Recontextualizing Revealed Preference Theory

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Consider a ghastly, sacreligious suggestion: Romeo indeed did prefer to commit suicide than to live a happy life with Juliet, because out of the options available to him he chose death. Any theory which makes such a statement must be missing something integral to the nature of choice, decisions, and preference – that is, belief. Revealed Preference Theory, which asserts that preferences are directly equatable with (revealed by) choices between actual or hypothetical sets of actions, seems to incorrectly discard the importance of belief in understanding and explaining preference. Critics often assert that Revealed Preference Theory either fails to coherently explain seemingly reasonable decisions by rejecting the presence of mental states, or produces coherent explanations but abandons its behaviorist thesis by implicitly relying upon mentalism. I assert that this line of reasoning against Revealed Preference Theory relies upon a falsely constructed portrayal of the types of problems that the theory is applied to. Such portrayals, which are weaponized as counterexamples to the validity of Revealed Preference Theory, assume that information about the decision maker is static and that information about the decision maker's internal beliefs can be obtained without the choice paradigm. I will correspondingly argue, in defense of Revealed Preference Theory, that real decision makers are responsive information providers and that 'beliefs' are always already encoded into the choices made by responsive agents. Considering Romeo as such a 'real' decision-maker, then, it would not be bizarre or incorrect to suggest that Romeo indeed could have preferred death over Juliet.

The first problem with problems raised in objection to Revealed Preference Theory is the assumption that information provided by the decision maker is static. Consider the example of Romeo and Juliet raised by Daniel Hausman in *Preference, Value, Choice, and Welfare* (Cambridge University Press 2012) and at the beginning of this paper: Romeo's

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two alternatives are { death, Juliet }. Romeo chooses to kill himself, but Hausman argues that this choice does not reveal his true preference, which is to live with Juliet. Rather, Romeo committed suicide because he subscribed to the false belief that Juliet was dead. Hausman concludes that "preferences influence choices only via beliefs" (Hausman 27). However, this is a misleading description of the problem: it revives a literary example frozen in time. Romeo is not a decision maker in a 'real' sense – his decisions have already been written out for him, and he merely follows this preordained route. Such cases are not in need of a formal descriptive theory of preference, since they already function as self-complete literary artifacts. However, 'real' decision makers need to be *responsive* – they are continuously making different types of choices between dynamic sets of alternatives. A 'real' decision maker does not necessarily need to reveal their preference through a single choice, but rather through several. The joint consideration of all relevant choices is preference. For instance, consider a recontextualization of Romeo as a responsive decision maker: Romeo sees a dead-looking Juliet and is deciding what to do next. First, we ask him to make a choice between two hypothetical outcomes: dying or living with Juliet. Romeo chooses the latter. Suppose Romeo is asked to make another hypothetical choice between living with Juliet dead and with Juliet alive. He chooses the latter again. These choices need not be purely hypothetical: Romeo chooses to go on a dinner date with Juliet over not doing so. To iterate, all of these relevant choices aggregated in sum constitute Romeo's preferences: it is not just that Romeo chose death over Juliet and that this is the extent of Romeo's choice patterns which are available to us for the purposes of preference attribution. It is reasonable to expect that these 'additional' choices can be obtained because real decision makers are indeed responsive information providers and can make choices not only on a particular (possibly pathologically highlighted) decision but many (or all) other relevant decisions.

Let us further understand preference as a collection of many choices on relevant deci-

sions. In modification to Hausman's previously quoted claim, we suggest that "preferences are choices through other choices": it does not make sense to consider a single choice in isolation, because it is dependent on an arbitrary particular formulation of the decision. Johanna Thoma suggests in "In Defense of Revealed Preference Theory" (*Economics of Philosophy* 2021) that revealed preference theorists should aim at "providing standards for the specification of choice options that help economists avoid the problem" (Thoma 9) of decision misspecification which arguably underlies Hausman's usage of Romeo and Juliet. Thoma asserts that a minimal mentalism is needed to describe the choice set available to the decision maker in an epistemologically correct way, but that this dependence is not severe enough to be mentalism. While Thoma is right to point out the arbitrariness of the problem formulation and the role of this formulation in determining the sensibility of the selected choice, Thoma misses the interconnection between choices themselves. The problem is not misspecification, but rather underspecification. Rather than understanding preference as a choice between two accurately described possibilities, we should instead suggest that preference is the set of choices made on relevant decisions of varying formulation (the expression and highlighted features of the decision), content (the subject matter), and type (actual or hypothetical). Romeo's preference is not defined by a single choice, even one formulated in a suitable manner, but rather by the many relevant choices – actual and hypothetical – which he made or would have made. This understanding of preference allows for, it must be noted, the possibility of a seemingly inconsistent set: in some cases, decision makers may choose one action, whereas they may choose another in others. However, there is no reason to suggest that preference must take the form of a necessarily consistent belief over this set of choices: preference is itself this set of choices – not an abstraction over it which requires homogeneity – and each choice is contextualized by its unique formulation, content, and type. Moreover, we should not think that preference needs to be consistent in either a descriptive or a prescriptive sense: it is well-known that people have empirically

inconsistent preferences, and just as one example, statistical learning theory demonstrates that pursuing inconsistent ('explorative') preferences yields superior long-term outcomes than consistent ('exploitative') ones.

The second problem with this objection raised against Revealed Preference Theory is the assertion that beliefs can be accessed without the involvement of choice. In the case of Romeo and Juliet, Romeo's beliefs were written by Shakespeare; in Thoma's example of the woman who mistakenly eats a spoonful of wasabi believing it to be avocado (Thoma 8), Thoma also explicitly writes out the decision maker's beliefs. However, 'real' decision makers never explicitly make clear their beliefs nor are constrained by an articulation of their beliefs. We know that even when people describe their beliefs, these often do not reflect their beliefs. We know this because their beliefs are demonstrated through their choices. A purported vegetarian who is repeatedly observed secretly eating meat does not believe in vegetarianism. In this sense, our only measure of belief content is through choices. Therefore, such exemplar decisions are false not only in restricting the responsiveness of the decision makers in question but also in suggesting that the agent's true beliefs, by which the congruence of choices and the goodness of a theory of preference is measured, is knowable independent of choices. Consider Alice as opposed to Thoma's example of the mistaken woman: Alice eats a spoonful of wasabi. Perhaps Alice enjoys wasabi, perhaps she does not: Revealed Preference Theory allows us to approximately understand what Alice's preferences might be without relying upon the presence of omnisciently obtained beliefs. When considering 'real' decision makers, we have only observable choices. We might retort, against the suggestion that behaviorism relies implicitly upon a minimal mentalism to generate coherent explanations, that mentalism relies implicitly upon a minimal behaviorism. All mental states must be inferred, demonstrated, or observed from outward choices. An attempt to describe a decision problem which does not allow the decision maker to be responsive and attributes omnisciently obtained beliefs results, therefore, in an

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overspecified problem for which the concept of preference is itself ill-suited in application, since it is already given in the formulation of the problem.

Revealed Preference Theory, then, is the theory of preference which is most aligned with the 'real' dynamics of decision-making. Objections to Revealed Preference Theory which suggest that deprivation of mental states yields incoherent predictions falsely portray decision makers as static. Understanding decision makers as responsive allows us to more holistically understand the collection of choices on relevant decisions; this set constitutes an individual's preference. Preference as a set does not need to be self-consistent, either descriptively or normatively. The introduction of beliefs proposed by the mentalists to understand choice, moreover, assumes that beliefs can be obtained independently from choices and therefore relies upon omniscient knowledge of an agent's 'beliefs'. However, such knowledge is never available in practice; philosophically, an agent's 'beliefs' are demonstrated – arguably, defined – by their choices. Recontextualizing Revealed Preference Theory in the domain of 'real' decision making allows us to understand preference, therefore, as a responsively updated, choice-constructed collection of decisions to relevant problems.

Works Cited

Hausman, Daniel M. *Preference, Value, Choice, and Welfare. Cambridge University Press*, Cambridge, 2011.

Thoma, Johanna. "In Defense of Revealed Preference Theory". *Economics and Philosophy*, vol. 37, no. 2, 2021, pp. 163-187.