



**Donders Institute**  
for Brain, Cognition and Behaviour

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**DRUST**  
**Digging deeper to uncover  
the roots of understanding**

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## Common Ground and Understanding

General aim: Interdisciplinary investigation of the processes that establish common ground (cultural, psychological, neural) and of the experiences related to understanding



Common ground very broadly defined



How do different types of common ground support interpersonal and intercultural understanding?

Highly interdisciplinary: Philosophy, semiotics, anthropology, psychiatry, psychology, cognitive neuroscience, robotics, statistical physics



## Aim 1: Role of Rhythm in Creating CG

How do processes of temporal coordination and shared rhythmic activity help to establish common ground?

Bonding, alignment of perception and attention



## Aim 2: Role of Sharing Actions and Emotions

Work out the implications of mirroring of actions and emotions for mutual understanding

For instance, to which extent can shared skills provide a deeper understanding of each other?

What is the role of empathy in understanding?



## Aim 3: Role of Repair

How are misunderstandings repaired during discourse?

What kind of cognitive architecture is needed to support repairs?

How can common ground and other social patterns emerge from simple interactions large networks of agents?



## Aim 4: Role of Shared Cultural Environments

Humans use material and virtual objects in their environment in order to achieve individual and joint goals

The culturally embedded use of objects likely constitutes a further form of common ground

How do differences in object use and technologies affect understanding?





# DRUST IPs and APs

