

## **COMMUNICATING CONCEPTS ABOUT ALTRUISM IN INTERSTELLAR MESSAGES**

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This project identifies key principles of altruism that can be translated into interstellar messages for communication with extraterrestrial intelligence. The message contents will focus specifically on the evolution of altruism, drawing on recent insights in evolutionary biology, with particular emphasis on sociobiological accounts of kin selection and reciprocal altruism. This focus on altruism for message contents has several advantages. First, the subject can be translated into interstellar messages both via an existing formal interstellar language and via pictorial messages. For example, aspects of reciprocal altruism can be described through mathematical modeling, such as game theoretic approaches, which in turn can be described readily in the interstellar language *Lincos*. Second, concentrating on altruism as a message content may facilitate communications with extraterrestrial intelligence. Some scientists have argued that humans may be expected to communicate something about their moral status and development in an exchange with extraterrestrials. One of the most salient ways that terrestrial and extraterrestrial civilizations might be expected to evaluate one another is in terms of ethical motivations. Indeed, current search strategies assume some measure of altruism on the part of transmitting civilizations; with no guarantee of a response, the other civilization would be providing information to us with no direct payoff. Thus, concepts about altruism provide an appropriate content for interstellar messages, because the concepts themselves might be understood by extraterrestrial civilizations.