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# Research Grants PROPOSAL

Document Status: With Owner  
ESRC Reference:

Standard Grants (Open Call)  
Psychology

Arts and Humanities\*

**Organisation where the Grant would be held**

Organisation	University of Warwick	Research Organisation Reference:	jelly
Division or Department	Psychology		

**Project Title** [up to 150 chars]

Extracting Knowledge from Other Minds: What do Children Understand about Question-asking?

**Start Date and Duration**

a. Proposed start  
date

01 September 2008

b. Duration of the grant  
(months)

24

**Applicants**

Role	Name	Organisation	Division or Department	How many hours a week will the investigator work on the project?
Principal Investigator	Professor Elizabeth Robinson	University of Warwick	Psychology	2.7
Co-Investigator	Dr Stephen Butterfill	University of Warwick	Department of Philosophy	2.7

## Objectives

List the main objectives of the proposed research [up to 4000 chars]

The aims of the proposed research are:

1. To conduct five experiments to examine 3- 4 and 5- year olds' question-asking in order to pinpoint when they do and do not take into account a potential informant's knowledge
2. To interpret the results in terms of developing understanding about transfer of knowledge between minds, and
3. To develop a broader account of the development of children's understanding of knowledge, drawing on literatures in psychology and philosophy.

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## Summary

Describe the proposed research in simple terms in a way that could be publicised to a general audience [up to 4000 chars]

As adults, we assume that we can draw on other people's knowledge and experience of the world by asking them. We understand that knowledge can be transferred between people, and that we do not need to wait for somebody to offer information to us, but that we can be proactive in filling gaps in our own knowledge by asking a more knowledgeable other. Children are especially dependent on others for gaining knowledge, and so it is of particular interest to find out what they understand about the process of extracting knowledge from other people by asking questions. In the proposed research we shall investigate this. We shall use our results, as well as relevant existing literatures in developmental psychology and philosophy, to develop an account of what it means to understand about knowledge, and how someone could be motivated to ask relevant questions without understanding knowledge.

Of course even 2-year-olds ask questions and do gain knowledge as a result, but their question-asking is not necessarily based on an understanding of what they are doing. Rather, young children may ask questions simply when they are uncertain and the social context invites question-asking. In our recent work, children aged between 3 and 5 years played a game in which they tried to identify a hidden toy. They were just as likely to ask an adult Experimenter for help whether or not she had seen the toy. That is, they asked questions to fill a gap in their own knowledge without taking into account the Experimenter's knowledge.

This behaviour becomes especially interesting when we consider other ways in which children this age do take into account an adult's knowledge. First, when an adult spontaneously tells the child which toy she thinks is hidden, without waiting to be asked, children correctly disbelieve her when she has not seen the hidden toy, and believe her when she has seen it. Yet when they receive the same information as a result of having asked a question, they believe the answer whether the adult is informed or uninformed. Second, when an adult marks a picture to show which toy she thinks is hidden, instead of giving an oral suggestion, children appropriately move in order to look at the marked picture (which is behind a barrier) when the adult has seen the hidden toy, and move much less frequently when she has not seen it. Yet moving to look at the picture is equivalent to asking a question, in that the child is proactive in gaining information from the adult. On the other hand, it is importantly different from question-asking in that the adult's knowledge is represented externally (in the form of a marked picture), whereas at the time the child decides to ask a question there is no external indication of the adult's knowledge. This may give us a clue to where children's difficulty lies with question-asking.

In the proposed research we shall carry out five experiments building on these results, to identify when 3-, 4- and 5-year old children do and do not take into account a potential informant's knowledge when they ask questions. Sometimes the potential informant's ignorance will be obvious because she has not seen the hidden toy, as above. Sometimes her ignorance will be indicated by her previous history of being inaccurate, another cue to ignorance that children do take into account when adults offer information spontaneously. We shall also vary the kind of knowledge the child aims to gain: knowledge about a current event or situation (such as the identity of a hidden toy), or more lasting knowledge about the name or function of a novel object. Children may be especially careful about the likely reliability of this latter kind of knowledge, and so may be better at taking into account the knowledge state of their potential informant when they decide to ask questions.

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## Beneficiaries

Describe who will benefit from the research [up to 4000 chars].

The main beneficiaries will be academics with an interest in young children's social and cognitive development, or philosophy of mind. We expect the findings also to be of interest to educationists and parents.

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## Staff Duties

Summarise the roles and responsibilities of each post for which funding is sought [up to 2000 characters]

Robinson (developmental psychology) will take responsibility for the overall management of the project, and for ensuring that it runs to time. She will be involved in all aspects of the research.

Butterfill (philosophy) will be most heavily involved with the theoretical development in the later stages of the project although he will keep in touch with the conduct and results of the experiments and will observe some of the testing.

Butterfill has previously collaborated successfully with developmental psychologists, on an AHRB funded project on

causal reasoning. His background in philosophy of mind as well as his familiarity with the developmental literature make him extremely well qualified for this research.

The psychology researcher appointed will be responsible for maintaining good contacts with schools and nurseries, for creating the experimental materials, collecting and analysing the data and providing feedback to schools. We hope to appoint a psychologist with an interest, and ideally expertise, in philosophy, who will be able to contribute to the theoretical development. Writing for publication and conference presentations will be shared collaboratively between the researcher and the co-applicants.

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### **Communications Plan and User Engagement**

Describe plans to engage with potential users of the research, to communicate the results of the research to such users, and the potential value of the research to users outside the research community [up to 4000 chars]

This is fundamental research and non-academic users will not be involved in the design or running of the research, although we always welcome comments from teachers who see our tasks when we take them into nurseries and schools. We provide accessible reports of our findings to the nurseries and schools involved, in the form of a regular newsletter. Depending on how our results turn out, it might be appropriate to communicate them to the media. Our main outputs however will be in academic journals such as *Child Development*, *Developmental Science*, *Mind and Language*, and *Journal of Philosophy*. Some of our outputs will be aimed at philosophers with no prior knowledge of the empirical research. We shall present our findings at national and international conferences including the European Society of Philosophy and Psychology that meets annually, and the biennial meetings of the Society for Research in Child Development and the Cognitive Development Society, both of which will meet in 2009.

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### **Ethical Information**

Has consideration been given to any ethical matters raised by this proposal ?	Yes
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Please explain what, if any, ethical issues you believe are relevant to the proposed research project, and which ethical approvals have been obtained, or will be sought if the project is funded? If you believe that an ethics review is not necessary, please explain your view (available: 4000 characters)

The research involves young children as participants. The research will be conducted within the ethical guidelines of the British Psychological Society. Should funding be approved, an application will be made to Warwick University's Humanities and Social Sciences Research ethics Committee. Head teachers and class teachers will be fully informed about the tasks and will observe them in action if they wish. Parental consent will be sought if that is the head teacher's wish. Children only take part if they volunteer and it is a priority that the tasks are fun for the child participants. If the Experimenter judges that any child is unhappy during testing, testing will cease. No personal data will be gathered from children other than gender and birth date. No individual will be identifiable in any report of the research. The researcher will submit to an enhanced Criminal Records Bureau check.

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## Summary of Resources Required for Project

### Financial resources

Summary fund heading	Fund heading	Full economic Cost	ESRC contribution	% ESRC contribution
Directly Incurred	Staff	64675.00	51740.00	80
	Travel & Subsistence	12150.00	9720.00	80
	Equipment	0.00	0.00	80
	Other Costs	3200.00	2560.00	80
	<b>Sub-total</b>	<b>80025.00</b>	<b>64020.00</b>	
Directly Allocated	Investigators	19442.15	15553.72	80
	Staff	0.00	0.00	80
	Estates Costs	19646.00	15716.80	80
	Other Directly Allocated	0.00	0.00	80
	<b>Sub-total</b>	<b>39088.15</b>	<b>31270.52</b>	
Indirect Costs	Indirect Costs	69066.00	55252.80	80
Exceptions	Staff	0.00	0.00	100
	Other Costs	0.00	0.00	100
	<b>Sub-total</b>	<b>0.00</b>	<b>0.00</b>	
	<b>Total</b>	<b>188179.15</b>	<b>150543.32</b>	

### Summary of staff effort requested

	Months
Investigator	3.50
Researcher	24
Technician	0
Other	0
Visiting Researcher	0
Student	0
<b>Total</b>	<b>27.5</b>

### Related Proposals

Proposal is related to a previous proposal to  
ESRC

Reference Number	How related?	Reason for submitting
RES-000-22-2264	Resubmission	Major reworking. New results support our previous hypotheses. New questions arise from these.

### Previous Proposals

Enter the ESRC reference numbers of any support sought or received from ESRC in the past five years.	RES-000-22-0825 RES-000-22-0305 RES-000-22-0277 RES-000-22-1847 RES-062-23-0335 RES-000-23-7932 RES-000-23-0881
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## Staff

### Directly Incurred Posts

						EFFORT ON PROJECT					
Role	Name /Post Identifier	Basic Starting Salary	Scale	Increment Date	Start Date	Period on Project (months)	% of Full Time	London Allowance (£)	Super-annuation and NI (£)	Total Other Allowances (over period of appointment) (£)	Total cost on grant (£)
Researcher	Researcher	25888	FA6 SP27	01/09/2009	01/09/2008	24	100	0	5478	0	64675
Total											64675

## Applicants

Role	Name	Post will outlast project (Y/N)	Contracted working week as a % of full time work	Total number of hours to be <b>charged</b> to the grant over the duration of the grant	Average number of hours per week <b>charged</b> to the grant	Rate of Salary pool/banding	Cost estimate
Principal Investigator	Professor Elizabeth Robinson	Y	100	238	2.7	90555	13062
Co-Investigator	Dr Stephen Butterfill	Y	100	238	2.7	44233	6380
						Total	19442

## Travel and Subsistence

Destination and purpose		Total £
Within UK	Travel to schools for data collection 100 days @ £8 per day	800
Outside UK	Accommodation, registration, travel and subsistence for RF and 1 coapplicant to SRCD meeting, USA location unknown; Cognitive Development Society San Antonio, 2009; European Society for Philosophy and Psychology 2009 and 2010; European location unknown	7200
Within UK	Travel, subsistence and accommodation for RF and 1 coapplicant at British Psychological Society Developmental Section meeting 2009, location unknown	600
Outside UK	Collaboration with Dr Stanka Fitneva - 1 person to the UK from Canada for 1 week; 1 person from the UK to Canada for 1 week	3150
Within UK	Travel by train Bristol to Coventry for Dr Erika Nurmsoo, 8 return journeys	400
Total £		12150

## Other Directly Incurred Costs

Description	Total £
PC + Printer for RF, standard Warwick specification	1300
Small consumables: toys for experiments, batteries, printer cartridges	300
Book tokens for schools at £20 per class of 25 children, in recognition of their help	600
Advertising for RF + travel expenses for 4 interviewees	1000
Total £	3200

**Timetable** estimates of the number of months after the start of the project to reach the following stages:

Stage	Number of Months
Completion of all preparation and design work	14
Commencement of fieldwork or material/information/data collection phase of study	1
Completion of fieldwork or collection phase of study	18
Commencement of analysis phase of study (substantive phase where research facilities are involved)	3
Completion of analysis phase of study	20
Commencement of writing-up of the research	4
Completion of preparation of any new datasets for archiving	23
Completion of writing-up	27

## Data Collection

If the research involves data collection or acquisition, please indicate how existing datasets have been reviewed and state why currently available datasets are inadequate for the proposed research.	The relevant literature has been reviewed and no data are currently available to answer the specific questions posed in the proposal.
Will the research proposed in this application produce new datasets?	Yes
Will this data be:	<input checked="" type="checkbox"/> Quantitative <input type="checkbox"/> Qualitative
Please give a brief description of the datasets	5 experiments, N = 120,240, 180, 120, 120 approx.
It is a requirement to offer data for archiving, if you envisage any difficulties in making data available for secondary	No difficulties expected

research, please outline here:	
Who are likely to be the users (academic or non-academic) of the dataset(s)?	The raw data are unlikely to be useful to others since the experiments are designed to answer narrowly specified questions.
Please outline the plans for and cost of preparing and documenting the data for archiving to the standards required by the ESDS.	No additional costs.



# OTHER INFORMATION

## Academic Reviewers

1	Name	Address	Town	Email Address
	Dr Vikram Jaswal	Dept of Psychology	Charlottesville	jaswal@virginia.edu

## Academic Reviewers

2	Name	Address	Town	Email Address
	Professor Josef Perner	Dept of Psychology	Salzburg	josef.perner@sbg.ac.at

## Classification

International in nature?

Yes

Please give details

The ESRC funded work will be located entirely in UK. However we ask for funds to collaborate with Dr Stanka Fitneva, Queens University, Ontario, Canada. She has been working on closely related research that also takes an interesting cross-cultural and cross-linguistic perspective. She has been in research contact with Robinson for some years. We ask for funds for the RF to make one week's research visit from Warwick to Queens, and for Dr Fitneva to make one week's return visit to Warwick. Immediately prior to the start of this proposed project, Robinson will be visiting Queens to take part in a workshop on testimony organised by Dr Fitneva. In addition, we shall meet at conferences. This collaboration will allow us to exchange ideas and results and develop future joint work.

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