



## Toward a Psychology of Surrogate Decision-Making

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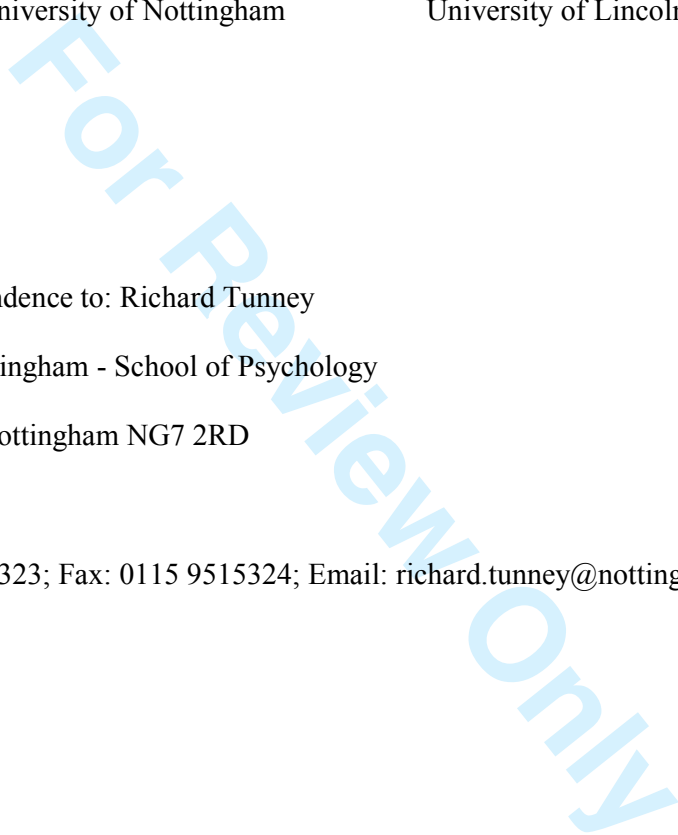
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Toward a Psychology of Surrogate Decision-Making

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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.

For Review Only

### Toward a Psychology of Surrogate Decision-Making

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<sup>1</sup> 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

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domains studied, 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 from decisions made for self, the pattern of results in the literature cannot be understood. But the pattern becomes predictable once 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 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 is therefore with respect to 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 their behalf that maximizes their own, rather than the recipient's outcome. This could occur because the decision-maker is essentially selfish, ill-willed, or

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unable to adopt the perspective of another person. Whatever the reason or motive, the egocentric surrogate decision-maker is an oxymoron. Any agreement between the recipient's wishes and their 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 US (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 a surrogate intends to make a fully substituted judgment (the decision that the recipient would have made if they were capable), they may fail to accurately simulate the recipient's wishes.

*Projected.* The decision-maker decides what they would do, or prefer, if they were in that 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 they 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 decision is the extent to which it matches that of the recipient.

*Benevolent.* The decision-maker decides what they think is best for the recipient irrespective of the recipients actual or simulated goals or desires. The judgment is based on an appraisal of the utility of the outcomes, not necessarily the surrogates' own, but on the basis of their 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

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terms of intent, but not outcome (i.e. the decision-maker co-incidentally 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 themselves). This sort of decision-making may well be common in 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 UK ("Mental Capacity Act," 2005) requires benevolent decisions when the patient's wishes are unknown, this still requires some consideration of the recipient's values and stated wishes.

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 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 Figure 1).

### A Model of Surrogate Decision-Making

#### *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

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computation of the relative merits of each outcome in order to act as surrogate. That is the decision-maker examines the choice in terms of what they would do if they were in the other person's position (projection) and what they believe the other person would choose to do (simulation) and what the other person should do (benevolent), and what is the best outcome for them (egocentric). The surrogate's ability to adopt another person's perspective is assumed to be determined by their 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 their own preference will be determined by their 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 only construct a simulated decision. In light of this how does the decision maker decide which perspective is the best?

*Choosing between perspectives*

*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 then the outcome is essentially rational. However, the model requires a choice rule in the likely scenario that the perspectives produce different 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. The voting weight for each perspective is weighted according to both internal and external factors; namely *intent*, *significance*,





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the greatest weight. On the other hand, one might expect that a parent making either a trivial (e.g. dinner) or profound (e.g. 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 familiar compared to those who they are less familiar (Tunney & Ziegler, 2015; Ziegler & Tunney, 2012). Our model incorporates the notion of *calibration*, to capture the construal or psychological distance of the surrogate and recipient (Trope & Liberman, 2010), and is a measure of how accurate the surrogate decision-maker believes their simulated decision to be. A surrogate is likely to believe that they are not likely to be accurate (i.e. well-calibrated) in their predictions of the wishes of a recipient or situation that 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 their 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, a surrogate may place a greater voting weight on a simulated perspective than a projected or benevolent perspective for recipients who 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 in decision-making. However, surrogate decision-makers may not have as their goal to match the wishes of the recipient, but instead try to make what they perceive to be an optimal or benevolent decision.

## Surrogate decision-making

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 their own preferences and their perceived preferences of the other person.

We present a framework by which we can assess the intention and accuracy of a surrogate decision-maker 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 our 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 their wishes is likely to be distorted according to internal factors such as their emotional ability to empathise with another person, and external factors such as the psychological distance between the two people. In situations 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 they 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.

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## FOOTNOTE

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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Table 1. Factors that influence decision weights in surrogate decision-making. The decision-maker adjusts the decision-weights in order to place greater or less emphasis on the predicted choices of each perspective that they attempt to model. The weight for each perspective can be thought of as an aggregate of each biasing factor, and this in turn determines the importance given to each vote.

	Biasing factor				
	<i>Intent</i>	<i>Empathy</i>	<i>Significance</i>	<i>Accountability</i>	<i>Calibration</i>
<i>Explanation of Category</i>	The intention of the decision-maker in choosing a perspective, i.e. 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 likelihood that the surrogate will be required to explain and be held accountable for their decision.	Describes the relationship between the decision-maker and recipient. Incorporates psychological and construal distance.
<i>Relevance and weighting</i>	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 the perspective accordingly. 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 <i>simulated</i> perspective. Less empathic people may believe that other people have similar preferences to their own and assign a greater weight to the <i>projected</i> 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 <i>simulated</i> for well-calibrated people, and either <i>projected</i> or <i>benevolent</i> for poorly calibrated people. 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 which the surrogate is likely to be held accountable will place greater weight on the required perspective. For example a parent might place greater weight on the benevolent perspective while a life-partner might place greater weight on the simulated perspective. Decisions that are unlikely to require accountability will be determined by the intentions of the decision maker.	Surrogates who are closer or more familiar with the recipient are likely to believe that a <i>simulated</i> perspective is an accurate prediction of the recipient's preferences and give that perspective the greatest weight. Surrogates who are far in construal distance or unfamiliar with the recipient may not have confidence in a simulated perspective and may instead assign a greater decision weight to either a <i>projected</i> or a <i>benevolent</i> perspective.

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FIGURE CAPTION

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.

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