

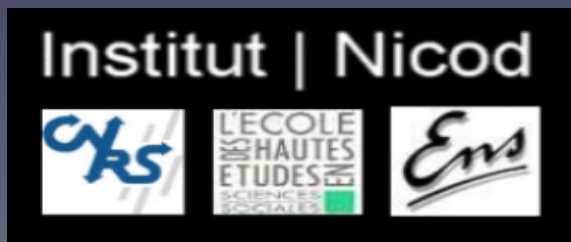
Large grants training day  
University of London April 12, 2013

# Interdisciplinary issues



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<http://dividnorm.ens.fr>



# Outline

1. **Personal data and Presentation of the DIVIDNORM project**
2. **General issues**
  - a. **Topic**
  - b. **Partners**
  - c. **Presentation of the project**
  - d. **Research questions**
  - e. **Societal and technological developments**
3. **Main problems to be solved**

# Personal interdisciplinary profile

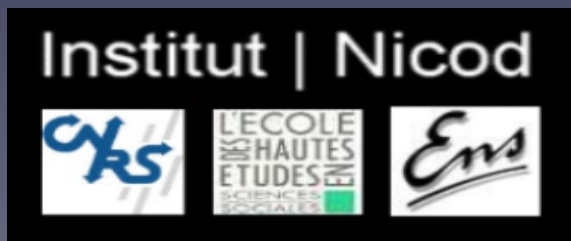
- Initial education in philosophy and in experimental psychology
- Interdisciplinary exposition in UC Berkeley, end of the 70s (Grants from the Sloan Foundation)
- Recruitment in CREA (now Institut Jean-Nicod), an interdisciplinary CNRS unit.
- Interdisciplinary research with:
  - Marc Jeannerod (Neuroscience)
  - Henri Grivois (Psychiatry)
- PI for two large interdisciplinary projects, ESF (2006-2009) and ERC (2011-2016)

# Divided metacognition: when epistemic norms conflict

ERC Project 2011-2016



<http://dividnorm.ens.fr>



# Goals

- Provide a naturalistic explanation of epistemic norms, i.e., of the informational dimensions relied upon in predicting and evaluating success in a first-order cognitive action.
- Explain the differential sensitivity to these norms across cultures within a realist approach of epistemic norms.

# Methods

- **Conceptual work** (e.g.: on strategic and epistemic standards of acceptance).
- **Experimental study** of sensitivity to epistemic norms, through the metacognitive assessments of young children and adults in Europe and Japan (behaviour+fMRI)
- **Observation and experimentation** about sensitivity to epistemic norms in a rural population from Madagascar (Cognitive anthropology)

# Specific methodological guidelines

## ***a) Norm sensitivity is best assessed in procedural metacognition***

Such a method can reveal fine-grained variance in epistemic strategies, for an age group, a cultural group, and a task of reference, independently from linguistic and conceptual abilities.

## ***b) Norms in conflict: epistemic norm sensitivity is best assessed in divided metacognition***

Normative awareness should preferably be studied when it involves internal conflicts and trade-offs, because such contexts reveal subjects' epistemic preferences given their instrumental goals.

# Participants

- **Philosophy:** *Joëlle Proust*. Masters and Doctoral students: *Anne Coubray, Martin Fortier, Joulia Smortchkova*.
- **Neurosciences:** *Laurence Conty, Julie Grèzes*, (Laboratoire de Neurosciences Cognitive, ENS).  
Post-docs: *Benoît Montalan, Terry Eskenazy*.  
Students: *Matias Balthazard, Amélie Jacquot*.
- **Psychology of Development:**
  - *Beate Sodian* (LMU, Munich). Postdoc: *Markus Paulus*
  - *Fabrice Clément* (U. de Neuchâtel). Postdoc: *Stéphane Bernard*
  - *Atsushi Senju* (Birkbeck College) *Shoji Itakura* (Université de Kyoto)
- **Cognitive anthropology:**  
*Maurice Bloch* (London School of Economics, ENS). Postdoc: *Denis Régnier*.



# General issues

# Determining the topic

- An innovative, although risky project is often found of higher value than a project that merely extends existing research by the applicant.

# Choice of partners: rules of thumb

- Important that each partner contributes pieces of knowledge **that are needed** by other partners (not: « business as usual »)
- If possible, create **innovative** interdisciplinary collaborations (advantages, but also: costs!).
- Discuss the topic and methods of each subproject in great detail **before** submitting the project.

# Presentation of a big project

- there is a common structure to all grant applications (well-known in science, less so in humanities).

# Presentation of a big project

- *Full name and acronym*
- *Object (5 lines of introductory presentation of the target issue)*
- *State of the art, including*
  - Important results
  - **Problems still unsolved, target problem**
- *How does this project relate to the target problem?*
  - Arguments: **new ideas, new evidence, new methods**
  - Why is the applicant in a position to address the problem?
- *Research questions, workplan & deliverables*
- ***Expected outcomes***
  - *Theoretical developments opened by the proposal*
  - *Societal and technological developments*

# Presentation of a big project

- Keep in mind that the project will be assessed by an interdisciplinary jury.
- The state of the art must be:
  - **informative and exhaustive** in its essential elements.
  - **intelligible** even by non-specialists
  - **crisply written**, allowing unsolved problems to emerge and offering a strong motivation for carrying out additional research

# Research questions

- Are usually addressed with different methods.
- Must, however, be integrated, and contribute to answer general issues.

# Dividnorm research questions

- R<sub>1</sub> – What *are* epistemic norms? (Philosophy)
- 
- R<sub>2</sub> – Which representational medium for norm sensitivity: emotions, or concepts? (Philosophy and Cognitive Science)
- 
- R<sub>3</sub>- How does sensitivity to epistemic norms develop? (Developmental Psychology, Philosophy of mind)
- 
- R<sub>4</sub>- How is norm dominance secured in a given context? Is normative conflict influenced by culture? (Dev and Ex Psychology & neuroscience, transfer of experiments from Europe to Japan, Philosophy and epistemology)
- 
- R<sub>5</sub>. Is epistemic norm sensitivity to one's own mental agency always transferable to assess others', and reciprocally? (in children and adults):(Dev and Ex Psychology & neuroscience. Consequences relevant to Philosophy)
- 
- R<sub>6</sub> - How are epistemic norms cross-culturally *understood* by thinkers? (Anthropology). Consequences relevant to Philosophy



# Research questions

- Should be **further subdivided** in subprojects, experiments, scientific goals.
- They are used to state **commitments to deliverables**.
- Research questions and their subdivisions **with their respective deadlines** are used to report progress in successive financial and scientific reports.

# **Societal and Technological Developments**

Is your research potentially helpful to address concrete issues ?

Applications to:

- Education
- Public health,
- Societal problems, cross-cultural differences etc.
- Particular technological applications

# DIVIDNORM societal and technological developments

The present research should contribute to the development of new educational technologies by:

- Exploring the specific patterns of EN sensitivity in children of a given school age and background.
- Enhancing plasticity in EN sensitivity in children and adults.
- Providing students with self-regulated methods of self-appraisal, based on technologies such as videotraining and social robotics.

Main problems to be solved

# Dominance relations between fields

- If the PI does **not** belong to the dominant field, problems to be expected:
  - Will the dominant field(s) complete their part as expected (extreme cases: do something entirely different)?
  - Will the dominant field(s) make the necessary efforts to learn/use a foreign terminology?

# Dominance relations between fields

- If the PI belongs to the dominant field, problem to be expected:
  - may not **sincerely** recognize the value of other methods for approaching the subject.
  - May not, **in retrospect**, acknowledge the contribution of other fields to the definition of his/her research project.
- no reciprocity

# Post-docs' careers and publishing

- Post-docs recruited in interdisciplinary projects may have interest **not to** publish in interdisciplinary journals, but rather to concentrate on their own field in order to have convincing CVs.



# Research questions

- Need to be discussed in detail by the PI with each contributor, along with the methods to be used.
- If possible, all the contributors should agree with the entire organization of the research, and make their expectations explicit.

# Author order in publications

- Need to be negotiated as soon as possible, for example when research questions are determined.

Your questions are welcome!

<http://joelleproust.org>

<http://dividnorm.ens.fr>