

This Application has been marked as accepted, so no further edits can be made.

## Project details

® Title of Project (max 25 words)	The effects of demography and migration on cooperation and competition: a large-scale field study (building wells)
® Type of Project	Staff or joint Staff/Student project
® At which campus is this project based?	Penryn
® Names of researchers	Shakti Lamba + PhD students, postdocs and research assistants hired to work on project
® Correspondent's Email (separate with a semi-colon if providing more than one)	s.lamba@exeter.ac.uk
Estimated start date (dd/mm/yyyy) and duration of the project	15/01/2015 - 5 years

  

Research Groups	Animal (Streatham)	<input type="checkbox"/>
	Animal (Tremough)	<input type="checkbox"/>
	DNA (Streatham)	<input type="checkbox"/>
	DNA (Tremough)	<input type="checkbox"/>
	GM (Streatham)	<input type="checkbox"/>
	GM (Tremough)	<input type="checkbox"/>
	Other (Streatham)	<input type="checkbox"/>
	Other (Tremough)	<input checked="" type="checkbox"/>

Project Supervisor



Shakti Lamba

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## Summary:

**Lay Summary (Rationale, Key methods etc max 250 words)**

1.The primary objective of this project is to test how well demographic evolutionary models describe observed patterns of human cooperation by examining how the demographic features of populations, particularly different patterns of migration, affect the degree and scale of cooperation amongst individuals.  
This will be achieved through the following specific objectives 2-4:  
2.To compare behavior in multiple populations of a matrilineal society, where typically men are the migrating sex, with behavior in populations of a patrilineal society, where women are the migrating sex, in order to test whether sex-biased migration has predicted effects on levels of cooperation within and between the sexes.  
3.To conduct a longitudinal study of patterns of cooperative and competitive behavior in multiple populations to quantify the extent to which behaviour patterns reflect social structure, demographic features of populations and individual characteristics.

**Does your study involve work with animals?**

Yes ☐ No ☒

**Does this study involve human DNA/Genetics?**

Yes ☐ No ☒

**® Track**

Track A

**Is this a database/modelling project**

Yes ☐ No ☒

**Purpose of project and its academic rationale. (max 150 words)**

Cooperation, defined in the evolutionary sciences as behavior that benefits others at a cost to the actor, is a cornerstone of human social organization. The degree and scale of cooperation varies considerably across human populations and many authors have attributed this variation to cultural differences. However, it remains unclear what drives this cultural variation. A substantial body of theory in evolutionary biology predicts that demographic characteristics of populations, such as their size and patterns of migration, may be important drivers of cooperation and competition. But these theoretical ideas have never been empirically tested in human populations, so it remains unclear whether evolutionary models are useful tools to explain variation in patterns of human cooperation. This study will be the first to empirically test these ideas in a set of real- world populations in order to investigate whether demographic influences on cooperation and competition explain the cultural variation observed across populations.

**Briefly explain how have you considered the 3Rs? (max 150 words)**

This research does not involve the use of animals.

**I am familiar with the BPS Guidelines for ethical practices in psychological research (and have discussed them with other researchers involved in the project.)**



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cooperation within and between the sexes.  
3.To conduct a longitudinal study of patterns of cooperative and competitive behavior in multiple populations to quantify the extent to which behaviour patterns reflect social structure, demographic features of populations and individual characteristics.  
4.To measure cooperative behavior in multiple ways for the same individual to determine whether patterns of behavior vary according to the context of cooperation. This will address a major outstanding question in both the social and natural sciences about whether there are "cooperative" and "non-cooperative" types of people, or whether the same individual can display different levels of cooperation in different contexts.

The study will generate a large-scale, longitudinal behavioural dataset of cooperative behavior in multiple populations of two small scale

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The study will generate a large-scale, longitudinal behavioural dataset of cooperative behavior in multiple populations of two small-scale Indian societies with contrasting systems of marriage and wealth inheritance, the Khasi and Pahari Korwa respectively. A combination of economic games, behavioural surveys, and observations of contributions to public works will be used to measure levels of cooperation.

Words left: 2

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## Communication and Consent

Section 1	Will you describe the main experimental procedures to participants in advance, so that they are informed in advance about what to expect?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a <input type="radio"/>
	Will you tell participants that their participation is voluntary?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a <input type="radio"/>
	Will you obtain written consent for participation?	Yes <input type="radio"/> No <input checked="" type="radio"/> n/a <input type="radio"/>
	If the research is observational, will you ask participants for their consent to being observed?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a <input type="radio"/>
	Will you tell participants that they may withdraw from the research at any time and for any reason?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a <input type="radio"/>
	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a <input type="radio"/>
	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a <input type="radio"/>
Will you debrief participants at the end of their participation (ie. give them a brief explanation of the study)?	Yes <input checked="" type="radio"/> No <input type="radio"/> n/a <input type="radio"/>	

If you have ticked No to any of the questions in section 1 and you consider that your project has no significant ethical implications, please give an explanation here

Since most participants in our study populations are not literate, we cannot obtain their written consent. However, we will obtain their informed verbal consent. After verbal instructions about the study have been delivered, participants will be individually asked for verbal consent. They will also be informed that they may withdraw from the study at any time and do not have to answer any questions that they do not wish to. I have been working with the Pahari Korwa since 2007 and with the Khasi since 2013 and have used this method of obtaining consent from them before. Where possible we will make an audio recording of the above procedure for each participant in our study.

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## Psychology

Will your project involve deliberately misleading participants in any way?

Yes ☐ No ☒ n/a ☐

Is there a realistic risk of any participants experiencing either physical or psychological distress or discomfort?

Yes ☐ No ☒ n/a ☐

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### Vulnerable Groups

Do participants fall into the following categories?	School children (under 18 years of age)	Yes <input type="radio"/> No <input checked="" type="radio"/> n/a <input type="radio"/>
	People with learning or communication difficulties	Yes <input type="radio"/> No <input checked="" type="radio"/> n/a <input type="radio"/>
	Those at risk of psychological distress or otherwise vulnerable	Yes <input type="radio"/> No <input checked="" type="radio"/> n/a <input type="radio"/>
	People in custody	Yes <input type="radio"/> No <input checked="" type="radio"/> n/a <input type="radio"/>
	People engaged in illegal activities (e.g. drug taking)	Yes <input type="radio"/> No <input checked="" type="radio"/> n/a <input type="radio"/>

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### Track A : No significant ethical implications

I consider that this project has no significant ethical implications to be brought before the Departmental Ethics Committee.

Yes ☒ No ☐ n/a ☐

In less than 150 words, provide details of the experiment including the number and type of participants, methods and tests to be used (i.e. the procedure).

Methods: We will sample 10 Pahari Korwa villages in India. Each village will be given a sum of money to build wells and springs for common use. We will observe how the villages decide to site the wells, organise themselves and who contributes to the building of the well and to what extent. We will monitor use and maintenance of the wells in the long term. We will record community meetings and well building activity via video cameras and use calorimeters and heart rate monitors to record individual effort spent on well building.

We will conduct a census of the village, collect demographic and other data about individuals via questionnaires (submitted with a previous application). Social network data on individuals will be collected via a questionnaire and using polaroid photos.

Recruitment: All consenting adults (men and women) in a village.



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Recruitment: All consenting adults (men and women) in a village. Mean pop. size is 250 (approx. 100 adults).

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### Attachments

X ☐ ☐ **Ethical considerations\_Shakti Lamba.docx** (137K): Document containing detailed ethical considerations.