

Wealth Maximization: A “Sober” Analysis

by

Seth Emblem

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Project Approved:

Supervising Professor: Richard Galvin, PhD

Department of Philosophy

Supervising Professor: Robert Garnett, PhD

Department of Economics

John Harvey, PhD

Department of Economics

ABSTRACT

In this paper, I first consider the ethical implications of “Wealth Maximization”, an ethical theory that permeates “stereotypical” economic analysis, by analyzing Richard Posner’s conception from his 1985 work, *Wealth Maximization Revisited*. Ultimately, among other theoretical and pragmatic concerns, I think Wealth Maximization fails to achieve its goal of maximizing wealth, at least compared to theories such as “autonomy maximization”. Second, I consider a potential objection against my normative analysis, an objection I coin as the “ought-implies-can” objection. This objection basically claims that if psychological egoism (PE) is true, then all normative judgments are inappropriate. Ultimately, in utilizing Elliott Sober’s transitivity result and empirical studies concerning volunteerism and happiness, I think we have good epistemic reason to reject PE in favor of what I call “psychological utilitarianism” (PU), and thus we have good reason to see my normative analysis as an appropriate endeavor.

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Introduction

Wealth Maximization is the normative theory that we should look to maximize wealth in court rulings, the law, and the like. Indeed, this ethical theory aligns with what I call “stereotypical economics”, or what others may call “ECON 101”. For the purposes of this paper, I will strictly focus on the ethical and moral implications of Wealth Maximization, and put the legal aspects aside for perhaps another time. In analyzing this view, I will refer to Richard Posner’s¹ work on the matter. Ultimately, I think Wealth Maximization falls to the same objection that Posner presents against utilitarianism, namely that it emphasizes short-term gains at the cost of long-term stability. As such, I think an ethical theory focused on autonomy maximization might better achieve intrinsic societal values such as happiness and well-being. From there, I consider a potential objection to my analysis, an objection I refer to as the “ought implies can” objection. In short, the objection claims that if psychological egoism (PE) is true, then normative judgments and analysis are inappropriate. In response to this objection, I utilize Elliott Sober’s transitivity result and empirical studies concerning volunteerism and happiness to show that we have good reason to reject PE in favor of what I call “psychological utilitarianism” (PU), and thus have good reason to consider my normative judgments concerning Wealth Maximization. As such, this paper has two main theses, first that autonomy maximization is better suited to achieve intrinsic social values than wealth maximization, and second that we have good reason to accept my normative analysis as an appropriate endeavor. In the following section, I will explain what we mean by “wealth maximization”.

¹ Posner has changed his position on this topic throughout the years, so when I refer to “Posner”, I refer to the Posner who wrote *Wealth Maximization Revisited* (1985)

Wealth Maximization

To start, we need to clarify what Posner means by “wealth”. Posner points out that non-economists generally think of wealth as paper money, but in his view wealth “refers to weighing preferences for the things that people want, either by willingness to pay for a thing, if you do not own it, or by unwillingness to part with it voluntarily, if you do own it”². For instance, say I value my car at \$5,000, but the “highest bidder” for the car only values it at \$2,000. In this case, societal wealth is \$3,000 greater if I keep the car than if the car went to the highest bidder. In cases similar to this, Posner points out that “wealth” is not always reducible to market prices.³ In the car example, \$2,000 might be the market value for my car, but I value the car at \$5,000 for sentimental reasons. As such, Posner asserts that “money, to an economist, is not wealth, but just a measure of one’s entitlement to houses, cars, rewarding work, leisure, privacy, and countless other ‘things’ that constitute a person’s wealth”⁴.

We should note here that “paper money” plays significantly different roles depending upon the original distribution of property rights. For instance, say that I still value my car at \$5,000, but I only have \$1,000 of paper money at my disposal. In this case, how much I “value” the car depends on whether I own the car. If I own the car, I value it at \$5,000, but if someone else owns the car, I only “value” it (under Wealth Maximization) at \$1,000, as I can only afford to spend \$1,000. Given the hypothetical market price of \$2,000, Wealth Maximization will also prescribe entirely different results depending on whether I originally own the car. If I own the car, Wealth Maximization demands that I keep the car ($\$5,000 - \$2,000 = +\$3,000$ in societal wealth). However, if I do not own the car, Wealth Maximization demands that I do not get the

² Posner, *Wealth Maximization Revisited* 86

³ *Ibid*

⁴ *Ibid*

car ($\$1,000 - \$2,000 = -\$1,000$ in societal wealth). In other words, the price at which I would obtain the property right is not the same as the price at which I would give up the right. This asymmetric normative judgment is not necessarily a vice⁵, but it is something Posner needs to account.

Intrinsic or Instrumental Value

To this point, we should consider whether wealth is an intrinsic value. Ronald Dworkin posits two potential ways of viewing wealth as an intrinsic value: either (a) an “immodest” claim that wealth is the *only* intrinsic social value, or (b) a “modest” claim that wealth is one of many intrinsic social values.⁶ Both claims imply that, *ceteris paribus*, a society with more wealth is better off than a society with less wealth. Indeed, the “immodest” version goes beyond this implication; “all other things” do not need to be equal, a society with more wealth is better off than a society with less wealth. I think this version is obviously false. For instance, consider a case where the hypothetical “market price” for nuclear weapons is \$1 billion, and a corrupt government values the weapons at \$2 billion. Fortunately, there is an anti-nuclear war group that wants to prevent the transaction, but they only “value” the weapons at \$1.99 billion due to a lack of funds. As such, Wealth Maximization demands that the corrupt government obtain the nuclear weapons, and nuclear warfare ensues. If wealth is the only intrinsic social value, then the nuclear war-torn society is better off than the peaceful society. This example might seem extreme, but I think it illustrates why wealth is definitively not the *only* intrinsic social value, just in case some had doubts.

⁵ Of course, this depends on whether the “giving up” price is higher than the “obtaining” price. If the “giving up” price is lower, then Wealth Maximization is an unstable cycle. I will not go into this concern, but you can reference Dworkin, *Is Wealth a Value* 192 for this concern.

⁶ Dworkin, *Is Wealth a Value* 195

Considering our previous example, the “modest” version can give us a prescription that matches our intuitions. Granted, giving the weapons to the corrupt government will maximize wealth, but the effects of increasing the probability of nuclear warfare would far outweigh any gains in wealth. In this version, we must weigh any changes in wealth along with other “intrinsic” social values, such as health, well-being, and safety. One potential issue with this view is how to quantitatively weigh different social values against one another. For instance, should wealth and health count the same, or should one count for more than the other? To make our analysis of the “modest” claim easier, I will consider the most basic implication of the claim, namely that, *ceteris paribus*, a wealthier society is better off. In other words, the wealth of a society is a tiebreaker between otherwise equal societies. Ultimately, I think wealth still fails to meet this “modest” standard for intrinsic societal value. If two societies are “otherwise equal” such that they are equally just, equally happy, et cetera, then increased wealth will not make one society better off than the other. Granted, increasing a society’s wealth might make the society happier or more productive, but then the society is not “otherwise equal” with the other society. To this point, one may try to reject my “tiebreaker” criterion and claim that we should quantitatively weigh wealth against other societal values, but this move will not work. If wealth cannot break a tie between otherwise equal societies, then wealth certainly cannot quantitatively outweigh other societal values. Wealth might have instrumental social value in that an increase in wealth is positively correlated with other societal values such as justice, but this depends on the background information. In short, anyone who claims wealth is an intrinsic social value “is a fetishist of little green paper⁷.”⁸

⁷ As Posner stated, “wealth” is not equivalent to money, but I think Dworkin gets the right point across here

⁸ Dworkin, *Is Wealth a Value* 201

Asymmetric Normative Judgments

Given that, at the least, wealth has no intrinsic social value, we shall return to the issue of Wealth Maximization's asymmetric normative judgments. Wealth seems to have at least *some* instrumental social value, but does this instrumental value warrant the maximizing of wealth? Deirdre McCloskey posits that wealth provides “[what she calls] ‘scope’, or what Amartya Sen and Martha Nussbaum call ‘capabilities’ – the ability to read, for example, or the potential to become the founder of a new business, or the scope to cultivate a talent as an artist.”⁹ I think McCloskey is right in this regard; having greater access to wealth generally allows us to pursue more fulfilling and “happier” ends than simple survival tactics (e.g. the wealth available to me allows me to write this honors thesis rather than scavenge the campus for food and shelter).

However, an unadulterated version of Wealth Maximization would push us in the opposite direction. Given the seemingly unjust prior conditions of our society (e.g. slavery), some members of present society have an unfair “leg-up” with respect to wealth at their disposal. This unfair distribution may affect both the “selling” value and the “purchasing” value for the unjustly impoverished. The “selling” value is affected in that, if one is severely impoverished, she might be willing to give up a semi-essential commodity (say, in an extreme case, one of her two kidneys) at a lower price to obtain a fully-essential commodity (say, food and shelter). Ultimately, I think the “selling” value is less problematic, for if one can access and own an important commodity, then he can “value” the commodity (under Wealth Maximization) per his desires and needs. In other words, the access to money does not constrain one's valuation of owned commodities, outside of extreme cases of destitution. The access to money, however,

⁹ McCloskey, *Happyism: The Creepy New Economics of Pleasure* 11

does significantly constrain one's "purchasing" value, the valuation of outside goods. To some extent, this is a "virtue" of Wealth Maximization, as it establishes clear boundaries within the ethical framework; those with the necessary means count in the ethical considerations. This, in some sense, makes Wealth Maximization preferable to utilitarianism, as utilitarianism fails to establish intrinsic boundaries (e.g. does a foreigner's pains/pleasures count the same as a U.S. citizen?). However, this "virtue" dissipates whenever society sets up constraints on these boundaries in an unjust manner, especially considering that wealth is not an intrinsic social value. If wealth were an intrinsic social value, then the proponent of Wealth Maximization could circumvent this issue to some degree (i.e. maximizing wealth is good for society, regardless of the initial conditions). Given that wealth is only good insofar as it promotes autonomy, justice, and the like, this constraint on "purchasing" value is not a virtue, but a vice. There might not be anything inherently wrong with Wealth Maximization's boundaries, but the related constraints on what individuals may claim to value compromise the moral worth of the theory.

To be clear, these assertions do not necessarily imply that we should redistribute wealth or reconcile for the initially unjust structure of our society. Indeed, we could establish an ethical framework that does not require such action (e.g. an ethical theory that considers wealth redistribution as theft). Rather, wealth redistribution seems necessary if we are to maintain any credence in wealth maximization. If wealth is only valuable such that it promotes things like autonomy and fairness, then we need some sort of "limited" Wealth Maximization that accounts for issues in unfair wealth distribution. Granted, one could posit that our current society does not have an unfair distribution of wealth, but this move would not completely circumvent the concern. The key here is that an unadulterated version of Wealth Maximization *could* result in a "snowball" effect, such that if a small group of people unfairly obtain a majority of the wealth

from the start, then Wealth Maximization would prescribe that market commodities exchange between these rich individuals. This potential case highlights another potential issue with unadulterated Wealth Maximization, that it does not consider long-term wealth; just because someone is endowed with more wealth (e.g. Paris Hilton) does not mean they will create any “real” wealth (e.g. advanced technologies). A proponent for Wealth Maximization needs to respond to these two issues.

Posner’s Response

In response to these concerns, Posner tries to defend the thesis that wealth is an intrinsic social value via an appeal to the traditional economic analysis of monopolies. He claims that “anyone who is inclined to say that wealth is not a value in an ethical sense should ask himself whether he agrees that monopolies and cartels are bad because they lead to a reduction in the value of output,” and that “if he agrees with this traditional economic criticism, then he believes that wealth is a social, ethical value – whether he knows it or not.”¹⁰ While I agree that monopolies and cartels are generally bad for the economy, I think Posner’s assertion misses the point. Monopolies are bad because they exploit the consumer, such as in cases where consumer demand for a monopolized good is inelastic. For instance, consider a case where the monopolized good is a life-saving drug. Granted, we might need to allow for monopolies in such cases to incentivize companies to produce these critical drugs, but the obvious concern here is that a company might abuse this monopoly and the inelastic demand for life-saving drugs and thus endanger human lives for profit’s sake. As we can see, we can object to monopolies and cartels without any appeals to wealth; in fact, the intuitive objection to monopolies seemingly

¹⁰ Posner, *Wealth Maximization Revisited* 89

has nothing to do with promoting wealth but with promoting human autonomy. To be fair, I think an appeal to Wealth Maximization is *sufficient* to reject monopolies and cartels, but such an appeal is not *necessary*; indeed, an appeal to human autonomy also moves us to reject monopolies and cartels. Thus, I still think that wealth is not an intrinsic social value.

In response to the issues presented concerning unadulterated Wealth Maximization, Posner posits that “one’s wealth is the present value of the stream of future income or other benefits generated by one’s human and physical capital.”¹¹ This conception of Wealth Maximization *might* (under certain assumptions and circumstances) circumvent issues involving the slothful rich (e.g. Paris Hilton), but this conception hinges on the original distribution of property rights. Posner claims that “perhaps the best [way to assign property rights] is [...] to parcel out the rights in an egalitarian fashion,” and that “this will give everyone some physical capital and therefore make it easier for the able and ambitious to rise.”¹² However, this appeal to egalitarianism conflicts with another claim Posner makes in his analysis. In cases of inherited wealth, Posner believes that “the testator will take into account the likelihood that his heirs will spend the money he leaves them in foolish or offensive ways,” and thus “any interference with their expenditures is an interference with his disposition of assets accumulated through his productive efforts.”¹³ This analysis of inherited wealth assumes that people are strictly rational in the economic sense, but empirical studies suggest that people are not rational in this sense¹⁴. Without this economic rationality (much less economic omniscience and infallibility), the problem of the unproductive rich remains, and Wealth Maximization cannot solve this problem.

¹¹ Posner, *Wealth Maximization Revisited* 93

¹² Posner, *Wealth Maximization Revisited* 94

¹³ Posner, *Wealth Maximization Revisited* 98

¹⁴ Frey, *Happiness: A Revolution in Economics* 127

Further, since this conception of Wealth Maximization hesitates to interfere with inheritance, we still have the problem that Wealth Maximization potentially inhibits wealth's primary instrumental value: increased human autonomy.

Autonomy Maximization

To be fair, Posner's main issue with wealth redistribution, such as in the inheritance case, is the generally utilitarian motivation behind it. Posner does not think we should redistribute wealth to those who derive the most pleasure from it. Such action more-or-less celebrates the individual as a consumer rather than as a producer, and is thus unsustainable. If we distribute resources to those who derive the most pleasure from them, rather than to those who best produce said resources, our supplies will evaporate and the consuming hedonists will have nothing left to derive pleasure. As such, Posner quips that "wealth maximization is a more effective instrument for attaining the goals of utilitarianism than utilitarianism itself."¹⁵ Wealth Maximization is better at producing happiness for exactly that reason, it focuses on producing consumable goods for the future (or at least Posner thinks so). In similar fashion, however, I would suppose that "Autonomy Maximization" is a more effective instrument for attaining the goals of Wealth Maximization than Wealth Maximization itself. I think, for the same reasons why maximizing wealth might better maximize happiness, maximizing autonomy might better maximize wealth.

The problem with Wealth Maximization is that it might overemphasize production in the short-run to the point where we exhaust our finite natural resources. Just like how the utilitarian theory might prescribe consumption now at the cost of consumption in the future, the Wealth Maximization theory seems to prescribe production now at the cost of production in the future.

¹⁵ Posner, *Wealth Maximization Revisited* 98

Since limited resources constrain our consumption capacity, this limitation must also constrain our production capacity (e.g. limitations in living/producing space and environmental stability). The proponent of Wealth Maximization might argue that his view appropriately weighs long-term and short-term production, but if this is true, then the utilitarian can also argue that her view appropriately weighs long-term and short-term consumption. Posner's analysis gives us no reason to believe that production-driven individuals will not erroneously over-produce in the short-term, so just as utilitarianism might motivate unsustainable consumption-driven lifestyles, so might Wealth Maximization motivate unsustainable production-driven lifestyles.

On the other hand, if we focus on maximizing human autonomy, this goal prescribes some sort of lifestyle of sustainability. Granted, Autonomy Maximization would want to limit government involvement in cases where our actions present no harm to others, but I think Autonomy Maximization would also prescribe government involvement in cases involving non-sustainable actions (e.g. carbon pollution). In such cases, these non-sustainable actions inhibit human autonomy via air-borne diseases and increasingly variable weather patterns. So, if we focus on promoting autonomy today, we can establish a sustainable lifestyle which would allow for the production and consumption of wealth well into the future. Of course, wealth is not an intrinsic social value, but relating to Posner's point, if Wealth Maximization is a more effective way of maximizing happiness as compared to act utilitarianism, then Autonomy Maximization is a more effective way of maximizing both happiness and wealth.

The "Ought Implies Can" Objection

The potential arguments for autonomy maximization over wealth maximization rely on an important premise, that happiness/well-being should be an abstract goal of our economy¹⁶, and that autonomy maximization is better suited to achieve this goal. A potential objection to this central premise is that making such normative “should” judgments is inappropriate. One could substantiate this objection by positing Psychological Egoism (PE) and “Ought Implies Can” (O). PE states that every moral agent, in all circumstances, acts in her self-interest. In other words, if PE is true, then moral agents can do nothing but act in their self-interest. One could substantiate this assertion of PE, in the context of our case, by claiming that people cannot help but pursue wealth. O states that the normative judgment that a moral agent *should* have done “y” implies that the agent *could* have done “y”. The conjunction of PE and O implies that we cannot make normative judgments such that:

$$(PE \ \& \ O) \rightarrow \text{No Normative Judgments}^{17}$$

Given the truth-tables of “if-then” conditional statements, if A implies B, then not-B implies not-A. If we replace A and B with (PE & O) and “No Normative Judgments”, respectively, we have the following:

$$\sim(\text{No Normative Judgments}) \rightarrow \sim(PE \ \& \ O), \text{ which is logically equivalent to}$$

$$\text{We Can Make Normative Judgments} \rightarrow \sim PE \vee \sim O$$

¹⁶ This does not necessitate utilitarianism, only that well-being is an implicit goal

¹⁷ This would also undermine Wealth Maximization, given that it too is a normative judgment. Nonetheless, the proponent of wealth might make this move to undermine the presented arguments that favor autonomy over wealth.

Thus, if we want to maintain that we can make normative judgments, then we must reject either PE or O.¹⁸ I do not wish to argue whether ought implies can, but certain empirical studies provide potential epistemic evidence against PE. In the following sections I will describe the transitivity result, its relation to Ockham's Razor, and how applying this result to our empirical evidence provides evidence against PE.

The Transitivity Result

Before I explain the “transitivity result”, I will make a distinction between Increased-Probability (IP) evidence and High-Probability (HP) evidence. Say that we formulate a hypothesis H and we find some sort of evidence E . E counts as IP-Evidence for H if and only if $\Pr(H|E) > \Pr(H)$. On the other hand, E counts as HP-Evidence for H if and only if $\Pr(H|E) > t$, where “ t ” is an arbitrary probability threshold (e.g. $t=0.9$). Obviously, our evidence E could count as IP-evidence but not as HP-evidence for H , and vice versa. For instance, say that we hypothesize that all ravens are black (B), and our evidence is that the pen next to me is not a non-black raven (P). This “evidence” might seem odd, but the pen is one less thing that could prove the hypothesis false. As such, $\Pr(B|P) > \Pr(B)$. Of course, this evidence hardly makes our hypothesis “highly probable”, so P does not count as HP-evidence for B (which matches our intuitions concerning the “odd” nature of this evidence). Now consider an inverse case, where a certain E counts as HP-evidence for H , but not as IP-evidence for H . Say that we randomly pull a card from a standard deck, and we hypothesize that the face value is greater than two (F) (taking $J=11$, $Q=12$, $K=13$, and $A=14$). Now suppose that, before we pulled the card in question, we pulled another card from the deck, and this card is the Jack of Hearts (JH). In this case, $\Pr(F|JH) = 47/51 \approx 0.92$.

¹⁸ Whether the world is physically deterministic affects the appropriateness of normative judgments (which is why I use conditional statements rather than bi-conditionals), but such concerns fall outside the scope of this paper.

Of course, t 's value is arbitrary, but I take that JH counts as HP-evidence for F in this case. However, $\Pr(F) = 48/52 > \Pr(F|JH)$, so JH does not count as IP-evidence in this case. Granted, JH makes our hypothesis highly probable, but only because our hypothesis was already highly probable, given the background conditions (e.g. $\Pr(\text{choosing a certain card randomly}) = 1/52$). In this regard, IP-evidence is “preferable” to HP-evidence. Optimally, E would count as both IP and HP-evidence for H, but our intuitions about evidence suggest that E should increase the probability of H, regardless of H's prior probability.

Now that I have explained the difference between IP-evidence and HP-evidence, I will point out that IP-evidence is not transitive in general, thus the need for the transitivity result. Let us consider a card-case example where we randomly pull a card from a standard deck, and posit the hypothesis that the card is a heart (H). Further, our evidence in this case is that the card is a red (R). In this case, $\Pr(H|R) > \Pr(H)$ ($1/2 > 1/4$), so R is IP-evidence for H. Now, consider the same example, but our hypothesis is R, and our evidence is that the card is a diamond (D). In this case, $\Pr(R|D) > \Pr(R)$ ($1 > 1/2$), so D is IP-evidence for R. If IP-evidence is transitive in general, then $\Pr(H|D) > \Pr(H)$, but D decreases the probability of H ($0 < 1/4$). As such, we need to satisfy certain conditions for the transitivity of IP-evidence to hold. Given this, the Transitivity Result is as follows:

In a case involving A, B, and C, the transitivity result states that if (i) $\Pr(B|A) > \Pr(B)$ and (ii) $\Pr(C|B) > \Pr(C)$ and (iii) $\Pr(C|B \ \& \ A) = \Pr(C|B)$ and $\Pr(C|\sim B \ \& \ A) = \Pr(C|\sim B)$, then $\Pr(A|C) > \Pr(A)$.

If we replace A, B, and C with H, R, and D, respectively, then the card case above fails to satisfy (iii), as $\Pr(D|R \ \& \ H) \neq \Pr(D|R)$ ($0 < 1/2$). Thus, given the truth tables of if-then conditional statements, the transitivity result states that $\Pr(H|D) \leq \Pr(H)$, which is true ($0 \leq 1/4$). The

transitivity result is necessarily true, but this card case helps show how the result holds. Next, I will explain how Sober builds off the general transitivity result.

In describing his “transitivity result”, Sober describes the archeologic case of common ancestry (CA) versus separate ancestry (SA). The crux of the case is whether the fossil of an “intermediary” species is found. Ultimately, observing such a fossil is probability-increasing (IP) evidence for CA, while failing to observe such a fossil is IP-evidence¹⁹ for SA.²⁰ This naturally derives from a theorem of probability calculus, such that if observing some piece of evidence counts as IP-evidence for hypothesis 1 over hypothesis 2, then failing to observe that piece of evidence counts of IP-evidence for hypothesis 2 over hypothesis 1. The idea of IP-evidence derives from *The Bayesian Theory of Confirmation*, namely that “evidence E confirms hypothesis H if and only if $\Pr(H|E) > \Pr(H)$ ”.²¹

From here, Sober utilizes the CA/SA example to describe the “ontic” stage and the “epistemic” stage of similar-type cases. The “ontic” stage concerns whether the existence of evidence E is IP-evidence for hypothesis H, and the “epistemic” stage concerns whether we observe evidence E given that evidence E exists.²² The “epistemic” stage contains a crucial property for Sober’s transitivity result, namely the “screening off” (SO) property. In the CA/SA example, the fact that an intermediary species existed does not guarantee that we will observe its existence by finding a fossil, given the multiple variables in forming a fossil. As such, the probability of observing a fossil is equal under the two hypotheses; the existence of an intermediary species “screens off” SA/CA from the observation of a fossil under both

¹⁹ Strictly speaking, Sober talks in terms of likelihood rather than IP-evidence, but I will utilize his schema with IP-evidence in mind

²⁰ Sober, *Absence of Evidence and Evidence of Absence* 73

²¹ Sober, *Absence of Evidence and Evidence of Absence* 66

²² Sober, *Absence of Evidence and Evidence of Absence* 75

hypotheses.²³ In other words, the hypothesis CA does not change the probability of observing the fossil such that:

$$\Pr(\text{Observing a fossil} | \text{an intermediary species existed \& CA is true}) = \Pr(\text{Observing a fossil} | \text{an intermediary species existed}).^{24}$$

To this point, Sober sets up the general format for his transitivity result. The general format is made up of a source, a trace, and an observation, with the ontic stage describing the relation between the source and trace, and the epistemic stage describing the relation between the trace and observation.²⁵ For the sake of clarity, I will describe this general format in terms of the given CA/SA case. In this case, the common ancestry and separate ancestry hypotheses are the “source”, the intermediary species is the “trace”, and observing or discovering the intermediary species (i.e. finding its fossil) is the “observation”. Given this background setup of the source, trace, and observation, the transitivity result goes as follows:

1. $\Pr(\text{Trace} | \text{Source}) > \Pr(\text{Trace})$
2. $\Pr(\text{Observation} | \text{Trace}) > \Pr(\text{Observation})$
3. $\Pr(\text{Observation}(\text{of trace}) | \text{Trace \& Source}) \geq \Pr(\text{Observation} | \text{Trace})$ and
 $\Pr(\text{Observation} | \text{not-Trace \& Source}) \geq \Pr(\text{Observation} | \text{not-trace})$
4. Then, $\Pr(\text{Source} | \text{Observation}) > \Pr(\text{Source})^{26}$

To put this transitivity result in our IP-evidence terminology, if the source is IP-evidence for the trace, and the trace is IP-evidence for the observation (of the trace), and the trace “screens off”

²³ Sober, *Absence of Evidence and Evidence of Absence* 71

²⁴ We could actually utilize a “greater-than-or-equal-to” here, the important thing is that CA(source) does not decrease the probability of observing a fossil

²⁵ Sober, *Absence of Evidence and Evidence of Absence* 75

²⁶ Sober, *Absence of Evidence and Evidence of Absence* 76

the source from the observation, then the observation is IP-evidence for the source. In the CA/SA case, if the first three properties hold, which they seem to do, then observing a fossil of an intermediary species is IP-evidence for the CA hypothesis.

(Atheistic vs. Agnostic) Ockham's Razor

In considering the relationship between Sober's transitivity result and Ockham's razor (OR), we should first recognize a distinction between Agnostic OR and Atheistic OR. Agnostic OR basically states that if hypothesis H is not needed to explain anything we know of, then we should not believe H.²⁷ This version of Ockham's razor is appealing in a couple of ways. First, it fits well with basic probability theory. A conjunction of n hypotheses is necessarily less probable than a conjunction of n-1 hypotheses, given that the two conjunctions share the n-1 hypotheses, $\Pr(n^{\text{th}} \text{ hypothesis}) \neq 1$, and that the other hypotheses do not entail the nth hypothesis. However, another attractive property of this OR is that you do not have to give up hypotheses or beliefs *strictly* for the sake of probability. If a hypothesis has explanatory power, then that power outweighs any gains in the conjunction's probability. This attractiveness aside, Agnostic OR is not the version of Ockham's razor wielded in science, nor does it relate all that well to our transitivity result. The transitivity result makes a claim about favoring one hypothesis over another; Agnostic OR makes no such claim. As such, we will now look at the Atheistic OR. Atheistic OR basically states that if hypothesis H is not needed to explain anything we know of, then we should believe not-H.²⁸ Atheistic OR implies the result of Agnostic OR, namely that we should not believe H if it has no explanatory power, but Atheistic OR also conjectures that we should believe not-H instead. Indeed, this prescription to favor one hypothesis over another more

²⁷ Sober, *The Principle of Parsimony* 145

²⁸ *Ibid*

closely relates to the transitivity result, but I will need to further explain why Atheistic OR might be justified.

As we have seen, the transitivity result regarding IP-evidence is justified when the conditions of the general format are satisfied. Furthermore, we can see that the transitivity result and Atheistic OR are closely related in their prescriptions. However, Atheistic OR needs justification beyond the simple appeal to probability appropriate for Agnostic OR. Indeed, if we are only concerned about probability, once we have accounted for explanatory power, then we would wield Agnostic OR. Since Atheistic OR prescribes one hypothesis over another, then it, like the transitivity result, needs to satisfy certain conditions for it to succeed in its implications. Sober presents an “inductivist” argument for Atheistic OR as follows:²⁹

1. H does not explain anything in my sample of things
2. My sample of things is representative of the population of things
3. Thus, H does not explain anything
4. If H were true, then H would be needed to explain something³⁰
5. Therefore, H is false

The main “conditions” that need to hold for Atheistic OR to succeed in its implications are premises one, two, and four. Premise three simply follows from the first two premises. So, if the first two premises hold, and premise four holds, then we have evidence for not-H over H.

To illuminate the Atheistic OR result, I will present the case of “hail on the roof”. Let us take H as the hypothesis that it is hailing outside at TCU. If it were hailing outside at TCU, I

²⁹ Sober, *The Principle of Parsimony* 151-152

³⁰ Sober does not explicitly state this premise, but a charitable reading of his argument implicitly includes this premise

would hear a pitter-patter on the roof. I do not hear a pitter-patter on the roof, so I do not need H to explain anything in my sample of things. In this case, my sample set of things is representative of the population of things. As such, H does not explain anything, and if explanatory power is an indication of truth, then H is false (i.e. not-H is true).

At this point, we can see how the transitivity result and Atheistic OR relate regarding their prescription of one hypothesis over another, but they are distinct in their probabilistic evidence claims. As we have discussed, the transitivity result makes an IP-evidence claim, namely that if the transitivity and screening-off conditions hold, an observation is IP-evidence for a source (hypothesis). However, the “inductivist” argument for Atheistic OR does not make an IP-evidence claim, but a “high probability” (HP) evidence claim. HP-evidence claims simply state that some evidence E makes a hypothesis H arbitrarily highly probable. Considering the hail case, given that my sample is representative of the population, not having the auditory experience of a pitter-patter is HP-evidence (E) for the hypothesis that it is not hailing (H). Similarly, if $\Pr(\text{Source} | \text{Observation}) > \Pr(\text{Source})$, then not having the observation is IP-evidence for not-Source. Bearing this distinction between IP-evidence and HP-evidence in mind, we can still utilize the relation between the transitivity result and Ockham’s Razor as generally applied (i.e. Atheistic OR); both make probabilistic claims favoring one hypothesis over another, depending on our observations.

“Psychological Utilitarianism” and Volunteerism

As I stated above, I look to show that we have evidence against PE via the transitivity result. To this point, I posit the idea of “Psychological Utilitarianism” (PU). PU states that at least one

moral agent, at least one time, acts in communal interest (for its own sake)³¹. If we recall our definition for PE, we can see that PU is simply the negation of PE, such that $PE = \sim PU$, and vice versa.³² This fact will be important when we apply the transitivity result to our supposed evidence against PE. Furthermore, we have two other reasons to move forward with this conception of PU. First, this idea of PU fits well with our experiences concerning human nature and motivation. I would be overly optimistic to believe or assert that all people try to act in communal interest. Indeed, I think the existence of serial killers provides a sufficient counterexample to such beliefs. Second, this conception of PU leaves open the possibility for normative judgments. Unlike with PE, the conjunction of PU and “ought implies can” (PU & O) does not imply that normative judgments are inappropriate. As such, if my proposed evidence does in fact favor PU over PE, then we have at least some evidence for maintaining the appropriateness of normative judgments.

In terms of my proposed evidence against PE, I take empirical findings concerning volunteerism and well-being to provide such evidence. Econometric analysis on empirical data from the German Socio-Economic Panel (GSOEP) during 1985-1999 suggests that volunteerism is positively correlated with happiness/well-being/life satisfaction, such that the more one volunteers, the happier she is.³³ Of course, an honest statistician will tell us that “correlation is not causation”. Higher volunteer rates might not increase happiness, but rather, intrinsically happier people simply choose to volunteer more often. This “arrow of causation” at least fits some of our intuitions concerning happiness and choosing to act in communal interest (i.e.

³¹ This implicit “for its own sake” is important, as PE could justify acting in communal interest as a means toward promoting self-interest.

³² The negation of a universal qualifier ($\forall(x/\sim x)$) is a corresponding existential qualifier ($\exists(\sim x/x)$), and vice versa.

³³ Frey, *Happiness: A Revolution in Economics* 81

volunteer work). For instance, I was in a much more “giving mood” when TCU beat the “school down south” 62-22 this past football season than when TCU had the “debacle” to said school a couple of seasons ago. This example aside, I think we can agree that, at least at some moments, we better sympathize with others’ circumstances when our own circumstances are optimal. Given that, we need to show there exists a stronger correlation between volunteerism and happiness. We can appeal to a “natural experiment” to show this stronger correlation.

We have access to natural experiments, in this case concerning volunteer work, when “because of an exogenous shock, people randomly lose the possibility of volunteering”.³⁴ To be clear, even with access to such natural experiments, we can never truly observe causation (David Hume seemed to nail it on the head concerning cause-effect relations). Nonetheless, if these natural experiments “report, *ceteris paribus*, lower life satisfaction afterward [the loss of volunteer possibilities], the effect is more likely to be causal”.³⁵ In other words, staying consistent with our HP and IP-evidence terminology, observing, *ceteris paribus*, lower life satisfaction/happiness is IP-evidence for a casual relation of volunteer work and increased happiness.

Ultimately, the reunification of Germany offers us a natural experiment, as the breakdown of the GDR (East Germany) collapsed the volunteer work structure such that East Germans could no longer easily volunteer shortly after 1990.³⁶ From this, we can compare life satisfaction/happiness levels from 1990, right before the exogenous shock, with happiness levels from 1992, following the exogenous shock. From here, we can compare the average net change in happiness levels for three groups of people: (i) those who did not volunteer in neither 1990 nor

³⁴ Frey, *Happiness: A Revolution in Economics* 83

³⁵ *Ibid*

³⁶ Frey, *Happiness: A Revolution in Economics* 84

in 1992, (ii) those who volunteered in both 1990 and 1992, and (iii) those who volunteered in 1990 but could not volunteer in 1992 because of the exogenous shock. As it turned out, those in the third group experienced a greater net drop in reported life satisfaction/happiness than those in the other two groups.³⁷ This finding makes it more likely that increased volunteer work causes increased levels of life satisfaction and happiness. To this point, I now posit the idea concerning Volunteerism (V), that volunteerism (i.e. acting in communal interest) increases a moral agent's well-being. Further, since observing that something exists has stronger epistemic value than that something simply existing unbeknownst to us, I posit OV, that we observe that V (i.e. we observe the strong correlation between volunteerism and happiness). These components PU, V, and OV will constitute our source, trace, and observation, respectively, for when we apply Sober's general schema to our case.

Applying the Transitivity Result

Before I apply the transitivity result to our PU case, I will explain another case to help show when the transitivity result-based argument holds. Consider the case concerning the debate between the mind-body identity theorists (ID) and the mind-body dualism theorists (D). The ID claim that for any mental entity/property M, there is a physical entity/property P such that $M=P$. The D claim the negation of the ID theory (not-ID). We also have empirical evidence C, that the physical event of C-fiber firings (P(C-Fiber Firings)) occurs whenever there is a mental event of pain (M(Pain)), and vice-versa. Regarding this evidence, the D can evoke an adjustable psycho-physical law to account for any correlation found between M and P. The ID can evoke any identity between M and P to account for any correlation found between the two, except for a

³⁷ Frey, Happiness: A Revolution in Economics 85

correlation of zero, for in such case an identity is not possible. Given that “n-1” correlations are consistent with ID compared to “n” correlations consistent with D, and that ID and D share the same “n-1” consistent correlations, ID intuitively confers a higher likelihood on our evidence C. From here, we can put the components of this case into Sober’s “source-trace-observation” schema. The theories of ID and D (not-ID) are our source, the evidence C is our trace, and our empirical observation of C is our observation. Inputting these components, the transitivity result goes as follows:

1. $\Pr(C|ID) > \Pr(C)$
2. $\Pr(OC|C) > \Pr(OC)$
3. $\Pr(OC|C \ \& \ ID) \geq \Pr(OC|C)$ and $\Pr(OC|\sim C \ \& \ ID) \geq \Pr(OC|\sim C)$
4. Thus, $\Pr(ID|OC) > \Pr(ID)$

Premise 1 seems to hold, for ID eliminates any cases where there is no correlation between M and P. Premise 2 holds because observation is “factive” in this case. Premise 3 holds because positing ID does not decrease the probability of OC given the truth or falsity of C. Since the three premises hold, we can conclude via transitivity that observing our evidence C is IP-evidence for ID. Furthermore, it follows from (4) that:

5. $\Pr(OC|ID) > \Pr(OC)$
6. Thus, $\Pr(OC|ID) > \Pr(OC|\sim ID)$ (= $\Pr(OC|D)$)

As we can see, observing the evidence is IP-evidence for ID and against D.

Now, I will apply Sober’s “source-trace-observation” schema to our “Psychological Utilitarianism” case to construct an IP-evidence argument in favor of PU and against PE. As I stated before, the source in our case is PU, that at least one moral agent, at least one time, acts in

communal interest. The trace is V, that acting in communal interest increases a moral agent's well-being. The observation is OV, that we observe that V. The schema then goes as follows:

1. $\Pr(V|PU) > \Pr(V)$
2. $\Pr(OV|V) > \Pr(OV)$
3. $\Pr(OV|V \ \& \ PU) \geq \Pr(OV|V)$ and $\Pr(OV|\sim V \ \& \ PU) \geq \Pr(OV|\sim V)$
4. Thus, $\Pr(PU|OV) > \Pr(PU)$

From (4), it further follows that:

5. $\Pr(OV|PU) > \Pr(OV)$
6. Thus, $\Pr(OV|PU) > \Pr(OV|\sim PU)$ ($=\Pr(OV|PE)$)

If these premises hold, as with the ID-versus-D case, then observing this correlation concerning volunteer work is IP-evidence in favor of PU and against PE. In the next section, I will evaluate this argument, particularly premise 1.

Evaluating the Transitivity Argument for Psychological Utilitarianism

First, (2) is obviously true, given the fact that observation is “factive” for our purposes. We can also see that (3) holds after brief consideration. Our trace V screens off the source PU such that PU does not change the probability of OV. In other words, PU does not possess any properties that would change the probability of OV given that V is true; V's truth alone determines the conditional probability of OV (e.g. $0 < \Pr(OV|V) < 1$ and $\Pr(OV|\sim V) = 0$). Premise 1, on the other hand, requires a more in-depth analysis. At first glance, (1) seems plausible, but we have little reason beyond intuition to claim that (1) holds. To this point, I will introduce the idea of the “Hedonic Paradox” (HP), which states that the direct pursuit of happiness adversely affects

happiness.³⁸ I think appeals to anecdotal “evidence” at least hint at this idea of HP. Indeed, I think many of us can recall at least some moment which going in we thought we would derive great happiness, but as it turned out, thanks to the universe conspiring against us, we left feeling disappointed by these high expectations for happiness and fulfillment. Granted, anecdotes hardly constitute meaningful data³⁹, but they do provide enough for my case. All I need is that $\Pr(\text{HP}) > 0$, and I think an appeal to anecdotes provides this minimum requirement.

If one grants me that $\Pr(\text{HP}) > 0$, then from there I can show that (1) holds. First, PE can only appeal to the increased happiness to explain V. Our findings concerning V do not imply a necessity for reciprocity. Granted, some may pursue volunteer work because volunteerism provides “good will” and the potential for reciprocity⁴⁰, but this is not a logical necessity of V. As such, the Psychological Egoist must claim that people pursue volunteer work strictly because volunteer work increases happiness (i.e. self-interest). PU, on the other hand, needs no such appeal; volunteer work is intrinsically consistent with PU. If HP is false, then both PU and PE are consistent with V. However, if HP is true, then only PU is consistent with V. If we, as a matter of our psychology, pursue volunteer work strictly to derive happiness (self-interest), but directly pursuing happiness decreases happiness, then we would never observe the correlation between volunteer work and happiness. We can put the result in terms of symbolic logic as follows:

1. V
2. HP
3. $(\text{PE} \ \& \ \text{HP}) \rightarrow \sim V$

³⁸ Frey, *Happiness: A Revolution in Economics* 153

³⁹ Thus, the saying “the plural of anecdote is not data”

⁴⁰ Frey, *Happiness: A Revolution in Economics* 80

4. Thus, $\sim(\text{PE} \ \& \ \text{HP})$ {from (1) and (3)}
5. $\sim\text{PE} \vee \sim\text{HP}$
6. Thus, $\sim\text{PE}$ {from (2) and (5)}

So long as $\text{Pr}(\text{HP}) > 0$, there are possible cases where PE is inconsistent with V. Thus, PU eliminates possibilities inconsistent with V, so Premise 1, $\text{Pr}(\text{V}|\text{PU}) > \text{Pr}(\text{V})$, holds. Furthermore, since premises 1-3 hold, we can conclude that the observed correlation concerning volunteerism is IP-evidence in favor of PU and against PE. Given that the conjunction of “ought-implies-can” (which I take as true for our purposes) and PE implies that normative judgments are inappropriate, but the conjunction of “ought-implies-can” and PU implies no such thing, our IP-evidence in favor of PU is also IP-evidence in favor of normative judgments.

To be clear, this IP-evidence is “qualitative” in nature, it does not give us the quantitative strength of our evidence. In other words, our evidence does indeed favor PU over PE, but it might only favor PU to a limited degree. To this point, the Psychological Egoist might scoff at the potentially limited scope of our evidence. In response, I would contend that PU has a higher prior probability than PE. I defined PU as “at least one moral agent, at least one time, acts in communal interest”, but a consistent, albeit unilluminating, reading of PU could be that “some of the time, moral agents act in self-interest”. In this case, $\text{Pr}(\text{PU}) > \text{Pr}(\text{PE})$, as more combinations of motivations (whether self, communal, or otherwise) are consistent with PU than with PE. The Psychological Egoist might object to my claim via an appeal to parsimony. Indeed, PE posits fewer entities than PU. PE posits only one motivational entity, namely self-interest. Meanwhile, PU posits at least two motivational entities, communal-interest and self-interest. As such, the Psychological Egoist might claim that we should reject PU, as it posits entities beyond necessity! I find this appeal to parsimony thoroughly unsatisfying. First, parsimony has no epistemic value

if the less parsimonious hypothesis has a higher prior probability and/or fits better with the evidence; PU satisfies both conditions. Further, an appeal to Bayesian analysis⁴¹ suggests that parsimony has no epistemic value even as a “tiebreaker” between two hypotheses⁴².

Ultimately, we cannot easily give any “knock-down” arguments against PE, as PE is unfalsifiable. For instance, no matter how selfless an agent’s action may appear, the psychological egoist could always claim that, deep down, the agent really acted in his self-interest; the firefighter might think she acted selflessly in saving the child from a burning building, but that is only because she cannot access her true subconscious motivations. This fact also relates to the mind-body case discussed earlier. No matter how highly correlated the mental occurrence of pain and the physical occurrence of C-Fiber firings, the Mind-Body dualist can always appeal to some psycho-physical law that explains the correlation without accepting an identity between the mental and the physical. In both the PE and D cases, no amount of empirical evidence could ever disprove the relevant hypothesis, the psychological egoist and the mind-body dualist will always have some sort of response that salvages their respective view to some degree. Nonetheless, our collected empirical evidence does provide us good reasons to accept PU and ID over PE and D, respectively, as shown in the transitivity result. This is all I wanted to show, and is all I probably can succeed in showing, in this analysis: we have good reason to reject PE in favor of PU, and thus have good reason to consider the normative analysis presented in this paper.

Conclusion

⁴¹ Roche, *Is Parsimony and Epistemic Value* 3

⁴² This is a point of contention among metaphysicians and epistemologists, but I will put that debate aside

In this paper, I described Wealth Maximization and its relation to intrinsic social values such as happiness and well-being. Ultimately, I believe that Wealth Maximization fails to achieve these values and goals compared to a normative theory such as autonomy maximization. Further, I think my presented analysis is appropriate, despite potential objections concerning “ought implies can”. Indeed, if psychological egoism is true, then my normative analysis seems unwarranted. However, in utilizing the transitivity result and empirical studies concerning volunteerism and happiness, I think we have good reason to reject psychological egoism in favor of “psychological utilitarianism”. Granted, no amount of empirical evidence can “disprove” psychological egoism, but I never claim to do so. Rather, the empirical evidence confers a higher probability on psychological utilitarianism over psychological egoism. One might scoff at the seemingly limited scope of this finding, but given the difficulty confronting psychological egoism and its non-falsifiability, this finding still presents an interesting epistemic result.

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