Behavioral Finance in Action

Psychological challenges in the financial advisor/
client relationship, and strategies to solve them

**Part 5 – Addressing the Disinclination to Save:
The Behavioral Time Machine**

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Addressing the Disinclination to Save–
The Behavioral Time Machine

Many people were caught off guard in the recent financial crisis as they watched with alarm the value of their 401(k) accounts plummet, the price of their house decline and their job security threatened or even lost entirely. Most people imagined these three pillars of future financial stability to be separate: if one pillar started to crumble, the other two would compensate. The fact that under a confluence of certain financial circumstances their fates might be closely correlated was a timely reminder of the interconnectedness of things in our financial worlds. It also exposed a chronic problem: inadequate savings, not just for retirement but also for a source of stability in blustery financial climates in the future.

As financial advisors know, people find the task of saving adequately to be very challenging. Standard economic theory of saving assumes that people will be able to grasp how much they need to save, for retirement and for other contingencies; and then have the self-control to forgo current rewards in favor of later benefits.

Even those people who can do the math (it isn't easy) often find their best intentions derailed by the lure of immediate gratification leading to poor financial decisions that the mind, if given time to reflect, would reject.

It may be difficult to focus on the benefits of financial rewards that will be available at retirement, because the present self may be psychologically disconnected from the distant future self. "With extreme psychological disconnection," says Hal Ersner-Hershfield, of the Kellogg School of Management, Northwestern University, "saving for retirement may feel to the present self like giving money to a stranger years in the future." That is a strong disincentive to saving now.

The Behavioral Time Machine offers the prospect of a simple tool that effectively reduces the gap between present and future selves. It will assist people's imagination to understand the impact of present decisions on the future self, thereby enhancing people's willingness to save now (Ersner-Hershfield *et al*., 2011).

Two Selves

The notion of a disconnection between present and future selves has fascinated philosophers since the time of Plato. Many young people view their older selves heading into retirement as strangers. The British philosopher Derek Parfit famously described this lack of comprehension of future selves as "a failure of imagination, or some false belief" (Parfit, 1971). It is a failure to *identify* with oneself in the future.

This unconscious assumption of a different self in the future is demonstrated graphically by brain scans. Researchers at Northwestern University and elsewhere find that when people think about their future selves, the same brain region lights up as when they think about strangers. This neurological response to thinking about future selves is stronger in some people than in others. And those in whom the brain region is activated most when looking at future selves also show the steepest discounting of the future (Ersner-Hershfield *et al.*, 2009). The degree of psychological disconnection is reflected in an unwillingness to save.

To a failure of imagination we might add many young people's seeming sense of immortality, or denial that one day they, too, will be old.

In any case, the disconnection between present and future selves is well recognized, and it correlates with a reluctance to save. The question is, can the psychological gap between the two selves be closed, and would this affect willingness to save?

Having people imagine their future selves in a substantive way is very challenging, for several reasons. For a start, it is not something people ordinarily do, and so it is a foreign exercise for them. And for anyone, imagining themselves at the age of retirement conjures up many possibilities, with different contingencies (losing one's hair, winning the lottery, moving to another town or country, having a face-lift), which leads to multiple different outcomes. Under this spate of different potential future selves, people find it very hard to bring a single future self into focus.

The Behavioral Time Machine will provide a means of creating a single, salient future self to which the intuitive self reacts strongly. The reflective mind endorses that reaction, and makes rational decisions about saving.

Enter Virtual Worlds

When people are confronted with vivid visual images of themselves that have been digitally aged, they take notice. Hal Ersner-Hershfield and six colleagues performed such an experiment on young volunteers, using age-progression software in a virtual reality environment. These algorithms use a framework of key facial features to build an image of what that person will look like in, say, thirty years' time. Some of the comments on seeing age-rendered future selves included: "Wow, I look just like Grandma," "Oooh, I don't know if I want to see this" and "Whoa, this is freaky" (Ersner-Hershfield, 2011). But more pertinently, the volunteers in the experiment who see their future selves more than double the amount of money they say they would allocate to retirement savings.

This was not a simple priming effect. When the volunteers see similarly age-processed images of *other* people, it does *not* affect their allocation to savings. Only when they see images of their *own* future selves do they do the right thing with savings.

Seeing our future selves boosts savings

Seeing a happy future self further boosts savings

(Ersner-Hershfield and Goldstein, 2011)

These experimental results are the first demonstration of a new kind of intervention that shifts participants' willingness to forgo present rewards in favor of future benefits. The age-progression exercise helps people recognize that the future self is indeed the same person as the present self. It repairs the disconnection between the two selves and leads to far-sighted decisions that take care of the future self by making adequate contributions to a retirement plan. In other words, says Daniel Goldstein, a professor at London Business School, "The Behavioral Time Machine helps people to imagine their future selves by presenting them with a striking visual image of that self."

In a second study these same experimenters added an emotional dimension to the future selves. They first took three photographs of each participant, one with a very happy expression, another with a very sad expression and a third one with a neutral face. These three images were then digitally processed to form a series of about a dozen expressions in a future self-image, progressing from very happy to very sad. The experimenters then linked this sliding emotional scale to a sliding financial scale, going from minimal allocation of savings for retirement on the left to optimal allocation on the right.

Participants could then see the emotional reaction of their future selves to different rates of saving for retirement by the present self: pushing the slider toward the left (low allocation) end of the scale evokes an ever sadder future face; when participants move the slider toward the right (high allocation) end of the scale, the smile on their future selves' faces gets ever broader.

The results of the procedure are clear-cut: Participants who see these emotional reactions in their future selves allocate significantly more to saving for retirement as compared with others who encounter only happy or sad images of their present selves.

> " The Behavioral Time Machine helps people to imagine their future selves, by presenting them with a striking visual image of that self."

Daniel Goldstein,
London School of Business

The virtual reality environment that these experimenters used in their laboratory studies is very high tech and sophisticated.

The Behavioral Time Machine complements other savings-enhancement strategies, which focus on present and future rewards rather than present and future selves. One of these is Save More Tomorrow, which effectively reduces the lure of the present (Thaler and Benartzi, 2004). Another strategy is to heighten people's awareness of the benefits of future uses of money: trips to Europe, for instance, or spoiling the grandchildren. Research shows that this second strategy increases people's patience, and enhances their willingness to save more now (Bartels and Rips, 2010). Financial advisors might use the Behavioral Time Machine on its own, or in combination with one of these strategies.

References

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About the Author

The **Behavioral Finance in Action** series was written by Shlomo Benartzi, Ph.D., Professor, UCLA Anderson School of Management, and Chief Behavioral Economist of the Allianz Global Investors Center for Behavioral Finance.

Professor Benartzi is a leading authority on behavioral finance with a special interest in personal finance and participant behavior in defined contribution plans. He received his Ph.D. from Cornell University's Johnson Graduate School of Management, and he is currently co-chair of the Behavioral Decision-Making Group at The Anderson School at UCLA.

Professor Benartzi is also co-founder of the Behavioral Finance Forum (www.behavioralfinanceforum.com), a collective of 40 prominent academics and 40 major financial institutions from around the globe. The Forum helps consumers make better financial decisions by fostering collaborative research efforts between academics and industry leaders.

Professor Benartzi's most significant research contribution is the development of Save More Tomorrow™ (SMarT), a behavioral prescription designed to help employees increase their savings rates gradually over time. Along with Richard Thaler of the University of Chicago, he was recognized by *Money* as one of 2004's "Class Acts" for SMarT's success – increasing savings rates in one plan from 3.5% to 13.6%. The SMarT program is now offered by approximately half of the large retirement plans in the U.S. and a growing number of plans in Australia and the U.K.

Professor Benartzi has supplemented his academic research with practical experience, serving on the advisory boards of the Alaska State Pension, Fuller and Thaler Asset Management, Guggenheim Partners, Morningstar and the U.S. Department of Labor.

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