The Patient preference predictor and the objection from higher-order preferences

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ABSTRACT

Recently, Jardas *et al* have convincingly defended the patient preference predictor (PPP) against a range of autonomy-based objections. In this response, I propose a new autonomy-based objection to the PPP that is not explicitly discussed by Jardas *et al*. I call it the 'objection from higher-order preferences'. Even if this objection is not sufficient reason to reject the PPP, the objection constitutes a pro tanto reason that is at least as powerful as the ones discussed by Jardas *et al*.

The patient preference predictor (PPP) is a computer-based algorithm that can predict the preferences of people who are incapable of making treatment decisions for themselves, based on sociodemographic features of the patient.[1] There are several proposed ways to implement the PPP, such as letting the PPP unilaterally decide what treatment the patient receives, or using the PPP as a decision support tool for decisional surrogates.

Jardas *et al* defended the PPP against six different objections, all of them based on autonomy-based concerns.[2] In this response, I propose a new autonomy-based objection to the PPP that is not explicitly discussed by Jardas *et al*. I call it the 'objection from higher-order preferences'.

The objection from higher-order preferences takes as its starting point the empirical finding that many people have strong 'second-order preferences' about which decision procedure they would prefer to be used, if they were incapable of making treatment decisions for themselves.[3] What exactly is a second-order preference in this context? We can think of a second-order preference as any preference that a patient might have with regard to how their treatment preferences are predicted.

Here is an example: Adam feels very strongly that if he is ever incapable of making treatment decisions for himself, his mother whom he hasn't talked to for years should have no say on the matter. This is a second-order preference, as opposed to the first-order preference of which treatment to choose. Empirical studies suggest that many people have strong second-order preferences about how their first-order preferences are predicted.[4] Some may even care more about how the decision is made, than what the decision is. For instance, many people worry about burdening their families with a tough decision,[5] and some even care more about this than they care about what their family might decide.

As Jardas *et al* mention (although they do not use the same terminology), John has also raised an objection to the PPP based on concerns for second-order preferences. John made the point that respect for patient autonomy might imply that there are certain categories of background factors that a PPP should not employ.[6] For instance, a religious man might prefer that the PPP takes his religion into account, but not his ethnicity. My objection is broader than John's, since mine concerns any second-order preference patients might have, not only concerns about which background factors the PPP takes into account. Still, it may be helpful to categorise John's well-known objection as an instance of mine.

Under normal circumstances, we have good autonomy-based reasons to respect people's first-order preferences, as well as their second-order preferences. After all, respect for patients' autonomy is generally one of the cornerstones of medical ethics.[7] Unfortunately, respect for second-order preferences and respect for first-order preference may lead to completely difference treatment decisions. Suppose that Adam has a severe cerebral haemorrhage and that surrogate decision making by Adam's family is called for. Suppose also that Adam's mother is convinced that her unconscious son would have preferred not to stay on life support, while all the other relatives are convinced that Adam would have preferred to stay on life support. In fact, Adam would have preferred not to stay on life support, but he never got around to signing an advance directive, and he never revealed his preference to anyone. Adam has a strong second-order preference that his mother should have no say at all in the decision, regardless of what her opinion might be. In this case, respecting Adam's second-order preference would result in Adam staying on life support (which Adam would not have preferred) because the input from the rest of the relatives would be decisive. If we instead only respected his first-order preference of not staying on life support (suppose we used the PPP to predict this preference), then it would result in discontinuing Adam's life support (which Adam would have preferred).

In the absence of any evidence of the strengths of the respective types of preferences, there seems to be no principled reason to prioritise first-order preferences about treatment selection over second-order preferences about how the treatment is selected. In the case of Adam, it would be worse not to prioritise the second-order preference of discounting the mother's opinion.

As Jardas *et al* recognise (p. 308), sometimes we have reason to believe that patients care more about their first-order preferences than their second-order preferences, and sometimes we don't. They cite an empirical study[8] suggesting that most patients care more about their first-order preferences than their second-order preferences. This empirical result is then used by Jarvas *et al* to justify the practice of employing the PPP by default (p. 309). But since we have no principled reason to prioritise first-order preferences over second-order preferences, simply deciding to use by PPP may well violate patients' autonomy just as much as simply deciding on a treatment with no sensitivity to what treatment the patient would have preferred. According to one study, roughly 15% of patients would prefer the PPP not to be employed.[5] If we found out that the same percentage preferred, say not to stay on life support, then proponents of the PPP would probably not think that this alone would justify choosing that treatment by default. So why think differently about second-order preferences? Predicting if a patient is a PPP sceptic might well be as important for patient autonomy as predicting if people prefer one treatment over another.

However, trying to predict if a patient is a PPP sceptic to respect the patient's autonomy may lead to an infinite regress. If we have no principled reason to prioritise first-order preferences over second-order preferences, then we might not have a principled reason either to prioritise second-order decisions over third-order decisions, and so in infinitum. For

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example, the best way to predict if Adam would have preferred the PPP to be employed may well be to employ the PPP. And the best way to predict if Adam would have preferred the PPP to be employed to do *that* may well be to employ the PPP. And so on.

Perhaps it is unrealistic to think that people care just as much about any higher-order preference as they do about any first-order preference. But even if the regress is not infinite, we at least have reason to believe based on empirical studies that many patients care deeply about their second-order preferences, as mentioned. This should at least give us pause and make us reconsider how we determine if the PPP should be employed or not in specific situations.

Just like most of the autonomy-based objections discussed by Jardas *et al*, the objection from higher-order preferences is not only an objection against the PPP. It is an objection against any decision method we might use to decide first-order questions about what patients' preferences would be in situations in which they are incapable of deciding for themselves. In other words, it speaks against any type of surrogate decision making that consists in predicting people's first-order preferences. Thus, if the objection is correct, it implies that proponents of the PPP cannot simply replace the PPP with another preference predictor to avoid the objection (although other preference predictors may be less likely to violate first-order or second-order preferences). This is important given that the PPP and similar preference predictors are generally very popular among patients and surrogates alike.[9]

In the literature, there is a competing approach that does not involve the idea of trying to predict people's preferences. On this approach, if the patient has not signed an advance directive stating what her preferences are, then it should be entirely up to the doctors to decide what is in the best interest for the patient, regardless of what the preferences the patient would predictively have been in the counterfactual scenario where they temporarily regained decision capacities.[10] This approach follows the 'best interest' standard in medical ethics. The objection from higher-order preferences does not apply to this approach, because it does not attempt to predict patient preferences in the first place. The fact that it does not take patient preferences into account is, however, also one of the approach's biggest weaknesses.

But ironically, this competing approach is also problematic for autonomy-based reasons, which is part of the justification for developing the PPP in the first place.[2] It completely circumvents the autonomy of the patient by ignoring what preferences the patient might have. We; therefore, face something in the vicinity of a dilemma: If we simply employ the PPP to predict patients' preferences by default, then we run into the autonomy-based objection from high-order preferences. But avoiding this objection by abandoning the idea of predicting preferences altogether implies circumventing the autonomy of patients altogether. A promising solution to this dilemma is to proceed with the PPP, but look for better ways to take serious the second-order preferences of patients.

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