attempt to confer gender onto the other individuals present. This five-part break down of the conferralism of gender allows us to better understand and recognize when gender is being conferred and how. Now, we will move to consider the arguments made in LeMoncheck's article and how they can be applied to a conferralist lens.

In her article "Feminism and Promiscuity" (2011), Linda LeMoncheck offers her reader a feminist philosophy of sex, which she defines as seeking to "expose women's sexual subordination in an effort toward change" (LeMoncheck 9). LeMoncheck's article aims to develop an account of the manner by which woman is made sexually subordinate in a patriarchal society. LeMoncheck asserts that Western society is a patriarchal society where "women are defined in terms of their heterosexuality and reproductivity in order to serve the needs and maintain the privileges of men" (LeMoncheck 10). That is, a woman's sexuality is defined by her ability and willingness to serve the needs of men. Men therefore carefully control women's sexuality "lest it gain an independent credibility and power of its own" (LeMoncheck 10). Here, LeMoncheck argues that men want women to be sexual, but only in a way that accommodates and appeases them. Through this view, LeMoncheck argues that there exist both "good" and "bad" women in the eyes of men. LeMoncheck calls this stereotype (the binary between so-called good and bad women) "America's good girl/bad girl stereotype," which functions to define "the parameter of acceptable sexual behaviour for women" (LeMoncheck

10). A woman's identity as either a "good girl" or a "bad girl"¹ is defined by "her sexual access to men" (LeMoncheck 10). This is to say that a woman is deemed either a good or bad girl depending on how well she supports and accommodates the man's power and privilege. For a woman to accommodate a man's power and privilege is for her to act in a way which is deemed appropriate by him, and does not disrupt or dispute the power he holds over her. LeMoncheck breaks down the good girl/bad girl dichotomy by borrowing from Sheila Ruth's theory of women's sexual serviceability in Ruth's *Issues in Feminism* (1990). LeMoncheck offers us three different configurations of the sexual serviceability of women as defined by Ruth: the good serviceable woman, the good non-serviceable woman, and the bad non-serviceable woman (LeMoncheck 10). All three types of women fall under either of two categories, namely serviceable or non-serviceable. The serviceable woman is good, while the non-serviceable woman can be either good or bad. The good serviceable woman is "playful yet submissive, eager, [and] perhaps slightly mysterious" (LeMoncheck 10). Additionally, she is "independent, experienced, exotic, or dangerous," as well as "challenging" and "carnal" (LeMoncheck 10). She is distinguishable from the good non-serviceable woman. The good non-serviceable woman is often mother or wife and should be "nurturing" and "virginal" (LeMoncheck 10). She is not the desirable, independent, and experienced sexual playmate to the man as the good serviceable woman is. Rather she is the ideal wife who is pure and nurturing, and is not challenging, eager, or seductive. Finally, there is the bad non-serviceable woman. The bad non-serviceable woman is a "bitch-temptress, immodest, coarse, and demanding" (LeMoncheck 10). She is promiscuous, although is deemed as non-serviceable because "she is sexually ungovernable, indiscriminate, and selfish" (LeMoncheck 10). The "seductive lustiness" that is present in the good serviceable woman becomes "salacious, lewd, and uncomfortably lascivious" in the bad non-serviceable woman as she is "cloying, manipulative, and catty" (LeMoncheck 10). While the good serviceable woman is the ideal submissive playmate, the bad non-serviceable woman is selfish in her unwillingness to sexually serve and/or accommodate men. What seems to be at the core of the distinction between the good serviceable

¹ Women are defined in terms of being either a good or bad girl only in the context of their sexual subjectivity in relation to men. The language of girl is in reference only to the sexual character of women.

woman and the bad non-serviceable woman is her willingness to comply with the man's demands and engage in sexual intercourse. While the good serviceable woman is the ideal submissive playmate because of her willingness to accommodate the man and his wants, the bad non-serviceable woman is selfish in that she does not comply with the man's demands.

It is important to note the use of the terms 'men' and 'women', in both LeMoncheck and Ruth's work. The gendered language used by Ruth and LeMoncheck is indicative of a gender distinction. As has been demonstrated in Ásta's work in chapter four of *Categories We Live By*, an individual X who is in the position of power in the given context, confers gender onto an individual Y. For Ásta, gender conferral is done by the individual in power, that is, by X's attempting to track certain base characteristics about the other individual Y, such as but not limited to "role in biological reproduction... role in societal organization of various kinds, sexual engagement, bodily presentation..." (Ásta 75). Gender may be argued to be one of the base properties that an individual is attempting to track when conferring a woman's sexual serviceability. Because of the conferred nature of a woman's sexual serviceability, the important aspect for the conferral is that the individual X who is doing the conferring views the individual Y who is being conferred upon as a woman. Like with Ásta's conferralism of gender, the conferralism of sexual serviceability is entirely context-dependent and does not rely on any independent facts, that is, on any facts that are not contingent on the man's opinion of the woman. For the conferral of women's sexual serviceability to be context-dependent means that whether a woman is deemed to be sexually serviceable or not is dependent on the man's opinion of her in the given context, within a specific moment. The following paragraphs will discuss exactly how the context dependency functions.

As stated above, LeMoncheck argues that "women are defined in terms of their heterosexuality and reproductivity in order to serve the needs and maintain the privileges of men" (LeMoncheck 10). A woman is defined through her perceived sexuality and how her sexuality is perceived by a man to be able to function in aiding and maintaining the privileges of men. It is crucial to note that this is the perceived sexuality of women by men. Sexuality, through LeMoncheck's lens, is created and maintained through the social, and conferred, to use Ásta's language, onto a woman by a man who holds a position of power, and who deems her sexuality to be useful or not in the given context. It is LeMoncheck's

argument, and mine, that women's sexuality is carefully controlled under patriarchy so that it functions only to please and accommodate man "lest it gain an independent credibility and power of its own" (LeMoncheck 10). Through this view — namely that women's sexuality is controlled by men in a patriarchal society — men are in a position of power, which enables them to confer a woman's sexuality onto her. From LeMoncheck's assertions about patriarchy, we can understand that in our Western patriarchal society, it is the man who sits in this position of power.

It is evident in LeMoncheck's article that the nature of a woman's sexual serviceability depends not only on the man, but on the context as well. As I have mentioned above, context can be defined as the environment or situation in which the conferral occurs. As LeMoncheck points to in her article, a "wife may be congratulated by an ambitious husband for the way she successfully flirts with his boss at a company cocktail party. Having lost his chance at promotion, he may regard her identical flirtation as an insensitive assault on his masculinity or refer to her as 'the bitch who can't shut her mouth'" (LeMoncheck 10). A woman's behaviour may be applauded in a certain context — that is, a certain environment and situation — while the same behaviour may be frowned upon in another. LeMoncheck's example of the company cocktail party is especially well-crafted as it clearly exemplifies how situation-driven the woman's sexual serviceability really is. In the company cocktail party example, the woman's behaviour did not change and nor did the man who held the position of power to confer her sexual serviceability change. That is, the environment in which the conferral occurred did not change. It was simply the situation that has changed — that is, whether he was ambitious or had lost the opportunity for a promotion that changed. The context dependency of a woman's sexual serviceability is perhaps easier to grasp when the sexual serviceability of the woman changes with the environment, which includes the man who is in the position of power to make the conferral. For example, a woman's chastity may be rewarded in the environment of a church or religious group. It may be regarded as something that women should aspire to maintain, while that same woman's chastity in the environment of say, a state college, may be looked down on or she will be called a "tease" if she appears sexually alluring, but refuses to engage in sexual intercourse or any sexual behaviour. One may easily be able to understand that depending on the individual who is in power in whatever environment, the sexual

serviceability of a woman may change, as demonstrated with the example of the chaste woman's religious cohort versus her peers at college. It is harder perhaps to understand that the man who is in the position of power does not need to change, but the change can be solely from the situation for the conferral a woman's sexual serviceability to change. As I have suggested above, this change of situation can be as little as the man's mood or opinion of the woman or environment.

Throughout the sections above, LeMoncheck and I, through the use of Ásta's work, have claimed that man is in the position of power in a patriarchal society, which enables him to determine a woman's sexual serviceability. One may ask: what kind of man may hold this position of power? Is the requirement only that they are a man or are there other factors that determine whether he has the position of power? Moreover, can only women be in the position of having her sexual serviceability conferred onto her by the individual in power? The critique of sexuality offered by LeMoncheck and Ruth function in "a heterosexually-dominated culture" (LeMoncheck 11). This is a culture in which the expected and accepted norm is a heterosexual context, in which the man is the dominant partner whose "advantage rests in pressing women's sexuality to the service of individual men" (LeMoncheck 11). It is important to note that either individual, the individual in the position of power or the one who is conferred upon, within this power dynamic of conferring sexual subjectivity, may experience the dynamic differently. Within a heterosexually dominant society such as Western society, we are able to conceive of other factors besides gender that contribute to an individual's power within any given context. This may include the intersection of race, sexual orientation, age, and economic status. As LeMoncheck argues in her article, the expectations for men and women differ for individuals of different age, race, sexual orientation, and economic status. For men the intersection of these differing factors functions to "narrow the range of dominance" (LeMoncheck 13) on them. LeMoncheck states that in Western society "[s]ex is a badge of honor for white, affluent, heterosexual men" (LeMoncheck 13). A white, heterosexual, and affluent man is in the ultimate position of power in our Western society, although other individuals who are not within this position may still maintain power.

LeMoncheck also writes on the ways in which the above mentioned factors may intersect with each other in order to dictate the stereotypes that accompany the individual. LeMoncheck writes; "African-American

men are often sexually stereotyped by white men and women as primitive and dangerous sexual animals..." (LeMoncheck 13). Although one may be a man, they are taken by degree further away from the ultimate position of power the further they are from being white, heterosexual, and affluent. Although the intersection of these factors in an individual may diminish or narrow the individual's claim to power in a given context, there seems to be a hierarchy to these factors. It would seem that first and foremost, it is important that the individual be a man for him to be in the position of power to confer the woman's sexual serviceability onto her. The hierarchy of these factors —including sex, sexual orientation, affluence, race, and age— may become a bit fuzzy after the individual's identification as a man is established, as it is once again context dependent. Next, we may argue that it is the man's sexual orientation as heterosexual that is important in establishing his dominance, as gay men may be often times categorized with women in sexually subordinate roles. Next, we may consider affluence. As LeMoncheck points out, an individual's money may give them a sort of sexual influence on its own, "[He's] so rich! Isn't he sexy?" (LeMoncheck 14). Though affluence can be strongly influenced by race, as LeMoncheck notes; "A rich African American or Hispanic man may also be made sexy by his money, but whites' [both males and females] stereotypes of him have notoriously restricted his social stature to that of a successful drug dealer, pimp, or professional athlete" (LeMoncheck 14). The final characteristic that may affect the man's position of power is age. As LeMoncheck discerns, there are expectations on a man depending on his age, although we can see that this may not be as relevant when we consider examples such as Hugh Hefner. Considering his age, Hefner might be considered a "dirty old man" (LeMoncheck 12) based on his sexual interest in young women. He is however, represented in every other characteristic to hold the ultimate position of power. Namely Hefner was an affluent heterosexual white male. As such, his old age does not detract sufficiently for him not to be considered a "man of the world" or "man of experience" (LeMoncheck 12), as many promiscuous young men would be called. From this, we can begin to consider how different factors of a person may draw them nearer to or farther from the ultimate position of power.

From all that has been said above, we are now able to attempt to create a simple five-part configuration of how women's sexual serviceability gets conferred onto them by weaving together the arguments made by LeMoncheck on women's sexual serviceability, and Ásta on the

context dependency of the conferral of gender. How women's sexual serviceability is conferred is as follows:

Conferred Property: Being of one of the three types of sexually serviceable women

Who: Individuals in the position of power. Those closest to being male, heterosexual, affluent, white, and young

What: The perception that the woman is one of the three types of sexually serviceable women

When: In whatever context (environment and situation), decided by the individual in power

Base Property: The woman's willingness and ability to serve the needs and maintain the privileges of men

In conclusion, above we have outlined Ásta's conferralist framework, from her work *The Categories We Live By*, as it relates to the conferral of gender—highlighting its context dependent nature, and drawing out exactly what this means. We then developed the conferralist framework to function in accordance with Linda LeMoncheck's theory on the sexual serviceability of women, and the three types of sexually serviceable women. Lastly, using the five-part configuration offer to us by Ásta, we created a five-part conferralist configuration of women's sexual serviceability. It is important for us to consider the conferralism of women's sexual serviceability, as well as the five-part configuration of it offered above, because it allows for us to be able to best understand and recognize when sexual serviceability is being conferred onto a woman in any given context. Through this lens we are able to better consider the questions that many feminists, including LeMoncheck are asking; "Should a feminist reconceptualization of women's sexual desire include a sexually promiscuous lifestyle? Or are promiscuous women simply appropriating a masculine sexual value that is ill-suited to their temperament as women?" (LeMoncheck 16).

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A Character-Based Account of Moral Good in Plato's *Apology*

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Abstract: Plato's *Apology* not only presents Socrates' defense of his life's work as a philosopher, it communicates why philosophy is worth dying for. I argue that, embedded in the *Apology*, Plato provides a sophisticated defense of the metaethical claim that moral good is measured by consistency with virtuous character, not by harms to one's body or possessions. I elucidate and evaluate three arguments for this claim in the *Apology*. The first is that the recipient of moral harm is one's character; the second is that even the worst bodily harm, death, is not worse than harming one's soul; the third is that good character is the only intrinsic good. Upon evaluating each, I find the argument from intrinsicness the most persuasive of the three.

Introduction

In the *Apology*, Plato offers a defense of Socrates' pursuit of philosophy against the charges that he is impious and has corrupted the youth of Athens. From Plato's speech, we can see that Socrates believes he has acted and lived rightly—so much so that he is willing to die rather than abandon his project. To a modern reader, this may seem deeply counter-intuitive because if Socrates is doing good for the world and is a “gift of the god to the city” (31a7- 31b1) of Athens like he claims, then he should also be averse to death because it would prevent him from doing his divine duty. I will argue that the *Apology* makes sense of this by defending the claim that the moral good of an action or way of life is measured by its consistency with virtuous character, not by its consequences, which explains why Socrates is not so bothered by the prospect of dying for his pursuit of philosophy. I will pursue three broad lines of argument: first, that the discussion of harm in the *Apology* reveals that the recipient of moral wrongs is a person's character and soul, not their physical body or material possessions, second, that Plato argues that corruption of one's character, not death, is the worst consequence that could befall a person, and third, that good character is the only intrinsic good.

The Argument from Harm

The first instance in the *Apology* where Plato discusses harm is when Socrates accuses Meletus of frivolously bringing him to court; Socrates argues that he would not have willingly corrupted the youth of Athens and therefore cannot be convicted. He constructs this argument using the premise that “the wicked do some harm to those who are [...] closest to them” (25c 6-7), so he would have no reason to corrupt the youth of Athens by making them wicked because it would make him vulnerable to being harmed by them (25e 4). Socrates’ first argument makes little sense if we attempt to interpret it using a consequentialist analysis of harm. Under the consequentialist view, harm might take the form of a bodily injury or death, and it might involve the removal or worsening of a person’s assets as a result of some antecedent action. If we take wickedness to mean a desire to benefit oneself, even when it comes at the expense of others, then it seems that the wicked have an incentive to treat their inner circle well—rather than to harm them. For one, the wicked are likely to use friendships for their gain—either so they would have supporters who can make them look well-liked, concealing their wicked nature, or because their friends might possess things which might benefit them and aid their misdeeds. As a result, the friends of the wicked are less likely to experience harm as a consequence of wicked peoples’ actions than they are to be treated well because of the wicked person’s ulterior motive. Second, wicked people are the most likely to generally have ulterior motives for pursuing friendship, because of their overarching desire for self-improvement. If they choose to seek friendships with certain people, it is more likely because that person has something they want; if the wicked were just intending to cause harm to the person, there is no reason why they would want to befriend them at all. Thus, Socrates’ argument runs into issues if we think of harm as primarily consequentialist. So, if we want Socrates’ argument to hold, we must conceptualize harm as the worsening of one’s character and the corruption of a person’s soul. Under the character-based view, it makes sense that the wicked are able to harm the characters of those close to them by enticing them into practices and habits which worsen their character—for example, the aphorism that bad apples spoil the bunch and why parents take interest in who their children befriend.

Of course, the justification I use here to explain why associating with the wicked causes harm to one’s character is not clear solely from this passage in the *Apology*. One might wonder why the character-based

interpretation of goodness is appealing or a likely hypothesis, which I would argue arises from understanding the *Apology* in context. The trial seeks to issue a referendum on Socrates' life's work and the penalty of death assesses Socrates' punishment at the level of his personhood and soul. Socrates begins his defense by addressing the general attacks on his character from nameless accusers, indicating that these are the more "dangerous" (18c 3) of the allegations with which he is presented. Likewise, the charges assessed against Socrates include corrupting the character of Athenian youth, with little reference to any explicit negative consequences of Socrates' actions. Because the trial itself is an ethical judgment of Socrates' character and his influence on others' characters, it becomes apparent that Plato is broadly interested in character-based accounts of moral good. We might then worry that the character-based interpretation is inconsistent with Socrates' larger project of attempting to question and disprove the wisdom of those who are perceived to be wise but are not. If Socrates, for example, spends a majority of his time around people who are ultimately worse in character than him, then this argument seems to suggest that Socrates' character would be worsened by his association with them. Socrates' initial defense against Meletus is that if he "make[s] one of his associates wicked [he] run[s] the risk of being harmed by him" (25e 4), which implies that Socrates can conversely make his associates better to decrease the risk of being harmed by them. If we think that Socrates has not been made wicked—Plato certainly does—then we are also committed to believing that Socrates' questioning has helped improve the character of the individuals in Athens with whom he associates.

The second instance where Plato discusses harm occurs when Socrates claims that it is not possible that "a better man be harmed by a worse" (30d 2); that, in fact, Meletus "is doing himself much greater harm" by "attempting to have a man executed unjustly (30d 4-5). Socrates' second argument also makes the most sense if we presuppose a conception of harm as harm to character. He continues his attack on Meletus by making the interesting claim that "[n]either Meletus nor Anytus can harm [him] in any way" (30c 7 - 30d1) because it is not possible for "a better man [to] be harmed by a worse" (30d 2). Under the consequentialist view, this argument clearly does not make sense; there is nothing that prohibits a person from harming a person with better character than them, physically or otherwise, which Socrates concedes by stating that Meletus could certainly "kill [...] banish or disenfranchise" (30d 3) him.

Especially if we hold that causing harmful consequences is what makes people and actions better or worse, it follows that it would actually be common for worse people to harm better people than them because the worse people are worse under the consequentialist interpretation *because* they harm others. Instead, Socrates must be referring to a different type of harm.

In contrast, if we conceptualize harm as a harm to one's soul, then it follows that it is impossible for Meletus and Socrates' other accusers to harm or spoil Socrates' character by accusing him. This is because, as Socrates claims, the recipient of the harm caused by Meletus' unjust action is Meletus, as well as the rest of the jury who convicts Socrates — not Socrates himself. Under the consequentialist analysis of harm, Socrates is clearly also harmed because he dies at the Athenians' hand. Likewise, under the consequentialist view of harm, Meletus and the Athenians only stand to benefit: if Socrates is as much of an annoying "gadfly" (30e 5) as he claims to be, then Meletus and the people of Athens stand only to benefit from his death. The only way to reconcile his claim that it is Meletus and the Athenians who are harmed, not him, is to conceptualize harm as harm to one's character. Meletus and the Athenians are harmed by the injustice of sentencing an innocent man to death because unjust action can worsen one's character through the formation of bad habits or negative tendencies. In contrast, Socrates' character and his moral dispositions cannot be harmed or worsened by his conviction by the jury: immediately before describing Meletus' self-condemnation, he criticizes Athenians' materialistic prioritization of "wealth, reputation, and honors" (29e 2) over "wisdom or truth, or the best possible state of [their] soul" (29e 3). In explaining this, Socrates draws a distinction between materialistic, consequentialist wellness and the wellness of one's character. From assessing how Plato deploys the concept of harm as a moral wrong, we can see that Socrates holds that consistency or deviation from good character is the appropriate measure of an action's moral status, rather than the self-serving assessment of an action's consequences.

Here, Plato does not offer a clear explanation of why it is that a worse man, even if he tries, cannot harm the character of a better man. Despite this, we can still construct some plausible justifications for why this is the case, but each depends on a particular understanding of the metaphysics of the soul and a person's character that Plato does not make explicit in the *Apology*. For example, we might defend the idea that worse

men cannot worsen better men by arguing that peoples' characters improve in an ascent from wicked to good character. This view might hold that improvement of character consists in examining one's flawed traits and habits and subsequently dispensing with them, which can inoculate a person against lapsing back into the habits associated with bad character. We could also imagine that things like good foresight and judgment of others' character are necessary conditions for a person's goodness of character, which could explain why it would be unlikely for the good to be goaded by worse men into patterns of behavior that worsen their character. Both seem plausible, and their addition is necessary to fill in the gaps in Plato's argument.

The Argument from Death

The second broad argument that Plato pursues in favor of the claim that the moral good of an action is measured by its consistency with good character, rather than its consequences, consists in a number of arguments designed to mitigate the magnitude of death as a consequence. For one, Socrates makes three consequentialist arguments that mitigate the perceived badness of death. First, Socrates explains that he is not ashamed to have had an occupation resulting in his death by referencing Achilles' courage and integrity, citing how Achilles would rather die than live a "coward" and "laughingstock (28d 2-3). The argument implicit here is that one's commitment to virtue makes consequential harms like life or death look small in comparison. Second, while making fun of men like Meletus who grovel for the jury to acquit them, Socrates remarks that they act "as if they were to be immortal" (35a 6) if they were not executed, suggesting that trying to avoid death is ultimately futile because delaying their death does not change the fact that everyone experiences it. Third, Socrates hypothesizes about what death is like after he is sentenced to death and concludes that it is likely that "death is a blessing" (40c 3-4). He suggests that death is either "like a dreamless sleep" (40d 2), which is pleasant, or that it is a movement of the soul to a place where he can be among Greek heroes, be judged by the "true jurymen" (41a 3) (as opposed to the Athenian jurymen) of the dead. From these arguments about death, we can hypothesize that because death—what Meletus and the jury perceive to be the worst possible consequence that can be levied against Socrates—is not so bad, then the relative badness of other negative consequences, like bodily harm and a loss of one's wealth, must also not be so bad in comparison. By arguing that death is

not a bad consequence, Plato throws into question what actually constitutes a bad consequence, and if all consequences are less than death, if any consequences at all are bad.

I think that these arguments overall are designed to be convincing to Plato's audience of ancient Greek readers (which they might very well be) but are less convincing to modern readers. Plato's first argument about Achilles' heroism includes an appeal to authority by referencing Achilles' heroism. This argument then becomes less persuasive if we do not think that Achilles is a hero, the likes of which we should aspire to. We might also worry that Achilles' desire to avenge Patroclus is indicative of character flaws, like a predisposition towards rage or a lack of rational thinking before making decisions. Plato's second argument—that delaying one's death does not amount to much, given the inevitability of death—fares slightly better. It is not contingent on a person subscribing to any particular notion of personhood or mythological tradition, but the argument is also not one of Plato's more powerful claims. However, the function of this argument is just to mitigate the badness of dying by claiming that it is inevitable, which does not actually justify why consistency with good character is comparatively more important. Finally, Plato's third argument seems the most promising out of the three and offers a rhetorically powerful ending to his speech. However, the disjunction that Socrates offers between a dreamless sleep and an afterlife surrounded by heroes misses out on other possibilities for what death is like, such as reincarnation or life as a ghost. These may be anachronistic ways of thinking about death, and the possibilities Plato offers seem germane to Greek ideas about the afterlife, so this argument is probably maximally persuasive to an ancient Greek reader. Examining the first of these possibilities, that death is like a dreamless sleep, reveals that this argument begs the question of who it is that experiences the pleasure of that sleep. If the sleep is eternal, it does not make sense to think that this experience could be "pleasant" (40d 5) because the pleasure of being well-rested is only experienced once one wakes up, which does not happen in the case of death. The other possibility is that death moves the soul to an afterlife where one can be in the company of the souls of heroes, but this requires the reader to buy into the existence of an immortal soul that can interact with other souls, and the existence of the Greek afterlife with its judges and heroes.

Next, in addition to not holding that death is a significantly bad consequence for one to experience, Plato also makes consequentialist

arguments for acting with good character—that is, that acting with good character produces desirable consequences. This is because Socrates claims that harm to one’s soul is worse than and outweighs death by many times; having good character allows one to escape these harms. Socrates offers a quantification of the harm of bad character by remarking that he would live life as a philosopher, “even if [he is] to face death many times” (30c 2). He suggests here that when acting with good character would cause some negative consequences—even death—the harms of bad character still outweigh death by many times and therefore should be avoided more stringently. A benefit of this argument is that it would also be persuasive to a person who thinks that consequentialism is an appropriate standard of moral conduct, because it uses an appeal to the consequence of dying to quantify the harm of bad character and compare it to death as if it were itself a consequence. However, I find this argument ultimately unpersuasive because Socrates’ commitment to dying for the pursuit of philosophy does not justify why acting with good character is actually many times more important than avoiding death, it simply provides an example of how a person who believes this is true might act.

The Argument from Intrinsicness

The final argument Plato pursues is the argument that good character is the only intrinsic good. Socrates remarks that “excellence makes wealth and everything else good for men, both individually and collectively” (30b 3-4). This denies consequentialism by arguing that what most take to be good consequences, like “wealth and everything else” have no intrinsic goodness. Instead, the source of the moral goodness of material things comes from an their virtuous use: Socrates qualifies the goodness of excellence by remarking that it is “for men, both individually and collectively,” so the type of good that he is referring to must be one that relates to humans’ character and is intrinsic to individuals and communities. Good character satisfies this because institutions and people can have character traits that are intrinsic to them, whereas any good that material things have are contingent on their user knowing how to and wanting to use them properly. For example, take the action of making large sum of money: under the consequentialist view, we could only say that making the money is a good thing if the possession of the money produced another good consequence, and so on. In contrast, the character-based view of moral good would claim that the money itself is neither good or bad, and that the making of money is good only if the owner

makes the money in a virtuous way. I find that this defense of consistency with character is appealing because it does not cause a problem of infinitely regressive justifications for the goodness of consequences which all appeal to other consequences which we take to be good; thinking that goodness can be intrinsic and therefore self-contained by individuals' or institutions' character avoids the regression problem.

Conclusion

So far, I have outlined three arguments present in the *Apology* that Plato uses to defend the claim that goodness of an action is measured by consistency with good character, not the consequences of an action. I find that Plato's analysis of harm is persuasive if we charitably grant him that there exist explanations of how people with good character maintain their character in the face of challenges to it, which Plato does not provide in the *Apology*. The second line of Plato's argumentation is mainly designed to mitigate the magnitude of the consequence of death; it argues that virtuous character is a more important good than preventing death. I conclude that many of these arguments are unpersuasive because they presuppose that the reader assents to much of the Greek worldview. We are left with Plato's final argument—which I find the most successful—that good character is the only intrinsic good.

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