

## **Feeling more connected to your future self:**

### **Using immersive virtual reality to increase retirement saving**

With regard to retirement planning, people fail to save what they need to (Fidelity Brokerage Services, 2005). Economists believe that shortcomings in this domain are related to temporal discounting, or the tendency to value rewards that will occur in the future less than rewards that occur in the present (Frederick, 2003). One of the reasons why such discounting occurs is because people may often have a difficult time vividly imagining future wants and desires. To the extent that people can more vividly imagine how badly they will feel in the future with little to no retirement savings, they should be motivated to save more money now.

In the present between-subjects study, we used immersive virtual reality (VR) to help subjects vividly envision themselves in the present (control condition) or in the future (experimental condition). With VR, instead of merely asking someone to imagine that they are an older version of themselves, we provide them with a visual representation of their body and face as it will approximately look in the future. For all participants ( $N = 50$ ), we used preset algorithms to locate key points on the face and then built a three-dimensional model of each participant's face (i.e., a digital avatar). For the experimental condition, we created a persuasive visual analog of the 70-year old version of each participant by morphing the shape and texture of his or her digital avatar to simulate the aging process (Bailenson, Beall, & Blacovich, 2002) (See Figure 1).

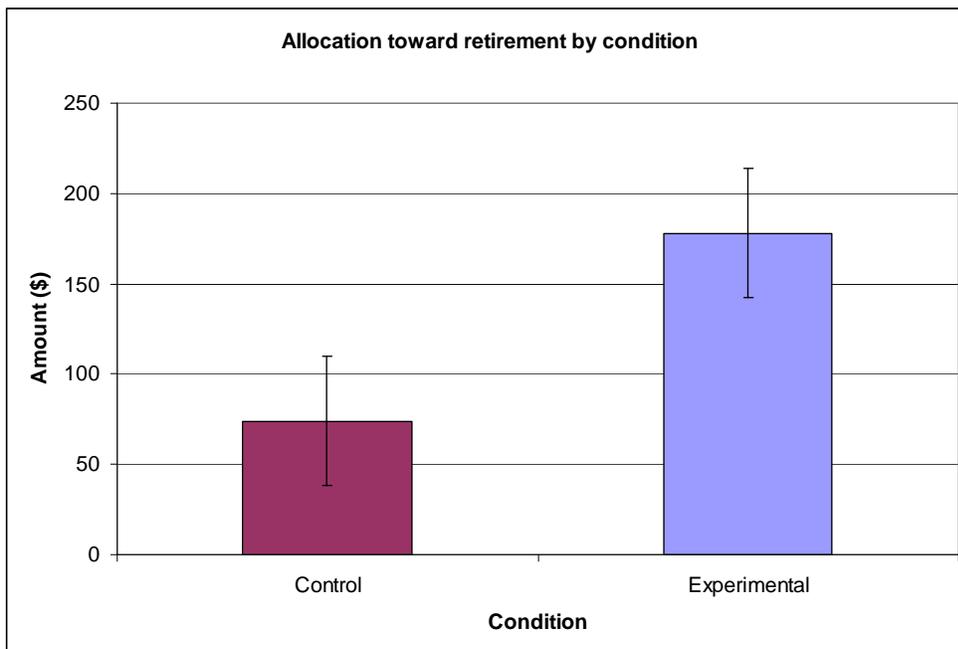
All participants then entered an immersive virtual reality system and saw their current self or future self in a virtual mirror and answered a series of interview questions from a confederate. Upon leaving the virtual reality environment, all participants completed, among other surveys, a retirement savings questionnaire. We had hypothesized that participants in the experimental condition would allocate more money toward retirement than participants in the control condition. To test this hypothesis, we conducted a univariate ANOVA with one between-subjects factor (Condition: control, experimental) and two covariates (self presence and social presence) on allocation toward retirement. Results indicated that experimental condition participants allocated significantly more money toward retirement than did control condition participants (See Figure 2).

Figure 1



The left panel demonstrates a morphed representation of one of the authors as he looks currently. The right panel is an age-morphed version of the same author.

Figure 2



Allocation toward retirement by condition.