



## Shakti Lamba, Ph.D.

Anthropology and Biology

University of Exeter

Born in 1982 in New Delhi

Studied Zoology at the University of Delhi, Biology at the University of Oxford, and Biological Anthropology at University College London

FELLOWSHIP

College for Life Sciences

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### PROJECT

## Banking on Cooperation: Testing Evolutionary Theories of Cooperation by Examining the Real-Life Cooperative Dilemma Created by Microfinance

Understanding the fundamental patterns and determinants of human cooperation is a challenge across disciplines. A substantial body of theory has focused on explaining the evolution of cooperation. Yet there has been relatively little empirical work evaluating the extent to which existing theory explains the behaviour of individuals facing real-life cooperative dilemmas. I will test the validity of evolutionary models of cooperation by studying how individuals behave in the high-stakes, real-life cooperative dilemma created by microfinance and cooperative banking.

Microfinance initiatives provide loans to groups of individuals who are jointly liable for their repayment. This form of lending creates a cooperative dilemma, because if any member of a loan-group defects and does not repay his share of the loan, the other members of the group are liable to repay it for him. Thus, maintaining cooperation amongst borrowers is crucial to ensure loan repayment. My study has three aims: 1) to identify factors that influence the degree of cooperation and loan repayment in microfinance loan groups, 2) to reduce the gap between theory and empirical knowledge on the evolution of cooperation and 3) to translate my findings into social impact. Combining perspectives from evolutionary biology, anthropology and economics, my project aims to synthesise findings from the natural and social sciences to shed light on factors that foster cooperation between humans in the real world.

During my time at the Wissenschaftskolleg zu Berlin I will write a review paper synthesising the economic literature on microfinance and the evolutionary literature on cooperation to identify the overlap and differences in their findings so far.

### Recommended Reading

1. Lamba, S. and R. Mace (2011). "Demography and ecology drive variation in cooperation across human populations." *Proceedings of the National Academy of Sciences* 108: 14426-14430.
2. Lamba, S. and R. Mace (2010). "People recognise when they are really anonymous in an economic game." *Evolution and Human Behavior* 31: 271-278.
3. Lamba, S., Y. Claire Kazi, S. Deshpande, M. Natesh, A. Bhadra, and R. Gadagkar (2007). "A possible novel function of dominance behaviour in queen-less colonies of the primitively eusocial wasp *Ropalidia marginata*. *Behavioural Processes*. " 74: 351-356.

Lamba, Shakti (London, 2014)

Social learning in cooperative dilemmas

<https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1046372831>

Lamba, Shakti (2014)

A comparison of the economic literature on microfinance and the evolutionary literature on cooperation

<https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1042512256>

Lamba, Shakti (2013)

The simulation within a play : an evolutionary analysis of Hamlet ; unpublished paper produced for a workshop on "Hamlet and Succession" at the Wissenschaftskolleg zu Berlin

<https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1043658327>

Lamba, Shakti (Berlin, Heidelberg [u.a.], 2008)

Signaling hunger through aggression - the regulation of foraging in a primitively eusocial wasp

<https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=1669504875>

Lamba, Shakti (2007)

A possible novel function of dominance behaviour in queen-less colonies of the primitively eusocial wasp *Ropalidia marginata*

<https://kxp.k10plus.de/DB=9.663/PPNSET?PPN=819621757>