

Project Summary

Problem statement As individuals age their continued survival contributes less to fitness while their ability to subsidize their own needs declines. Research (Hill and Hurtado, 1991; Hawkes *et al.*, 1998) has measured elderly effects on kin in an effort to demonstrate how inter-generational provisioning might have allowed for selection of longevity. It is doubtful, however, that intergenerational provisioning alone explains selection for human longevity. Questions of “why old age?” may be addressed better by examining the utility of non-material resource transfers; advice, instruction, knowledge, entertainment, emotional support, affection, mediation, and supervision. This research will examine whether elderly Bolivian Tsimane’ activity budgets and exchange patterns fit risk-buffering or kin selection models. The central goal of this study is to show how and under what conditions elderly Tsimane’ make a social difference, a fundamental question relevant to concerns with extended lifespan among humans.

Methods and Analysis Research, organized into four three-month phases, will take place primarily in six focal Tsimane’ communities. Phase one will census and map focal communities updating kinship and reproductive histories, and conducting focus group interviews to investigate skills, abilities, and strengths of elderly. During phase two, interviews focusing on cultural expertise, skill acquisition, information transfer, and social expertise of elderly will be conducted with individuals of various ages. In phase three, details of 100 older adults’ daily activities will be collected and checked for validity. Finally, phase four will examine personal networks of 100 older adults, from whom self-satisfaction reports will be also be collected. Descriptive statistics will be used to measure patterns, rankings, sorts, time budgets, interactions, and geo-spatial characteristics. Inferential statistics will be used to test hypothesis and multi-level analysis will control for effects at various levels while testing predictions of the models.

Intellectual Merit This research will contribute to the cultural study of human aging and the ecological and evolutionary study of longevity. Despite the noted importance of valued knowledge and skills, supportive networks, and intergenerational transfers for understanding the evolution of distinct human life history traits, there have been few explicit empirical tests. This represents the first study to systematically explore the role of intergenerational non-material resource transfers in elderly time allocations, activity budgets, and personal networks. A better understanding of relational costs and benefits between elders and their minors will contribute to development of more specific models explaining the effects of kin and elderly on demographic phenomena, which can in turn, shed light on human social organization and life history. It is urgent to begin serious research on elderly Tsimane’ now because similar groups are showing rapid acculturation rates and will remain isolated for little more than a decade. Data collected by this research will be archived for future scientists no longer able to obtain them directly.

Broader Impacts In addition to the scientific and applied goals, this research actively involves Native Americans, allowing their local indigenous organizations first hand access to information and skills important for Tsimane’ self-governance, development, and healthcare. As relative size of elderly populations burgeons across cultures so does prevalence of increased health risk, abuse, and neglect among elderly (Lachs and Pillemer, 2004). Knowledge of risk-buffering and kin-selecting strategies among elderly in small-scale society can be practically applied when planning for the anticipated problems of an unprecedented large and growing old-age population over the next 50 years. Supporting costs of elderly survival is a growing issue faced by all societies and, for this reason, the human phenomenon of extended post-reproductive life span merits special attention.