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Life History Theory and Risky Financial Decisions

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Raised in a poor area, Ray Otero moved to New York at age 18. After the tragedy of 9/11, he started playing the lottery. Ray now spends $500 of his savings on the lotto each week. Why?

Similar to the true story of Ray, most people must make financial choices about their savings. Broadly speaking, a person can choose between two types of investment strategies: one that is a safe investment, but earns minimal growth over time, or one that is riskier, potentially losing large sums of money for a chance at a huge payoff. The underlying psychology of how people make such decisions applies beyond the financial realm. In fact, from a broad life-sciences perspective, such choices can be viewed as choosing between two fundamentally different types of life-courses: a “slower” course that focuses on longer-term goals and investment and a “faster” course that focuses on immediate payoffs (Simpson, Griskevicius, & Kim, 2009). I propose to examine experimentally how these broad life-courses—and the risky financial choices associated with each life-course—are influenced by theoretically important environmental factors.

To examine these questions, I draw on Life History Theory (LHT), a theoretical framework that integrates ideas from evolutionary biology, anthropology, ecology, and psychology. LHT posits that a fundamental task faced by all organisms is the successful utilization of resources—time, effort, energy, food—in the service of survival and reproduction. Because resources are inherently limited, all organisms must make trade-offs regarding how they allocate resources. One fundamental trade-off faced by all organisms, including humans, is whether to invest in current reproduction or in future reproduction (Kaplan & Gangestad, 2005). Efforts to enhance current reproduction (devoting energy to intra-sexual competition and mating) are associated with a “faster” life-course, whereas efforts to enhance future reproduction (devoting energy to the growth and maintenance of one’s body and mind) are associated with a “slower” life-course.

Different species have a wide variety of life-courses, with humans being defined by their lengthy investments in future (i.e., delayed) reproduction. Biologists have historically presumed that a given species’ life-course is fixed genetically. However, accruing evidence indicates that organisms have mental mechanisms that monitor and evaluate the current and expected states of their environments, adjusting the life-course they enact based on specific environmental pressures. LHT suggests that life-courses should be influenced by two types of environmental factors: (1) the local mortality rate and (2) the availability of resources (e.g., relative SES).

**Pilot Studies.** Using a priming methodology (Griskevicius et al., 2006), my advisors Drs. Jeffry Simpson and Vladas Griskevicius, and I have begun to examine how these environmental factors influence trade-offs between current vs. future reproduction. More specifically, how priming cues of danger influence desire to have children sooner vs. later in life. Consistent with LHT, we find that mortality cues typically lead people to want to have children earlier in life. However, mortality cues have a markedly different effect on people who grew up in a resource-scarce environment (“I felt relatively poor when growing up”) than on those who grew up in a resource-plentiful environment (“I felt relatively wealthy compared to kids in my school”).

For individuals who grew up in a resource-scarce environment, mortality cues led them to want to have their first child sooner, consistent with adopting a “faster” life-course. Conversely, for those who grew up in a resource-plentiful environment, mortality led them to want to delay reproduction, consistent with adopting a “slower” life course (see Figure 1). The results of these pilot studies reveal that human life-courses are sensitive to cues of danger, and

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**Figure 1. Summary of key finding found in two separate pilot experiments:**

The influence of mortality cues on decisions to have children sooner vs. later depend on whether people grew up in a resource-plentiful or a resource-scarce environment.
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Proposed Plan of Research

that these cues interact with resource availability from one’s childhood.

Because I am interested in the psychology of risk-taking, I plan to build on these pilot studies by examining how cues of danger influence risky decision-making starting with financial risks. Drawing on LHT, I plan to study how danger cues in one’s current adult environment might interact with SES from one’s childhood environment to influence risky financial decisions.

**Experiment 1** will examine how danger cues influence risky financial decisions. Participants (Ps) from the University of Minnesota (N=160) will be randomly assigned to either a mortality or a control prime condition. Mortality will be primed by having Ps read a news story ostensibly from the New York Times that describes increasing homicide rates in many American cities. In the control condition, Ps will read a similarly arousing story of equal length that does not involve danger. Ps will then choose between making risky vs. safe investments (e.g., choosing between risky stocks or safe bonds). Ps will also complete individual difference measures, including their current and childhood SES. Consistent with LHT and the pilot studies, I predict that for people who grew up in a resource-plentiful environment, mortality cues will lead them to prefer less risky investments, consistent with adopting a “slower” life-course. Conversely, for individuals who grew up in a resource-scarce environment, mortality cues should lead them to prefer more risky investments, consistent with adopting a “faster” life-course.

**Experiment 2** will aim to increase the generalizability of my proposed research by collecting data at Singapore Management University—the current location of my undergraduate advisor. Using the same methodology as in Experiment 1, I expect to replicate my findings with participants of diverse ethnic and religious backgrounds.

**Experiment 3** will examine the psychological processes underlying how mortality cues influence financial risk. LHT suggests that individuals can perceive mortality danger either as random and unpredictable OR as predictable and potentially avoidable. I predict that individuals from resource-scarce environments will perceive current mortality danger as unpredictable and uncontrollable. Accordingly, for these individuals investing in the self should be viewed as futile in terms of reducing danger, leading them to adopt a “faster” life-course. In contrast, individuals from resource-plentiful environments should perceive current mortality danger as predictable and controllable. Thus, for these individuals delaying reproduction and investing in the self could increase their ability to reduce danger, leading them to adopt a “slower” life-course.

To conduct my proposed research, I plan to work closely with my two advisors: Dr. Simpson, who is expert in Life History Theory and human mating, and Dr. Griskevicius, who is expert in economic decision-making and experimental priming methodology. Furthermore, I plan to apply LHT to examine other types of risks. I plan to work with Drs. Traci Mann and Alex Rothman, both of whom are experts in health in the Department of Psychology, to examine how environmental factors predicted from LHT influence health risks. By understanding the factors that influence financial and health risk-taking, this research can be used to develop targeted childhood and/or adult interventions to decrease risky behaviors. I am confident that the combination of my mentors, research experience, and the excellent fit between my interest and that of the faculty at the University of Minnesota will enable me to complete my plan of research.