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# Toward a Psychology of Surrogate Decision-Making

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ABSTRACT

In everyday life many of the decisions that we make are made on behalf of other people. A growing body of research suggests that we often, but not always, make different decisions on behalf of other people than the other person would choose. This is problematic in the practical sense of legally designated surrogate decision-makers who may not meet the substituted judgment standard. Here we review evidence from studies of surrogate decision-making and examine the extent to which surrogate decision-making accurately predicts the recipient's wishes, or if it is an incomplete or distorted application of our own decision-making processes. We find no existing domain general model of surrogate decision-making. We propose a framework by which surrogate decision- making can be assessed and a novel domain general theory as a unifying explanatory concept for surrogate decisions.

In everyday life many of the decisions that we make are made on behalf of other people. For example, parents make decisions for their children and spouses make decisions for their partners. The majority of these decisions are relatively trivial. For example, choosing a gift or a meal. On other occasions, such as end-of life care, these surrogate decisions are profound and potentially life changing. This raises the immediate question of whether decisions we make for other people are different from decisions we make for ourselves.

Ageing populations in western industrialized countries have increased old-age dependency rates and consequently the number of surrogate decision makers has risen (Age-UK, 2015; Ortman, Velkoff, & Hofgan, 2014). For this reason, recent research has focused on the accuracy of surrogate decision-making with respect to older adults and carers of people who are unable to make informed decisions for themselves. This paints a picture of surrogates often making decisions that are contrary to the recipient's[1] wishes, and often also different from the decision the surrogates would have made for themselves (Shalowitz, Garrett-Mayer, & Wendler, 2006). Investigations in other domains of decision making, including human mate choice (Apostolou, 2013; Buunk, Pollet, & Dubbs, 2012; Perilloux, Fleischman, & Buss, 2011); purchasing presents or vacations (Jonas & Frey, 2003; Jonas, Schultz-Hardt, & Frey, 2005; Tunney & Ziegler, 2015); standard gambles (Fernandez-Duque & Wifall, 2007; Ziegler & Tunney, 2015); decision-making by general practitioners (Garcia-Retamero & Galesic, 2012); and end of life care (Fagerlin, Ditto, Danks, Houts, & Smucker, 2001; Shalowitz et al., 2006), paint a pattern of decision making which is sometimes described as accurate (reflecting the choice the recipient would have made), better (different by way of approaching an optimum benchmark), or the same (in that the choices for self and recipient did not differ). Given the disparity of the results and the lack of overlap between domains studied, no unified no unified account of surrogate decision-making

has yet been proposed. This is a significant gap in the psychological literature that we believe can be bridged with the model that we describe here.

We do not propose that people possess any additional decision-making processes other than those that have already been described elsewhere (Kahneman 2011), rather that the change in perspective from oneself to another person affects the decisions that we make on behalf of other people. By conceptualizing decisions for others as categorically different to decisions made for self, the pattern of results in the literature cannot be understood. But the pattern becomes predictable ones we assume that decisions for self and others are influenced by a number of factors of which some are internal to the decision-maker and some are contextual. The nature of the decision and the distance between the decision maker and the one the decision is made for are the overarching factors influencing the decision. From the existing empirical literature we have identified *intent*, *significance*, *accountability*, *calibration*, and *empathy* as factors that feed into and bias the process. We present evidence for their influence and quantify their role in our model of decision-making in the remainder of this paper.

**Perspective of the decision-maker**

Surrogate decisions fall into four main categories with respect to the difference in the surrogate's intention and ability to model the recipient's wishes and with what the surrogate decision maker believes the main outcome to be. A useful framework with which to assess the accuracy of surrogate decision making therefore reflects the perspective of the decision maker. These perspectives are outlined below.

*Egocentric.* The putative surrogate may simply fail to model the recipient's wishes and instead make a decision on the recipient's behalf that maximizes the surrogate's own, rather than the recipient's, outcome. This could occur because the decision maker is essentially selfish, ill willed, or unable to adopt the perspective of another per- son. Whatever the reason or motive, the

egocentric surrogate decision maker is an oxymoron. Any agreement between the recipient's wishes and those of the supposed surrogate occurs by accident rather than by design.

*Simulated.* The decision maker attempts to model the goals and desires of the recipient. This is the basis of the substituted judgment standard in medical decision making, and the legal expectation in the United States (Stanley, 1989). It is assumed in this normative model that next of kin can set aside their own preferences and make decisions that accurately reflect the wishes of the recipient. The accuracy of the surrogate's decision is the extent to which it matches that of the recipient. This kind of surrogate decision making is the one that we might optimistically hope is the most common. One aim of our model is to explain why, when surrogates intend to make a fully substituted judgment (the decision that the recipient would have made if he or she were capable), they may fail to accurately simulate the recipient's wishes.

*Projected.* The decision maker decides what he or she would do, or prefer, if he or she were in the recipient's situation and chooses accordingly. The surrogate's intentions are good (with respect to the normative expectation), but the judgment is based on the decision maker's own utility functions or goals, and the decision maker assumes that the recipient's utility function or goals are similar. The decision maker is cognitively capable of a first-order simulation of what he or she would prefer in a hypothetical scenario but fails to construct a second-order simulation of what another person might do. As is the case with simulation, the accuracy of the projected surrogate deci- sion is the extent to which it matches that of the recipient.

*Benevolent.* The decision maker decides what he or she thinks is best for the recipient irrespective of the recipient's actual or simulated goals or desires. The judgment is based on an appraisal of the utility of the outcomes—not necessarily the surrogate's own, but on the basis of his or her perspective of the situation. Since the decision is not intended to match the recipient's

wishes, any match is incidental. Thus, a benevolent decision can be errorful in terms of intent but not outcome (i.e., the decision maker coincidentally makes a choice that the recipient would like) or errorful in both intent and outcome (i.e., the decision maker chooses an option that the recipient would not choose him- or herself). This sort of decision making may well be common among parents, politicians, and selfish partners, but it is in the case of medical decisions that ethical issues arise with respect to informed consent, end-of-life care, and so on. Note that a strictly benevolent decision that contradicts another person's wishes is unlikely ever to be desirable (Dixon & Smalley, 1981; Jones, 1994), and although the best interest standard adopted in the United Kingdom ("Mental Capacity Act," 2005) requires benevolent decisions when the patient's precise wishes are unknown or unreasonable, this still requires some consideration of the recipient's values.

## A Model of Surrogate Decision-Making

We have outlined four perspectives that a surrogate decision maker might adopt in making a decision on behalf of another person and that are essential as elements of a framework on which to build a theory of surrogate decision making. How, then, does a decision maker decide what the appropriate response is when making a surrogate decision? The model of surrogate decision making that we propose has two components: perspective taking and a simple choice rule (see Fig. 1).

### *Taking perspectives*

From subjective experience, it seems reasonable to assume that in making a decision on behalf of another person, a decision maker would ask, "What would I do in that situation?" "What do I think is best for the other person?" and "What would the other person want?" If the decision maker fails to do so and, instead, computes his or her own egocentric preference for the outcome, either because of a failure of empathy or by selfish intent, then the decision maker fails

to be a surrogate. In the model that we propose, the surrogate decision maker facing a significant decision intends to simultaneously construct all four perspectives in the computation of the relative merits of each outcome. That is, decision makers examine the choice in terms of what they would do if they were in the other person's position (projection), what they believe the other person would choose to do (simulation), what the other person should do (benevolent), and what is the best outcome for the decision maker (egocentric). The surrogate's ability to adopt another person's perspective is assumed to be determined by his or her ability to engage in the perspective-taking component of empathy (Davis, 1983), or to construct a second-order mental model of another person. So, in situations in which the surrogate and the recipient have different goals and values that are likely to affect the choice that is made, the surrogate's ability to detach from his or her own preference will be determined by empathetic perspective-taking ability. Although it is unlikely that a decision maker would admit to making a wholly egocentric surrogate decision, it seems likely that this perspective will nonetheless have some influence on the decision that is eventually made. However, we also think that it is inevitable that a surrogate decision maker will construct a projected and a benevolent mental model even when, as in the case of end-of-life care, instructed to construct only a simulated decision. In light of this, how does the decision maker decide which perspective is the best?

*Choosing between perspectives: The choice rule*

Once the surrogate decision maker has constructed the four perspectives and attempted to compute the relevant expected outcomes, a final choice must be made. In situations in which the simulated and projected preference is the same as the benevolent option, the outcome is essentially rational. However, the model requires a choice rule in the likely scenario that the perspectives produce differ- ent preferences. We propose a simple weighted linear choice rule in which the decision maker selects the majority option from the four perspectives that have been

modelled. Both internal and external factors—namely, intent, significance, accountability, calibration, and empathy—determine the voting weight for each perspective and the relative importance given to each (see Table 1). For example, if the surrogate intends to make a totally egocentric decision, then that perspective has a voting weight of 1, and the remaining perspectives either are not computed or, if they are computed, are ignored. Either way, the result is that the remaining voting weights are set to 0. Similarly, if the surrogate intends to make a benevolent decision, then that voting weight will be set higher than the simulated perspective. In this way, the benevolent decision maker can ignore the wishes of the recipient of the decision in cases where the two perspectives disagree. We suspect that this arrangement of voting weights is common among naive parents.

As in any form of decision making, the significance of the outcome is likely to affect the computation of alternative perspectives. Standard laboratory gambles often appear to be suboptimal—perhaps because they tend to be made on the basis of heuristics—when the financial outcomes are hypothetical, compared to when they are larger and the effort of engaging in analytic processing is worthwhile (Shanks, Tunney, & McCarthy, 2002; Tunney & Shanks, 2002). In line with this, surrogate decision makers are more likely to go to the effort of computing and considering all possible perspectives when making profound decisions such as decisions about their parents' end-of-life care than they are when choosing dinner for their children.

In general, people may be less likely to be asked to justify trivial decisions than they are to account for profound ones. Accountability might take the form of the expectation that we will have to verbally justify our deci- sions either to the recipients themselves or in a legal context such as a tribunal or an inquest. Decisions that we expect to be held accountable for are more likely to involve the computation of all possible perspectives and appropriately weighted votes. For example, a next-of-kin end-of-life decision is expected to be a fully simulated surrogate

decision, in which case the decision maker should be able to state that all possible perspectives were considered and that the patient's simulated perspective was given the greatest weight. On the other hand, one might expect that parents making either a trivial (e.g., about dinner) or profound (e.g., about blood transfusion) decision on their child's behalf would give a greater weight to the benevolent perspective and in many cases underweight their own egocentric preferences or the simulation of their child's preferences.

Surrogate decision makers are more likely to know or be able to predict decisions for people with whom they are more familiar (Tunney & Ziegler, 2015; Ziegler & Tunney, 2012). Our model incorporates the notion of calibration, which captures the construal or psychological distance between the surrogate and recipient (Trope & Liberman, 2010) and is a measure of how accurate the surrogate decision maker believes his or her simulated decision to be. Surrogates are likely to believe that they are not likely to be accurate (i.e., well calibrated) in predicting the wishes of a recipient who is remote in construal distance compared to someone with whom they are more familiar. Thus, perceived calibration affects the weighting that the surrogate places on his or her simulated judgment. Surrogates making decisions for recipients who are far in construal distance may place less voting weight on that perspective than on a projected perspective. For this reason, decisions made on behalf of strangers may be more optimal than those made for people with whom we are more familiar, such as our relatives (Tunney & Ziegler, 2015; Ziegler & Tunney, 2012). On the other hand, surrogates may place a greater voting weight on a simulated perspective than a projected or benevolent perspective for recipients with whom they perceive themselves to be well calibrated.

*Summary*

Decisions for others are often assessed as a function of how close they are to the stated wishes of the surrogate. This often paints a bleak picture of differences between the surrogate decision and the decision that the recipient would have made were he or she able to do so.

However, surrogate decision makers may not have as their goal to match the wishes of the recipient, but instead to make what they perceive to be an optimal or benevolent deci- sion. The model of surrogate decision making that we propose has at its core the notion that, in attempting to make decisions on behalf of other people, the decision maker simulates his or her own preferences and the perceived preferences of the other person.

We present a framework by which we can assess the intention and accuracy of surrogate decision makers in the existing literature and that we hope will frame future research. In particular, research should consider the extent to which a surrogate decision may be a projection of the surrogate's own wishes, a benevolent recommendation, or a true simulation of another person's mind. The model that we present captures the cognitive component of empathy (perspective taking) that provides a normative benchmark for the accuracy of a surrogate decision maker. Our model also describes how an individual decision maker's ability to simulate another person's decision-making processes and anticipate his or her wishes is likely to be distorted according to internal factors such as the decision maker's emotional ability to empathize with another person and external factors such as the psychological distance between the two people. For cases in which these perspectives disagree, we propose a simple choice rule that predicts situations in which a surrogate decision maker might accurately reflect the recipient's wishes and situations in which the decision maker may fail to do so. To our knowledge, there exists no other domain-general model of the psychological processes that underlie what is actually a common, critically important, and increasingly needed human faculty.

Note

1. We use the word recipient to denote the person for whom the surrogate makes the decision. In some circumstances, the word ward or legatee may be more appropriate. The word beneficiary may not be appropriate, since there are circumstances in which the recipient may not benefit from the decision.

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FIGURES

Figure 1: A model of surrogate decision-making in which the decision-maker simulates the choice outcomes and decides among them using a simple choice rule. Choice weights are determined by the decision-maker's intentions and familiarity with the recipient.

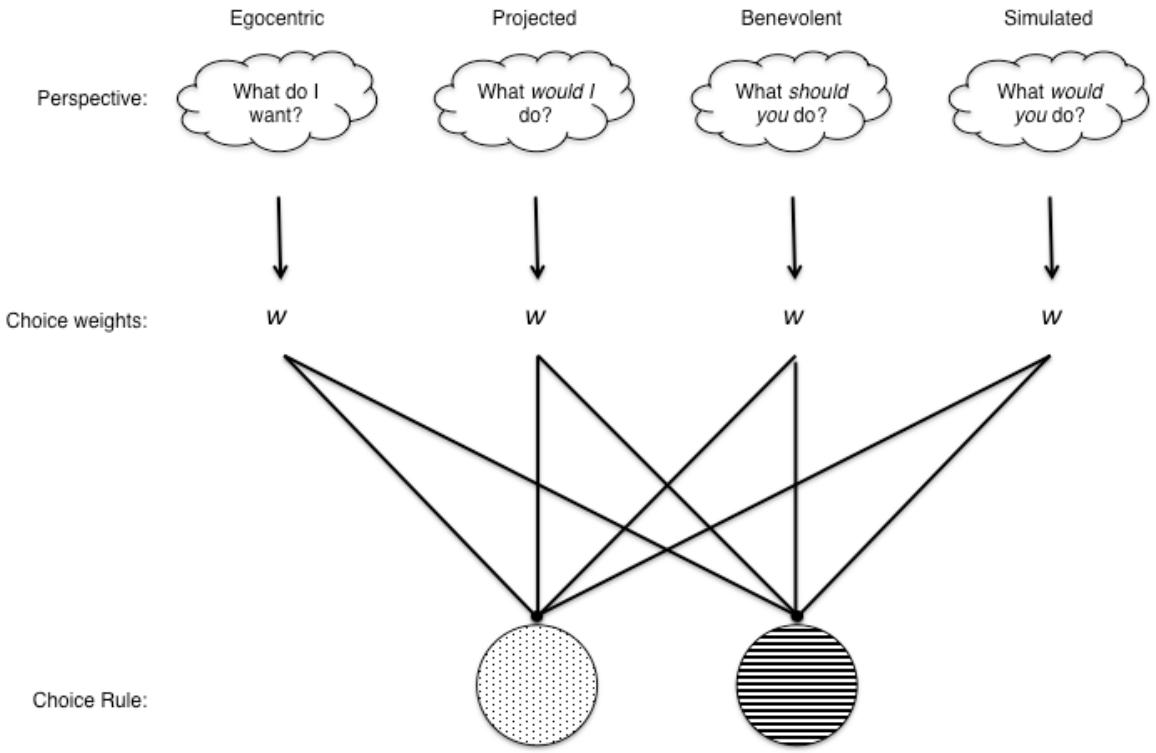
Egocentric
Projected
Benevolent
Simulated
Perspective:
What do I want?
What would I do?
What should you do?
What would you do?
Choice weights:
w
w
w
w
Choice Rule:

Table 1. Categories, Relevance, and Weighting of Biasing Factors in Surrogate Decision Making

| | Biasing factor | | | |
|---|---|---|---|---|
| | *Intent* | *Empathy* | *Significance* | *Accountability* |
| *Explanation of Category* | The intention of the decision-maker in choosing a perspective, e.g. benevolent, projected, egocentric, or simulated. | An individual difference internal to the decision-maker. | The likely impact of the outcome of the decision that is external to the decision-maker. | The likelihoo surrogate wil to explain an countable for sion. |
| *Relevance and weighting* | Selfish decision-makers may place greater weight on an egocentric perspective, the benevolent decision -maker might intend to make a best-interest judgement and weigh they perspective accordingly.<br><br>In many circumstances the surrogate decision maker is unlikely to admit to adopting an egocentric perspective, but the model assumes that even underweighted perspectives will have an influence on the ultimate choice. | More empathic people are likely to understand that other people might have different preferences than themselves and assign a greater weight to the *simulated* perspective.<br><br>Less empathic people may believe that other people have similar preferences to their own and assign a greater weight to the *projected* perspective. | Decisions with profound consequences are more likely to be weighed towards the required benchmark (substituted judgement or best interest). End of life decisions are more likely to be *simulated* for well-calibrated people, and either *projected* or *benevolent* for poorly calibrated people.<br><br>Decisions with trivial consequences are more likely to vary in the decision weights dependent upon the surrogate's intent or accountability of decision -making. | Decisions for surrogate is li held account place greater the required For example might place g weight on the perspective w partner migh greater weigh simulated per<br><br>Decisions tha likely to requ ability will be by the intenti decision mak |