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# The self over time

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People often have difficulty making decisions that maximize well-being over time, and researchers have explored various reasons for why such poor ‘intertemporal’ decision-making may arise. In this article, I review a body of work that has focused on how the relationship between current and future selves may influence judgments and decisions. Namely, I spotlight research suggesting that the future self is often thought of as another person and how feelings about this ‘other’ person impact decisions across domains. I then review two insights gleaned from this research: in order to positively modify long-term decision-making, interventions may wish to focus on (1) strengthening the felt bond between current and future selves, or (2) reducing the subjective pain of sacrifices made by the current self. I close with several questions future research may wish to address.

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Recent surveys of retirement readiness in America paint a somewhat bleak picture: approximately 4 out of 10 working adults have less than \$10 000 in retirement savings [1], and 50% of households will fall short of meeting their retirement goals [2]. Unfortunately, this sort of dreary forecast also applies to other domains where a long-term perspective matters, such as environmental decision-making [3]. If there is a positive spin to these somewhat depressing statistics, it is that social scientists have been working on understanding why exactly it is that so many people (not just Americans) give priority to the wants and desires of today in a way that results in poor outcomes over time. Psychologists, for example, have found that people have difficulty accurately forecasting the emotions that they will experience in the future [4], leading them to make decisions that seem ‘right’ in the long-run but often end up falling short of ideal. Others have shown that there

are differences between individuals in terms of willpower (a resource that can undoubtedly help when it comes to making decisions over time [5]). Other research over the past 10 years takes a different approach and investigates how the relationship people have with their future selves can help explain how long-term decisions are made. This article provides a brief overview<sup>1</sup> of the theoretical underpinnings of this approach, the empirical findings that have emerged, and questions to be addressed by future research.

## Thinking of the future self as an other

Philosophers are fond of posing the Ship of Theseus riddle: if a ship leaves Los Angeles and travels around the world, but during its journey, gradually replaces all of its parts, is it the ‘same’ ship when it returns to port? In a similar way, theorists have asked whether people tend to think of themselves as remaining the same or different over time. In the modern era, Parfit [6] has been most influential in suggesting that the sense of ‘connection’ that individuals feel to distant, future selves may feel weak, and substantially weaker with greater periods of time, to the point that some very distant future selves may feel like different people altogether — and even, strangers. Paul [7] notes that in much the same way as we have a hard time truly entering another person’s mind (i.e., really knowing their thoughts, feelings, and desires), we can likewise never truly know our future selves’ wishes and desires.

Recent work indicates that there is at least some traction to this argument that the future self may be thought of as another person. When imagining a birthday in the distant future, for instance, research participants were more likely to take on a third-person perspective and see their future self as another person in their mind’s eye [8]. Undergraduates also made decisions for their future selves that were more on par with the decisions that they made for their classmates rather than for themselves (e.g., by signing their future selves up for a similar amount of volunteer work as they assigned to others [9]). Moreover, compared to thinking about ourselves right now, thinking about a self in ten years’ time elicits a similar neural pattern to that which occurs when we think about another person [10,11]. Along similar lines, the same

<sup>1</sup> For longer, more comprehensive reviews, please see Hershfield [30] as well as Hershfield and Bartels [31\*\*]. Notably, the latter review categorizes various theories that deal with present and future selves (continuity theories, self-as-other theories, and failure of imagination theories), while the present article — in an effort toward brevity and accessibility — draws on these different accounts.

neuroanatomical region that allows for taking the perspective of other people (the temporal parietal junction) also seems to allow us to take the perspective of our future selves: a recent study used transcranial magnetic stimulation (TMS) to temporarily shut off this region, finding that research participants not only experienced diminished empathy toward others, but also experienced diminished empathy toward their future selves (by opting for more smaller rewards that they could consume immediately compared to larger rewards for which they had to wait [12]). Finally, Molouki [13] found that research participants place similar weight on various psychological constructs (need, liking, deservingness, and similarity) when making decisions for other people as they do when making decisions for their future selves. The analogy of the future self as another person may seem like a strange one, but it is rather powerful when it comes to understanding long-term decision-making.

Although this is oversimplified, the general idea is the following: People are inherently self-interested, and often act in ways that benefit themselves over strangers. And, if in fact, the future self *feels like* or *seems like* a stranger, then it may make sense to place more weight on the present over the future when making decisions that have consequences at different points in time (e.g., ‘Why shouldn’t I eat that large piece of chocolate cake now? The person who will feel its effects on their health and waistline isn’t me: it’s my future self who feels like a different person entirely.’). However, as Whiting [14] notes, people do not always act in truly self-interested ways. People regularly make sacrifices for others, such as their children, aging parents, spouses, and closest friends. Drawing on this idea, when it comes to long-term decision-making, it may be okay to consider the future self as another, different person. What matters, however, is how that other, different person is considered: is it a close other with whom one shares an emotional connection, much like an older relative or friend? Or, is it a distant stranger who barely registers in our thoughts? Seeing the future self as another person, albeit one who feels close to us now, may allow for more patient long-term decision-making. Seeing that distant future self as an emotional stranger, however, may result in decisions that prioritize today over tomorrow.

### How conceptions of the future self-affect decision-making

Several recent papers provide support for the idea that the way the future self is considered can influence the decisions that people make: on both correlational and causal levels, people who feel more connected to their future selves have accumulated more assets [15], are more patient on financial saving tasks in laboratory settings [15,16], opt for more ethical (rather than unethical) courses of action [17–19], procrastinate less [20], and exercise more [21]). In short, feeling a greater emotional

connection with one’s future self is linked to behaviors that are more patient in nature, even when statistically controlling for other relevant variables (e.g., age, education, income, gender). In ongoing work, my collaborators and I are investigating the extent to which such relationships are generalizable across large swaths of the population (e.g., people who are below the federal poverty level), and the extent to which such relationships remain robust even in the face of other related psychographic constructs (e.g., the propensity to plan).

### Possible interventions and future directions

These findings point to two important insights in the ongoing quest to help people make more patient long-term decisions. First, it may be helpful to strengthen the relationship that exists between one’s current and future selves. How might this be accomplished? Given that the future self can be considered at least analogous to another person, we can consider the various ways that previous research has successfully encouraged people to take better care of others. In the charity domain, for example, researchers have consistently found that when charity recipients are more vivid, they receive more in donations [22]. Vivid examples are emotional, and emotion tends to drive behavior more than cold, calculated thought. To this end, a series of studies have explored the effectiveness of making the future self more vivid, and by extension, more emotionally evocative. Namely, researchers have employed virtual reality and age-progression software so that research participants have realistic interactions with older versions of themselves, finding that exposure to vivid, age-progressed images prompt more patient long-term intentions and behaviors in financial [23], ethical [18,19], and health [24] domains. Vivid examples of the future self need not be solely confined to the visual realm, however. In a recent field study, for example, my collaborators and I used a mad-lib style intervention to prompt Mexican citizens to spend time actually thinking about the interests, desires, and lifestyles of their future selves, before making a decision about whether to sign up for automatic saving accounts. The power of such interventions is that they do in fact make the future self more salient, and more vivid. As the author Karl Knausgaard [25] wrote, there were certain academic topics he could ‘account for’ but knew nothing about (e.g., World War II), until he spent time reading about them and more thoroughly imagining their existence. In much the same way, people may be able to ‘account’ for their future selves (i.e., by knowing their future selves will exist), but have a difficult time feeling anything toward these distant selves until prompted to consider them in more vivid ways.

In a related intervention, the notion that the future self can be thought of as another person was taken to a more literal level. Many retirement appeals frame retirement saving as an act of self-interest, but if the future self can be considered

another person, then such appeals may be poorly framed. As a result, in a field study with university employees, one group of adults were asked to consider the responsibility that they had to their future selves in retirement, while another group of adults were reminded that saving for retirement would be in their best self-interest. Overall, the message that played on the notion that the future self is another person (the message that asked people think of the responsibility they have to their future selves) worked better at prompting positive changes to 401k accounts, and especially so for people who already felt a strong sense of emotional connection to their future selves [26]. Intuitively, a message asking people to take responsibility for others may only be effective if people already have a reason to care for those others.

The interventions discussed above directly tackle the relationship between current and future selves by either prompting a more vivid, realistic conception of the future self or by prompting a heightened sense of responsibility for that future self. However, it may often be difficult to actually change the somewhat impoverished relationship that many people have with their future selves. Thus, the second insight from this body of work is that there may be circumstances when it is beneficial to not directly invoke the future self, but to instead frame sacrifices felt by the present self as being less burdensome. To this end, drawing on earlier work [27], we recently demonstrated higher take-up rates of an automatic savings program when contributions were framed in daily terms — which presumably feel less onerous to the current self — than monthly terms [28].

Clearly, many research questions remain. For example, although this article began by discussing retirement saving, many Americans face problems that are more short-term in nature (e.g., 25% would have a difficult time coming up with \$2000 in an emergency [29]). Accordingly, are there different psychological processes that underlie connections to future selves at different points in time? Furthermore, we know nothing of the origins of the tendency to consider the future self as another person. And, when in course of child development does this tendency emerge? Knowing both the origin of the future self as an other, as well as when this tendency develops, might help researchers better pinpoint interventions at different stages in the life span. Whatever the case, in order to positively affect long-term decision-making, interventions could focus on strengthening the emotional bond between selves over time, or reducing the subjective pain of sacrifices made by the current self.

### Conflict of interest statement

Nothing declared.

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