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Why (some) unrealistic optimism is permissible in patient decision making

In their fascinating and timely paper, Blumenthal-Barby and Ubel argue that it is often unclear whether patients exhibit hope, are unrealistically optimistic, in denial or self-deceived, as distinctions made on the basis of belief accuracy are problematic. The authors maintain that in most cases, we should respect patient decisions, even when they exhibit some optimistic bias. We agree on all key points and here intend to provide additional evidence to support the authors' arguments, drawing attention to the fact that in the health domain, as in other areas of life, being unrealistically optimistic can be an asset, leading to self-fulfilling prophecies and giving people a higher chance of living the life they desire.

In this brief commentary, (1) we offer further reasons against the view that specific individuals who exhibit optimistically biased beliefs need be mistaken; (2) we show that unrealistic optimism has the potential benefit of supporting a person's agency with positive implications for motivation, sustained pursuit of personal goals, and increased likelihood of goal achievement; and (3) we argue that it would not be justified to prevent people from making decisions based on their optimistically biased beliefs in the health domain but not in other life domains.

1. Are positively biased beliefs mistaken?

Blumenthal Barby and Ubel point out that it is hard to assess how much accuracy is needed to make an optimistic belief count as unrealistic or mistaken, and that non-numerical likelihood assessment such as 'likely', 'unlikely', 'very unlikely' are subjective, so it is hard to judge whether different individuals even assign the same quantitative values to them. We agree with both these points and want to highlight another: Individuals are said to be unrealistically optimistic when their estimate of risks diverges from an objective measure. But risk estimates in medicine provide numbers which show what proportion of a certain population will experience a certain outcome. If a certain procedure has a 1 in 10 success rate but 50% of people who are offered this procedure think it will be successful in their case, some of them must be mistaken. However, it is difficult to know which of these individuals are mistaken in their risk assessment. Population risk estimates cannot take into account the specific information individuals have about themselves which may make a certain outcome more likely.

More information should in principle make a prediction more precise. However, it also provides an entry-point where individuals can apply motivated reasoning to show that they are special in ways that makes a desired outcome more likely. The biased way in which people take into account information supporting their desired outcome and discount undesirable information may well make individuals' expectations end up being unrealistic (Kuzmanovic, Jefferson, & Vogeley, 2015). Nevertheless, it is entirely possible that their case is indeed special, and a population-based risk assessment is by necessity too coarse-grained to take this into account. Furthermore, one of the factors affecting medical outcomes may be the optimistic beliefs themselves. This does not mean that beliefs about treatment success cannot be unrealistic (cf. Jefferson, Bortolotti, & Kuzmanovic, 2017), but that it may be impossible to ascertain whether and, if so, how unrealistic they are.

2. What are the benefits of unrealistically optimistic beliefs?

There is a long-standing debate in the psychological literature about whether entertaining optimistically biased beliefs is beneficial or detrimental to a person's physical and mental wellbeing—starting from the response by Colvin & Black (1994) to a seminal paper by Taylor & Brown (1988) arguing for the benefits of unrealistic optimism. As highlighted in recent reviews of the debate (cf. Bortolotti & Antrobus 2015), the jury is still out: in some contexts, optimistically biased beliefs seem to lead agents to take unnecessary risks and result in their being unprepared to face challenges and setbacks; in other contexts, optimistically biased beliefs actively contribute to agents' motivation and productivity, and are instrumental to their deploying effective coping strategies in critical situations. Both sides of the debate present convincing cases: if you believe that your chances of getting lung cancer are low, you will not be incentivised to stop smoking. However, if you believe it is up to you to prevent breast cancer from coming back, you will be determined to adopt a healthier lifestyle. Both beliefs are unrealistic and positively biased, so what makes the latter more desirable than the former?

Our view is that it is not the extent to which beliefs are unrealistic that matters, but the role they play in supporting agency (Bortolotti 2018). Optimistic beliefs that are unwarranted at the time of their adoption contribute to the agent's chances of success if they support her sense of herself as a competent and efficacious agent, and enable her to see her goals as attainable and valuable. Such beliefs make agents more resilient and persistent in the pursuit of their goals. Persistence does not guarantee goal achievement, but makes it more likely. If patients exhibit empowering beliefs, it would be a mistake to prevent them from maintaining such beliefs or basing decisions on them, for many of the reasons that Blumenthal-Barby and Ubel detail in their paper, including the fact that optimistically biased beliefs do not always result in risky behaviour or compromise autonomous decision making, and the fact that decisions based on optimistically biased beliefs often create opportunity gains.

There is another important point the authors raise: optimistically biased beliefs are *epistemically irrational*, because they are not supported by the best evidence available to the agent, but may be *practically rational*, enabling people to achieve their goals. We would want to take this point even further. Optimistically biased beliefs are epistemically irrational at the time of their adoption, and indeed their not being supported by the best available evidence is a better description of their epistemic faults than their being false or mistaken for the reasons detailed above. However, by supporting agency in the way we described, some optimistically biased beliefs contribute not only to the person's *practical* rationality, as the authors rightly argue, but also to the person's *epistemic agency*. When a person is motivated to continue to pursue her goals in the face of setbacks, and so has better chances of achieving her goals, this includes her *epistemic* goals, such as gaining a good understanding of her situation. Although the positive contributions of optimistically biased beliefs do not cancel out their being adopted in an epistemically irrational way, they should certainly be taken into account in our normative analysis of their role.

3. Does the presence of unrealistically optimistic beliefs invalidate patient's treatment preferences?

The fact that unjustifiably optimistic expectations can help people cope provides a further reason against trying to talk individuals out of them. Here we would like to raise two points. First, people are encouraged to adopt and maintain unrealistically optimistic beliefs in a number of situations

where such beliefs are associated with successful performance, and it is not clear that optimistically biased beliefs in the health domain present additional challenges. The other point is that in decisions to offer or administer treatment, clinicians should be guided by their expert judgements on whether the treatment is in the best interests of their patients, given the risks and benefits associated with it, and by the wishes of their patients. The extent to which some of the patients' beliefs about the chances that the treatment is successful is optimistically biased is not easy to ascertain and does not seem to be a relevant consideration.

In some contexts, such as sport and education, an unwarrantedly strong self-belief is even considered to be an asset which increases chances of success (cf. Sharot 2012). If we were committed to stopping people from making important decisions based on their unrealistically optimistic expectations, then we should stop them wanting to have children, doing PhDs in philosophy, or pursuing a career in acting. But we do not do that. So, why should people with a medical condition be prevented from enjoying the benefits of optimistically biased beliefs? The concerns are, presumably, that their medical conditions place them in a position of increased vulnerability and their biased beliefs are an obstacle to making good, informed decisions about their treatment.

But both concerns can be sidestepped in those situations in which the clinician provides all the relevant information to the patient and, after weighing up the risks arising from the treatment and its chances of success, believes that proceeding with the treatment can be justified. Matters would be different if clinicians were asked to offer and proceed with treatment against their own better medical judgment because a patient insisted that this should happen based on optimistically biased expectations. In such cases, though, the core issue is that the patient's wishes conflicting with expert opinion are likely to lead to an undesirable outcome, such as taking unnecessary risks which stand in no proportion to possible gains. Whether the patient's wish depends on an unrealistically optimistic belief seems irrelevant.

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