

PRACTICAL REASON AND THE ECONOMIC ACCOUNT OF  
CHOICE: AN EXAMINATION AND DEFENSE OF THE  
POSSIBILITY OF CHOOSING VIA  
TRIMODAL COMPARISONS

by

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## ABSTRACT

In this dissertation, I defend the thesis of comparability, understood as the claim that agents are always able to choose by taking one of three deliberative stances: regardless of what the choice options are, agents possess the capacity to prefer one option to another or to be indifferent between them.

I will present an interpretation of utility theory to serve as an account of how agents might, as a practical matter, reason their way through any given choice situation. This economic account of choice is explicitly folk psychological insofar as the internal mental states of choosing agents play functional roles in it, though the descriptions of the mental states are intentionally parsimonious. The economic account given therefore steers a course between competing theoretical extremes: revealed-preference theory, which is meant to account for choice without appealing to internal mental states, and value accounts of choice, which attempt to detail the internal mental workings that give rise to agent preferences.

In the account I favor, the notion of preference is regarded as a theoretical primitive and value can be understood as a derived concept. Many objections to comparability arise from the assumption that value judgements are necessary in order to compare; I show how such objections are answered if value is understood as being derived from preference instead of vice-versa.

Eliminating value as a theoretical necessity for choice does not counter all incomparabilist objections. I provide a response to one of the most trenchant remaining objections, the small improvement argument, which seems to show that any trimodal theory

of choice, whether it assumes values are necessary in order to choose or not, can lead to self-defeating choices, and therefore fails as an account of rational choice. I show that the small improvement argument can be answered without abandoning the assumption of comparability.

Finally, I consider the constitutive objection to comparability, and note that while it cannot establish that comparability must fail, it does, when understood as a subjective objection, suggest that in addition to having the capacity to compare any two options, agents also possess the capacity to refuse to compare them.

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## CHAPTER 1

### INTRODUCTION

#### **Choice and Comparability**

In what follows I will provide a defense of comparabilism — the position that agents are always able to choose by comparing regardless of what the choice outcomes they are faced with happen to be. Comparabilism, combined with certain other assumptions, amounts to the claim that everything has its price.<sup>1</sup> I will defend comparabilism in the context of a particular account of choice, and my intent in providing this account is just to lay out the proper context from which to defend the assumption of comparability. The main line of demarcation here is between comparabilists, such as myself, and incomparabilists who, for various reasons, hold that choosing via comparison is impossible in at least certain sorts of choice situations.

The defense of comparabilism I will put forward is strongly influenced by economic thought, specifically by utility theory.<sup>2</sup> I will present an interpretation of economic theory that is meant to serve as an account of how agents might, as a practical matter, reason their way through any given choice situation. Much of the work can be understood as a matter of presenting the theory of rational choice used by economists as a somewhat broader

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<sup>1</sup> A claim which is distinct from 'money can buy everything'- while I may not be able to buy the outcome 'wins tennis match fair and square', that outcome can certainly be valued by me in dollars. Indeed, athletes who fix matches can be understood as selling a chance at a 'fair and square' victory for some amount of money. The role of money in comparisons will be of considerable, though not central, interest in what follows.

<sup>2</sup> Where utility theory is understood as a set of economic axioms

philosophical account which is capable of answering philosophical objections to the main claim to be defended: that agents are able to compare any two choice outcomes. Call this account the economic account of choice (the EAC), an account which posits, among other things, a "general human capacity for resolving, through reflection, the question of what one is to do" (Wallace, 2014, para. 1).

Imagine a human or, less parochially, an agent, call her Abby, who faces a choice situation wherein she may choose between an apple or an orange, but may not have both (so, the cost of the apple can be understood as the orange, and vice versa). Imagine that Abby then chooses the apple. The task at hand is to explain that choice, and, if that explanation is to serve, as I hold the EAC serves, as a philosophical account of rational choice, the account must be applicable to any choice situation any reasoning agent might encounter — i.e., regardless of the sort of choice the agent might face, the choice account must allow the agent to actually rank her options. The general approach will be to begin from the premise that the axioms of utility theory roughly describe rational choice, and then to flesh out those axioms so that necessary assumptions regarding the interior mental workings of the agent, and the manner in which those workings relate to the observable choices of the agent, are made explicit.

### **Folk Psychology and Choice**

Choice phenomena can be understood as three staged. In the first stage, the agent faces a choice between two outcomes. Call this stage "the choice situation". In the final stage the agent actually chooses one of the two outcomes (or not — a possibility, indifference, which will be discussed below); call this final stage "the choice". Any attempt to explain the choice in terms of a process of conscious reasoning on the part of the choosing agent that might serve as the intermediate stage between choice situation and choice is folk

psychological in some sense.<sup>3</sup> Any such attempt will involve terms meant to describe or at least refer to the conscious processes of choosing agents, as well as having either no explicit or, at best,<sup>4</sup> a contentious account of how and/or why conscious reasoning relates to the actual phenomena under investigation — the actual choices. However, as there are a number of different folk psychological conceptions employed by philosophers and economists alike, the particular characteristics of the EAC's folk psychology should be borne in mind.

In particular, the EAC consists of four assumptions, assumptions of representation, subjective comparability, transitivity, and motivation, each of which involve specific folk psychological concepts, and each of which is needed in order to account for any observed choice per the EAC. The assumption of subjective comparability (the EAC's translation of utility theory's axiom of completeness) can be understood as the explanation of choice proper: the description of the conscious process that accounts for *how* agents might consciously go about ranking options.

The assumption of comparability relies on two folk psychological concepts: beliefs about outcomes, and preferences among those beliefs.<sup>5</sup> I will have a good deal to say about how, exactly, 'beliefs about outcomes' and 'preferences among beliefs about outcomes' figure in the EAC in what follows. However, I stress here at the outset that the EAC is *not* meant

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<sup>3</sup> Per the "theory-theory" account of folk psychology, for example, "[w]hen we predict behavior, for example, we utilize folk psychology to reason from representations of the target's past and present circumstances and behavior (including verbal behavior), to representations of the target's future behavior" (Ravenscroft, 2016, sec. 2.1, para. 1).

<sup>4</sup> There are, in particular, two problems: the problem of intentionality, of how an agent's mental representation of an apple comes to be 'about' some actual apple, for example; and the mind-body problem, how an agent's conscious experience relates to that agent's actual actions. Both of these problems attract considerable attention from philosophers and both remain resistant to conclusive philosophical analysis. The point being that it is a characteristic of folk psychological explanations that they involve these explanatory defects. Folk psychological theories presume to explain, via conscious processes, observable phenomena without providing any satisfactory explanation of how the postulated conscious processes might relate to the observations.

<sup>5</sup> An additional sort of folk psychological mental state, 'intending', is implied by the EAC's assumption of motivation. Agents that prefer A to B then form the intention to choose A.

to be understood as folk psychological in the "platitudinal sense of folk psychology" (Ravenscroft, 2016, sec. 3), where the functional roles of theoretical terms are meant to be related to some commonsense understanding of what those terms mean. This caveat is especially true of the term *preference*, economic use of which has departed from common usage, and which should be regarded as a technical piece of jargon (which, nonetheless, is meant to refer to a mental state which choosing agents actually do have the capacity to experience in any and all choice situations). The explicit role given to beliefs about outcomes in the EAC is also a departure from common usage, though, in this case, I think the departure is simply that the role of such beliefs is made explicit at all, i.e., that the EAC frequently and explicitly makes note of the distinction between actual things in the world and agents' beliefs about those things, whereas agents tend to elide that distinction both in their speech and thinking.

So, the EAC involves agents consciously reasoning about the choices they face and holds that those conscious deliberations are somehow relevant to the empirical observations the theory is meant to account for—the actual choices made by agents. For philosophers of practical reason this approach will, I think, seem the proper one. Philosophers engaged in debates about choice routinely invoke conscious processes in their accounts, and, indeed, this approach seems unavoidable if the purpose of the inquiry into choice is to describe how people might think about the choices they face. The philosophy of practical reason is conducted, in short, almost entirely and quite deliberately in terms of conscious reasoning. This approach is absolutely warranted given the nature of philosophical inquiry into the topic of choice. Philosophers are interested in understanding how people might *think* about choices, so of course philosophical explanations explain in terms like "consider" and "evaluate", because such terms are the means by which we agents understand ourselves. For

economists, however, this feature of the EAC, that it is a folk psychological theory, firmly positions it on one side of a sharp schism in economic theory.

While some economists agree that the mental states of agents somehow figure in the account of choice, revealed-preference theorists hold that choice can be accounted for without necessarily referencing the role of mental states. I will discuss revealed-preference theory, and why I think it necessarily fails, in Chapter 2. For now, it will suffice to note, again, that the EAC is meant to amount to utility theory qua practical reasoning, and given the nature of practical reasoning explanations of choice, the EAC must, and does, explain choice in terms of the choosing agent's internal conscious experience.

Any discussion involving things like mental states, any story told in the idiom of internal, subjective experience, is, at least to some degree, untethered from observation. You might observe me consider, and then choose an apple rather than an orange, but you cannot observe my beliefs about the orange. The folk psychological approach adopted here holds that choices in all cases can be motivated or at least correlated with some internal mental state, but such an approach is on tenuous ground from the outset (see fn. 5). Given the significant philosophical problems even a minimal folk psychological account like the EAC entirely fails to address, the approach adopted here will be to attempt to get the folk psychological account organized *in general*, rather than to attempt to construct a finely detailed account of any further folk psychological specifics which may or may not underlie that general account. Again, preference is meant to account for a psychological function, the state which gets the agent to choose a certain way, or which at least reliably correlates with the agent choosing.<sup>6</sup> I am quite certain any number of diverse subjective experiences, each

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<sup>6</sup> Again, this departs from David Lewis' (1972) conception of a folk psychological term, where the term would be both functionally defined, and defined so that the definition arises from the commonly held conception of the term — the idea being that 'folk psychology' is how the 'folk' talk about their psychological operations,

likely admitting of any number of plausible further explanations, might qualify as that sort of subjective state, and because of that explanatory diversity, I think it is important to focus on the main folk psychological claim, that there is a mental state, preference, which *at least possibly can* reliably correlate with an agent's choices regardless of the sort of choice situations the agent is faced with. Preference can be understood as an agent's desire to have one outcome at the cost of the other.<sup>7</sup> How, exactly, agents might come to such a desire is a question of some, but not paramount, interest. The EAC is an attempt to account for choice by expressing the economic axiom of completeness in folk psychological terms, but in the fewest folk psychological terms possible.

### The Axiom of Completeness and the Trichotomy Thesis

In utility theory, the claim that agents are able to compare any two things is given by the axiom of completeness: Axiom of completeness: for *all*  $X_1$  and  $X_2$  in  $\mathbf{X}$ , either  $X_1 \succcurlyeq X_2$  or  $X_2 \succcurlyeq X_1$ , where  $\mathbf{X}$  is the set of possible choice outcomes. The axiom holds that agents facing a choice between two outcomes are capable of reaching three distinct deliberative conclusions. For any  $X_1$  and  $X_2$ , the agent can reach one of the following three deliberative conclusions:

- 1)  $(X_1 \succcurlyeq X_2) \ \& \ \sim(X_2 \succcurlyeq X_1)$
- 2)  $\sim(X_1 \succcurlyeq X_2) \ \& \ (X_2 \succcurlyeq X_1)$
- 3)  $(X_1 \succcurlyeq X_2) \ \& \ (X_2 \succcurlyeq X_1)$

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where those psychological operations are also regarded as that of Rosenberg's (2008), where the folk theory is explicitly not causal but instead proceeds with the goal of providing "understanding through interpretation" (p. 22) (though Rosenberg holds that folk psychological terms should correspond to "commonsense" usage). The functional, definition of preference I employ is much broader than is likely commonly held, and is most strongly influenced by Daniel Hausman's (2012) treatment of that same term.

<sup>7</sup> One way to think about the sort of folk psychology used by economists is as a *belief-desire* model of psychology, but where desire only exists as a two-place predicate. One desires A at the cost of B, or vice-versa (or, one desires both options equally and is indifferent between them).

Call (1) a strict preference, or simply a preference, for  $X_1$  over  $X_2$ , and call (2) a preference for  $X_2$  over  $X_1$ .<sup>8</sup> If the agent's preferences are as described in (3), the agent is said to be indifferent between  $X_1$  and  $X_2$ . An agent who is indifferent between  $X_1$  and  $X_2$  lacks a decided preference one way or another and she is willing to take either outcome and forego the other.<sup>9</sup> I hold that the axiom of completeness is a reasonable summation of how agents might go about choosing by comparing, but that it implicitly relies on certain folk psychological assumptions that will be made explicit in the EAC.

Before giving the EAC in detail, however, I note that there are many philosophers and, indeed, a few economists who might feel that presenting utility theory in the manner that follows is unnecessary as a perfectly good, general philosophical rendering of the axiom is already provided by what Ruth Chang gives as the *trichotomy thesis*.<sup>10</sup> The trichotomy thesis holds that when faced with a choice between any two options, say A and B, the agent will reach one of these three deliberative conclusions:

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<sup>8</sup> The notational primitive  $\succsim$  can be read as "is weakly preferred to" (so, if  $A \succsim B$ , then, for some agent, A is weakly preferred to B). But, per the axiom, weak preference relationships are never experienced in isolation. If I weakly prefer A to B, then I will either weakly prefer B to A or not. The discussion is therefore conducted in terms of strict preference and indifference.

<sup>9</sup> The economic meaning of indifference amounts to the agent saying, free of any cost whatsoever, "you choose", to some party which would then choose for the agent. I employ this idealization rather than the alternative of regarding indifferent agents idealized as frozen, for as long as circumstances do not change, by the choice, if only because it obviates the need to clutter up thought experiments with small inducements meant to cause indifferent agents to choose one or another option where the agent would otherwise be indifferent. It also more clearly shows indifference as a deliberative stance actually taken by the agent ("either is fine") as opposed to leaving open the possibility that the agent is "still thinking about it".

<sup>10</sup> See Chang (2002). Chang's translation of utility theory (which she refers to the standard model) involves the assumption that utility theoretic ordinal rankings of choice options can only be sensibly understood as being made "with respect to" some value (p. 27). This assumption is, I think, quite wrong and I will address this claim in more detail in Chapter 3. Chang's further claim, that "Amongst economists, rational choice theorists, and decision theorists, it is almost universally assumed that what justifies a given choice is a comparison of the alternatives, and in particular, that the chosen alternative is better than or as good as each of the others" (p. 41) is both misleading and puzzling. It is misleading because to claim that the position that goods are chosen because they are "better" than the alternatives is near universal amongst economists is absurd. It is puzzling because she admits as much in her footnote to that claim: "Although economists think justification is a matter of one's suitably constrained preferences, I shall take them to be concerned not with preferences for alternatives but with their goodness" (p. 65).



- 1) A is better than B
- 2) B is better than A
- 3) A and B are equally good

And agents then choose what is 'better'.

The trichotomy thesis does share an important characteristic with the axiom of completeness. In both, comparison is trimodal — there are three distinct deliberative stances available to the agent when comparing things. And, claims like "A is better than B" certainly do seem to capture the meaning of preference notational claims like " $A \succcurlyeq B$  &  $\sim(B \succcurlyeq A)$ " in the sort of internal experiential terms that philosophers of choice are concerned with. Nonetheless, the trichotomy thesis does at least suggest that a rather significant concept, that of a value measure, is *necessarily* a part of the utility theoretic account as the notion of "better" (or "worse") indicates the existence of either a universal or some particular measure with respect to which some outcome might be better or worse than some other outcome.<sup>11</sup> This suggestion is problematic both because utility theory is meant to be understood as an attempt to provide what economists call a positive account of choice (an account that is bereft of value judgements), and, more significantly, because the concept of a value measure is simply not necessary to account for choice. It is a mischaracterization of utility theory to have it account for the three possible deliberative conclusions allowed for by the axiom of completeness as value-laden in this way, where choice options are necessarily better or worse or equally good as others *with respect to some measure*.

This unnecessary assumption — that choices must be assessed with respect to some

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<sup>11</sup> Chang holds that such terms "presuppose a covering value" and that "it makes no sense to say that one thing is simply better than another; things can only be better in a respect" (2002, p.3-4). This presupposition may not be necessary, but I agree that the use of such value terms are strongly evocative of evaluations conducted according to some measure of value, and therefore tend to obfuscate explication of choice. They should therefore be avoided.

measure and those assessments then compared, or, more generally, that preferences necessarily must be explained in terms of some further folk psychological term like *value*,<sup>12</sup> rather than allowing for a more direct comparison of one choice option directly to the other — leads to some significant complications for a trimodal, comparable account of choice. While I will, in what follows, address a number of philosophical objections to the notion of comparability, I will be particularly concerned with the idea that in certain sorts of hard choices the values associated with the choice outcomes may be so different as to necessarily render such outcomes as evaluatively distinct from one another. Lacking common values, such outcomes cannot be ranked by the agent as better or as worse than one another. So, the assumption that value necessarily plays a role in choice then leads to the conclusion that not all choices can be navigated by comparing the choice options on offer, or at least not by trimodal comparison.

### **Preference and Value**

A feature of the EAC is simply that the notion of value is in no way required in order to account for choice. While the EAC can accommodate and account for value notions to at least some extent, such notions are not required in order for comparisons to take place and, by explicitly relegating value to a derived rather than fundamental role in the theory of choice, a number of objections stemming from concerns about value comparisons can be avoided.<sup>13</sup> The trichotomy thesis is sometimes conceived of as logically equivalent to the axiom of completeness,<sup>14</sup> and so a strict preference for A over B conceived of as logically

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<sup>12</sup> Subjectivity is assumed throughout. Whether there are such things as objective abstract values or not, in order to play a role in agential choice, any measures must be comprehended in some fashion *by the agent*.

<sup>13</sup> Admittedly, this understanding of value departs from certain philosophical conceptions of the term. That is, the EAC allows for sensible discussion and consideration of values, though perhaps not in the way in which value theorists are accustomed.

equivalent to A being regarded as better than B with respect to some value (or, depending on one's philosophical outlook, A's actually somehow *being* better). In contrast, I argue that the trichotomy thesis is a further explanation of the axiom of completeness, where an agent's strict preference for A over B is explained by the agent perceiving A as being better than B with respect to some value, and that the further explanation it provides is, in the end, wrong. While agents may often regard the things they prefer as better with respect to some value than the things they prefer them to, that is not necessarily the case,<sup>15</sup> and, even when value notions are involved in the process of choosing, I will argue that those values should be understood as derived from preferences and not the other way around.

At this point, preference can be further defined. To say that "Abby prefers the apple to the orange" is to say that, all things considered, she, perhaps for some reasons but also perhaps for no reason that she or anyone else might be able to articulate, or even perhaps for no reason at all, has concluded that she would like to have the apple at the cost of giving up the orange, rather than having the orange at the cost of the apple. "All things considered" means "all things Abby happened to consider when making the comparison", and those things, such as the reason(s) Abby might have, or that observers of her choice might surmise that she has for her choice, can be understood as what I will call subpreferences. One can think of any choice option as a bundle, either of distinct goods (for example, a bundle of apples and oranges) or of separate features of some distinct good (for example, a

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<sup>14</sup> Chang writes, "...subjectivists would have us believe, the relation between preferences and betterness is biconditional" (2002, p. 5), which, at least in regard to this inquiry, is a straightforward mischaracterization of what a subjective approach actually asserts. A charitable reading of the passage might yield the implicit claim "any subjective account of comparison necessarily involves comparing 'with respect to' some measure". A claim with which I disagree (see Chapter 3).

<sup>15</sup> However, I will, in effect, also be arguing that any comparison could be made with respect to such a measure, such as money. But, as will be discussed in Chapter 2, money should be understood as facilitating comparison rather than as making comparison possible. That is, money makes comparing things much easier than otherwise, but money is only possible in the first place because agents are, somehow, able to compare things.

given apple might be sweet, crunchy, and shiny). Subpreferences are the preferences for "more rather than less sweet", or for "sweet rather than sour", for "more rather than less apples in the bundle relative to oranges" that contribute to an agent's final, all things considered, preference.<sup>16</sup>

So, Abby's preferences can, in some, likely most, cases be explained in terms of subpreferences. And, if one cares to, it will sometimes be possible to explain subpreferences themselves in terms of sub-subpreferences, and so on. But, at some point, and, as a practical matter, the process bottoms out and one prefers some A to some B simply because one does.<sup>17</sup>

### The EAC

The EAC proceeds from the following four assumptions:

Assumption of representation: Any actual choice outcome,  $X_i$ , can be represented by the agent by some simplified possible world,<sup>18</sup>  $Y_i^j$ , where  $\mathbf{Y}$  is the set of simplified possible worlds conceivable by the agent, and where  $\mathbf{X}$  is the set of possible choice outcomes.

Assumption of subjective comparability: for *all*  $X_i$  and  $X_j$  in the consumption set  $\mathbf{X}$ , there are some simplified possible worlds possibly represented by the agent  $Y_i^k$  and  $Y_j^l$  in  $\mathbf{Y}$ , such that either  $Y_i^k \succcurlyeq Y_j^l$  or  $Y_j^l \succcurlyeq Y_i^k$ .

Assumption of transitivity: for any three elements in  $\mathbf{Y}$ :  $Y_1^1, Y_2^1, Y_3^1$ , if  $Y_1^1 \succcurlyeq Y_2^1$ , and

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<sup>16</sup> The economic formalism of a utility function is illustrative in this regard (though care must be taken to remember that the notion of utility is itself a derived notion that should not be taken to actually, so to speak, *exist*). Abby's preference for an apple over an orange can be described as Abby assigning a higher utility score to the apple than to the orange, where an option's utility score is determined by some function,  $U(x_1, x_2)$ , and where the arguments of the function,  $x_1$  and  $x_2$ , can be understood as either distinct parts of the option bundle, or distinct features of the options.

<sup>17</sup> One might have reasons for preferring of which one is unaware. I say more about this in Chapter 3.

<sup>18</sup> The term "simplified possible world" is from Matthew Adler (2012, 514).

$Y_2^1 \succcurlyeq Y_3^1$ , then  $Y_1^1 \succcurlyeq Y_3^1$ .

Assumption of motivation: If  $Y_i^k \succ Y_j^l$ , then  $X_i$  is chosen; If  $Y_j^l \succ Y_i^k$ , then  $X_j$  is chosen; if  $Y_i^k \approx Y_j^l$ , then the agent is willing to cede the choice between  $X_i$  and  $X_j$  ("you choose"; see fn 10).

Some versions of the assumptions of subjective comparability and of transitivity are usually given formally in economic presentations of utility theory, though, as in the axiom of completeness given above, these formal claims are presented as if the agent has objective knowledge of actual outcomes on offer, rather than being limited to a subjective conception of those outcomes. This omission, while understandable in the context of economic practice, leads to an immense amount of confusion. The EAC explicitly holds that there are, in effect, two related but different objects of choice: the things agents actually will get if those things are chosen (I will call these the *choice outcomes*) and the things the agents actually choose between (their perception of those outcomes — I will call these the *choice options*).

Whereas the assumptions of transitivity and comparability are often presented as if choice is an objective matter, the assumptions of representation and of motivation are usually not made explicit at all. In part, these omissions are simply a function of notational and modeling conventions, as well as the empirical outlook guiding the development of these economic practices. The assumptions of representation and of motivation have no formal function within mathematical economic models and, if they are discussed by scholars of choice at all, are usually referred to as background conditions. Further, economists, whether explicitly by assuming consumers are perfectly informed or implicitly by modeling comparisons as between, for example, actual goods and actual money, rather than as involving the agents' subjective representations of the outcomes, often elide the distinction between actual choice outcomes and mental representations of those actual outcomes.

However, while not particularly helpful in the construction of models of choice which are meant to be, for example, put to some predictive purpose, these additional assumptions are necessary if such models are to be explicitly related to conscious agential processes. That is, if, as it is here, the idea is to regard an economic account of choice as an account of how agents might actually reason through a choice situation, then both of these assumptions, representation and motivation, are required, as is the recasting of the axioms of completeness and transitivity in explicitly subjective terms.

Together, these four assumptions cover the entirety of the choice problem. The assumption of representation connects the actual choice situation to the agent's conscious deliberations about that situation, which are explained by the assumption of subjective comparability and further described by the assumption of transitivity. The assumption of motivation connects those conscious deliberations back to the observed phenomenon — the actual choice. While the assumption of subjective comparability will be the focal point of what follows, comparisons will be understood as both informed (via the assumption of representation) and consequential (via the assumption of motivation), and the resultant comparative rankings will be held to the standard of transitivity.

### The Assumption of Representation

The assumption of representation accounts for how comparisons come to be informed. Faced with any outcome, the agent has the capacity to represent that outcome as some simplified possible world. This can be understood as the agent's subjective perception of the outcome or, to be as clear as possible regarding the nature of the theory being forwarded, as what the agent imagines the outcome to be. What the agent will compare is not the actual possible choice outcomes, but rather the agent's internal conception of those outcomes. Abby does not compare the things that are actually on offer; she compares the

things she *believes* to be on offer.

The EAC holds that mental representations serve as internal proxies for actual outcomes. An economic model might show a consumer's indifference curve through various bundles of money and oranges; the EAC asserts that the consumer does not consider the actual money nor the actual oranges in her comparison at all but, rather, that she considers her mental representations of those outcomes. Exactly how those representations come to be *about* the oranges and money is very unclear,<sup>19</sup> but this is the first folk psychological step in the process of choice: the agent, somehow, somehow, represents something that is, somehow, somehow, *about* the real world outcomes she is faced with in the choice situation.

The most straightforward objection to this assumption is that it is entirely unnecessary: that the choice options which the agent chooses over should not be understood as mental representations, internal to the agent, but rather, the actual choice outcomes on offer. Revealed-preference theory takes this position, as, I take it, do certain philosophical approaches which eschew subjective accounts of choosing and seek to account for choice by focusing on supposed actual values "borne by" choice options.<sup>20</sup> Such philosophical accounts are generally not explicitly described as objective, and might be understood as an attempt to grapple with problems of choice without relying on appeals to subjectivity (as will be seen in Chapters 3 and 4, the explicitly subjective nature of the EAC confers a great deal of flexibility upon the theory — too much, according to some philosophers). Nonetheless, attempts to remove mental states from the theoretical account of choice entirely must, I think, fail (see Chapter 2), while attempts to explain choice in folk psychological terms while

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<sup>19</sup> This is the problem of intentionality, see fn 5.

<sup>20</sup> See, for example, Chang 2002.

denying that agents' conscious experience is, in the end, subjective and demonstrably so,<sup>21</sup> seem to me to be attempting to impose the sorts of abstract considerations that may come into play in questions of theoretical reasoning upon questions of practical reasoning.<sup>22</sup> At any rate, as a practical matter, I assume that agents perceive everything, choice outcomes included, through a subjective lens.

### The Assumptions of Subjective Comparability and of Transitivity

The assumptions of subjective comparability and transitivity together account for the internal deliberative process by which the EAC accounts for choice — the intermediate stage between the agent facing the choice situation and the agent choosing. Agents compare as per the assumption of subjective comparability: Internal representations of possible outcomes are compared and one of the three deliberative stances is adopted. Abby compares her internal representation of the apple to her internal representation of the orange and either strictly prefers the representation of the apple to that of the orange, or strictly prefers the representation of the orange to that of the apple, or is indifferent between them.

Transitivity is assumed somewhat reluctantly. The assumption of transitivity is generally regarded as necessary if the theory of choice being forwarded is to be considered rational. I will have very little to say about what it might mean for an agent to be rational, but as a failure of transitivity does leave agents vulnerable to ranking choices in a manner which

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<sup>21</sup> Consider Romeo's actual chosen outcome: his death, while Juliet still lives (if briefly). The *outcomes* Romeo actually faced could, quite accurately, be described as "death" and "life with Juliet". But, clearly, these are not the *options* Romeo actually considered, which, instead, are something like, "death" and "life in a world with no Juliet in it". Clearly, agents can be wrongly informed about actual choice outcomes, and clearly such misconceptions matter in terms of the agent's subsequent choices (adapted from Hausman 2012, p. 27-28).

<sup>22</sup> So, for example, if it is an absolute principle of one's ethical theory that "one should never cause harm to befall an innocent" and it is also an absolute principle that "one should never lie" and if one then encounters a choice situation in which one must either lie or cause harm to befall an innocent, there will be no way to successfully compare the options with respect to the ethical theory — one faces a dilemma. But none of that prevents one from choosing using some other criterion that facilitates comparison or simply be doing whatever one prefers to without worrying too much about the ethics of it.



can be exposed as clearly self-defeating, I will defend the assumption of subjective comparability in conjunction with the assumption that the preferences resulting from comparisons are also transitive. My reluctance to include this assumption is due to its descriptive as opposed to explanatory nature. The preference rankings of agents, if those agents are to be secure from being used as a money pump, need to be transitive, and further, the agent's preference rankings must simply *be* transitive rather than *be made* transitive by the agent (i.e., noting that an agent could escape being used *too much* as a money pump by adjusting her preferences once they are revealed as intransitive, while practically reassuring, fails to address the philosophical point of the objection). When choosing between an apple or an orange, between an orange or a banana, and between an apple or a banana, Abby's rankings of the apple, the orange, and the banana must be transitive without her comparative process involving the intent to make them so.<sup>23</sup> So, whether an agent's preference rankings are transitive or not seems to have nothing to do with how agents actually, or at least possibly might, go about choosing. The agent *represents* choice outcomes, then the agent *compares* them, and then the agent *chooses* what she prefers. But at no point does the agent *order* her preferences so that they are transitive. Her preferences simply must, if she is to be regarded as rational, turn out to be that way.

### The Assumption of Motivation

In the third and final stage, detailed in the assumption of motivation, the agent actually chooses such that her deliberative conclusion reached in the intermediate, conscious stage at the very least correlates with her actual choice. That is, the agent chooses the

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<sup>23</sup> That is, Abby is meant to simply have preferences for an apple, an orange, and a banana, without consciously ensuring that the rankings for each pairing of goods are, taken together, transitive. One can think either of Abby having a consistent preference set, which she accesses when comparing, or having a consistent comparison function, which always yields the same preference rankings. Of course, neither of those things is actually true (agents' preferences do, as a matter of fact, change over time).

outcome that is represented by the option she prefers. Preferring the mental representation of the actual apple to the mental representation of the actual orange is the mental state that, if not causes, at least correlates with actually choosing the apple.

At this point, one might reasonably have concerns about the EAC tending toward tautology and/or unfalsifiability. But even if the EAC consisted of a single claim, say "whatever Abby chooses is what she prefers", to apply that theory to the circumstance of Abby choosing the apple over the orange and then to explain that choice by holding that Abby preferred the apple to the orange, the conclusion, "Abby prefers the apple", is not simply a restatement of the premise, "whatever Abby chooses is what she prefers". It is what follows from that premise and the additional claim that "Abby chose the apple over the orange", i.e., that the assumption of motivation combined with an "all things considered" definition of preference might yield claims that might be strung together into a logically true statement need not, in of itself, be a concern. Claims constructed so as to be necessarily true make excellent premises exactly because one can be certain that they are true, and any valid argument is indefeasible. However, the assumption of motivation does not claim "whatever Abby chooses is what she prefers". It claims "Abby chooses the outcome represented by the choice options she prefers", meaning that it is possible that Abby actually chooses an outcome that, had it been more accurately represented, she would not have preferred.

The EAC is best understood as a deductive theory.<sup>24</sup> Conclusions like "money is comparable with friendship" follow from the theory's assumptions when those assumptions are combined with observations of agents facing choices between friendship and money and actually choosing between them.

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<sup>24</sup> See Hausman (1992).

### What Follows

In Chapter 2 I will survey three significant approaches to accounting for choice: the account forwarded by modern revealed-preference theorists, value accounts of choosing, and Aristotle's account of the just exchange. I will consider revealed-preference theory and value accounts in general as marking two ends of an explanatory spectrum with Aristotle's account marking the mean between the two extremes. The EAC is meant to follow Aristotle's approach in this respect.

I begin the chapter by examining the account of choice provided by revealed-preference theory — a line of economic thinking running from Paul Samuelson to contemporary economists such as Faruk Gul and Wolfgang Pesendorfer. While I will argue that the modern economic account of choosing should be understood as theoretically independent of the notion of value, revealed-preference theorists hold that choices can be theoretically understood as independent from the notion of agent mental states entirely. Such an approach does evade concerns about how comparisons are actually made quite neatly (arguably too neatly). However, it is also subject to a number of significant objections, and, I think, ultimately falls to them. In some sense, revealed-preference theory marks the limit of the challenge that this work presents to the usual sorts of philosophical accounts of choice, which have agents thinking about and valuing things. In the account of choice advanced here, agents need not value, but they still need to think. (I hope philosophers dismayed by my treatment of value notions may find some comfort in knowing that economists of a revealed-preference bent will be likewise offended by my insistence that agent mental states necessarily play a role in accounting for choice.)

My examination of what I am calling value accounts of choice will focus on the extent to which the assumption of value as being theoretically necessary for choice

constrains the ability of agents to choose via trimodal comparison, if at all. While many choice theorists allow that agents are able to choose via trimodal comparisons in certain sorts of simple choice situations, many also hold that other sorts of choice situations, hard choice situations, prohibit trimodal comparisons. Using J.S. Mill's economics and utilitarian ethics to illustrate the point, I will show that a meaningful theoretical distinction between hard and simple choices cannot be supported.<sup>25</sup> That is not to say that, in the end, all choices are simple, but, to paraphrase Clausewitz, to say that, in the end, even simple choices are very difficult. And, once this point is understood, a great deal of confusion regarding choice can be eliminated.

I conclude the chapter by examining Aristotle's account of reciprocal justice in the *Nicomachean Ethics*, V.5., an account which hinges on his treatment of comparability.<sup>26</sup> While V.5 is notoriously murky in many respects, I will suggest that Aristotle makes two very important points, and makes them quite clearly. First, Aristotle notes that, in the end, exactly how it is possible for agents to compare one sort of thing to another sort of thing is unknown, likely unknowable, because, per Aristotle's own metaphysical conception, such comparisons are impossible. Second, Aristotle notes that, nonetheless, such comparisons happen, and that in practice it is money that makes them possible. We therefore are faced with Aristotle claiming, in reference to diverse goods, both that "now, in truth, it is impossible that that things differing so much should become commensurate" but that, "nonetheless, they may become so sufficiently" (2001, 1133b, 18-19). I discuss how I think this apparent inconsistency is best understood, and make a case for understanding the EAC

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<sup>25</sup> At least between various classes of "different good comparisons". That is, it is possible, I think, to sensibly regard "apple or apple" choices as theoretically distinct from "apple or orange" choices, but not to theoretically distinguish between "apple or orange" and "money or virtue" choices. I discuss this in more detail in Chapter 2.

<sup>26</sup> Aristotle is actually concerned with commensurability, but the distinction can be elided here. I discuss this at length in Chapter 2, fn. 42.

as an elaboration of Aristotle's approach.

In Chapter 3 of the dissertation, I consider the EAC's "value free" approach to accounting for choice in detail. In the EAC, the notion of preference is taken as a theoretical primitive and values, to the extent that they function as theoretical objects, can be understood as derived from preferences. The EAC is a deductive, subjective, folk psychological account of choice, where the term preference marks a function — something agents possess the ability to do, somehow. I will examine all of these aspects of the theory in some detail, before considering how the EAC stands in relation to incomparabilist objections. I will argue that almost all of these objections are answered or at least circumvented if value is understood as being derived from preference instead of vice-versa.

In Chapter 4, I respond to a trenchant incomparabilist objection that is not dispelled simply by rejecting the premise of qualitatively different values — the objection illustrated by the small improvement argument. The small improvement argument demonstrates that if certain intuitively plausible deliberative stances are interpreted per the EAC as preferences then, even if the assumption that certain types of values are evaluatively diverse is lifted (as I hold it should be), agents may still appear to have intransitive preference rankings. This circumstance suggests that any sort of trimodal theory of choice, whether it assumes values are necessary to choose or not, can lead to self-defeating choices and, therefore, fails as an account of rational choice. In Chapter 4, I will show that there are good reasons, namely the subjective nature of choosing and the costs of making comparisons, to believe that a trimodal theory of choice can satisfactorily address the concerns about preference-indifference intransitivity raised by the SIA. In my view, the SIA can be answered without abandoning or modifying the assumption of subjective comparability.

In Chapter 5, I provide a review of the EAC. I summarize both the theory's

relationship to the notion of value, and the manner in which the subjective nature of the EAC allows it to answer objections arising from apparent instances of intransitivity. I conclude the dissertation by noting that that same subjective nature necessarily allows for agents to regard certain choice situations as incomparable, but hold that these sorts of subjective assessments do not indicate the existence of necessarily incomparable options, and should be understood simply as cases of agents refusing to choose by comparison rather than as cases of agents being unable to choose by comparison.

## CHAPTER 2

### CHOICE AND MENTAL STATES

#### **Introduction**

Examining some other ways of accounting for choice will help orient the EAC in the theoretical space. The EAC can be understood as occupying a theoretical niche between two more extreme ways of accounting for choice. The first extreme, best illustrated by revealed-preference theory, amounts to an attempt to account for choice without involving any theoretical acknowledgement of mental states whatsoever. The second extreme is driven by the idea that the mental state which motivates choice — preference — must be explained in terms of some specific and further folk psychological claims. Choice accounts wherein value notions are thought necessary in order for agents to choose, value accounts, provide examples of this extreme.

Value accounts assume, in addition to mental representations of the actual outcomes on offer in any given choice situation,<sup>27</sup> and in addition to the notion of agent preferences in regard to such mental representations, that the agent's preferences are necessarily motivated by some additional internal mental processes, such as assessing choice options with respect to some value. Some value accounts of choice, especially value pluralist accounts, give rise to the idea that certain types of choice situations resist trimodal comparisons (call these hard

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<sup>27</sup> To be clear, it is my position that this assumption is necessary once the door to accounting for choice via mental states is opened. There are value theorists, just as there are economists, who maintain that choice options are the actual things in the world (or the actual abstract values in the world) that the agent chooses between, rather than the agent's subjective representation of those things (or values).

choice situations), while other types of choice situations, presumably, do not (call these simple choice situations). Such a distinction allows for choices that by all appearances are actually navigated via straightforward, trimodal comparison to be theoretically accommodated, while at the same time allowing for objections to comparability to arise from the theoretical assumption of values so diverse from one another as to bar comparisons,<sup>28</sup> an assumption common in value pluralist accounts of choice.

Between these two extremes, which serve as contrasts to the EAC, is Aristotle's account of choice. This account, like the EAC, makes no attempt to explain choice in terms of value and, like the EAC, makes no pretense of explaining exactly how choosing agents arrive at any particular choice. Aristotle is quite clear on two points. First, how comparisons come to be made is a question which resists a satisfactory answer. Second, comparisons, nonetheless, do come to be made.

In the first part of this chapter, I will lay out my concerns about the two extremes — attempting to do away with the folk psychological aspects of accounting for choice entirely at one extreme, attempting to more precisely define the folk psychological processes which might further explain functional states such as preference at the other. My treatment of revealed-preference theory is meant to mark a *failed* theoretical extreme. Revealed-preference theorists make the mistake of thinking that the theory's epistemological foundation can be discarded once the theory has been in some fashion empirically fixed without this remaining empirical rump being subject to certain theoretical failings.<sup>29</sup> They are, I think, quite wrong,

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<sup>28</sup> There are myriad variations of this sort of incomparabilist position, in all cases the gist of which is "there is no measure with respect to which the options under consideration can both be assessed". Specific examples of this sort of objection to comparability can be seen in the work of Ronald DeSousa (1974), Walter Sinnott-Armstrong (1985), Thomas Nagel (1979), and Joseph Raz (1991).

<sup>29</sup> Milton Friedman's "The Methodology of Positive Economics" (1953) is as important an example of this sort of mistaken theoretical approach as one is likely to find. The paper makes a compelling case for economics as an entirely functional practice with concerns regarding the epistemological justification of that practice



and, as distasteful as it might be to the committed empiricist, any satisfactory account of choice does need to involve at least some theoretical acknowledgement of the inner experience of the choosing agents.

The treatment of value accounts of choice, however, is not meant to be quite as damning. To be clear, I think, insofar as value is taken to be prior to and necessary for preference, value accounts are in error. And, in part, I think this because I, to some degree, find the failure of the revealed-preference approach to satisfactorily account for choice lamentable. We should, I think, be very careful about making assumptions about things that cannot be observed other than introspectively, and the theoretical acknowledgment that some internal mental experience, preference, motivates observed choices must be regarded as a concession. Having been forced to give that inch, one should not then cede the mile and assume that some further folk psychological specifics must be in place in order for preferences to form unless that further assumption is also truly necessary. That said, I also note that such further psychological specifics may very well apply in any given choice situation and, in Chapter 3, I will show that the EAC can account for further psychological specifics such as valuing. My complaint here is best understood as against the inference from the notion of value to the notion that some choices do not allow for comparison, as exemplified in some value pluralist accounts.<sup>30</sup>

In the second part of the chapter, I examine Aristotle's account of reciprocal justice, an account which, I will argue, is correct, and an account which also is, in some ultimate sense, deeply unsatisfactory. This lack of satisfaction should not be overlooked. I mean to

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presented as entirely besides the very practical point of economics. As will be seen shortly, such concerns cannot be disregarded.

<sup>30</sup> Not all. Chang, for example, holds that disparate values indicate not that comparison fails, but that comparison is conducted along four modes, rather than three.

make no pretense to the reader regarding certain facets of the EAC. Whether or not one regards the EAC's reliance on folk psychology in general as problematic, the theory's definition of preference looks suspiciously flexible. As an explanation, "whatever accounts for choice accounts for choice" should admittedly be regarded as less than ideal. And, while I will show in the next chapter that that general claim can be much more productively detailed, there is no denying that that is, in the end, the general claim. Part of what I mean to establish in this work, and what I will in the second part of this chapter argue is part of what Aristotle means to establish in regards to explaining choice in the context of exchange, is that "less than ideal" is, nonetheless, the best option available.

### **The Theoretical Extremes**

#### Revealed-Preference Theory

Almost all economists are one sort of revealed-preference theorist or another. Indeed, the EAC could be described as a revealed-preference theory insofar as, per the EAC, if one knows what some agent chooses in some choice situation and *if one also knows something about what that agent's beliefs were in regard to the options she faced in that choice situation*, then one can infer that agent's preferences. Daniel Hausman refers to revealed-preference theory in this sense as "belief-dependent revealed-preference theory", which he then contrasts to two more problematic types of theory, "actual revealed-preference theory" and "hypothetical revealed-preference theory" (Hausman, 2012, p. 25). The latter two approaches attempt to eliminate or diminish the role of internal mental states in accounting for choice — attempts which may very well pursue a laudable goal, but which, nonetheless, fail. I will reserve use of the term "revealed-preference theory" for these more problematic sorts of approaches.

Actual revealed-preference theory arose out of the work of Paul Samuelson and

remains a popular strain of economic thought today.<sup>31</sup> The theory holds that the claim that "Abby prefers the apple to the orange" is logically equivalent to the claim "Abby will never choose the orange from any set which includes the apple". Assuming this equivalence, one might further infer that choice behavior on the part of agents can productively be explained entirely in empirical terms, without employing the idiom of consciousness at all — preferences are revealed just by what is actually chosen, so actual choices can stand for preferences. As choices and preferences amount to the same thing, a choice theory can discard the notion of preferences qua psychological states entirely, or at least relegate such internal ruminations about choice to a vestigial role in the account of choice.<sup>32</sup> Such an approach, however, faces significant obstacles.

Say that we observe Abby faced with a choice between an apple and an orange. We observe her choose the apple. She bites into it, exclaims, "yuck!", spits, and throws the apple away, seemingly in disgust. Upon closer observation, half a worm can be seen in the discarded apple. An initial critique regarding preference as defined by choice is just that it seems quite obvious that Abby does not prefer wormy apples to oranges; she only chose the apple because she did not believe the apple was wormy. To put it in terms of the EAC, Abby faced a choice between her mental representation of the apple and her mental representation of the orange, and the representation of the apple was significantly different from the actual apple. In this case, Abby's actual choice does not appear to reveal anything that anyone

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<sup>31</sup> Samuelson first defends the revealed-preference approach in "A Note on the Pure Theory of Consumer's Behavior" (1938). Revealed-preference theorists such as Faruk Gul and Wolfgang Pesendorfer continue to develop and defend the theory (their "The Case for Mindless Economics" (2005), directed at neuroeconomic critiques of economics, provides a good example of the conflation of preference and choice in economic thought).

<sup>32</sup> In addition to dispensing with the notion of "preference" qua an internal state of choosing agents, revealed-preference theory dispenses with the notion of mental representations of the actual goods on offer. The conflation of actual choice and preference eliminates the distinction between what the agent thinks she is choosing and what she is actually choosing.

would actually understand as a preference, no matter how loosely. Nonetheless, many a bloody-minded economist is prepared to define preference in just this manner and might very well offer the same justification for the oddity of their particular definition of preference as I do for the EAC's definition of that same term — that the common folk understanding can be freely put aside in favor of a technical definition.

However, the technical definition given by the logical equivalence of choice and preference is deeply problematic in a way that the technical definition given by the EAC (where preference is the internal state that motivates choice) is not. Hausman gives a number of examples where, if preference is defined as choice (as actual revealed-preference theorists would have it), certain widespread economic practices are clearly unjustified. Game theorists, for example, routinely assign utilities (understood just as indications of preferences) to choice options in choice situations that may never actually be faced by an agent in the game. That is, preference is attributed in the absence of choice, which flies in the face of actual revealed-preference theory's definition of preference.<sup>33</sup> Many such examples of economic practice outstripping actual revealed-preference theoretical justification are available (see Hausman, 1992, 2012), but the problem is far worse than such particular examples might suggest, as the notion of completeness itself becomes impossible to support.<sup>34</sup> Plainly put, if

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<sup>33</sup> So, for example, consider a two person proposal game (adapted from Hausman (2012)). Sean moves first and faces a choice between 'ask Robin to marry' and 'do not ask Robin to marry'. But, the 'ask Robin to marry' choice involves two possible outcomes as once Sean asks, Robin might say 'yes' or 'no'. In order to define the game, Sean must have a preference between the outcome 'Robin says 'yes'' and 'Robin says 'no'' (as well as preferences between those options and not asking Robin to marry in the first place). The problem, of course, is just that Sean's preference for Robin to say 'yes' is a preference for an outcome that Sean does not actually, and never will actually choose (see fn. 32).

<sup>34</sup> The misguided nature of the actual revealed-preference theoretical approach is perhaps most succinctly illustrated by Alexander Rosenberg, who notes that "short of being disconfirmed every time a person's tastes do change" revealed-preference theory, like any theory of choice, needs access to some sort of "qualification or ceteris paribus clause to remain plausible". That is, revealed-preference theory assumes no changes in taste, and such an assumption betrays a commitment to what Rosenberg refers to as "the psychological sources of consistency in choice behavior" (2008, p. 88).

preferences are theoretically defined only by actual choices, then the simple act of drawing any indifference curve that extends beyond an observed consumption point is not theoretically permissible. Hypothetical revealed-preference theory can be understood as an attempt to get around this rather significant problem by redefining preferences along the lines of "what would be revealed by actual choice if the agent had actually faced some choice situation and made some choice".

In the hypothetical variety of revealed-preference theory,<sup>35</sup> preference is held to be revealed by the choices the agent actually makes as well as the choices an agent *would* make in choice situations the agent does not actually face. This conception of preference allows the hypothetical revealed-preference theorist to resume drawing indifference curves through consumption points where no actual consumption has been observed, and to investigate the sorts of choices one *might* face in various sorts of games. However, two points should be borne in mind. First, the initial objection to the revealed-preference approach in general, that it really does not look like Abby prefers that wormy apple to the orange, still stands. Second, it is not at all clear that a theory founded upon counterfactuals is on any firmer footing than one founded on internal mental states with regard to the sorts of epistemological concerns that motivate the move away from folk psychological claims in the first place. Such concerns are not, I think, insignificant, but, even if they are put aside, hypothetical revealed-preference theory is nonetheless limited.<sup>36</sup>

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<sup>35</sup> Ken Binmore recommends this approach (1994).

<sup>36</sup> Consider, again, the two person proposal game from fn. 7. The problem for actual revealed-preference theory was that in order to define the game, Sean needs to have a preference between Robin accepting or rejecting the proposal, and Sean needs to have those preference before the choice situation, "accept or reject", even comes about. But holding, as hypothetical revealed-preference theory does, that an agent's preferences are revealed by what the agent *would* choose does not solve the problem because even when the choice situation is considered hypothetically, the choice situation is not a choice situation player A *would* ever face. "Accept or reject" is a choice situation faced by Robin, not Sean. Nonetheless, the game requires Sean to have a preference between "Robin accepts" and "Robin rejects". Again, see Hausman (2012, p. 31).

As is the case with revealed-preference theory, the most telling flaw of the hypothetical revealed-preference approach lies in the theory's foundation. As Hausman notes, "*Hypothetical choice is not choice*. It is instead prediction concerning what someone would choose in a particular epistemic situation. Without specifying what the agent believes, one has not specified the situation in which the agent is to choose, and no prediction can be made" (2012, p. 31).

Attempts to eliminate mental states from theoretical accounts of choice simply do not seem to work, and the failure of revealed-preference theory, along with my introspective experience of having various mental states that at least *seem to* motivate my choices, suggests that preference is best understood as a psychological attribute of choosing agents. Insofar as I have been discussing the field of economics in this section, it should be noted that this necessary distinction between preference and choice can very often, for practical purposes, be elided, provided the goods in economic models accurately represent the actual beliefs of agents about those goods.<sup>37</sup>

### Value Accounts

A different approach is to take the opposite tact of revealed-preference theorists and try to account for preferences qua mental states with more detail and rigor than the EAC. Once the notion of agential mental states as choice motivating is theoretically acknowledged, it is tempting to proceed with the choice account by accounting for the "I desire this at the cost of that" motivating state of preference *via some further theoretical internal state/experience*.

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<sup>37</sup> Hausman is, I think, quite correct to note that the issue is that revealed-preference theorists "mischaracterize the practice of economics, not that they correctly characterize a mistaken practice. Economists do not and cannot employ a notion or preference defined in terms of choices." (Hausman, 2012, p. 23). Nonetheless, while economists are certainly free to insist that preference does equate to choice without much fear of it impacting their results, the fundamental failure of such approaches to cohere mandates a different philosophical approach.

Abby chooses the apple at the cost of the orange. The EAC accounts for that choice by holding that Abby preferred the mental representation of the apple to that of the orange. And the EAC holds that her preference might be further accounted for in terms of subpreferences, such as a preference for crispy at the cost of juicy (or for more juicy at the cost of less juicy). Subpreferences can be accounted for in terms of sub-subpreferences and so on, but this is not particularly philosophically satisfying, whether the regression is taken to be infinite or taken to end in some atomic preference. Such explanations, no matter how finely detailed and how many "subs" are prefixed to the preference, strike most philosophers of choice as unprincipled, and determining the principles at play is certainly a widely respected philosophical goal. That said, I hope, nonetheless, to convince the reader that such an unprincipled account (if, indeed, it is such) is, nonetheless, the right one.

Usually, however, the next step in philosophical accounts of choice involves evoking a principle governing rational choice, and the principle evoked is most often some sort of value notion. That is, Abby prefers the apple to the orange because the apple is better with respect to some value. The value might be a psychological experience brought on by the consumption of the apple (which the agent is capable of anticipating), or it might be some other metric, abstract or otherwise, according to which the agent is able to assess the apple. In either case, the principle of choice is the same and roughly amounts to "maximize value". If the value account takes a monist approach, then "maximize *the* value" is the principle that holds over every choice situation an agent might encounter, while if the account adopts a value pluralist perspective, "maximize value 1" might hold over some choice situations and "maximize value 2" might hold over others (the overarching governing principle being "maximize the value relevant to the choice situation at hand").

Value monism has fallen out of fashion of late both with economists and

philosophers, while value pluralism is widely embraced by philosophers. That said, value monist approaches are, in many respects, congruent with the EAC. The only real difference (though a philosophically significant one) being that value monists hold that the utility score which certain sorts of choice theorists might assign to some choice option is actually a measure of *something* the agent actually experiences (or at least thinks about when choosing), whereas per the EAC, as per most modern economic approaches in general, utility is best understood as a theoretical abstraction derived from preferences, i.e., *not* a psychological object.

Value pluralist approaches are, however, another matter. Such approaches often lead to the position that certain values are incomparable to certain others. Many value pluralist<sup>38</sup> accounts of choice involve what amounts to an assumption of incomparability, at least in hard choice situations. It is with value pluralist accounts which assume incomparability in this fashion that the EAC is most sharply contrasted, and the distinction between hard and simple choice situations highlights the contrast especially well.

I take it as obvious that some choices are harder to make than others. Determining whether one eats an apple or an orange is likely to be an easier matter than determining whether to become a clarinetist or a lawyer. There is simply less about the options in the first choice situation to consider, and the costs of misconsiderations when choosing among fruits are significantly lower than those possible when choosing among careers, so agents, quite sensibly, will be inclined to invest more time and energy in considering the career options more closely (in other words, agents will be more inclined to make the career choice a hard one by working hard in order to make it, because working hard to make the choice is likely to be worth the cost). At issue is whether this distinction between hard and easy marks

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<sup>38</sup> Not all. Ruth Chang is a value pluralist, but argues, compellingly, that practically reasoned choices must occur within the framework of some sort of comparativism (2012).



anything of theoretical significance — whether hard choices are also choices between incomparable options. To be clear, the distinction between hard and simple choice situations can be practically maintained, and that distinction has had and continues to have immense practical significance, especially for practicing economists. However, even in value pluralist approaches that are committed to the idea of fundamentally diverse values, establishing a meaningful theoretical distinction between simple and hard choice situations presents a challenge. To see why, I want to begin by considering how the practical distinction between simple choices and hard choices can be established in a value monist approach, using Mill's distinction between his utilitarian ethics and his approach to political economy.

### Value Monism: Utility

Mill develops his notion of the fundamental unifying value, utility, in an ethical context. Per Mill, utility is the internal measure that agents *should be* maximizing. This ethical proscription, however, suggests that Mill also holds that choice options actually *can be* assessed with regard to utility, and his account of what utility amounts to also indicates that "mere market goods" (Chang, 2002, p. 96) like apples and oranges are themselves sources of utility (so, simple, prudential choice situations can be understood as a matter of utility maximization as well, though the utilitarian calculus in such cases might not extend much beyond "eating this apple will make me happier than eating that orange").

*Utility* per Mill's own gloss can be understood as "happiness" or "pleasure",<sup>39</sup> and ethical choices, per Mill, can themselves be glossed as comparing the choice options with respect to the net amount of pleasure produced by choosing each option.<sup>40</sup> Mill's notion of

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<sup>39</sup> It is a gloss which Mill, a good philosopher, is of course deeply suspicious of (see, in particular, chapter two of his *Utilitarianism* (1998)).

utility is philosophically developed and articulated in detail and is strongly influenced by the work of both Jeremy Bentham and Mill's father, James Mill. It should be noted that the concept is also explicitly psychological, with the father's psychological theory of associationism providing the foundation for the son's treatment of utility in *Utilitarianism*.<sup>41</sup> Utility, for Mill, is something agents actually experience, be it the low pleasure of biting into a crisp apple or the sublime pleasure of helping others, and any choice option can be compared to any other on the basis of how much utility actually choosing the option would produce.

When compared to the EAC, Mill's conception of preference is rich with detail. For Mill, to prefer an apple to an orange is to believe that choosing the apple rather than the orange will cause a specific sort of psychological state — that of pleasure — and cause either more, or a more intense version, of that state than would choosing the orange rather than the apple. Per the EAC, the explanation, ultimately, gets no further than the "rather" — i.e., per the EAC, unless we care to further detail the sorts of things that might constitute, or, more importantly, be believed to constitute, the "apple bundle" and the "orange bundle", the explanation consists of noting that the agent would prefer to have an apple at the cost of an orange, rather than vice versa.

### Wealth, Money, and Mere Market Goods

It is interesting to note the notion of utility is not explicitly applied by Mill in his economics, especially considering its ready applicability to a project in which the ability to quantify matters of exchange is paramount. Mill's stripped down conception of *homo*

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<sup>40</sup> Admittedly, nothing in Mill's approach explicitly indicates that the comparison must be trimodal — i.e., tetramodal comparisons might be possible per this approach.

<sup>41</sup> See James Mill's *Analysis of the Phenomena of the Mind* (1878).

*economicus*, a central idea in his theoretical approach to economics, stands in contrast to his robust conception of utility, and this idealized approach to the study of economics should be understood as a function of Mill's approach to scientific inquiry in general rather than a particular feature of Mill's conception of choice.

Mill's approach to economics proceeds, as Mill holds any endeavor in the field of social inquiry must, deductively from "laws of human action" (Mill, SOL, 454). The effect of such laws, combined with particular sets of circumstances can then, hopefully, be calculated and checked against actual outcomes. Mill's economics regards "mankind as occupied solely in acquiring and consuming wealth" (Mill, 1976), but Mill is quite clear that the claim that agents are "occupied solely" with wealth acquisition and consumption is meant to be understood as an abstraction. For Mill, it is a law of human action that humans have a tendency to maximize wealth but that tendency never operates in isolation from the other tendencies possessed by humans. So, while a tendency to maximize wealth might motivate me to sell my offspring into slavery, a much stronger tendency to nurture my offspring provides much more motivation not to, and the sum total of my tendencies is to not treat my children as chattel.<sup>42</sup>

Mill is methodical about justifying proceeding with such an abstraction and about how such an abstraction might serve as helpful, though inexact, explanation. However, much more pertinent to this discussion is the circumstance that, as a practical matter, the tendency to maximize wealth does work, more or less, in isolation in market settings. The more thoroughly the market is commodified (i.e., the more the market is arranged so as to

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<sup>42</sup> Mill rather famously gives the example of "the theory of the tides", where the "attraction of the sun and moon is completely understood... but circumstances of a local or casual nature...influence, in many or in all places, the height and time of the tide" (2006. p. 845). Per Mill, the situation facing the economist is the same as that facing the tidologist. The tendency of choosing agents to behave like *homo economicus* is well defined and well understood, but that tendency almost always operates in conjunction with other, less well defined, less well understood, tendencies.

encourage people to limit their concerns to maximizing wealth), the more isolated the tendency.

So, per Mill, economics, in theory, is the study of the tendency of agents to maximize wealth in isolation, and, in practice, while the abstraction of *homo economicus* is never an accurate description of a choosing agent, commodified markets encourage agents to behave just like *homo economicus* would. This state of affairs, however, by no means suggests that the method of choosing between mere market goods in a market setting (which, given prices, is pretty much explicitly trimodal comparison) is limited to such market choice situations.

Choosing with respect to wealth as a measure, especially money wealth, is certainly simple. But money and wealth are just place holders for the various sorts of goods one might acquire with money and/or wealth. Per Mill, the value of wealth is just the utility one might use the wealth to generate. Regardless of how complicated the utility calculus facing the agent might get in harder choice situations, value monist approaches such as Mill's hold that a straightforward trimodal comparison with respect to some ultimate value is possible (exactly because such theories hold that there is some such ultimate value). While Mill would have certainly regarded, for example, a choice between virtue and money as beyond the pale of economic inquiry, his utilitarianism does give a straightforward account of how such a comparison might proceed — the agent might (*should*, per Mill) consider how much net happiness each option would provide, and choose the option which provides the most. So, wealth maximization can be understood just as a subset of Mill's recommended ethical practice of utility maximization, where the only relevant pathway from a choice option to happiness runs through the option's value, in wealth.

My point here is just that while Mill's distinction between economic and non-economic is well articulated as part of his theory of economics, it should not be mistaken for

a distinction that is at all relevant to a theory of choice. Mill's economics is explicitly limited to matters of wealth, but his implicit account of choice is not. Whether or not some choice can be sensibly made according to the principle of wealth maximization, that choice can, per Mill, be made with respect to the broader notion of utility. The distinction Mill is drawing, between idealized choices entirely motivated by wealth and choices which are motivated to some extent by other considerations, pertains not to practical reason, but to a philosophy of science with an eye toward establishing the fundamental methodology of the social science of political economy. Mill's carving out of wealth maximization — comparisons which only involve mere market goods which have money prices — from utility maximization has much more to do with economic practicalities than it has to do with philosophically accounting for choice. Mill limits *economics* to certain sorts of choices, which is different than saying, as many modern philosophers of choice seem wont to, that the distinction between choice situations involving mere market goods and those involving other sorts of goods marks a distinction between choices which are comparable and those which are not.

#### Value Pluralism: Covering Values

Those who regard the distinction between simple and hard choices as indicative of a distinction between comparable choices and incomparable ones are, as a general rule, not value monists, but value pluralists. In particular, I will consider the sort of value pluralism wherein, in order for comparisons to take place, the options in the choice situation both are covered by (or bear) the same value, so that the comparison can be made with respect to that common value. In such accounts, the justification for the distinction between simple and hard choice situations involves something similar to the following assumptions:

\*Choices are (sometimes) made by comparing the options on offer with respect to some particular covering value, with respect to which both options can be assessed.

\*Any mere market good can be compared to any other mere market good with respect to the covering value "wealth (money)" (these are simple choices).

\*Choices involving options which do not share a common covering value cannot be made by comparison (these are hard choices).

A problem in regard to these assumptions that I will focus on is this: the notion of a mere market good explains far less than it might initially appear. Consider, again, Abby and the choice between an apple and an orange, both mere market goods. Admittedly, wealth can be choice determining, and I will assume Abby prefers more wealth to less. Even if Abby loves apples and hates oranges, if she faces a choice between an apple she can immediately exchange for a dollar, and an orange she can immediately exchange for two dollars, she may very well choose the orange, especially if, for example, she believes she will be able to subsequently purchase two apples for two dollars. But, as that last clause suggests, the notion of wealth is a place holder for all and any goods wealth might be used to acquire. Abby prefers more goods to less goods and money just marks amounts of goods. So, whatever is meant by mere economic goods making for simple and therefore comparable choices, the reasoning cannot ultimately be that mere economic goods make for simple choices *because* such choices are merely a matter of assessing the amount of wealth offered by each option, even though that may be a perfectly good explanation of how any particular individual might consider some particular choice in the context of a commodified market. Money can practically serve as a covering value, but it is not the sort of value that can sensibly be regarded as inherent to some choice option. Of course, value pluralists might hold that money, while it can for all practical purposes come to function as a common covering value, is just an indication that all options with prices share some other covering abstract value(s) which are borne by all such options. It is, however, unclear how a covering

value which covers all mere market goods but which cannot cover other sorts of goods is meant to be understood.

For Mill, as for any sort of value monist, none of this is particularly problematic. All options can be assessed with respect to the fundamental theoretical value. Per Mill, Abby's choice can be explained in terms of the amount of utility she gets from apples, oranges, and/or any of the things she might be able to get with the money others might pay her for an orange or an apple. Again, this sort of explanation — supposing some universal value — is not highly regarded, and for some pretty good reasons,<sup>43</sup> but I want to note that, highly regarded or not, value monist accounts do, at least, provide some ultimate account of how choice between mere market goods might proceed, simply because they provide an account of how choices between *any* two options might proceed. Value pluralist accounts are less convincing in this regard.

It may, perhaps, be plausible to regard options such as apples and oranges as both falling under a common covering value along the lines of "nourishment" or "food".<sup>44</sup> But things begin to look less plausible when the choice situations involve options which are clearly mere market goods, but which are even less similar than apples and oranges. Abby might face a choice between a package of cigarettes and a dozen apples, for example. Here, no common covering value is readily apparent, but the choice is, again, clearly between two mere market goods. Value pluralists need to explain why the choice between cigarettes and food is, evidently, a simple one. A response along the lines of regarding "things you consume" as a value, is certainly possible, but, this, I think, stretches credulity or, at least, seems to be a value monist sort of answer (as almost everything can be understood as

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<sup>43</sup> Elijah Millgram makes a compelling case against regarding utility as the universal value in "What's the Use of Utility" (2000).

<sup>44</sup> Though, even here, the reply "but she is literally trying to compare *apples and oranges*" seems rather trenchant.

consumable in some sense or other).

Another line would be to allow for certain types of covering values to be comparable with money and, therefore, with each other. However, this line again misunderstands the nature of money. The only significant value attributable to some amount of money is entirely derived from the values possibly attributable to the goods that one might purchase with the money. So, the question remains: Why are cigarettes and apples supposedly comparable with money, but virtue supposedly not?

Again, one idea behind the EAC is just to limit the number of assumptions about things that cannot be empirically confirmed, i.e., assumptions about the internally experienced psychological processes involved in choice, to those that are necessary. And, certainly, if unnecessary assumptions, such as values being required in order for there to be preferences, are made, the idea is to avoid interpreting them in a manner that generates significant theoretical problems such as "most options are incomparable".<sup>45</sup> Because, as suggested above, insisting that all choices be made with respect to some common value while at the same time insisting that some values are evaluatively diverse seems to leave very few choices options as theoretically comparable. Choices between two apples might certainly proceed simply — one just chooses the better apple, but beyond such "apple and apple" comparisons, there seems to be little theoretical justification for regarding any diverse options as theoretically covered by a common value, as wealth is just a marker for other mere market goods and not, itself, some abstract value.

So, in either sort of value approach, value monism or value pluralism, there does not seem to be any sort of theoretical justification for making a significant comparable/incomparable distinction between simple choices and hard ones. Money

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<sup>45</sup> Unless, I suppose, such an interpretation is unescapable, in which case I would again point out that the assumption of value necessarily playing a role in comparison is itself unnecessary.



certainly greatly facilitates comparison, but facilitating something is different than being the root cause of that thing, and we should not mistake the circumstance that some things, like apples and cigarettes, are routinely priced while others, like honor and equality in the work place, are not as marking some theoretical distinction between certain types of choice situations and whether they allow for comparisons or not.

Absent a meaningful theoretical distinction between hard and simple choices we are left to consider whether and to what degrees the three approaches, value pluralism, value monism, and preference accounts like the EAC which allow for the omission of value notions entirely, actually explain choice, hard or simple. The EAC employs "preference" to mark the mental state that causes (or at least seems to cause) an agent to choose one outcome at the cost of another, and holds that outcomes are mentally represented, somehow, by the agent. No psychological assumptions regarding *why* an agent might prefer are necessarily part of the account. All outcomes are considered comparable.

In value monism, options are compared and preferences established with respect to some ultimate value (the options scoring higher with respect to the ultimate value is chosen). All outcomes are considered comparable, and this sort of account does provide a principled account of how and why agents prefer.

Value pluralism presents a more complicated interpretative challenge. The hard/simple distinction might be taken to suggest that the value pluralist position is that some choice situations, the simple ones that involve mere market goods as outcomes, can be navigated via trimodal comparison, while other choices situations, the hard ones, cannot be. However, as I have argued above, there seem to be reasons to suspect that, rather than the existence of money prices marking a theoretical category, "simple choice", the supposed theoretical distinction is simply marking market practices.

So, money *marks* preference, and ends up marking it in a way that, with respect to mere market goods, leaves money looking like a value that, in turn, looks very much like utility insofar as all market goods can be measured with respect to a money price. The role of money in choice is explicated in some detail by Aristotle, whose account of economic exchange (the "virtuous mean" between revealed-preference and value approaches) can now be examined.

### **Aristotle's Account of Choice**

In book 5, chapter 5 of his *Nicomachean Ethics* (hereafter, NE V.5) Aristotle provides an account of reciprocal justice, or justice in the exchange. NE V.5 is usually understood as Aristotle's treatment of what has subsequently become known as economics, and inherent in his discussion of how a just exchange might come about is an account of choice of the sort forwarded in the EAC. The main problem Aristotle addresses in this passage amounts to the difficulty in explaining how qualitatively different outcomes can possibly be made commensurate.<sup>46</sup> The terminological subtleties regarding the distinctions between

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<sup>46</sup> It is actually somewhat unclear whether Aristotle is actually considering the problem of making goods commensurate, in the sense that modern philosophers of choice understand that term, or whether he is considering the problem of how goods might be compared. As Aristotle writes in terms of commensurability, and as I am explicitly concerned with comparability, a brief accounting of these terms and the distinctions between them is warranted.

Chang provides the most complete contemporary account (see "Incommensurability (and Incomparability)", (2013)) of both terms. The main distinction being that "comparable" is meant to apply to bearers of value (i.e., the choice outcomes themselves), while "commensurable" is meant to apply to the values borne. Given this distinction, the EAC is properly concerned with matters of comparability, simply because that account does not necessarily involve values at all. Given Aristotle's treatment, it is tempting to assume that, despite the use of "commensurability", Aristotle means to draw the same sort of distinction, and that NE V.5 is best understood as a matter of comparability, and I largely succumb to that temptation in what follows, i.e., I will take Aristotle's "commensurable" as marking, well enough, the notion of "comparable" in which I am interested.

That said, however, it is also important to note that Aristotle is clearly seeking what amounts to a common value, and that he concludes that something very close to such a common value can be established, that common value being money. In contrast to Aristotle's approach, the EAC is most decidedly not concerned with the notion of a common value by which all goods can be measured. But, nonetheless, like Aristotle's account, the EAC does conclude that something very much like such a common value is shared, or at least can

comparability and commensurability aside, this problem is the same one that continues to trouble modern choice theorists. Aristotle handles the problem as well, I think, as is possible. Below, I will provide a general account of Aristotle's approach and then demonstrate that that approach is strongly evocative of the EAC.

However, it must be acknowledged that my account of Aristotle's approach is by no means the consensus account, for the simple reason that no clear consensus has emerged among scholars as to how NE V.5 should be understood. Interpretations vary wildly.

Aristotle's approach to the problem requires that the goods exchanged must be "somehow

be shared, by all objects of choice. In some sense, both the Aristotelian account of the just exchange and the economic account of choice can be understood as value monist approaches, where the one value is money.

Whether or not money's role in Aristotle's account qualifies the account as an account of commensurability, where commensurable is regarded as a matter of value is, I think, somewhat unclear. Aristotle asserts that "[m]oney, then, acting as a measure, makes goods commensurate" (1133b, 17), but this claim might still be understood as an admission that there is no shared value that diverse choice options inherently bear, which would seem to frame the subject quite clearly as strictly a matter of comparability. Nonetheless, while not inherent to the goods on offer, a cardinal scale of value can, undeniably, be put in place by agents over choice options which, per Aristotle, should not, metaphysically speaking, be subject to such a common scale.

It should be noted here that economists are also concerned with maintaining a similar distinction between the claim that everything has its price and the claim that there is some value by which all things can be measured. While a welfare economist might use a utility function in a Hicks compensating variation to calculate the money cost of achieving some particular level of utility, the pricing of utility is not meant to suggest that either utility or money is the "some one thing" by which all goods are measured. Again, it is somewhat difficult to determine whether this sort of money scale implies commensurability or not.

Aristotle's position in this regard is somewhat conflicted. He explicitly identifies the "some one thing" as "in truth, demand, which holds all things together" (1133a, 27-28) while, as mentioned above, also claiming that, in truth, different things cannot become commensurate. That latter claim is accompanied by Aristotle's observation that, despite the impossibility of two different choice options becoming commensurate, "...with reference to demand they may become so sufficiently" (1133b, 19-20). The notion of "sufficiently" is key. Neither Aristotle nor economists are willing to claim that there is some abstract, cardinal scale of measurement that applies to diverse goods. But, nonetheless, both the Aristotelian and economic accounts allow for agents to generate a practical cardinal scale of measurement that can be applied to diverse goods.

Chang somewhat tentatively identifies Aristotle as "perhaps the first proponent of weak incommensurability", where the claim is that "there is no single cardinal scale by which all values can be measured" (2013, 5), but I see no particular reason, given the attention Aristotle pays to the concept of incommensurability when considering an exchange between two mere market goods, to constrain Aristotle's advocacy to the weak variety of incommensurability. Instead, his account of the just exchange is perhaps best understood as an account of choosing by comparing in the absence of value commensurability of any sort. Nonetheless, that a practical cardinal scale, though not a measure of the right sort of value (i.e., abstract) to make diverse things truly commensurable, per Chang's definition, is available is a rather important feature, both of Aristotle's account of choice and EAC. In effect, the existence of a cardinal scale implies that the things measured by the scale are not just compared by agents, but that the agent's preference set is transitive (otherwise no money price could be determined for a good).

equal", and this, in turn, requires that "all goods must therefore be measured by some one thing" (NE V. 5, 1133a, 25-26). What, exactly, that "some one thing" is has been the subject of some dispute, with some scholars taking Aristotle to mean measures ranging from social status<sup>47</sup> to labor costs.<sup>48</sup> Some scholars have found study of the section so unrewarding as to declare that the best course of action in regard to it, is to, by and large, "pay no attention to this issue" (Bostock, 2000, p. 64). Yet, despite this lack of consensus or, just as likely, because of it, the passage has been highly influential as a piece of economic literature.

Part of NE V.5's significance in regard to the issue of choice has to do with its uneasy relationship with other aspects of Aristotle's philosophy. For Aristotle, as a matter of metaphysics, different types of things, by the very nature of being different types, cannot be compared.<sup>49</sup> Aristotle explicitly raises this point in NE V.5, noting, in reference to diverse goods, that "now, in truth, it is impossible that that things differing so much should become commensurate" (1133b, 18-19). Again, this problem, value diversity, is the same one that concerns many modern philosophers of choice. The manner in which Aristotle addresses the problem is instructive.

### Reciprocal Justice

Aristotle's account of exchanges, despite his concern that exchanges be just, proceeds by putting concerns about values aside and attributing the process of comparison to a psychological capacity possessed by choosing agents. Specifically, agents are able to demand<sup>50</sup> goods. The solution offered by the EAC also amounts to putting concerns about

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<sup>47</sup> See, for example, Robert Williams' *The Nicomachean Ethics of Aristotle* (1869).

<sup>48</sup> See, for example, Joseph Schumpeter's *History of Economic Analysis* (1955).

<sup>49</sup> See Scott Meikle's *Aristotle's Economic Thought* (1995).

<sup>50</sup> Per the David Ross translation. The actual term used by Aristotle is usually transliterated as *chreia*.

values aside, or, at least, by addressing such concerns in the context of prior preferences. Below, I am going to suggest that an agent's Aristotelian demand for some good is best understood as the agent's willingness to pay for that good, and that willingness to pay, in turn, can be understood as a function of the agent's preferences (i.e., I am going to suggest that the EAC accounts for choice in the same way that Aristotle does). So, Aristotle's "demand" can be understood as the "some one thing" that allows options to be commensurate, but that "some one thing" is a capacity of the choosing agent and does not necessarily involve any abstract value borne by the choice options themselves. This step, simply eliminating concerns about the nature of the outcomes, in particular concerns about the abstract values borne by them, is a central feature of the EAC, and, if one reads Aristotle as taking this same step in NE V.5, as I think one should, his account of reciprocal justice becomes remarkably straightforward. It is also clearly out of step with Aristotle's metaphysical conceptions. Aristotle is coping with two, to him, evident facts: one, it is philosophically evident that different things are not comparable; two, it is empirically evident that different things are compared by choosing agents.

Notably, Aristotle does not spend any time at all examining why or how some particular assessment of a some choice option is reached by the choosing agent, and the tendency of scholars to discern starkly different meanings from the passage can perhaps best be understood as those scholars signaling what sort of things they think *should be* involved in the agent reaching such judgments. Aristotle's account of choice, however, does not require such details. These points will be considered in more detail shortly; for now, it suffices to say that I think a lot of the confusion about this passage, like much of the confusion that arises when philosophers and economists encounter one another's conception of choice, arises because of confusion regarding how the notion of value is meant to apply in the account. I

hold that in regard to Aristotle's account of choice, as in regard to the EAC, the answer is fairly straightforward: it does not necessarily apply at all.

That straightforward response should not be taken to imply that the subjects of choice and value are, for Aristotle, entirely unrelated. Though value does not figure in his theoretical account of how agents choose between options, the options discussed in NE V.5 are certainly understood by Aristotle to have value, both in use and exchange, and the notion of value in exchange, i.e., price, is central to Aristotle's account. But, other than money (a value which, per Aristotle, greatly facilitates comparison, but which is also theoretically subsequent to the ability to demand in the first place), there is no common value shared by, for example, a house and a pair of shoes, by which those options can be understood as "worse" or "better" or "equally good" as one another. And, even in the absence of money, Aristotle holds that diverse goods can be compared and evaluated, each in terms of the other.

It should be noted here that Aristotle's conception of metaphysical evaluative diversity is, if not less forgiving, certainly more definitively established than the conceptions rather murkily endorsed by modern philosophers of choice who regard lack of a common value borne by options as a barrier to comparison. Aristotle, unlike many value pluralists, does not have any undue confidence in an agent's ability to choose between two options just because those options might be characterized as mere market goods. We forget that one, at least in some sense, cannot compare apples and oranges at risk of considerable philosophical confusion, and Aristotle should be feted for not making that mistake.

### Normative Concerns

Aristotle is quite clear, I think, regarding the normative question of whether everything *should* be given a money price (no). His examination of reciprocal justice in NE

V.5 occurs in the context of a broader examination of the virtue of justice. Exactly how the account of reciprocal justice fits into this broader examination is somewhat unclear. Aristotle divides the notion of justice into two main parts: justice in the complete sense, where the term can be glossed as "to be entirely virtuous" (i.e., justice in the ideal); and justice in the partial sense, where the term is understood to refer to a distinct virtue, meaning something like "fairness".<sup>51</sup> Partial justice is then further subdivided. Distributive justice "is manifested in distributions of honour or money or other things that fall to be divided among those who have a share in the constitution" (NE V. 5, 1130b, 31-33), while rectificatory justice "arises in connexion with transactions both voluntary and involuntary" (1131b, 25-26). However, while Aristotle is clearly discussing voluntary transactions in NE V.5, he nonetheless notes that "'reciprocity' fits neither distributive nor rectificatory justice" (1132b, 24-25), and that "in many cases reciprocity and rectificatory justice are not in accord" (1132b, 27-28). Debate regarding the exact taxonomy of justice has resulted, at issue being whether reciprocal justice is to be understood as its own species of justice or whether it is to be understood as a subspecies of rectificatory justice.<sup>52</sup> I want to suggest that reciprocity is best understood as not a variety of justice as all, but rather as a descriptive account of market exchanges (which in some cases will produce just outcomes) set amidst normative distributive proscriptions.

Aristotle's treatments of distributive justice and rectificatory justice are both normative in a way that his account of reciprocal justice is not. To achieve distributive justice, the distribution "must be according to merit" (1131a, 25-26) (though what is meant by merit may vary from instance to instance). Rectificatory justice, insofar as it concerns voluntary exchanges, is a matter of restoring equality, where equality is understood as one's

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<sup>51</sup> See Anne Ward's "Justice as Economics in Aristotle's *Nicomachean Ethics*" (2010).

<sup>52</sup> Gerhard Michael Ambrosi outlines some possible taxonomies in "Aristotle's geometrical model of distributive justice" (2007).

gains from a transaction being exactly offset by one's losses — here, "the just... consists in having an equal amount before and after the transaction" (1132b, 19-20). Relative to reciprocity, rectificatory justice can be thought of as allowing for what amounts to market corrections. Reciprocal transactions will usually result in exchanges that require no rectification. Anticipating Adam Smith's "invisible hand",<sup>53</sup> the account Aristotle gives in NE V.5 will usually produce just outcomes.<sup>54</sup> In cases where the outcomes are not just, rectificatory measures are required.

Unlike in Aristotle's accounts of rectificatory and distributive justice, reciprocal outcomes are not necessarily the result of agents actually attempting to produce just outcomes. Agents are able, somehow, to compare diverse goods, but agents do not, in Aristotle's account, perform such comparisons in order to bring about equality between what they gain and what they lose. Whereas the agent in Aristotle's account of distributive justice has an eye on distributing goods so that the distribution is proportionate to merit, and the agent in Aristotle's account of rectificatory justice has an eye on ensuring that losses and gains cancel out for all participants in a transaction, in the account of reciprocity, the normative value, equality, is a functional outcome of the relationship between the two agents, rather than a normative goal of either. Absent proportional equality, "the bargain is not equal, and does not hold" (1133a, 12).

This is not to say that normative concerns are completely absent from the account of reciprocity. Certainly an agent rejecting a trade because her losses would exceed her gains

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<sup>53</sup> A concept which is almost always applied much more broadly than Smith likely intended (1759 and 1776), the dangers of which are pointed out by Samuelson (1948). I do not mean to imply that Aristotle should be understood as advocating a *laissez faire* approach here, anymore than Smith should be.

<sup>54</sup> The case of fraud is one obvious example of possible departures from this norm, but I think a more pervasive concern is transactions entered into willingly by both parties which have effects on third parties — externalities, in the modern economic parlance.



might regard the rejected deal as unequal and therefore not virtuous (and we might even imagine that Aristotle means to describe an ideal market where the other party to such a deal, whose gains would exceed her losses, might also reject the exchange as immoral). But here, unlike in the accounts of distributive and rectificatory justice, the issue of equalizing losses and gains is secondary to the trading agents' assessments of the choice options, and the relationship between the assessments made by those agents. Equality is, ideally, a consequence of that comparative process, but it is not a goal of either party to the exchange.

The assessments themselves proceed via demand, and it is especially important to note just how little Aristotle does in terms of explaining what he means by that term. Of course, it is this lack of explanation that allows for the wide range of interpretations of NE V.5, and a reasonable objection to the account that I will shortly offer is that it is just another such interpretation, largely unencumbered by any textual evidence, excusing itself exactly because of that lack. Given what might be understood as the paucity of Aristotle's account, a lot of interpretations are at least possible. However, my position is that the paucity of Aristotle's account, the lack of detail regarding what he means by "demand" should not be regarded as a void which needs to be filled, and the account I offer makes no attempt to fill that void. Instead, I will argue that the explanation of demand is grossly underdeveloped because that is exactly what an account of choice requires of the psychological term performing that functional role.

In matters concerning distributive justice, agents should be concerned with establishing a properly proportionate distribution, relative to merit. In matters concerning rectificatory justice, agents should be concerned with correcting transactions, voluntary or involuntary, so that the outcomes are equal. In matters concerning reciprocity, the demands

of agents participating in exchanges should bring about proportionate returns,<sup>55</sup> and in the absence of such proportionate returns, exchanges should not happen. Aristotle, by my understanding, is quite properly silent, however, regarding how or why an agent should come to demand some good more than some other good. Aristotle's account of just exchange can now be considered in some detail.

### The Just Exchange Ratio

I will begin by making some assumptions about how the text of NE V.5 should be interpreted. These assumptions, I think, are quite fundamental (just in the sense that, for example, while one might dispute my interpretation of what the Ross translation gives as "demand", one certainly has to make some sort of assumption about what is meant by the term if one hopes to make any sense of the text). Once those assumptions about the text are in place, I will make some further inferences and arrive at what amounts to a preference theoretic account of the just exchange — something very similar to the EAC. I think these inferences are quite reasonable, given the assumptions; i.e., what I take to be the textual account of the just exchange certainly allows for a further, more developed, preference account to emerge.

### Assumptions About Aristotle's Account

Aristotle describes the just exchange by means of the just exchange ratio: "Now proportionate return is secured by cross-conjunction. Let A be a builder, B a shoemaker, C a house, D a shoe... the number of shoes exchanged for a house... must therefore correspond to the ratio of the builder to shoemaker" (1133a, 5-21). This just exchange ration can be

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<sup>55</sup> Again, there is considerable debate about what, exactly, Aristotle means by "proportionate return". I take "proportionate return" to mark exchanges which can be characterized as part of the contract curve in an Edgeworth Box (see below).

given as:  $A:B :: D:C$ , or, builder : shoemaker :: shoes: houses

Though, as with pretty much the entirety of NE V.5, how exactly the just exchange ratio should be represented is a matter of some dispute,<sup>56</sup> this arrangement (which conforms to L. Judson's 1997 interpretation of the ratio (p. 166)), allows for at least one half of the just exchange ratio to be understood in straightforward fashion. I will take the ratio of shoes to houses to be literally as described by Aristotle: the number of shoes exchanged for house (which amounts to the price of a house in shoes). While even this very straightforward interpretation is contested, that contest pales in comparison to the amount of dissension among scholars regarding the other half of the just exchange ratio, the ratio described by Aristotle as "the ratio of the builder to the shoemaker". It is this part of the just exchange ratio that serves as a sort of Rorschach test for philosophers and economists, whose suggestions range from taking Aristotle to be comparing the social status of the builder and shoemaker<sup>57</sup> to taking Aristotle to be comparing labor costs<sup>58</sup> to taking Aristotle to be comparing utilities.<sup>59</sup>

There is, however, a straightforward interpretation of the ratio of the builder to the shoemaker. That straightforward interpretation involves a number of assumptions that I will now make explicit. First, that the ratio of the builder to the shoemaker involves the ratio of some psychological aspect of the builder to some psychological aspect of the shoemaker, as opposed to being a ratio between, for example, social aspects of the parties to the exchange, i.e., that Aristotle's explanation of the just exchange amounts to a folk psychological account of voluntary exchange. "Demand" happens to evoke exactly the right folk psychological

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<sup>56</sup> See, for example, Thomas Heath's *Mathematics in Aristotle* (1949).

<sup>57</sup> See, for example, Robert Williams' *The Nicomachean Ethics of Aristotle* (1869).

<sup>58</sup> See, for example, Joseph Schumpeter's, *History of Economic Analysis* (1955).

<sup>59</sup> See, for example, Gerasimos Sodatos' "Aristotle's reciprocal justice in modern social science context" (2014).

capacity to allow for a rather succinct interpretation of the just exchange ratio. So, as Aristotle is quite clear that it is demand that holds everything together, I assume that the ratio of the builder to the shoemaker involves comparing the builder's demand to the demand of the shoemaker.

The answer to the question "the demand for what?" is provided by the other side of the just exchange ratio, which, in Aristotle's example, is a ratio of shoes to houses. Simply keeping the units in a proper relationship means the ratio of the builder to the shoemaker involves comparing the builder's demand for houses to the shoemaker's demand for shoes. And as, per Aristotle, demand can be represented by money, we have:

(i) shoes/house = ("builder's willingness to pay in drachmas"/house)/("shoemaker's willingness to pay in drachmas"/shoe)

And with that, Aristotle has defined both the just exchange and something remarkably similar to the Pareto efficient point of consumer equilibrium,<sup>60</sup> where:

(ii)  $MRS_{sh}^B = MRS_{sh}^S = \left| - \frac{P_h}{P_s} \right|$ , where  $MRS_{sh}^B$  is the builder's marginal rate of substitution (shoes for houses),  $MRS_{sh}^S$  is the shoemaker's marginal rate of substitution (shoes for houses), and  $P_h$  and  $P_s$  the prices of houses and shoes, respectively.

I say "similar" because, despite the inclusion of currency in his analysis, Aristotle is not attempting to describe a market equilibrium. The problem he is grappling with is quite simple: how can shoes and houses, so very different, be commensurable (because they must be commensurable in order to be exchanged,<sup>61</sup> and clearly these things are exchanged)? So, there are some important differences to note between (i) and (ii). First, (ii) is not related to

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<sup>60</sup> Jaffe (1974) seems to have been the first to suggest that Aristotle was describing something akin to an Edgeworth Box, though Spengler (1955) employs the notion of a contract curve in his analysis of the text.

<sup>61</sup> This point may be, and is, disputed (see, for example, Chan's account of choosing without comparing (2010), but Aristotle does not take this line.

any claims about justice; instead it describes a point at which the exchange is Pareto efficient — a point on the contract curve. Second, (ii) involves some assumptions about agents that clearly exceed anything Aristotle discusses — most notably that agents' preference sets are continuous. Those assumptions can be put aside without too much trouble, however. The  $MRS_{sh}^B$ , which is the rate at which the builder is willing to exchange shoes for houses, can be, instead, understood as the number of shoes which the builder is willing to exchange for a house just prior to the exchange in question<sup>62</sup> (the shoemaker's MRS can be subjected to the same sort of transformation).

Whereas the prices in (ii) are the market prices faced by all consumers, in (i) the builder's willingness to pay for a house serves as the price per house facing the shoemaker (i.e., as the builder is a producer of houses, one can assume that if the builder is willing to pay some amount for a house, then that amount the builder is willing to accept in exchange for a house must be at least as much), and, likewise, the shoemaker's willingness to pay for a shoe serves as the price of shoes faced by the builder.

Again, this sort of transformation is necessary because Aristotle is not attempting to describe or explain market operations. His focal point is something much more akin to a pure-exchange economy with two consumers, but is best understood as an attempt to determine how things as disparate as houses and shoes can be made equal, and in this account it is the builder and the shoemaker who have the capacity to do that. Money is included as part of that description simply as a numeraire, which, per Aristotle, can be understood to represent agent demand.<sup>63</sup>

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<sup>62</sup> "But we must not bring them into a figure of proportion when they have already exchanged... but when they still have their own goods" (1133b, 1-3).

(i), I think, is as far down the road toward a modern economic interpretation as one can plausibly push the textual just exchange ratio.<sup>64</sup> Nonetheless, this interpretation does allow for some further inferences, specifically regarding how one's demand for some good might be constituted.

### Inferences from Aristotle's Account

From Francis Edgeworth's box (1881), via Sir Arthur Bowley (1924), we have, at the point of consumer equilibrium:

(iii)  $MU_h^i/MU_s^i = (P_h/P_s)$ , for  $i = \text{builder, shoemaker}$ , and where  $MU_h^i$  is the marginal utility to "i" per change to amount of houses,  $MU_s^i$  the marginal utility to "i" per change to the amount of shoes, and  $P_h$  and  $P_s$  are the prices of houses and shoes respectively. And (iii) can be transformed, again to focus on a single point of exchange, for the builder, into:

(iv)  $(\text{builder's utility/house})/(\text{builder's utility/shoe}) = (\text{builder's willingness to pay/house})/(\text{shoemaker's willingness to pay/shoe})$ , which gives:

(iv,a)  $(\text{builder's willingness to pay in drachmas/house}) = (\text{shoemaker's willingness to pay in drachmas /shoe}) * (\text{builder's utility/house})/(\text{builder's utility/shoe})$

And, for the shoemaker:

(iv,b)  $(\text{shoemaker's willingness to pay in drachmas/shoe}) = (\text{builder's willingness to pay in drachmas/house}) * (\text{shoemaker's utility/shoe})/(\text{shoemaker's utility/house})$

Again, utility should be understood as just a mathematical artifact derived from the agent's preferences.

Of course, for every two-person exchange, there are two choice situations, one for

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<sup>63</sup> If one cares to, one can dispense with drachmas entirely and conduct this same sort of analysis using shoes as the numeraire.

<sup>64</sup> See Soldatos (2014) for an example of a textual interpretation being pushed much closer to a neoclassical economic account.

each party to the potential exchange. Say that shoemaker would be willing to pay 10 drachmas for a pair of shoes, and that the builder is willing to pay 1000 drachmas for a house. Whether or not that exchange rate is just (i.e., would result in both parties voluntarily agreeing to the exchange) will depend on whether each party regards the simplified possible world in which the exchange happens as at least as preferable as the simplified possible world in which the exchange does not happen.

So, at those "willingnesses to pay", for the shoemaker, from (iv,b):  
 $(10 \text{ drachmas/shoe}) = (1000 \text{ drachmas/house}) * (\text{shoemaker's utility/shoe}) / (\text{shoemaker's utility/house})$ , so,  $(\text{shoemaker's utility/house}) * (\text{shoes/shoemaker's utility}) = 100$   
 shoes/house, which gives:

$$(vi) \text{ shoemaker's utility/house} = 100 * \text{shoemaker's utility/shoe}$$

If the exchange rate is just, then the equality expressed in (vi) must hold. In EAC terms, for the shoemaker to voluntarily enter the exchange at that rate, the shoemaker must be at least indifferent between exchanging 100 shoes for a house, or keeping the shoes and not getting the house. That tells us a bit more about why the shoemaker is willing to enter into the exchange than Aristotle's account, and I think these extensions beyond Aristotle's textual account are warranted. Obviously, one's willingness to pay, expressed in currency, for some item, is a function not just of that item, but of the other item(s) one will have to forego acquiring should the currency actually be spent on the first item. Expressing demand in terms of utility (which, again, is just a mathematical derivation, so really, expressing demand in terms of preference) details that relationship somewhat more precisely than the text of NE V.5.

That said, both accounts, Aristotle's and the EAC, stop short of providing a complete answer to the question "how are such unlike things actually compared?". Both the

Aristotelian account and the EAC indicate that the comparison is a function of the agent, and both accounts hold that that function is psychological. Exactly how that psychological capacity manages to compare unlike options remains opaque.

Note that the just exchange ratio allows for precise pricing of a good in terms of the other good involved in the choice situation. Aristotle does not say "any good", but there is nothing prohibiting such a claim, especially as, again, "allows for" is *already* in the context of "in truth, impossible". Money is the practical scale, but it is not required (the agent's capacity to price an option in terms of some other option comes first, then money markets).

Demand amounts to a theoretical primitive in Aristotle's account above, and, understood in the fashion I recommend above, it is also clearly a psychological term as well. "Explanations come to an end somewhere" (Wittgenstein, 1958, p. 3), and Aristotle's explanation of choice can be understood as ending much in the same way as the EAC does.

While this might be regarded as an unsatisfactory place to leave the inquiry, it is unclear that any more satisfactory account of choice is available. Even if we allow that there is some abstract value, shared and borne by both oranges and apples that allows agents to choose between oranges and apples with respect to that shared value (call it *eating goodness*), we are no closer to explaining why one agent might evaluate an apple as better than an orange with respect to eating goodness while another does not (i.e., some agents evaluate oranges and apples differently with respect to eating goodness — how? why?).

Absent theoretical answers about how exactly agents might go about comparing diverse options, we can nonetheless impose some answers based on empirical observations, and a numeraire, money, helps immensely in this regard. Money "becomes in a sense an intermediate; for it measures all things"(1133a, 19), and money "makes goods commensurate" (1133b, 17). Commensurability, in turn, allows for equality, equality allows



for voluntary exchanges, and voluntary exchanges allow for association between agents. And, as association between agents is necessary in order to have money ("it exists not by nature but by law" (1133a, 32)), the whole circular relationship is held together by "demand", of which "money has become a sort of representation" (1133a, 31).

### **Conclusion**

The appeals of what I am calling the extreme approaches are apparent. At one extreme, revealed-preference theory attempts, in effect, to purge empirically suspect internal mental states from the account of choice. At the other, value accounts attempt to provide a more satisfactory account of how agents come to have preferences between options. While at cross purposes, the motivations driving these two sort of approaches are quite understandable.

Nonetheless, I have attempted to show that such approaches should be regarded with suspicion. If revealed-preference theorists really do mean to commit to explaining choice without reference to agent mental states, then their economic practices need to be much, much more limited than they currently are. Value approaches, on the other hand, may very well succeed insofar as they might accurately describe how some particular agent(s) think about some particular choices, but I hold that there is no reason to expand the number of assumptions regarding unobservable things beyond those which are absolutely necessary, and that value notions are not absolutely necessary for a minimal account of choice.

Aristotle's account of choice, given in his account of reciprocal justice, is presented as a sort of golden mean between those two suspect approaches. Internal mental states of the choosing agents are included in this account, but the description of those mental states is, appropriately, minimal. In Chapter 3, I detail how even such a minimal approach as

Aristotle's or the EAC, despite the paucity of assumptions regarding how, exactly, choices are made, can still be a useful in regards to acquiring a detailed understanding of choices.

## CHAPTER 3

### THE ECONOMIC ACCOUNT OF CHOICE

#### **Introduction**

The EAC is meant to be an economic account of choosing, with a particular focus on what I take to be the necessary folk psychological components of such an account. In this chapter, I will focus mostly on the assumption of representation and the assumption of subjective comparability. These two assumptions describe, in folk psychological terms, how agents go about reaching a deliberative conclusion regarding what to choose. Further assumptions (such as the assumption of transitivity, but, in general, any further claim describing agential choice) may describe how the agent's preferences must look, both if we are to regard the agent as rational and if we wish the theoretical descriptions to allow for various mathematical applications.<sup>65</sup>

Though the folk psychological theoretical terms employed in the EAC are defined by their roles within the theory, those terms are also meant to refer to some conscious deliberative process which agents are actually capable of performing. Agents are held to be capable of representing choice outcomes and of preferring between any two such representations. As these processes cannot be directly observed, it is difficult to establish with certainty exactly what agents are or are not capable of, and disagreements in this area often involve intuitive appeals. This focus on what does or does not make intuitive sense is

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<sup>65</sup> Consider, for example, the degree to which consumer theory's axiom of continuity facilitates the construction of mathematical models.

both unavoidable and, given the theoretical level of description, appropriate. It is important, however, to keep this focus as tight as possible. The intent here is not to provide a richly textured or even a particularly resonant folk psychological account. The intent is to make the theory's folk psychological assumptions explicit without making any unnecessary folk psychological commitments. The folk psychology of economic theory does not, for example, necessarily involve mental states such as "loving" or "fearing". Agents might certainly love or fear apples, and those states might certainly affect an agent's preference ranking of an apple in some choice situation. But the only mental states posited by the EAC are "preferring" and "representing". Fears and loves might certainly factor into an agent's preferences, but these mental states are not, per the EAC, necessary theoretical concepts.

I take it that the requirement facing any theory of choice is that it present a procedure which is in all cases *possible* for an agent to follow, and which if followed will allow an agent to successfully navigate any choice problem that agent might encounter (where success is understood as being able to rank any and all options). What matters is not whether the agent actually does choose in the way described, what matters is that the agent has the capacity to so choose.<sup>66</sup> The question is not "how do agents actually choose all, most, or even some of the time?". It is "how is it possible for any rational agent facing any choice situation to actually choose?". In this chapter, I will show how the EAC answers that question by relying on two particular folk psychological conceptions — representations of outcomes, and preferences between such representations, and show how other folk psychological conceptions, especially value notions, can be related to the notion of

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<sup>66</sup> A reasonable question is "how are we to determine whether choosing agents have this capacity?". This question is about the internal subjective experience of choosing agents and is largely a matter of intuition. While it is not necessary for choosing agents to intuit that they actually do choose in the manner described by the EAC, I think choosing agents intuiting that choosing in such a manner is at least possible is a reasonable requirement. The presentation of the EAC given here is at least in part an argument in favor of regarding the possibility of so choosing as intuitively plausible.

preference. I will also argue that preference can be sensibly understood absent reference to any other mental state such as "valuing" whatsoever (other than the mental state of believing things about the choice outcomes). Preference, in other words, is meant to function as an arbiter simpliciter in the EAC, and I will conclude the chapter by considering and replying to some objections to preference, or anything, serving in that theoretical capacity.

### **Assumptions and Idealizations**

The EAC answers the question "how is it possible for any rational agent in any choice situation to choose?" via a series of axiomatic claims. It is usual to regard such axiomatic claims as some sort of abstraction. J.S. Mill, for example, regarded economics in part as an attempt to separate what can be called mere economic tendencies from the sum total of all the agent's tendencies. For Mill, economics "is concerned with [the agent] solely as a being who desires to possess wealth... It makes entire abstraction of every other human passion or motive..." (1844, 321). Mill's definition of economics involves, in part, first constraining the field of economic inquiry to decisions involving mere market goods, and then abstracting away from the effects of agent preferences for other sorts of goods. Since Mill, the field of economic inquiry has broadened considerably, and this broadening should, I argue, be understood as the result of shifting the economic abstraction from the agent to the choice options, or, put another way, as a result of shifting the abstraction from the theory to the theoretical models. For Mill, *homo economicus* was an idealization of a rational agent stripped of noneconomic tendencies, i.e., any tendency to weigh factors other than wealth, such as family, honor, etc. Choice situations which might involve options composed in large part of such nonwealth factors were therefore simply not suitable subjects for economic inquiry. The modern economic view is that the economic conception of choice can be applied to any choice one might care to imagine, though, importantly, in practice it

may be difficult for the theoretician to model the choice options actually considered by the agent accurately. Say, for example, that an agent faces a choice between purchasing an orange from an orange vendor or an apple from an apple vendor, and that the choice is modelled as a choice between an apple and an orange. Say also that the agent facing this choice situation both likes apples more than oranges in general but absolutely hates doing business with the apple vendor. For Mill, the model "apple or orange" is accurate as apples and oranges are the relevant mere market goods the agent must choose between. The agent might consider other, noneconomic factors and might end up choosing an orange based on such noneconomic factors. In such a case, Mill's economic abstraction, *homo economicus*, has been drowned out by the actual agent's noneconomic tendencies. Per the EAC, it is the goods "apple" and "orange" that are abstractions; the agent is regarded as capable of having preferences over goods that are not mere market goods, such as "having to buy an apple from the despised apple vendor", and the modelled goods "apple" and "orange" should be understood as idealizations of the actual options being considered by the agent.

There is still a temptation, however, to regard the axiomatic description of agents provided by utility theory as somewhat idealized, and to regard the epistemological justification for those axioms as somewhat murky; Mill's conception of *homo economicus* as an abstraction from actual, practical choosing agents lingers. Sometimes, as in the case of revealed-preference theory, attempts are made to completely sever choice theory from any concern about the actual capacities of agents. I, in contrast, will argue that the epistemological justification for the assumptions employed in the EAC is just that those assumptions (which, again, are to be understood as claims about agent capacities and not claims about how agents actually do choose), are true.

"True" in this context, however, needs a small amount of parsing. In regards to the

assumptions of representation and subjective comparability, by "true" I mean just that agents are able to establish one of three preference relationships between any two objects of choice they might consider. I hold that rational agents always possess the capacities described by the assumptions of representation and comparative subjectivity. These capacities are expressed as choices per the assumption of motivation. These three axioms are meant to be true descriptions of agent capacities: Facing any choice situation, a rational agent can represent actual outcomes as choice options, can prefer among those options, and then can intend to choose an actual outcome because of a preference for one option rather than another.

To be clear, I think instances of agents actually practically reasoning in the manner described by these assumptions are rare. When facing a choice situation between an apple and an orange, I do not, usually, consciously represent the apple one way or another. Instead, I just end up conceiving of the apple however I end up conceiving of it. I clearly do, however, have the capacity to make conscious adjustments to that conception (I might, for example, go so far as to check the average number of calories provided by an apple and by an orange, and then include that information in my mental representations of the apple and orange). And, clearly, any time a choice situation is of sufficient import to merit an agent listing the pros and cons that might be associated with the outcomes on offer, said agent is consciously constructing a representation of the actual outcome. Likewise, I would hazard that agents likely hardly ever actually experience a deliberative conclusion as preferring, where preferring is understood as per the EAC — wanting one thing at the cost of another. Again, however, agents clearly can so reason (and, again, choice situations which inspire significant conscious reflection are most likely, I think, to be the sorts of situations where the agent actually concludes something along the lines of "all things considered, I will take option A and give up option B").

In regards to the assumption of transitivity, by "true" I mean something other than "agents possess the capacity to order their preferences so that those preferences are transitive". Instead, I mean that the agent's preference rankings must conform to the assumption of transitivity if those preferences are to be regarded as rational. Failures of transitivity are, in some sense, observable. Though whether such failures indicate that the assumption of transitivity is not always true of agential preference sets, or indicate that the assumption of subjective completeness fails, or just indicate that the agent represented the choice outcomes in a different manner (in error or otherwise) than the observer is unclear. My intent here is to provide and defend a trimodal account of choice; I argue that any rational agent faced with any two choice outcomes, say A or B, has the capacity to choose by determining whether she prefers her representation of A to her representation of B, the representation of B to that of A, or is indifferent between the two options. Concerns arising from transitivity will be addressed insofar as those concerns plausibly relate to the assumption of subjective comparability.<sup>67</sup>

### **Preference and Value in the EAC: A preliminary account**

The assumption of comparability hinges on the notion of preference, and preference, per the EAC, follows Daniel Hausman's usage, where preference is understood as a "total comparative subjective evaluation" (2012, p. 34). I will examine the notion of preference in the context of the EAC in some detail below. Here, however, I want to note that I am going to take the position that preference can be considered as close to the ultimate explanation of choice as we can expect to get. That position is not meant to mark a rejection of any particular endogenous conception of preference formation that economists might adopt, such as institutionalist accounts, nor is it meant to rule out any sort of exogenous account,

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<sup>67</sup> See Chapter 4.



such as genetic dispositions to prefer in certain ways. Rather, my position is that no particular endogenous account of preference formation is required in the fundamental theoretical account, and that no particular exogenous account should be regarded as necessary either. What is necessary to account for choice is just the notion of preference, and preference is therefore presented as the fundamental functional mental state in the EAC. I will explicitly argue that total preferences over bundles of goods may be comprised of subtotal preferences over the component goods which comprise the bundles, and that any choice option may be understood as a bundle of goods. Value is a useful notion, both for the choice theorist and for the choosing agent, but I will argue that notions of value can be understood as derived from the more fundamental theoretical notion of preference, and, strictly speaking, that value notions are not a necessary part of the EAC.

Mark Schroeder notes that, while "[i]t is hard to specify in some general way exactly what counts" as the appropriate subject of a theory of value, claims like "A is better than B" clearly involve some sort of value notion (2016), and it is this sort of value notion that will be of concern here. Ruth Chang defines *value* in this context as "any consideration with respect to which a meaningful evaluative comparison can be made" (2002, p. 3), and holds that "[e]very comparison must proceed in terms of value". So, for example, "fleeing at the first sign of trouble" might be regarded as worse, with respect to the value notion of honor, than "not fleeing at the first sign of trouble". It is this conception of value that the EAC is set against in what follows.

Such "with respect to some value measure" accounts of choosing can be further classified as either value monist (where there is some ultimate value to which all other values are subordinated, with respect to which all choice options can be assessed) or value pluralist (where there is no such ultimate value). In contrast, the EAC offers what amounts to an

avalued approach to choice. Such an approach avoids incomparabilist objections arising from concerns regarding qualitatively different values in much the same way that monist approaches do (i.e., by not offering a theoretical description in which such problems can arise). The distinction between the two approaches is, however, significant, as will become apparent below when I address philosophical objections against the possibility of choosing without respect to some particular value. Here, I simply want to stress that, per the EAC, agents ultimately choose on the basis of what they prefer, not on the basis of what is better with respect to some value. While complex preferences can be further explained in terms of the subtotal or component preferences contributing to the total comparative subjective evaluation, and while I think agents do use notions of value in such evaluations, preferences can ultimately be explained in terms of other preferences. This approach, therefore, marks a significant departure from both value theory and from the manner in which philosophers usually think about choices. However, as the EAC allows for a functional role for value as a derived theoretical concept, though it denies that such a role is necessary, it does not, in and of itself, represent a challenge to employing value notions in explanations of choice.

I will proceed by examining the assumption of representation and the assumption of subjective comparability more closely. These two assumptions are necessary to explain how agents reason their way through choice situations. The assumption of subjective comparability is the crux of the theory, and the assumption of representation formalizes the theory's commitment to describing choice as a subjective process explicitly involving agential mental states and mental representations. With those assumptions in place, I will then detail how notions of value and preference might be reconciled given this theoretical account of choice. Straightforward objections to the assumption of representation and the assumption of subjective comparability will be addressed in turn.

## **The Economic Account of Choice**

### The Assumption of Representation

The EAC assumes that agents are able to form beliefs "about properties and consequences of alternative actions" (Hausman, 2012, p. 37). This is the assumption of representation. While the assumption of representation is not usually made explicit, I give it as the EAC's first premise.

Assumption of representation: Any actual choice outcome,  $X_i$ , can be represented by the agent by some simplified possible world,  $Y_i^j$ , where  $\mathbf{Y}$  is the set of simplified possible worlds conceivable by the agent, and where  $\mathbf{X}$  is the set of possible choice outcomes.

Of course, simplified possible worlds are in no way observable or quantifiable, and choices are usually modeled and discussed, by philosophers and economists alike, as being between actual goods or actual outcomes. The extent to which models of some particular choice situation will accurately reflect some agent's actual conception of that situation will vary. But the main point here is that if an agent is presented with a choice between some particular apple and some particular orange, but, for whatever reason, associates eating apples with feelings of shame, the actual choice situation faced by the agent is "getting to eat this particular apple and experiencing feelings of shame" or "getting to eat this particular orange". That the agent's association of shame with apple eating is unobservable, unforeseeable, and arguably nonsensical, is of no consequence. The relevant description of the choice problem in regards to explaining choice is determined entirely by the choosing agent.

As discussed in Chapter 2, revealed-preference theorists reject this approach completely in favor of an approach that attempts to purge notions of mental states from the theoretical account of choice. However, even choice theorists who do allow that mental

states serve some functional role in the process of choosing, and that such states, therefore, serve some explanatory role in theories of choice as well, tend, as much as possible, to discuss choices in terms of objective outcomes (the things the agents actually would get upon choosing them) rather than simplified possible worlds (the things the agents imagine they would get upon choosing them). The point here is not just that agents might be mistaken (the things they imagine may not accurately represent the things in the world), but that there are often several distinct ways that some actual good might be mentally represented by an agent, where each distinct representation is accurate, though, perhaps, more or less precise. That is, there is a great deal of flexibility in terms of how agents might represent any particular actual outcome as a choice option.<sup>68</sup>

### The Assumption of Subjective Comparability

In order to account for a choice between any two simplified possible worlds, the most straightforward assumption is that agents choose by establishing one of three comparative relationships between the two simplified possible worlds. I call this trimodal comparison. There are a number of ways to describe these three comparative relationships. As discussed in Chapter 1, one might use some version of what Ruth Chang calls the *trichotomy thesis* (Chang 2002, p. 2). Given choice options  $X_1$  and  $X_2$ , where  $X_1$  and  $X_2$  are consumption options within the consumption set  $\mathbf{X}$ :

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<sup>68</sup> Cognitive biases such as framing and anchoring effects are pretty clear illustrations of this sort of flexibility. For example, an agent presented with a choice between certainly saving the lives of 200 out of 600 people, or a 1/3 probability of saving all 600 and 2/3 chance of saving no one, might prefer the sure thing. But, that same agent, if presented with a choice between certainly allowing 400 out of 600 people to die, or a 1/3 probability that no one will die and a 2/3 probability that all 600 will die, might prefer to take the gamble. The problem, of course, is that the two choice situations are equivalent, yet the agents preferences appear to flip from one to another. The answer to this problem suggested here is simply that the different, but equivalent, framings of the choice situation result in the agent considering different choice options, even though the outcomes remain the same. In the first situation, the agent perhaps imagines the options as involving numbers of live people, whereas in the second the agent might imagine the options as involving numbers of dead ones.

$X_1$  is better than  $X_2$ , or

$X_2$  is better than  $X_1$ , or

$X_1$  and  $X_2$  are equally good

Or one might, instead, interpret the usual economic axiom of completeness as the EAC's assumption of comparability:

Assumption of subjective comparability: for *all*  $X_i$  and  $X_j$  in the consumption set  $\mathbf{X}$ , there are some simplified possible worlds possibly represented by the agent  $Y_i^k$  and  $Y_j^l$  in  $\mathbf{Y}$ , such that either  $Y_i^k \succcurlyeq Y_j^l$  or  $Y_j^l \succcurlyeq Y_i^k$

The use of "or" in the assumption is inclusive and any comparison between two options can be understood as a conjunction of two weak preference relationships, for example,  $(Y_1^1 \succcurlyeq Y_2^1) \& \sim(Y_2^1 \succcurlyeq Y_1^1)$ , which allows for descriptions in terms of strict preference, for example,  $Y_1^1 \succ Y_2^1$ . And, as the three possible preference relationships seem to align with the three relationships described in the trichotomy thesis, it is tempting to regard the assumption of subjective comparability as a formalization of the trichotomy thesis (or, perhaps, to regard the trichotomy thesis as a more colloquial version of the assumption of subjective comparability). The trichotomy thesis focuses on the choice outcomes, whereas the assumption of subjective comparability focuses on the choosing agent's capacity to assess those outcomes, as represented by the choice options the agent actually considers. These two conceptions of choice might be thought of as mirror images of one another.

The trichotomy thesis has choice options as "better", "worse", or "equally good", but there must be some agent who so evaluates the options. The assumption of subjective comparability has agents preferring one option to another, but one might further assume (though, I will argue that this assumption is not necessary) that agents prefer the way they do because of some reason, and that the reason has to do with whether one option is better,

worse, or equally good as the other. However, regarding either description as a version of the other overlooks significant differences between them.

In contrast to notions of "better" or "worse", the theoretical primitive that the assumption of subjective comparability relies on is "preference". According to the EAC, an agent chooses  $X_1$  over  $X_2$  because the agent preferred  $Y_1^1$  to  $Y_2^1$ . The trichotomy thesis' ultimate explanation is that  $X_1$  is better than  $X_2$ . Again, it seems that it is a straightforward matter to show that either description can be understood as saying much the same thing as the other:  $Y_1^1$  is preferred to  $Y_2^1$  because  $X_1$  is better than  $X_2$ . But the transformation is not straightforward. Note that the assumption of comparability is transformed so that value is explicitly identified as the cause of preference (i.e., the theoretical primitive is changed), but the transformation of the trichotomy thesis simply adds preference as a consequence (i.e., the theoretical primitive of the trichotomy thesis does not change). Taking preference, not just as the methodological starting point for economic models, but as the theoretical foundation for explanations of choice, greatly simplifies the concept of trimodal comparisons.

### **Preference and Value in the EAC: Comparison Simpliciter**

Again, "explanations come to an end somewhere" (Wittgenstein, 1958, p. 3), and I hold that that end should here be understood as the subjective mental state of preferring one option to another, as opposed to the subjective mental state of regarding one outcome or option as more valuable, with respect to some standard, than another. To be clear, I do think that it can be sensibly said of choosing agents that they value things and that notions of "better" and "worse" quite often actually do factor in agential choices. That said, value is simply not necessary for the theoretical description. The two notions, preference and value, are, I think, quite obviously closely related. But, per the EAC, agents are, ultimately, able to

determine what they value because they are familiar with what they prefer, as opposed to covering value accounts where preferences are necessarily a result of comparisons with respect to some value measure. If I, for example, prefer a potato chip to a cherry, the covering value explanation of my choice might be that I rank the chip higher with respect to the covering value of eating satisfaction than I rank the cherry with respect to that same covering value. And covering value accounts allow for the covering value to be understood as composed of contributory values (Chang 2002, p. 5). So, comparing a potato chip to a cherry might involve considering how these foods measure with respect to values such as "sweetness" and "savory-ness", which contribute to the value of eating satisfaction. So, in this covering value approach, my choice is explained by my assessment of the chip as better with respect to eating satisfaction than the cherry, and that assessment can be further explained by my assessing savory-ness as making a greater contribution to the covering value of eating satisfaction than the contribution made by sweetness.

Conversely, per the EAC, my preference for the potato chip is explained by my wanting whatever I imagine the chip to be *rather than* my conception of the cherry. That preference might be further explained by subpreferences which comprise part of my total subjective comparative evaluation. Subpreferences are just preferences over the features that I imagine the potato chip and the cherry to have. So, in the EAC's explanation, comparing a potato chip to a cherry might further involve considering how sweet and how savory each of those foods are when determining which of the two foods I prefer. Now, if I consistently prefer options that are savory to options which are sweet, it is perfectly reasonable to describe me as valuing certain features in my food more than other features. That is, it really does begin to look like I am assessing options with respect to values when I make my choices, and I probably actually am. After years of making choices about food, I am now

well aware that I prefer things that score highly with respect to savory-ness to things that do not. My claim, however, is that this sort of value structure should be understood as emerging from my preferences. Conceptions of values such as eating satisfaction, sweetness, and savory-ness emerge from my experiences of consuming various sort of foods, and preferring certain sorts foods, with certain sorts of features, to other sorts of foods with other sorts of features.

I also hold that even absent the notions of sweetness and savory-ness, or even eating satisfaction, I am still quite able to prefer the chip option to the cherry option. That is, I do not necessarily prefer the chip option to the cherry option *because* I find savory things to be better than sweet things. Though my choice of the potato chip can certainly be sensibly and helpfully explained in value terms, the capacity to prefer does not depend on the capacity to value (by which I just mean the process of assessing a choice option with respect to some value measure). Admittedly, in most scenarios, choice can accurately be explained as value driven. Once I become aware of the common features instantiated by the particular options I tend to prefer, I am likely to use this knowledge to navigate subsequent choices — I will value those types of features. It is likely that, as an agent who has made countless choices regarding what to eat, I am quite aware that in any given choice situation involving foodstuffs that I will find the more savory option to be the better one, so my choosing process actually does involve notions of value. And, in many cases, it seems likely to be less costly for an agent to deploy a general value judgment, once the particular value notions involved have been established, rather than to compare the actual particulars of the choice options on offer. I do not, usually, choose between *this* cherry, and *that* chip, but, rather, cherry or chip, a choice which can be further abstracted to sweet or savory. But here it is important to recall that the assumption of comparability makes no claims about how I, or



any agent, actually chooses in any given choice situation. It is a claim about agential capacity, and the point here is that I have the capacity to choose the chip absent any sort of value notion whatsoever.<sup>69</sup> However prevalent and useful in an agential reasoning, value notions are not the theoretical primitive of choice.

Note, also, that it is not necessary that the particular value of savory-ness be among the values I consider when deciding whether I would rather have a potato chip or a cherry. I might instead prefer chips to cherries because I prefer crunchiness to juiciness. There are innumerable values that can be derived from any given choice option. Some of them are common and well established, like sweetness or savory-ness, others might not yet be named.<sup>70</sup>

The video media subscription service Netflix provides a good example of how messy the process of describing the value structure of a choice option actually is. I rank the films I watch, and Netflix uses those rankings to recommend other films, based on the common features, as defined by Netflix, which appear in the films I like. The idea is that if I rate a horror film highly, the rating will, in part, be interpreted as an indication that I value "horrorifying-ness" as a feature in film. Netflix describes my film choices in terms of features common across choice options, i.e., values. But this process can only be successful if the values used by Netflix to explain my rankings match the features of films that actually number among the things that I consider when making my choices (i.e., if the values derived by Netflix from the examination of my rankings match the values I derive from examining my rankings — here Netflix is acting as the choice theorist attempting to model my behavior). And the values Netflix uses to describe choice options are obviously not precisely

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<sup>69</sup> Examples of this capacity abound, such as an infant exhibiting a clear and indisputable preference for toast at the cost of carrots (concerns about rationality aside).

<sup>70</sup> See Chang, 2002, p. 89, for a discussion of "nameless" values.

capturing the actual choice process. For example, if I rate *Basic* (Medavoy, 2003) highly, Netflix likely explains my choice in terms of values such as "John Travolta", and "extreme plot twists", and will then recommend movies that star John Travolta, and/or that have extreme plot twists more highly. However, I do not particularly value either of those features in a film. Instead, my preference ranking of *Basic* can be more accurately explained by the fact that it rains a lot in that movie, and I value "lots of rainy scenes".<sup>71</sup>

Obviously, identifying the values agents use to assess choice situations is a crucial step in terms of producing accurate models. And, as the Netflix example shows, getting those values right is a difficult process. However, getting the values right is a modeling problem, not a theoretical one. What it is about a choice option that matters to some agent, whether mattering amounts to being valued or being preferred, is an empirical question. Not knowing which particular features of choice options that an agent actually cares about in no way threatens our theoretical understanding of how the agent chooses between those options. The agent prefers one to the other, or does not and is, instead, indifferent between them. That theoretical understanding and its relationship to the notion of value can now be elaborated in some detail.

All of the features I consider when assessing a choice situation contribute to what Hausman calls my "total subjection comparative evaluation" (Hausman, 2012, p. 34), which is just my preference between the bundles of features included in the simplified possible worlds being considered. Contributory features can be understood in terms of values or agential preferences. That is, I prefer *Basic* to *The Princess Bride* (Scheinman, 1987), at least in part, because I prefer more rainy scenes to fewer rainy scenes. But, once again, I hold that it

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<sup>71</sup> Anecdotal evidence: I knew I preferred *Basic* to any number of better films prior to understanding why (i.e., preference came first, then value). In fact, *Basic* is so obviously a rather bad movie that my high ranking of it was sufficiently puzzling that I actually spent the time to figure out how my preference could be explained. And, identifying "lots of rainy scenes" as a value has actually helped in subsequent choice situations.

is possible for me to prefer *Basic* to *The Princess Bride* without being able to explain precisely why. The choice theorist can, like Netflix, make assumptions regarding which features or values are considered to be relevant by the agent and are therefore included in the total subjective comparative evaluation. However, these assumptions may be wildly inaccurate, or any such assumptions may be entirely extraneous — my actual reasoning process might not extend beyond, "I prefer *Basic* to *The Princess Bride*, full stop".<sup>72</sup> The first possibility, that assumptions about which features or values contribute might contribute to a given preference might be inaccurate, is, I think, widely appreciated. The second possibility, that such assumptions might be completely extraneous is, however, often dismissed.

Allusions to preference formation implying that values are necessarily prior to preference are pervasive in both the philosophical and economic literature. For example, while multiattribute utility theory describes choice situations as involving options which are bundles of features, multiattribute utility theorists still tend to assert that the preferences of agents for such bundles is determined by the agents' values.<sup>73</sup> Such an account does not go far enough to completely immunize the assumption of completeness from objections of incomparability arising out of value pluralist accounts of choice as it gives at least the appearance of regarding value notions as prior to preferences. Such accounts at least imply that an agent's capacity to value is necessarily prior to her ability to prefer. Consequently, if certain values are regarded as incomparable, then such values cannot lead to the formation of preferences, and so might result in choice options which cannot be compared.

The prevalence of value notions is, in this context, entirely understandable. Much

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<sup>72</sup> I think it likely, however, that even in such cases, it would be possible to test for the features that do matter (though the agent might not be aware of them).

<sup>73</sup> See, for example, Bruce Chapman's "Rational Choice and Categorical Reason" (2003), and Ralph L. Keeney and Howard Raiffa's, *Decisions with Multiple Objectives* (1993).

more often than not, a preference for one option over some other *is* likely caused by an agent's considerations of the values associated with the two options on offer. That is, the total comparative subjective evaluation involves subtotal assessments, and those assessments can often be understood as focusing on value notions. But this value-centric understanding can be, and I argue should be, replaced with a preference-centric one where the usual relationship between preference and value is reversed. In contrast to the usual approach to utility theory, which assumes that some exogenous process of value formation is necessary in order for the agent to form preferences, the EAC appeals to no such exogenous process.<sup>74</sup>

One can model the total comparative subjective evaluation as resulting in a utility score — a number indicating, via comparison to the scores of other options, where a simplified possible world falls in an agent's preference ranking. The agential process which gives rise to these rankings can be modeled as a utility function that yields the score. Subtotal considerations can be understood as arguments of the utility function. If, when assessing the simplified possible world in which she eats an apple, the agent considers both the apple's sweetness and crispness, the apple's utility score,  $U_{\text{apple}}$ , is a function of those two subtotal considerations,  $U_{\text{apple}}(\text{sweetness}, \text{crispness})$ .

If the choice is framed as between an apple and orange, the assumption of comparability yields an explanation of that choice where the agent either prefers the apple or the orange (where higher utility scores are modeled as preferred to lower scores,  $U_{\text{apple}} > U_{\text{orange}}$ ), the orange to the apple ( $U_{\text{orange}} > U_{\text{apple}}$ ), or is indifferent between them ( $U_{\text{orange}} = U_{\text{apple}}$ ). One is perfectly entitled to ask why the agent scores the options whichever way she does. Though, typically, economists will balk at attempting to answer such a

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<sup>74</sup> It should be noted that this assumption is steadily becoming less usual among economists, who increasingly seek to explicitly account for tastes. See Ignacio Palacios-Huerta's and Tano Santos' "A theory of markets, institutions, and endogenous preferences" for an example of this sort of inquiry.

question, this reluctance can be understood as stemming from the empirical challenges in confirming or disconfirming any answer. Whether some agent prefers apples to oranges is fairly easy to establish. Establishing exactly why is significantly more difficult. For example, one might wonder whether the agent prefers the apple to the orange because the agent prefers more sweetness to less, and she thinks apples are sweeter than oranges. One could find out by offering the agent marginally sweeter and sweeter oranges in exchange for the apple, but the practical difficulties to actually gathering the data seem enormous and, as "apple or orange" seems to be the salient level of description, it is not clear why anyone interested in modeling actual choices would want to pursue this line of inquiry. Oranges and apples seem to be good candidates to be modeled as fundamental choice options as the component features of the orange and apple cannot easily be traded independently of the fruit with which they are associated. It is, if not impossible, at least quite difficult to unbundle these sorts of goods.

Someone interested in modeling the limits of choice in theory, of course, will want to pursue just this line of inquiry, and the obvious tool with which to further explain the choice is still the assumption of subjective comparability. The explanation for how agents compare "orange, more sweet" to "orange, less sweet", for example, is that the agent prefers one to the other. And, in this case, it seems as if we really can explain taste no further (though I would argue that it seems this way simply because we do not typically break the notion of sweetness down into component features). If we did, however, the comparative mechanism involved in ranking those features would still be the assumption of subjective comparability. It is preference all the way down, and, when (if) the explanation comes to an end, it comes to rest on preference. In the EAC, value notions are idealized accounts of the features which agents tend to prefer.

## Concerns and Replies

Per the EAC, preferring one option to another means that the choosing agent would rather have one option than another, where the agent might believe any number of things about the choice options. Value notions can be accommodated by, but are not necessary to, the account. Absent value as a necessary part of the EAC, objections to comparability arising from the idea that certain sorts of values are just too qualitatively different to allow for comparisons fail to bite. There are, however, two concerns about understanding and employing the notion of preference in the manner the EAC does. First, there is the straightforward objection that preference simply cannot be understood in this fashion. Second, there is the concern that, if preference is understood as per the EAC, then the EAC is an unfalsifiable tautology that does not actually explain anything at all. These two concerns are related; answering concerns about the propriety of defining preferences as total subjective comparative evaluations in the manner I do below tends to lead to concerns about unfalsifiability. I will address these concerns in turn.

### Regarding Concerns About the EAC's Definition of "Preference"

Ruth Chang raises two objections to the notion of preference as defined in the EAC. She objects both to the possibility of "all things considered" (the "total" in Hausman's "total subjective comparative evaluation") serving any productive role in choice making, and to the possibility of preference (or anything else, for that matter) allowing for "a sensible notion of comparison simpliciter" (Chang, 2002, p. 4). Both of these objections involve rejecting the idea of choice options being assessed with respect to each other, rather than with respect to a value measure.

*"All things considered" comparisons*

Correctly noting that "the context of 'all things considered' shifts from comparison to comparison" (Chang 2002, p. 8), and that "all things considered" is, itself, "not a value", Chang argues "that it is only in virtue of the value for which ['all things considered' is a placeholder] that evaluative comparison can be made with respect to them" (2002, p. 8). Of course, the "total" in "total comparative subjective evaluation" is actually limited to those factors that the agent regards as relevant (which is just to say, limited to whatever the agent limits them to). Simplified partial worlds are, after all, simplified subjective representations of possible outcomes. But Chang holds that,

it makes no sense to say that one value makes a greater contribution to "all things considered" than another. Whether "efficiency" makes a greater contribution than "kindness" depends on what value "all things considered" stands in for. If it holds a place for "economic well-being", efficiency will make a greater contribution; if the value it stands for is "moral goodness" then kindness will. (Chang, 2002, p. 8)

This passage is an excellent example of the game of intuition tennis that is played between the trimodal comparabilist and those who object to that position. For Chang, in order for the agent to choose between, for example, reading to sick children for an hour or working as a corporate lawyer for an extra hour,<sup>75</sup> the agent must evaluate those two options with respect to a value. If the value is moral goodness, presumably reading will be the better option; if it is economic well-being, she will work. There is, however, another way to understand the choice.

The choice options have features, and these features can be idealized as values. But these values are, themselves, comparable. If the agent prefers moral goodness to economic

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<sup>75</sup> The importance of contextual details which are generally omitted in theoretical discussions such as this (though, as a practical matter such details cannot be escaped by the choosing agent) cannot be overstated. If, for example, one intends to use the proceeds accruing from an extra hour of work to help sick children, Chang's claims regarding both "kindness" and "efficiency" no longer have even their *prima facie* force.

well-being, she reads. If she prefers economic well-being to moral goodness, she works. Moral goodness and economic well-being can both be factored into the utility scores of both simplified possible worlds, giving,  $U_{\text{reading}}(\text{moral goodness, economic efficiency})$ , and  $U_{\text{working}}(\text{moral goodness, economic efficiency})$ . If one wants to consider efficiency and kindness, one can simply extend the model, yielding  $U_{\text{reading}}[\text{moral goodness}(\text{efficiency, kindness}), \text{economic well-being}(\text{efficiency, kindness})]$ , and  $U_{\text{working}}[\text{moral goodness}(\text{efficiency, kindness}), \text{economic well-being}(\text{efficiency, kindness})]$ . And it seems likely that efficiency makes a greater contribution than kindness to economic well-being, which, in turn, makes a greater contribution than moral goodness to  $U_{\text{working}}$ . But  $U_{\text{working}}$  and  $U_{\text{reading}}$  are not compared with respect to anything other than each other, all things (moral goodness, economic well-being, efficiency, and kindness) considered.

Again, it is also possible that some or all of these values are completely ignored by the agent and are simply not part of the total comparative subjective evaluation. Such values might be completely disregarded by an agent who really dislikes children, whose utility functions might best be represented by  $U_{\text{working}}(\text{exposure to children})$  and  $U_{\text{reading}}(\text{exposure to children})$ , and who therefore prefers working to reading. "All things considered" just means that the choosing agent determines which values are or are not relevant, and what Chang calls covering values are nothing more than heavily weighted value idealizations, i.e., features which weigh heavily in the agent's utility function.

All of the components included in an agent's total comparative subjective evaluation are comparable and the subject of preferences. As kindness is not, in the above example, obtainable unbundled, it need not be cross-compared with efficiency. But agents can certainly prefer a simplified possible world in which they read to children to a simplified possible world in which they read to children, but which involves slightly less kindness (an



account which applies just as well to simplified possible worlds in which the agent works instead). Any value or feature can be the subject of preference, and preference allows for a sensible notion of comparison simpliciter.

*Comparison simpliciter: preference as a theoretical primitive*

Chang's objection to this last claim is also highly instructive. Correctly characterizing the approach I am recommending as subjective, she holds that "subjectivists maintain that something is valuable if and only if it is desired. By extension, a subjectivist might maintain that one prefers one thing to another if and only if the one thing is better than the other thing" (Chang, 2002, p. 5). But there is absolutely no need to assume either of these logical equivalences in order to establish a theory of choice, and focusing on the value side of the proposed equivalences needlessly complicates the issue, as Chang goes on to demonstrate:

Since the preferences are simpliciter, so is betterness. But, preferences, if they are to constitute betterness, cannot be simpliciter. For betterness must be transitive, and, if, as subjectivists would have us believe, the relation between preferences and betterness is biconditional, preferences must be transitive. (Chang, 2002, p. 5)<sup>76</sup>

Again, some portion of the dispute is driven by the value theorist's insistence upon describing choices using value notions. To be clear, it is the value theorist, not, at least, this subjectivist, who "would have us believe" that what is better  $\equiv$  what is preferred. The position offered here is that, while that equivalency might be assumed, it is not necessary to do so in order to explain choice. And, indeed, it is often unhelpful and confusing to evoke the equivalency. However, before answering the objection to comparison simpliciter, I want to note that the objection is explicitly not against assumptions of trimodal comparability; it is against the possibility of trimodal comparability in conjunction with transitivity. Insofar as

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<sup>76</sup> If nothing else, this passage is a remarkably roundabout way of showing that subjectivists must commit to the assumption of transitivity, as almost all theories of choice, subjective or otherwise, explicitly make that commitment.

choice is explained by the EAC, that explanation is provided by the assumptions of representation and subjective comparability. Even if this objection runs, it is not clear that it presents a significant problem, as I think it is entirely possible that an agent's hypothetical preference rankings might be exposed as intransitive without that agent being practically exposed as subject to a money pump. Absent the practical possibility of that outcome, I am not sure how concerned we need be about intransitive preferences indicating irrationality on the part of the agent.

All that said, the objection, once the unnecessary focus on the notion of value is stripped away, is simply the claim, "preferences must be transitive" (a claim explicitly made in the EAC), combined with the claim that sometimes choices suggest intransitive preferences. This objection is significant as the response to it leads directly to a more serious objection to the EAC — that it is an unfalsifiable tautology — but it is important to note that the response employed by covering value theorists to the same problem (seemingly intransitive choices) leads to the exact same place, an account that appears unfalsifiable.

"Where will it all end?"

John Broome provides an illustration of the transitivity problem referenced by Chang (Broome, 1991, pp. 100-101). An agent might prefer a trip to Rome to mountaineering in the Alps, prefer staying at home to a trip to Rome, and yet *not* prefer staying at home to mountaineering. The agent's preferences appear to be intransitive. By Chang's covering value account, this appearance is misleading because each relationship must be understood with respect to some covering value which may vary from choice situation to choice situation. Transitivity can then be salvaged by noting that the choice between mountaineering and staying at home is made with respect to "honor". The agent does not want to be perceived, by others or by herself, as cowardly, and she believes this

would be a consequence of choosing to stay at home rather than climb in the Alps. But the choice between mountaineering and going to Rome is made with respect to "culture".

However, as Broome notes, the appearance of intransitivity can also be dispelled by noting that the simplified possible worlds conceived of by the agent are not entirely stable across the three choice situations (so, for example, the agent imagines the mountaineering trip differently when it is compared to staying at home than when it is compared to a trip to Rome). This line, holding that options under consideration are actually changing from choice situation to choice situation, is the reply afforded by the EAC.

These two different sorts of replies are an example of the difference between the assumption of subjective comparability and the trichotomy thesis discussed above. The trichotomy thesis fixes the options, so problems are addressed by making adjustments to the agential processes; the agent changes the value with respect to which the options are compared. The EAC fixes the agential processes, so adjustments are made to the options. In this latter approach, as described by Broome, in the choice between staying home and mountaineering, the simplified possible world in which the agent stays home involves the feature "perceived as cowardly", while in the choice between going to Rome and staying home, the simplified possible world in which the agent stays home does not include this feature. By noting the distinction between the simplified possible world in which the agent stays home and is perceived as a coward, and the simplified possible world in which the agent stays home and is not perceived as a coward, the agent's preferences can be understood as complete and transitive. The options are assessed with respect to each other, not with respect to any value at all.

An obvious concern about solving this sort of objection by noting distinctions between agent representations of a choice outcome depending on what it is being compared

to is, "where will it all end?" (Broome, 1991, p. 101). Responding to apparent failures of trimodal comparability by making adjustments to the choice options on offer leads to the critique that the assumption of comparability becomes unfalsifiable. This critique is, I think, misplaced. It might be a desirable criteria of a theory of choice that some or all of its assumptions be falsifiable, but, regardless of whether or not we might want them to be, the assumption of subjective comparability, conjoined with the assumption of representation, does not meet that Popperian standard. The assumption of subjective comparability can certainly be doubted, but it cannot be proven to be false. Any instance of choice can be explained as a result of trimodal comparison: It is just a matter of describing the simplified possible worlds so that the description accounts for the choice.<sup>77</sup>

Note that the unfalsifiable status of the assumption of subjective comparability is conferred by the assumption of representation. Absent the assumption of representation, the assumption of subjective comparability is either vacuous (not because it is a tautology but because there are no choice options to which it refers), or it must be reformulated as an objective interpretation of the axiom of completeness in which the actual outcomes on offer, rather than the agent's conception of those outcomes, serve as the choice options. How this latter interpretation accounts for agents possessing direct access to objective truths, especially in choice situations which involve intangibles such as honor or culture, strikes me as sufficiently problematic to put such objectivist approaches aside. So, in order to be sensible, the assumption of comparability must be subjective, and it is the flexibility of the assumption of representation, not the assumption of trimodal comparability itself, which

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<sup>77</sup> Again, it is not clear how the use of covering values is meant to evade concerns about unfalsifiability. Just as apparent instances of intransitivity of this sort can be dispelled by adjusting the options, they can also, as Chang shows, be dispelled by adjusting the covering value. It is not clear what is accomplished by constraining "the strategy of reindividuating the alternatives" (Chang, 2002, p. 5) by relativizing choice to a "common respect" when the "respect" is not actually common to all choice situations.

confers unfalsifiability upon the EAC. None of which means that the unfalsifiability objection should necessarily be dismissed. It does, however, suggest that the objection should be targeted at the assumption of representation instead of the assumption of subjective comparability. And, putting the objection to its proper target does, I think, raise some questions about its strength. Properly understood, the demand that the assumption of subjective comparability, conjoined with the assumption of representation, be falsifiable, means that it must be possible to show that the claim "it is possible for agents to conceive of any actual outcome as some simplified possible worlds" is false (where "simplified" indicates that the agent is representing (or misrepresenting) some features of the possible outcomes and not others). When one bears in mind that the agent's conception need not be in any way accurate, only that there be one, such a requirement seems excessive, even ridiculous. When one considers what the assumption of representation claims — that agents represent states of the world in their minds — this outcome is rather unsurprising.

Nonetheless, that the EAC is unfalsifiable might be taken as an indication that the theory is an empty tautology which amounts to simply defining choice as a matter of preference — that the EAC does not address the problem of incomparability at all because it does not tell us how agents, ultimately, come to prefer in hard choice situations. This latter claim is, as I note in Chapter 2, true. The approach to accounting for choice I am proposing takes preferences, along with mental representation of actual outcomes, as the theoretical primitive mental states or capacities. And, indeed, this leaves the question of how these preferences come into being unanswered. But the objection actually extends beyond hard choice situations to simple ones, and even if a value approach is adopted, the ultimate explanation that this objection seems to demand is not available.

The lack of controversy regarding choice situations involving mere market goods is

significant. Modern incomparabilist intuitions are split. For certain choice situations, namely choices between mere market goods, it is commonly allowed that the choice can be understood as a matter of trimodal comparison. Other, harder, choice situations are thought to preclude such an approach. This intuitional divide is generally explained by whether or not the values associated with the choice options are themselves comparable,<sup>78</sup> which amounts to whether options can be assessed with respect to a commonly shared value measure — a covering value. But, even in cases where the covering value might seem obvious, it is not clear how comparison actually proceeds. The adoption of a covering value approach makes the choice situation look far more comprehensible than it actually is. For example, consider a choice between an apple and an orange. Both fruits share a number of features: sweetness, texture, fragrance, etc. And, in this example, whatever I choose will be put toward the same purpose: I will eat it. So, the choice might be explained as a matter of which piece of fruit is better with respect to the covering value "eating satisfaction". But, just because it is possible (and easy) to detail the choice situation in value terms, such detail does not actually explain how the agent makes the choice between the apple and the orange, regardless of the amount of detail regarding the value structure underlying the agent's evaluation of the apple and the orange is provided. That some choice situation can easily be described in terms of a unifying covering value does not, in and of itself, mean that the description accounts for how the agent evaluates the options with respect to the covering value. Yes, both apples and oranges can be compared with respect to "eating satisfaction". How does an agent decide which is the better fruit with respect to eating satisfaction? Both are sweet, though the quality of the sweetness differs between them. Both have pleasing though very different textures. Both have pleasing though different aromas. Both combine

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<sup>78</sup> See, for example, Chapter 9 of Nagel's *Mortal Questions* (2012).

these various features so that the features complement one another, and the interplay of features works differently in the apple than in the orange. The agent will decide one is better than the other with respect to eating satisfaction, but how, exactly? The trichotomy thesis and covering value approach, in the end, can answer this question in no more detail than the EAC. The agent will somehow find one fruit to be better than the other with respect to some value, or the agent will somehow come to prefer one fruit to the other. One can be ever more precise. The value structure can be more intricately described and the covering value more exactly specified. Or, as recommended here, the options themselves can be considered in more detail and the agent's utility function be made correspondingly more complex. In either case, we get a more detailed account of the choice, which certainly enhances our understanding of the situation, but neither approach avoids bottoming out in some sort of brute claim. The agent prefers one (whether it is the apple or orange, or some component of the apple or orange) to the other, or one is better than the other with respect to some value.

### **Conclusion**

In conjunction with the assumption of representation, the assumption of subjective comparability solves exactly one problem: how do agents choose between two options? It does not offer predictions as to what they will choose or even offer to explain why they choose it, beyond the claim that they prefer it, which should be understood as the claim that they would rather have that option as opposed to having the other option on offer. Options are preferred with respect to having one rather than the other. Describing the regularities necessary for predictions and more satisfying explanations — the sorts of things that might be held to the falsifiable standard — is a matter of modeling specific choices, not theoretically accounting for choice in general. If the choice options are "arranged in the 'right' way in the

'right kind' of stable environment" (Cartwright, 1999, p. 138), a robust model of choice can be developed. But, the "right" regularities and the "right kind" of stable environment are not, themselves, theoretical assumptions. Rather, they "are a consequence of the repeated successful running of a socio-economic machine" (Cartwright, 1999, p. 138). The EAC offers a sparse explanatory foundation that, in the right circumstances and in conjunction with further assumptions, can give rise to comprehensive explanations of choice.



## CHAPTER 4

### RESOLVING THE SMALL IMPROVEMENT ARGUMENT<sup>79</sup>

#### Introduction

This chapter defends the EAC's assumption of trimodal comparability against a particular sort of objection, the small improvement argument (SIA), perhaps most famously presented by Ronald De Sousa as the problem of "The Fairly Virtuous Wife" (1974, p. 545).<sup>80</sup> The Fairly Virtuous Wife appears to be indifferent "between keeping her virtue for nothing and losing it in Cayucos for \$1,000" (1974, p. 545). The Fairly Virtuous Wife, however, also appears to be indifferent between keeping her virtue and losing it for \$1,500, which presents a problem for the EAC, and for trimodal comparabilists in general. For them "indifference, like preference, in terms of which it is defined, is a transitive relation" (De Sousa, 1974, p. 545), and the Wife's rankings are a case of preference-indifference intransitivity.<sup>81</sup> While it is a failure of the assumption of transitivity that brings the problem into focus, De Sousa holds that the options presented to the Fairly Virtuous Wife are actually incomparable. In general, philosophers have shared this interpretation of the choice problem. Joseph Raz, for example, refers to failures of transitivity as "the mark of

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<sup>79</sup> A version of this chapter appeared in the *Erasmus Journal for Philosophy and Economics* (volume 8, issue 1, p. 24-41), © author.

<sup>80</sup> The term "small improvement argument" is from Ruth Chang (2002).

<sup>81</sup> See Gustafsson and Espinoza's "Conflicting Reasons in the Small-Improvement Argument" (2010) for a detailed account of how preference-indifference intransitivity allows for money pump type problems to arise.

incommensurability" (1986a, 120).

The structure of the SIA suggests an inconsistency between any assumption of trimodal comparison and the assumption of transitivity. If the Wife's deliberative stances — by which I mean her attitudes about the two outcomes (absent any particular theoretical account of choice being applied to those attitudes) — are understood as preference rankings, then those rankings are intransitive and leave the Wife vulnerable to a money pump. The response to that apparent inconsistency between comparability and transitivity advanced in this chapter involves the claim that agents may consider an outcome in more or less detail depending on what that outcome is being compared to. I will argue that the objection to comparability illustrated by the SIA can be answered without abandoning a trimodal approach to explaining choice, provided that the approach also assumes that agents are able to resolve<sup>82</sup> choice options to finer or coarser grains — which is to say that the number of details considered when assessing a choice outcome and, importantly, the precision with which agents consider those details may vary.<sup>83</sup> I will also argue that the costs to agents of

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<sup>82</sup> This use of "resolution" is similar to the manner it is employed by Nien-He Hsieh in the 2005 paper, "Equality, Clumpiness, and Incomparability". Both Hsieh and I argue that the resolution at which options are compared will vary. However, there are significant differences between Hsieh's conception and the one I will be suggesting. For Hsieh, the variation in resolution occurs because the "covering considerations" with respect to which the options are assessed are themselves clumpy (Hsieh 2005, 181). For example, one grading scale might clump student papers into As, Bs, Cs, etc., while another, more fine-grained grading scale might clump papers in to As, A-minuses, Bs, etc. And Hsieh understands "comparison to be distinct from choice" (2005, 199). In contrast, I examine the role resolution might play in a utility theoretic explanation of choice, an explanation which does not necessarily involve the notion of covering considerations at all. In my account, resolution is a fundamental feature of how agents mentally represent choice options as opposed to a feature of certain types of covering considerations.

<sup>83</sup> This claim depends on the notion that there is a large degree of variability in terms of what an agent might believe about choice outcomes, i.e., it is a response that depends on making adjustments to the choice options which then account for apparent cases of preference-indifference intransitivity. As discussed in Chapter 3, John Broome is dubious of "refining the individuation of outcomes" in this fashion. He states that, "if this sort of individuation is always allowed, transitivity will truly be an empty condition" (1991, p. 101). However, while I do claim that the notion of resolution does eliminate the apparent inconsistency between the assumptions of comparability and transitivity illustrated by the SIA, I do not claim that all instances of intransitive preferences can be eliminated in this way. I do not, for example, dispute that perceptual thresholds can result in the sorts of intransitive preferences described by W.S. Quin in "The Puzzle of the Self-Torturer" (1990), and the notion of resolution as presented here does not leave transitivity as "an empty condition".

making comparisons will vary depending on the resolution at which the comparisons are made. For example, the representation of an outcome as "I receive a bag of oranges" is less finely resolved than the representation of an outcome as "I receive a bag containing 11 oranges"; generating that less finely resolved representation is less costly as I do not have to count the oranges.

I will explain the process of resolving in the context of the EAC, and will provide a comprehensive account both of the objection and my proposed solution below. This chapter is not meant to provide a *tout court* defense of comparability but, rather, a response to a very specific sort of objection particular to the SIA. And, as many examples of the SIA, like De Sousa's, conflate that specific sort of objection with various other objections to comparability, I first want to isolate the particular problem I mean to solve.

#### The Particular Problem Posed by the SIA

In examples such as De Sousa's, at least part of the reason for focusing the objection on the notion of comparability — rather than on the assumption of transitivity — is the idea that the two outcomes are "qualitatively different" (De Sousa 1974, p. 545). Sinnott-Armstrong illustrates preference-indifference intransitivity using choices between death and amounts of pain, and the problem is often illustrated via choice situations between various sorts of careers, such as the choice between becoming a lawyer or a clarinetist (Raz 1986a, p. 126). However, examples such as these, which involve such diverse outcomes, actually conflate two separate sorts of objections to the notion of comparability. The first sort of objection is simply that such diversity necessarily renders certain choice options incomparable with one another.<sup>84</sup> In De Sousa's presentation of the SIA, for example, the

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<sup>84</sup> Or, at least that such options cannot be compared trimodally. See Chang (2002) for an account of how the existence of such evaluatively different options might be compared using a tetramodal comparative approach.

force of this objection stems from the intuition that virtue simply cannot be priced in dollars. The second sort of objection, the sort particular to the SIA, stems from the intuition that the Wife's deliberative stances are plausible and reasonable. Here, I will be concerned with answering the second sort of objection rather than the first — this is for two reasons: (1) because the second objection applies to a much wider range of choice situations (among them are the sorts of choice situations routinely addressed by economists); (2) because it is this second sort of objection that actually arises from the structure of the SIA (whereas in the first sort of objection the structure of the SIA is just a consequence of the prior intuition — that some options are evaluatively different from one another and that such differences make trimodal comparisons impossible). Ruth Chang (2002) presents the SIA as a choice between tea and coffee, where the agent is supposed to be indifferent both between a cup of tea and a cup of coffee, and between a slightly improved cup of tea and the same cup of coffee. This example, which I will examine in some detail below, shows that the problem of preference-indifference intransitivity arises not just in choice situations that involve hard choices between things like virtue and money (or death and pain), but even in the simplest situations involving choices between what Chang calls "mere market goods" (2002, p. 96).

Again, one might object that it is impossible to compare things when the options are qualitatively different. One might take the position that, in certain hard cases, the assumption of comparability is *prima facie* (or for any number of reasons<sup>85</sup>) false, and that things like virtue cannot be compared to things like money. However, one need not begin with the intuition that virtue and money are somehow inherently incomparable to note that the Wife's

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<sup>85</sup> For example, one might be convinced by an argument from the diversity of values — that "some items are 'so different' that there is no 'common basis' on which a comparison can proceed" (Chang, 2002, p. 72). Or one might be convinced by the claim that certain options are constitutively incomparable, where the constitutive features of certain options prevent those options from being compared in certain cases (Raz, 1986b). Again, however, replies to these objections are available (see Chang, 2002).

three deliberative stances are, taken together, intuitively sensible. Even the trimodal comparabilist that is absolutely convinced that there is no such thing as qualitatively different options, or that such qualitative differences simply have no effect on an agent's ability to compare, still faces the problem illustrated by the SIA if that same comparabilist nonetheless intuits that deliberative stances like the Virtuous Wife's are plausible and reasonable.

### A Trimodal Theory of Choice

That the force of the SIA is intuitive is significant. The EAC can be understood as what Alexander Rosenberg describes as "folk psychology formalized" (2008, p. 80). It assumes that agents not only choose, but that choices are motivated by internal considerations. Such an account is vulnerable to objections that appeal to intuitions as the process of formalization needs to account for intuitive judgments about the nature of agents' mental states. If it seems at least plausible that the Fairly Virtuous Wife has the deliberative stances that she does and, at the same time, that she is rational, then the SIA presents a problem for any trimodal theory of choice, such as the EAC, which also assumes that a rational agent's preference rankings must be transitive.

Understood in the context of a folk psychological account of choice, the assumption of comparability involves claims about agents' capacities. And, per the EAC, agents' choices are entirely motivated by their preferences, where "preference" is understood as an agent's all-inclusive, subjective judgement about which of two options she wishes to consume. So, I will defend a trichotomy of choice where the agent chooses by either preferring option A to option B, or preferring option B to option A, or being indifferent between them (where indifference can be understood as the agent being willing to say "you choose", i.e., the agent is willing to accept either option on offer). So, the Fairly Virtuous Wife's preferences can be given as follows:

virtue  $\approx$  \$1000

virtue  $\approx$  \$1500

\$1500  $>$  \$1000

Where each of those options, "virtue", "\$1000", etc. is to be understood as the Fairly Virtuous Wife's mental representation of the possible outcome. As noted above, these preferences are problematic because they violate the assumption of transitivity: for any three elements in  $\mathbf{Y}$ :  $Y_1^1$ ,  $Y_2^1$ ,  $Y_3^1$ , if  $Y_1^1 \succcurlyeq Y_2^1$ , and  $Y_2^1 \succcurlyeq Y_3^1$ , then  $Y_1^1 \succcurlyeq Y_3^1$ .

Again, it is usually omitted that the options compared by agents are not the actual outcomes that obtain.<sup>86</sup> These options are, rather, mental representations, which I refer to as simplified possible worlds. So, where economists and philosophers alike are prone to speak of agents comparing, for example,  $X_1$  to  $X_2$ , it should always be remembered that the agents compare their beliefs about  $X_1$  to their beliefs about  $X_2$ , so, for example,  $Y_1^1$  and  $Y_2^1$  might be compared. The comparison of  $X_1$  and  $X_2$  proceeds by proxy.

I further assume that the simplified possible world that an agent conceives of as representative of some particular actual outcome can vary in resolution, which in part is just to say, again, that how the agent represents a particular outcome may vary from particular choice situation to particular choice situation.  $X_1$  might be represented as  $Y_1^1$ , or it might be represented as  $Y_1^2$ . This last assumption suggests that the Fairly Virtuous Wife's preferences given above are composed of comparisons made at varying resolutions, and that the failure of transitivity appears to be a consequence of comparing differently resolved options — a comparison the Virtuous Wife herself never actually makes.

To reiterate, these assumptions, that agents prefer, that agents mentally represent

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<sup>86</sup> Of course, expected utility theory explicitly involves agent beliefs, but I mean to point out that choice options must be considered in this manner even when agents are unconcerned with assigning probabilities to various outcomes.

options, are to be understood as folk psychological in nature. Theoretical terms such as *prefer* are, therefore, "definable functionally, by reference to their causal roles" (Lewis 1972, p. 207), though I do not hold that the functional roles such terms play in a folk psychological interpretation of utility theory actually reflect the ordinary folk understanding of those terms. Rather, the theory being deployed here supposes that the functional roles described by theoretical terms ("to prefer" and "mentally represent") are roles agents are actually capable of performing. Agents believe (mentally represent, somehow) things about alternative outcomes. Given beliefs about alternatives, agents are able to weakly prefer (or not) some mental representation (a collection of beliefs about some outcome) of some outcome to another. The justification for assuming subjective comparability is that it is possible for agents to actually reason through choices in the manner described by the assumption. Agents can weakly prefer a representation of one outcome to a representation of another, and weakly preferring is a thing agents do in their heads by comparing "alternatives they *believe* to be available" (Hausman, 2012, p. 15, emphasis added).

### **Responding to the SIA**

There are two distinct argumentative lines of the SIA: a practical line and an abstract one. The abstract line is meant to present the objection without allowing for replies simply positing agent error, as such replies are, arguably, sufficient responses to practical examples of the SIA. However, by abstracting completely away from any actual choice situation, the abstract line of the argument also loses quite a bit of intuitive force. I will show that the abstract line depends not on the intuition that the deliberative stances presented in the SIA are plausible and reasonable, but, rather, on the prior intuition that certain options are, for whatever reason, incomparable. Without this prior intuition, some actual choice options must be posited in order to get any sort of objection off the ground. I will proceed by

explaining how a trimodal comparabilist might respond to the abstract line of the SIA. I then show how the capacity to resolve any given choice outcome with varying degrees of precision and detail allows agents to rationally navigate the difficulties presented by the practical line without abandoning a trimodal approach to choice.

### The Abstract Line of the SIA

The abstract line of the SIA rests upon the claim that certain sorts of small improvements simply cannot make a difference to an agent's preferences. Chang presents the argument quite clearly. Though the trichotomy that she considers ("better", "worse", "equally good") departs from the trichotomy of preference that I am interested in defending, the distinction makes no difference in terms of the comparabilist response. It will be helpful to consider her presentation of the abstract line of the SIA in some detail.

Chang describes the abstract intuition as "in general, for evaluatively very different sorts of items, certain small improvements — given by a dollar, a pleasurable tingle, and so on — cannot effect a switch from an item's being worse than another to its being better" (2002, p. 128). She accurately notes that,

...if this intuition is correct, then it follows that the trichotomy of relations sometimes fails to hold. For take an arbitrary pair  $(r, s)$  of evaluatively diverse items. We can create a spectrum of  $r$ -items by successively adding or subtracting dollars (or pleasurable tingles, etc.) from  $r$ . If we add enough dollars, we get an  $r$ -item,  $r+$ , that is better than  $s$ , and if we subtract enough dollars, we get an  $r$ -item,  $r-$ , that is worse than  $s$ . Now, according to our abstract intuition, adding a dollar, pleasurable tingle, etc., cannot make a difference to whether one item is better or worse than another item evaluatively different from it. Therefore, there must be some  $r$ -item,  $r^*$ , in the spectrum that is neither better nor worse than  $s$ . But what relation holds between  $r^*$  and  $s$ ? Suppose one of the trichotomy [for our purposes that the agent either prefers  $r$  to  $s$ , or vice versa, or is indifferent] always holds. Then since  $r^*$  is neither better nor worse than  $s$ , it and  $s$  must be equally good [the agent must be indifferent between them]. According to our intuition that a dollar cannot make a difference, however, this is impossible. For if we add fifty cents to  $r^*$ , we get an item that is better than  $s$ ; if we take away fifty cents from  $r^*$ , we get an item that is worse than  $s$ . And the difference



between  $r^*$ -plus fifty cents, which is better than  $s$ , and  $r^*$ -minus fifty cents, which is worse than  $s$ , is a dollar. Thus  $r^*$  and  $s$  cannot be equally good. (2002, p. 128)

The main issue that I want to address here is the notion of "our abstract intuition" and that intuition's role in the subsequent development of the abstract line of the SIA. Chang's presentation is quite precise. If one begins with the assumption that qualitatively different options exist, and that "certain small improvements cannot [in choice situations involving such qualitatively different options] effect a switch from" one preference to another, then, as Chang shows, intransitive preference rankings such as the sort exhibited by the Fairly Virtuous Wife can be shown to follow as a consequence of that initial assumption. Formally, in the abstract line as given by Chang, an agent can be shown to have the following preferences that conform to the usual, problematic SIA pattern:

$$r^* \approx s$$

$$(r^* - \text{plus fifty cents}) \approx s$$

$$(r^* - \text{plus fifty cents}) \succ r^*$$

Again, these preferences are intransitive and the agent having such preferences can be subject to a money pump. Chang's solution to this problem is to question the propriety of classifying the relationships between  $s$  and  $r^*$  and between  $s$  and  $r^*$ - plus fifty cents as *indifference* in the usual utility theoretic fashion.<sup>87</sup> But, as her presentation of the abstract version of the SIA suggests, there is an alternative, straightforward response available to the comparabilist presented with the abstract line of the SIA — namely, to reject the foundational abstract intuition. Without the abstract intuition, that "certain small improvements" cannot effect a comparative difference between options which are qualitatively different, there is no particular reason to regard the above abstract preference

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<sup>87</sup> Chang suggests a fourth comparative relationship – "on par" (2002).

rankings of  $r^*$ ,  $s$ , and  $r^*$ -plus fifty cents as plausible; therefore the abstract line can simply be put aside.

Of course, the abstract intuition is abstracted from somewhere, and in Chang's presentation of the abstract line of the SIA, it is developed through examples of the usual sorts of hard choices which are often assumed to be the clearest examples of qualitatively different options: "a career in hang-gliding and one in accounting, a Sunday afternoon in the amusement park and one at home with a book, a zero-tolerance policy towards crime and one that aims only to reduce homicides, and so on" (2002, 128). Choice theorists differ on how convincing such examples are in terms of establishing the notion of "qualitatively different"; incomparabilists may assert that it is impossible to price virtue in dollars, while comparabilists may assert that it is quite possible and that so-called qualitatively different options can be compared in the same fashion as comparisons between mere market goods, such as tea and coffee. However, what is really significant about the SIA is that even if the comparabilist dismissal of the possibility of qualitatively different options which make for hard choices stands, and all choices are ultimately as simple as the choice between tea and coffee, the argument still presents a trenchant objection to trimodal accounts of choice. To show exactly how that objection runs, and how I think the notion of resolution answers it, I will now consider one final instantiation of the SIA, the practical example proposed by Chang of a choice between a cup of tea and a cup of coffee.

### The Practical Line of the SIA

Hopefully, the structure of the practical line of the SIA is at this point familiar. It consists of three plausible deliberative stances, all held by a single agent. Those deliberative stances are often presented and meant to be understood as outside the context of any

particular theoretical description, as the SIA is meant to present evaluative judgements to which the standard trimodal descriptions do not apply. However, as noted above, the force of the SIA can be demonstrated quite simply by applying a trimodal theoretical description to the plausible evaluative judgements and then proceeding to illustrate exactly how such a description entails a failure of transitivity. For example, one might propose that Abby the agent has the following preferences:

- (i)  $\text{tea} \approx \text{coffee}$
- (ii)  $\text{tea}^+ \approx \text{coffee}$ , where  $\text{tea}^+$  is a slightly improved version of tea
- (iii)  $\text{tea}^+ \succ \text{tea}$

Again, per the EAC, each of the following assumptions apply:

Assumption of representation: Any actual choice outcome,  $X_i$ , can be represented by the agent by some simplified possible world,  $Y_i^j$ , where  $\mathbf{Y}$  is the set of simplified possible worlds conceivable by the agent, and where  $\mathbf{X}$  is the set of possible choice outcomes.

Assumption of subjective comparability: for *all*  $X_i$  and  $X_j$  in the consumption set  $\mathbf{X}$ , there are some simplified possible worlds possibly represented by the agent  $Y_i^k$  and  $Y_j^l$  in  $\mathbf{Y}$ , such that either  $Y_i^k \succcurlyeq Y_j^l$  or  $Y_j^l \succcurlyeq Y_i^k$

Assumption of transitivity: for any three elements in  $\mathbf{Y}$ :  $Y_1^1, Y_2^1, Y_3^1$ , if  $Y_1^1 \succcurlyeq Y_2^1$ , and  $Y_2^1 \succcurlyeq Y_3^1$ , then  $Y_1^1 \succcurlyeq Y_3^1$ .

Assumption of motivation: If  $Y_i^k \succ Y_j^l$ , then  $X_i$  is chosen; If  $Y_j^l \succ Y_i^k$ , then  $X_j$  is chosen; if  $Y_i^k \approx Y_j^l$ , then the agent is willing to cede the choice between  $X_i$  and  $X_j$  ("you choose").

The preference relationships given in (i), (ii), and (iii) are problematic for this theory because, if those relationships are as described, then the assumption of transitivity fails to hold. And, the "tea or coffee" example constructed by Chang illustrates two important

features of the SIA. First, as noted above, the objection clearly applies to choice situations involving mere market goods, and the problem clearly applies to a very wide array of choice situations. Second, the alternatives on offer are immediately and fully comprehensible, unlike De Sousa's (or any other example which involves a large amount of uncertainty, such as a choice between a career as a lawyer and a career as a clarinetist). Whereas the Fairly Virtuous Wife might reasonably be thought to be facing a choice situation best explained with an expected utility model, the "coffee or tea" problem does not seem to involve anything other than a straightforward trade-off between two choice options that can be known with as much certainty as anything can.

Interestingly, it also seems quite reasonable that Abby *is* actually indifferent (willing to say, "you choose") between the two options in the cases where she does not express a strict preference for one over the other. Abby not caring whether she gets tea or coffee seems plausible. However, Abby not caring whether she keeps her virtue or gets \$1000 seems somewhat less plausible. This points to a problem with examples such as those from De Sousa, Raz, and Sinnott-Armstrong that attempt to present practical situations which are meant to strongly invoke incomparable intuitions prior to any consideration of an agent's preferences. Such examples often involve momentous choices. From a practical perspective, an agent being genuinely indifferent between such significant options seems suspect unless one intuits that, for example, the Fairly Virtuous Wife when presented with the choice between either \$1000 or \$1500 and her virtue is content to say to her crass suitor, "you choose". While such a conclusion is certainly possible, it seems so unlikely that it invites practical dismissals of the problem, most obviously that the Fairly Virtuous Wife's lack of preference for either the money or her virtue does not indicate any sort of fixed deliberative stance at all, but rather that she is still thinking about it. The trimodal comparabilist can

simply admit that a trimodal description of the Wife's deliberative stances does not apply because the Wife has not actually reached any comparative judgements. Abby's preferences, in contrast, do not invite this sort of dismissal, and, nonetheless, they exhibit preference-indifference intransitivity. The practical line of the SIA is, I think, best illustrated with mundane choices. This is not to say that examples of the SIA that involve hard choices cannot be understood as manifesting the particular objection that I am concerned with answering here (that the agent's preference rankings appear plausible yet intransitive); rather, such examples may conflate various incomparabilist objections, and such hard case examples of the SIA permit the objection to be evaded rather than addressed. That said, the response to the SIA suggested here will work just as well in such hard case examples, provided that the objection is understood as the objection arising from the structure of the SIA. Again, if one comes to such hard case examples of the SIA already intuitively convinced that certain options simply cannot be compared, no answer to *that* intuition is offered here.<sup>88</sup>

The apparent inconsistency between Abby's preferences and the axiom of transitivity can be clearly seen if Abby's preferences are described slightly more formally:

- i)  $(\text{tea} \succcurlyeq \text{coffee}) \ \& \ (\text{coffee} \succcurlyeq \text{tea})$
- ii)  $(\text{tea}^+ \succcurlyeq \text{coffee}) \ \& \ (\text{coffee} \succcurlyeq \text{tea}^+)$
- iii)  $(\text{tea}^+ \succcurlyeq \text{tea}) \ \& \ \sim(\text{tea} \succcurlyeq \text{tea}^+)$

And now, in violation of the assumption of transitivity, it is plain that, while  $(\text{tea} \succcurlyeq \text{coffee})$  (from (i)), and  $(\text{coffee} \succcurlyeq \text{tea}^+)$  (from (ii)), it is also the case that  $\sim(\text{tea} \succcurlyeq \text{tea}^+)$  (from (iii)). Nonetheless, it seems very reasonable that, if Abby is indifferent between tea and coffee, then she would be indifferent, as well, between tea<sup>+</sup> and coffee. Given that failures of

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<sup>88</sup> Those interested in such replies can find a multitude of them in Ruth Chang's *Making Comparisons Count* (2002), where she argues that the SIA is, in effect, the last objection to trimodal comparability left standing.

transitivity are more difficult to explain than failures of completeness,<sup>89</sup> even when prior incomparabilist intuitions are put aside, the problem exposed by the SIA still suggests that either Abby's preferences are not, in fact, complete, or that the meaning of "completeness" is not exactly as described by assumptions of trimodal comparability. Given the nature of Abby's preferences, and given that they seem perfectly sensible, the problem is often regarded, as it is by Chang, as a problem with the notion of indifference. In such accounts, Abby's plausible deliberative stances, which (i) and (ii) attempt to describe, are not instances of indifference between the options therein considered, but rather, some other type of comparative relationship or the absence of any comparative relationship whatsoever.

By contrast, the account proposed here suggests that Abby's preference relationships can be explained by a trimodal theory of choice. That theory must allow that agents have the capacity to resolve choice options in various ways, and allowance for this capacity is already built in the four assumptions of the EAC. The agent can represent any given X as some Y, but the EAC does not assume that any particular X is necessarily represented by some particular Y in every choice situation that involves that particular X. X<sub>1</sub> might be represented in one choice situation by Y<sub>1</sub><sup>1</sup>, and in another by Y<sub>1</sub><sup>100</sup>. And, just as in the response to the objection from transitivity I give in Chapter 3, the response to the SIA given here is, in general, just that the options considered by the agent are varying from choice situation to choice situation. Once this flexibility in terms of how any particular choice outcome is represented by some choosing agent is acknowledged, the objection raised by the SIA can be answered in a straightforward manner. But I am going to hazard a bit more detail regarding how and why, I think, the choice options represented by the choosing agent vary

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<sup>89</sup> There are a number of alternatives on offer that might allow a rational agent to choose without referencing a complete preference set (or, indeed, without preferring at all, see, for example, Chan, 2010), or that propose that the notion of completeness be adjusted (see, for example, Chang, 2002).

from choice situation to choice situation in the SIA.

To illustrate how the process of resolution works, I will include resolutions with Abby's preferences.

- i)  $\text{tea} \approx \text{coffee}$  (at resolution alpha)
- ii)  $\text{tea}^+ \approx \text{coffee}$  (at resolution alpha)
- iii)  $\text{tea}^+ \succ \text{tea}$  (at resolution beta)

In the first choice problem (i) Abby must decide between tea and coffee. Abby considers her options at resolution alpha, and she is indifferent between the two options. In the second choice problem (ii) Abby must decide between tea<sup>+</sup> and coffee. Again, Abby considers her options at resolution alpha, and she is indifferent. In the third choice problem (iii) Abby must decide between tea and tea<sup>+</sup>. In this case, Abby considers options at a different resolution, beta, a resolution at which she notes the superior aroma of tea<sup>+</sup> as compared to tea. Abby prefers tea<sup>+</sup>. But she is representing the outcome that will result if she picks tea<sup>+</sup> differently in case (iii) than she does in case (ii). Abby's preference rankings will, to some extent, vary depending on the resolution Abby uses to consider her choices.

The question of why Abby considers case (iii) at a different resolution than cases (i) and (ii) admits of a straightforward and intuitive answer. It is less costly to compare two types of tea than it is to compare tea with coffee, so smaller differences can be taken into account in pursuit of smaller benefits. As incomparabilists tend to raise objections to the assumption of comparability precisely because of this intuition — that some comparisons are more difficult than others — I do not think it needs much defending here. However, in this instantiation of the SIA, the explanation might be that the options in (i) and (ii) are considered relatively crudely by Abby as "a cup of tea" or "a cup of coffee", with no attention being paid to fine-grained details (such as the very slightly superior aroma of tea<sup>+</sup>),

because the costs of resolving the choice problem in a manner that takes such small details into account exceed the benefits Abby might reasonably expect to get by noticing them. In (iii), the items under consideration are fundamentally the same, tea. This circumstance lowers the costs of considering such small details. This low cost makes it more likely that Abby will use a fine resolution as she can expect to receive benefits that exceed her comparison costs. Comparing tea+ to tea is less costly than it is to compare tea+ to coffee because Abby can take advantage of the fundamental sameness to avoid the costs associated with generating a simplified possible world populated with details about tea entirely. There is no need for Abby to consider how tea tastes compared to tea+, for example, as they taste the same. The only comparison Abby actually makes in (iii) is to note that tea+ offers a "+" and tea does not. In effect, Abby simply disregards everything about the two options that is the same, and chooses between what is left. Her choice in (iii) amounts to the choice between the "aroma improvement" (the "+") or "nothing". Even though Abby is using a more fine-grained resolution in (iii) in order to be able to consider the improvement, the costs of comparing in (iii) are still, I think, likely to be far lower than in (i) and (ii), as there are far fewer details that Abby needs to include in the simplified possible worlds she compares in (iii). In general, any change to an agent's mental representation of an outcome can be considered a matter of resolution. A simplified possible world which includes the sort of office chair that a career as a lawyer would have me sitting in is more finely resolved than the simplified possible world that just has me sitting in some chair, and the simplified possible world which includes details about how sitting in that particular chair might actually feel is more finely resolved still.

By my account, at any particular resolution Abby's preferences are complete and transitive. If she considered all three comparisons, (i), (ii), and (iii), at resolution alpha, then,



in (iii), Abby would be indifferent between tea+ and tea and no violation of the assumption of transitivity would occur. If she considers all three options at resolution beta, the only thing certain is that she will prefer tea+ to tea. Taking small details like particular aspects of aroma into account, Abby may prefer tea to coffee, prefer coffee to tea, or remain indifferent. If she does remain indifferent between tea and coffee at resolution beta, she will, at resolution beta, prefer tea+ to coffee.

It might be thought that Abby's indifference between tea+ and coffee at resolution alpha must be an error in judgment on her part, if, as argued here, she has the capacity to discern qualities that could cause her to prefer tea+. Especially if we allow that Abby is permitted a sip of each beverage before choosing, it seems reasonable to wonder, given the simplicity of the choice situation, how Abby might fail to notice some feature of tea+ at resolution alpha that she does notice at resolution beta. But even simple experiences like sipping tea can be attended to more or less closely. I might, for example, appreciate the same sip as "warm tea", or as "warm tea with a soft, sweet flavor, and ginseng accents". This variation in how objectively identical experiences may be perceived translates quite naturally to variation in how simplified possible worlds are resolved.

Of course, the same sorts of concerns that apply to agents making adjustments to the partitions of states in an expected utility model of choice apply here as well. The same choice situation considered at different grains of resolution may result in the agent making different choices. As described above, indifference may resolve into strict preference, and there is no particular reason to disallow outright preference reversals. Abby might, for example, prefer a cup of coffee to a cup of tea, but, were she to examine the options at some finer grain of resolution, she might find the aroma of tea (a detail she had not considered at all at the coarser resolution) so delightful that once this aroma is considered at some finer

level of resolution she finds the tea preferable to the coffee.

Such preference changes might appear problematic. If more finely resolved choice options provide Abby with “a fuller and more realistic picture” of her choice situation (Joyce, 1999, p. 70), then it seems as if Abby, knowing she has the capacity to resolve choice options more finely, rationally should pursue that fuller, more realistic picture in order to establish as accurate preference rankings as possible. The notion of costs, however, goes some distance towards answering such concerns. Abby may be well aware that if she took the time and effort to consider her sample sips of tea and coffee at a finer degree of resolution, her preference might change and she would cease to be indifferent between the two options. But there is the matter of cost, the extra time and effort. While Abby might prefer tea to coffee when she considers the choice situation at resolution beta, unless the benefits of choosing tea over coffee exceed the extra costs of considering the choice situation at a finer resolution, Abby should use the coarser resolution. Therefore, Abby should only use resolution beta to compare coffee and tea when she suspects that, for example, she will not just prefer one option to the other at that resolution, but that she will prefer the simplified possible world where she gets the now preferred option and pays some extra costs (the cost of comparing at resolution beta minus the cost of comparing at resolution alpha) to the world where she gets the lower ranked option and does not pay the extra cost.

### **Conclusion**

The SIA shows that intuitively plausible deliberative stances may constitute an objection to the assumption that agents can compare by establishing one of three comparative relationships between any two options. Directed at the EAC, the objection

suggests that if the assumption of subjective comparability is an accurate account of such preferences, then the assumption of transitivity cannot be an accurate account of them, as the intuitively plausible preferences display preference-indifference intransitivity.

However, a more complete account of choice also assumes that choice options are simplified possible worlds, mentally represented by agents; I call this assumption the assumption of representation. An agent's ability to represent alternative outcomes as choice options includes the capacity to vary the amount and precision of details included in the simplified possible worlds. The capacity to resolve choice options to a finer or coarser degree answers the SIA by showing that as long as the agent's preferences are all described at the same degree of resolution, the inconsistency between the claims made in the assumption of subjective comparability and the assumption of transitivity is eliminated. So the objection is illustrated by a failure of the assumption of transitivity, directed at the assumption of comparability, and answered by referring to the assumption of representation.

I maintain that the force of the objection presented by the SIA depends on comparing choice options in a manner that does not correspond to a reasonable folk psychological account of how agents actually go about comparing. Agents resolve different choice problems at varying grains of resolution, and have good reasons (namely costs) for doing so. If one compares a simplified possible world that has been appraised by an agent at a certain grain of resolution with a simplified possible world that has been appraised at some other grain of resolution, one is making a mistake. Absent this sort of mixing and matching of differently resolved simplified possible worlds, the SIA does not illustrate any inconsistency between the assumptions of subjective comparability and transitivity.

## CHAPTER 5

### CONCLUSION

#### **Introduction**

I have considered trimodal comparabilism in the context of an economic account of choice, the EAC — an account of choice that emerges from the conscious idiom. In order to defend the assumption of comparability, I have argued for restraint in terms of making assumptions about how, exactly, the conscious workings of choosing agents are necessarily configured. But I have also made explicit assumptions normally left in the background of choice accounts, assumptions which link the choosing agent's mental states to that agent's observed choices. I maintain a distinction between what can be regarded as the objective objects of choice (the things the choosing agent might actually get, which I have been referring to as choice outcomes) and the subjective objects of choice (the things the agent thinks she might actually get, which I have been referring to as choice options). Via the EAC, I have forwarded a claim of comparability by proxy — any choice outcome is comparable to any other, because agents possess the capacity to represent those actual choice outcomes as comparable options.

The EAC stands quite well as a defense of trimodal comparability, both due to its subjective nature and due to the conception of preference on which it relies. To conclude, I will review these features of the theory, before considering the constitutive objection to comparability. The constitutive objection fails in much the same manner as objections from

value fail, but it also suggests another, related, objection: that agents simply have the capacity to regard comparisons as prohibited in certain choice situations. That is, whether or not some outcomes are objectively constituted so as to be incomparable with some other outcomes, agents might still insist that their subjective representations of some outcomes are so constituted. I will show that this last objection, the objection from subjectivity, is best understood as allowing agents to refuse to compare options, rather than as showing that certain choice options are necessarily incomparable with one another.

### Overview

Consider, again, the assumption of trimodal comparability as expressed in the EAC versus the usual economic expression of trimodal comparability expressed by the axiom of completeness.

Axiom of completeness: for *all*  $X_1$  and  $X_2$  in  $\mathbf{X}$ , either  $X_1 \succcurlyeq X_2$  or  $X_2 \succcurlyeq X_1$ , where  $\mathbf{X}$  is the set of possible choice outcomes.

Assumption of subjective comparability: for *all*  $X_i$  and  $X_j$  in the consumption set  $\mathbf{X}$ , there are some simplified possible worlds possibly represented by the agent  $Y_i^k$  and  $Y_j^l$  in  $\mathbf{Y}$ , such that either  $Y_i^k \succcurlyeq Y_j^l$  or  $Y_j^l \succcurlyeq Y_i^k$

While I defend general idea expressed by the axiom of completeness — that, regardless of what the  $X$ s happen to be, agents are able to choose between them via a process of comparison — I also hold that this particular expression of that idea is, if taken literally, quite false as it claims agents establish preference relationships between various actual outcomes (the  $X$ s). Per the EAC agents do not, and cannot, establish such preference relationships; instead, the agents establish preference relationships between what they believe about the actual outcomes — their mental representations of those outcomes (the  $Y$ s). The

preference relationships described in the axiom of completeness should therefore be understood as preferences by proxy, with the EAC's assumption of subjective comparability (along with the assumptions of representation and motivation) providing the necessary folk psychological details (however nebulous) to plausibly flesh-out the axiom of completeness as an account of choice.

As I note in Chapter 1, the axiom of completeness is often unpacked as the trichotomy thesis, where options are understood by choosing agents as either "better", "worse" or "equally good" as one another with respect to some value which covers the choice situation the agent is facing. In contrast, a main theme throughout this work is the idea that value notions are not necessary in order to account for choice. The EAC is offered as an a-valued account of choice. That said, it need also be stressed that adopting the EAC does not eliminate the possibility of discussing or considering value notions in relation to choice. The EAC is entirely capable of accommodating such considerations, with the understanding that values are theoretically derived from, as opposed to prior to, agent preferences.

In Chapter 2, I presented the EAC as on a spectrum of choice accounts running from one extreme, where revealed-preference theorists attempt to eliminate agent mental states from the choice account entirely, to another, where value theorists attempt to determine exactly how an agent's preferences come to be and to describe that process in terms other than "preference". I argue that there is a golden mean between these two extremes, appropriately occupied by Aristotle's account of choice in his *Nicomachean Ethics*, and further argue that the EAC can be understood as an extension of Aristotle's basic approach — an approach which admits of a role for agent mental states in accounting for choice, but an approach which also resists the temptation to explain that sort of choice

motivating mental state in any unnecessary detail.

In Chapter 3, I examined what it means to regard preference as prior to value. I argued that this conceptual relationship is coherent, is at least as intuitively plausible as holding that value is prior, and that it avoids the unnecessary complications that often accompany regarding values as prior to and necessary for preferences. So, while the usual axiom of completeness deployed by economists is quite wrong insofar as it suggests that agents have objective knowledge of the things they choose between,<sup>90</sup> it is quite correct in terms of presenting the fundamental choosing capacity as "to prefer" as opposed to "to value".

Omitting value as a theoretical necessity means that the EAC is immunized against objections to the assumption of comparability, which depend, in some way or another, on the notion of qualitatively different values.<sup>91</sup> Such value-based objections take different forms, but the EAC's response to all and any value-based objections is to explicitly deny the necessity of accounting for choice in value terms. Eliminating value as a theoretical necessity also eliminates concerns about these sorts of objections.

The small improvement argument, however, does not depend on the idea that value notions are necessary in order for agents to choose. Here, eliminating value as a theoretical necessity is not sufficient to answer the incomparabilist critique, and in Chapter 4, I showed that the objection still has intuitive bite even if the assumption that valuing is necessary for

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<sup>90</sup> Even in cases where  $Y_1^1$  is, for all intents and purposes, identical to  $X_1$ , the agent's perception of  $X_1$  is still subjective — it just happens to be an entirely accurate subjective perception.

<sup>91</sup> For example, Ruth Chang provides a taxonomy of nine different sorts of objections to comparability. Of those nine, five clearly depend on the notion of value being necessarily involved in choosing (objections from the diversity of values, bi-directionality, calculation, incomparability of values, and the lack of a common value — see Chang 2002, pp. 71-91), and another, the "rational irresolvability of conflict" likely does as well (Chang notes that this incomparabilist objection "is often appealed to but left unexplained" (2002, p. 76). It should be noted that Chang, a comparabilist, though not a trimodal sort of comparabilist, provides replies to all of these objections.

choosing is lifted. The subjective nature of the EAC, however, does provide a reply to the small improvement argument. In general, the EAC response to any charge of intransitivity, be it preference-indifference transitivity or outright strict preference intransitivity, is the same: What looks like intransitivity between  $X_1$ ,  $X_2$ , and  $X_3$  does not mark intransitivity in the agents preference set. If, by proxy, an agent is shown to  $X_1 \succ X_2$ , and  $X_2 \succ X_3$ , yet  $X_3 \succ X_1$ , then in many cases, the appearance of intransitive may be illusory, as the choice options actually considered by the agent in the various choices between  $X_1$ ,  $X_2$ , and  $X_3$  will vary from choice situation to choice situation. So, presented with a choice between  $X_1$  and  $X_2$ , the agent might actually be choosing between  $Y_1^1$  and  $Y_2^1$ , whereas when choosing between  $X_1$  and  $X_3$ , the choice options might be  $Y_1^9$  and  $Y_3^1$ . In particular, I hold that when the intransitivity occurs due to small improvements to the outcomes, the representations actually considered by the agents will vary in certain predictable ways as the costs associated with representing any given outcome as some simplified possible world will vary according to how finely resolved that simplified possible world is, and according to what that simplified possible world is being compared to.

Ruth Chang's response to the small improvement argument involves assuming a fourth comparative mode, that of parity, whereas I have argued that the small improvement argument can be met by instead assuming that the simplified possible worlds that agents use to represent actual choice outcomes can be resolved in more or less detail. Apparent cases of intransitive rankings are just instances of considering comparisons between a simplified possible world resolved at some given grain of resolution, and another simplified possible world resolved at some different grain of resolution, which, I hold, is not the sort of thing choosing agents actually do. Both Chang's reply to the small improvement argument and mine involve attributing a degree of flexibility to the process of choosing. Chang locates that



flexibility in the agent's comparative process, whereas I locate that flexibility in the agent's representational process.<sup>92</sup>

The subjective nature of the EAC, the distinction between the actual outcomes on offer and the internal options by which the agent represents those outcomes, provides a great deal of flexibility in terms of how the EAC is able to address incomparabilist objections. A final concern that I will address is just that the EAC's subjective nature leaves it vulnerable to a subjective objection — the claim that, as agents subjectively represent the choice outcomes as options, it is possible for agents to represent two outcomes as subjectively incomparable options. The constitutive incomparabilist objection, though it makes objective claims about choice outcomes, nonetheless provides a good means of understanding how such a subjective objection might be mounted. I will begin by giving and answering the constitutive objection, before providing an argument for regarding an agent's capacity to regard choice situations as prohibiting comparisons as the capacity to refuse to compare options, rather than as the capacity to generate options which are actually incomparable.

### **The Constitutive Objection**

The constitutive objection amounts to the claim that certain conceptual features of choice outcomes are such that they, by definition, cannot be compared with certain other classes of outcomes. Joseph Raz illustrates the objection with a choice between friendship and money (1986b), where the claim is that the concept of "friendship" is so constituted that

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<sup>92</sup> An objection related to the small improvement argument is the objection from vagueness (Chang refers to this objection as "incomparability as vagueness" (2002, p. 155)), where the difficulties for comparability arise from the agent seeming to have multiple rankings of choice options, with no particular ranking rationally privileged. As in her reply to the small improvement argument, Chang's notion of parity bestows rationality on such rankings. As in my reply to the small improvement argument, I hold that the agent only seems to have multiple rankings and that the actual options being considered, the simplified possible worlds, vary from ranking to ranking.

if one believes that one can compare friendship to money, one clearly does not understand what friendship is. It is constitutive of friendship that it cannot be compared with certain other sorts of options, like money. Raz holds that certain actions and attitudes are necessary in order for one to be party to a friendship, and that among those actions and attitudes are "not comparing friendship with mere market goods", because the necessary attitudes and actions in regard to friendship are such that the person having them is unable to compare friendship and mere market goods. Friendship is meant to be incomparable with mere market goods, not because friendship is so different from mere market goods, but because friendship is by definition incomparable with mere market goods. If you think you can compare the two, you are not thinking about friendship, you are thinking about some other thing.

About this particular objection, I first want to say that I think Chang's suggested reply to it is, in the main, correct. She notes that "it is hard to believe that in order to be a friend, I must believe that friendship is incomparable with money" (2002, p. 102), and holds that "friendship and money" type choices are better understood as "emphatic comparisons", i.e., that friendship is, in her terms, emphatically better than the money (2002, p. 113). While I think Chang's identification of Raz's underlying concern, that friendship is somehow always better than money, i.e., that the value "friendship" is lexically preferable to the value "money", is accurate, simply recharacterizing the constitutive objection as a matter of emphatic comparisons should be understood clearly for what it is: an outright rejection of Raz's premise — that there are some concepts, which can sensibly be understood as features of choice options and which also are by definition incomparable with certain other sorts of options. For Chang, there are simply, and objectively, no such concepts. And, as Chang is not a subjectivist, she can certainly adopt this position — that friendship is not by definition

incomparable with mere market goods. However, rejecting that definition does not, therefore, leave us with emphatic comparisons.

To be clear, insofar as Raz's claims are meant to be somehow objectively correct claims about the nature of friendship, I do think those constitutive claims should be rejected. However, simply declaring the comparison between friendship and money "emphatic" elides a host of complications in the exact same manner that declaring the comparison between friendship and money impossible does. That is, considered from a practical perspective, the comparison between friendship and money seems neither particularly forbidding nor as if it is necessarily emphatically predetermined one way or another. Consider the following choice situation:

Outcome 1: Abby sells salacious details regarding her friend to a tabloid for 50,000 dollars. Abby spends that money to pay for a life-saving medical procedure for her mother. However, her mother is quite old and will only live a few more years, at best. The friend's career will be ruined, and she will not forgive Abby for her betrayal, despite Abby's use of the money.<sup>93</sup> The friendship is dissolved.

Outcome 2: Abby mother's dies. Abby does not lose any friends.

It seems very strange to me to insist either, as Raz does, that these outcomes cannot be compared, or, as Chang does, that the comparison is emphatically in favor of friendship in all cases. Such claims *appear* much more sensible when the choice is presented as the abstract "friendship or money", but that does not seem to be the sort of choice that any agent would ever actually face, and objectors taking this line must be much more clear about

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<sup>93</sup> A claim here might be that the friend is unwilling to forgive the transgression, given Abby's motives, then there was no real friendship to compare with money in the first place. Here, the constitutive objection might be understood as the claim "friendship cannot by definition be *exchanged* for money", i.e. one cannot choose money over friendship via a process of comparison because, in the end, one cannot choose money over friendship. Again, I simply disagree that friendship need necessarily be defined in either manner (cannot be compared with money/cannot be exchanged for money).

how much money is being offered for how much friendship. Once those details are supplied, the intuitional force of the objection dissipates.

Raz's objective claim that friendship is, by definition, incomparable with mere market goods is answered by the EAC in the same manner that objections from qualitatively different values are — the objective claim of incomparability is simply rejected. Whether or not Raz conceives of friendship as incomparable by definition, other agents are free to reject that definition. The constitutive objection follows the same line as objections from qualitatively different values. Some two options are asserted as necessarily incomparable, because, by definition or by nature, they simply *are* necessarily incomparable. In both cases, the EAC's response is to deny the categorical, objective claim. In both cases, once prior assumptions of incomparability are put aside, the intuitive case for regarding things like mere market goods and things like friendship as comparable can be quite reasonably defended.

Chang's reply to the constitutive objection is, I think, about half right. Insofar as Raz is insisting that his constitutive notion of friendship is the objectively correct notion, and that outcomes like those faced by Abby above must be represented as options which deploy his constitutive notion of friendship if those options are to be understood as featuring the notion of friendship at all, I, like Chang, simply dismiss Raz's constitutive premise. However, Chang's covering value approach to explaining choice is also meant to be objective. From this objective standpoint, she is able to dispute not just Raz's claim that those outcomes must necessarily be understood to feature "friendship, incomparable with money", but that any representations of those outcomes which involve such claims are necessarily wrong. Chang holds that the feature of friendship is, objectively, not incomparable with money. Of course, Chang and Raz, being objectivists, do not frame these discussions in terms of representations of the outcomes, but, rather, in terms of the

outcomes themselves. Put simply, Raz's contention is that outcome 1 and outcome 2 are incomparable because outcome 2 features friendship which, by definition, cannot be compared with the money featured in outcome 1. Chang simply disagrees about the objective nature of the choice outcomes, which is a line of response not provided by the EAC. The subjective nature of the EAC, that same aspect which allows it to dispense with concerns about complications stemming from very small improvements to choice outcomes, makes it more difficult to dismiss something very like Raz's objection, once Raz's insistence on constitutive incomparability as being constitutive of the outcome rather than on the agent's perception of that outcome is stripped away and the objection is understood as an objection from subjectivity.

### **The Objection From Subjectivity**

One might understand friendship as Raz does, or, as Raz notes, one may not. While Raz's insistence that friendship is, in part, objectively defined as incomparable with money can freely be disregarded when accounting for choice with a subjective theory such as the EAC, the question of whether or not some agent might represent options like those facing Abby above as, by that agent's own *subjective* definition, incomparable, remains to be addressed. That is, what if, when faced with options 1 and 2 above, Abby reports that she cannot make the comparison because outcome 2 features friendship, outcome 1 features money, and she believes friendship is incomparable with money?

This emphasis on the agent's subjective judgement of incomparability also might be thought to allow value objections to re-emerge. Even if no two outcomes are necessarily qualitatively different, one might think that agents are able to represent any two outcomes as qualitatively different options. It is not even necessary to provide much or, indeed, any, reasoning about why the outcomes might be represented as incomparable per this sort of

subjective objection. All that matters is that the agents might, for whatever reason, genuinely believe that one option is incomparable with another.

The response to the subjective objection is to note that, while agents have a great amount of flexibility in terms of how to represent some outcome as a choice option, the option must, in the end, be an option. So, per the EAC, Abby might represent the outcomes above in any number of different ways. She might note the number of nights out, conversations, and laughs with her friend that she would get in option 2, and she might imagine how wonderful it will be to have more time with her mother in option 1. All the axiom of representation tells us is that somehow, someday, she will represent the outcomes as the things she imagines she might get upon choosing them. The representational process as described by the EAC does not extend to assessing the nature of the choice *situation*. Abby might represent her life without her mother in more or less detail, but those details must be representative of the outcome, not assessments of how that outcome stands in relation to other outcomes. So, Abby might imagine every dinner out that she would share with her friend in outcome 2. She might imagine the taste of the food and the feelings of comradery. She might also, like Raz, judge that those feelings of comradery are incomparable with money.<sup>94</sup> But that judgement is not, itself, part of the option. It is not something that she gets if she chooses option 2, nor is it conceivably something she ever might get. She gets the friendship and all it entails; the comparative status of that friendship in relation to other choice options amounts to a philosophical point of view about the choice option; it is not part of the option itself. It is not a thing that Abby might get.

Abby certainly might hold such an opinion about choice situations featuring

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<sup>94</sup> Again, it is worth bearing Chang's reply to the constitutive objection in mind here. Even in cases where Abby asserts that friendship is incomparable with money, there seem to be good reasons to suspect that what Abby really means is that friendship is really, really preferable to money.

friendship. She might, like Raz, believe, for whatever reason, that friendship is incomparable with money. And, she certainly might refuse to compare friendship with money because of that subjective belief. However, that explicitly amounts to imposing a prior assumption of incomparability on the choice situation. As noted above, when given in the context of a subjective objection, this prior assumption cannot simply be dismissed as all that is needed to support it is Abby's belief that it is true. But while her assumption that options 1 and 2 are incomparable might prevent Abby from choosing via comparison, I argue that nothing about the options themselves, even in the case where Abby believes that they cannot be compared, should be understood as rendering one incomparable with the other. Abby might regard the choice options as incomparable and so refuse to compare them. But even in cases of such a refusal, Abby still has the capacity, albeit unexercised, to compare the options.

### **Conclusion**

My intent has been to make the folk psychological assumptions I deem necessary to sensibly flesh out claims of comparability explicit, and then to consider how those folk psychological assumptions operate within an economic account of choice. While I hold that certain folk psychological assumptions are simply required if a theory of choice is to be regarded as a sensible explanation of how agents might reason through choice situations, care should also be taken to limit the number and scope of the folk psychological claims involved in the general theoretical description.

The resulting theory, the EAC, is a subjective, deductive, folk psychological approach which, while positing preference as the explanatory primitive of the choice account, is also quite capable of accounting for value notions, holding that such notions are derived from preferences. I have shown that regarding preference as a theoretical primitive answers value-based incomparabilist objections, and have replied to objections against the

possibility of preference being so regarded. I have also provided replies to incomparabilist objections which do not rely on value notions but which, instead, purport to show a failure of comparability via apparent failures of transitivity. These replies depend on the subjective nature of the EAC.

I have concluded the inquiry by noting that the same subjective flexibility which allows the EAC to answer objections from intransitivity might be taken to allow for agents, for whatever reason or for no reason at all, to subjectively insist that some two options are incomparable. I argue that such an assessment is not properly understood as a feature of choice options, and that while agents might certainly refuse to compare any two options, no two options are necessarily incomparable.



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