



Networking / Dissemination Activity Scientific Report Form

Form (Word or PDF file) to be completed and uploaded via the online system within two months of the completion of the event for the following activities: working group meetings, seminars, workshops, symposia, conferences, summer schools, training programmes and specialised courses (graduate-level and continuing education), EUROCORES programme invited sessions at larger conferences, working group meetings (e.g. publication meetings).

a) Summary

The summer school “Concepts, Normativity, and Cognition: Philosophical and Empirical Perspectives” was planned as an activity in the Eurocores “EuroUnderstanding” as a collaboration between the CCCOM and the NormCon group. Our intention was to emphasize the interdisciplinary character of our projects with an interdisciplinary summer school that would contain courses on psychological and philosophical aspects of concept acquisition, the role of shared concepts in communication, and the development and nature of our concept of normativity.

To this end we invited 6 lecturers (including the two organizers) from psychology and philosophy. All teachers were either members of either CCCOM or NormCon or work closely together with either of the groups. Initially we had planned to also invite psychologists and psycholinguists from outside our research groups. However, when we got the confirmation from ESF that we’d get the funding it was already too late in the year to arrange a suitable time with the other scientists we had intended to invite. Thus we shortened the overall length of the summer school somewhat to a duration of only 5 days (which also explains why we needed in the end only part of the total budget initially applied for).

We then circulated a call for participation, first within the EuroUnderstanding groups, then widely via different mailing lists (in philosophy and psychology) and on our websites (<http://daniel.cohnitz.de/index.php?summerschool>; http://www.cccom.ut.ee/?ai1ec_event=concepts-normativity-and-cognition-philosophical-and-empirical-perspectives-summer-school-2013&instance_id=27). The aim was to select a group of 20 students for the course. We intended to give preference to EuroUnderstanding PhD students, but to fill open places with other students, if possible. We received good feedback to the call, including applications from the US and India. Unfortunately, of the 20 students that we had selected, only 14 could eventually attend the course. The students that cancelled either lacked the funding, couldn’t get a visa, or cited other personal reasons. All cancellations happened last minute, so we couldn’t fill those places anymore with other students.

The summer school took place in Pärnu, Estonia, which is relatively easy to reach by bus from the airports in Tallinn and Riga. We decided to have the summer school there, since it allowed us to accommodate the students directly at the venue; accommodation and restaurants in Pärnu are considerably cheaper than those in Tartu, and Pärnu is otherwise a very attractive location for a summer school.

The summer school was located in the hotel Villa Wesset in the center of Pärnu. Wesset has a seminar room which is perfect for groups of that size and enough rooms to accommodate teachers and students. Students and teachers arranged their travels themselves and arrived in Pärnu the day before the summer school started. Most also left the day after the school had ended. For teachers we compensated the travel costs, which were in all cases quite moderate. Students had to finance their travels themselves, but we paid their accommodation and their meals. Monday, Tuesday, Thursday and Friday we had breakfast and a coffee break in the afternoon at the venue, lunch at a nearby restaurant and dinner at a nearby hotel. Wednesday we combined our courses with an excursion to Tallinn and had our dinner at a restaurant in Tallinn. (The trip to Tallinn (by bus) was not paid from the grant (since we weren't sure whether this would count as an ineligible social event).)

b) Final programme of the event

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--|---|--|--|---|
| Cohnitz & Haukioja: Experimental Philosophy of Language | Schurz: The functional core of the theory of mind | Excursion to Tallinn with students presenting their projects | Schurz: Taking another's perspective | Cohnitz & Haukioja: Externalism and Essentialism |
| Lunch | Lunch | | Lunch | Lunch |
| Esken: The ontogenetic development of concept use – philosophical and psychological aspects | Haukioja: Meta-Externalism | | Esken: Is metacognition necessarily bound to language abilities? | Priewasser & Esken: When is protesting a sign of normative understanding? |
| Rafetseder: Counterfactual reasoning – a developmental challenge of knowing what to change and what to hold constant | Priewasser: No reason to compete? Young children's difficulties with competition and sabotage | | Cohnitz: Intuitions and Semantics | Rafetseder: Generics – a default mode in children's counterfactual world? |
| Dinner | Dinner | Dinner | Dinner | Dinner |

c) Description of the scientific content of the event (abstracts can be provided)

The presentations of CCCOM (Cohnitz & Haukioja) introduced their interdisciplinary approach to semantics and to theories of reference in particular. Cohnitz and Haukioja started with an introduction to the contemporary methodological discussion in philosophy of language, which started in 2004 with the advent of “experimental philosophy”. Experimental philosophers reported results according to which East Asians would be less likely to have the same intuitive reactions to philosophical thought experiments that Western philosophers have. In the debate following the publication of this result, the discussion centred on whether this would show that the methodology of philosophy of language is flawed. One of the central questions in this debate is, of course, whether the intuitions of ordinary speakers should have any evidential weight in the discussion of theories of reference in the first place.

After introducing the current state of the debate, Cohnitz and Haukioja presented in their second lecture their distinction between meta-externalist and meta-internalist views on reference. A meta-

externalist holds that the reference relation is determined by speaker-external factors, thus the intuitions of speakers might at best have very indirect evidential weight. Cohnitz and Haukioja showed that meta-externalism is incompatible with the aim of philosophical semantics to contribute to a systematic account of linguistic communication. Only a meta-internalist conception of semantics and the determination of reference can provide us with a theory that could explain how human beings manage to communicate thoughts via language.

In their third lecture they explained which consequences this would have for the methodology of philosophy of language. If meta-internalism is correct, then the dispositions of competent speakers how to use and interpret expressions is constitutive for reference. Hence studying these dispositions must be a central task in philosophy of language. Cohnitz and Haukioja argued that the elicited judgments in response to thought experiments are best understood as reports of the intuitive interpretations of certain hypothetical utterances, thus, if adequate, provide us with the outputs of the dispositions we are interested in. In their final lecture Cohnitz and Haukioja showed how this account could be combined with empirical methods from psycholinguistics, which would be less prone to the problems that the experiments of 2004 were troubled with.

The NormCon group presented four lectures on concept acquisition, metacognition and the developmental psychology of our understanding of norms and rules. For a long time experiments on metacognition in non-linguistic animals always had the disadvantage that their results could be explained by means of non-metacognitive, i.e. first-order cognitive abilities. But the idea of non-conceptual forms of metacognition and epistemic feelings recently gets support from some new results. These seem to show, for instance, that rhesus macaques can be trained to make retrospective judgements of their accuracy on perceptual tasks. In one of these experiments rhesus monkeys were shown six pictures, one at a time. Then they were shown nine pictures simultaneously and had to touch the one picture that had been presented previously. After they responded, the monkeys were 'asked' how many tokens they wanted to wager on their response. (The tokens were icons, displayed on the screen, which were automatically exchanged for food rewards). If a subject touched the 'high-risk' icon, they would either gain or lose three tokens, depending on whether their previous response had been right or wrong. If they touched the 'low-risk' icon, they gained one token, regardless of the accuracy of the response just given. The monkeys in this experiment showed a significant tendency to follow correct responses with the choice of the 'high-risk' and wrong responses with the choice of the 'low-risk' icon.

If this experiment shows what it seems to show, some monkeys can be trained to evaluate their remembering abilities, i.e. they can learn to make retrospective judgements of their accuracy on perceptual tasks. These abilities seem to be bound to metacognitive abilities: in order to perform the task the monkeys have to monitor and to control their own cognitive capacities, i.e. they must be able to reliably express their self-confidence on mastering the task. We normally call cognitive abilities like these (if they are performed by other means, namely by language-based judgements like 'How confident are you, that you got it right?'—'I am quite confident') metacognitive abilities. If this interpretation is correct, these monkeys must have learned, in one way or another, to 'reflect' on their performance abilities, albeit only when highly trained. 'Reflection' in these cases does not mean that they use declarative judgements like 'I know that I saw this picture before', but only that they have learned to register the accuracy of their performances, which engenders feelings of confidence or uncertainty. These feelings then would be responsible for their choice of the 'risk' items and exhibit a procedural metacognitive ability. In his lecture Esken discussed to what extent these results could carry over to the development of meta-cognitive abilities in young children.

Beate Priewasser discussed in her lectures the development of understanding and acting according to norms. Understanding rational actions requires perspective taking both with respect to means and with respect to objectives. Priewasser discussed studies that addressed the question of whether the two kinds of perspective taking develop simultaneously or in sequence. She argued that evidence from competitive behaviour is best suited for settling this issue. One study had kindergarten children between 3 and 5 years of age participating in a competitive game of dice and tested them on two traditional false belief stories as well as on several control tasks (verbal intelligence, inhibitory control, and working memory). The frequency of competitive poaching moves in the game correlated with correct predictions of mistaken actions in the false belief task. Hierarchical linear regression after controlling for age and control variables showed that false belief understanding significantly predicted the amount of poaching moves. The results

seem to speak for an interrelated development of the capacity for “instrumental” and “telic” perspective taking.

Eva Rafetseder presented her empirical studies, which investigated at what point in development 3- to 6-year-old children begin to demonstrate counterfactual reasoning by controlling for fortuitously correct answers that result from basic conditional reasoning. Basic conditional reasoning occurs when one applies typical regularities (such as “If ‘whenever’ it doesn’t rain the street is dry”) to counterfactual questions (such as “If it had not rained, would the street be wet or dry?”) without regard to actual events (e.g., if street cleaners had just been washing the street). In counterfactual reasoning, however, the conditional reasoning must be constrained by actual events (according to the “nearest possible world”). In situations when counterfactual reasoning and basic conditional reasoning would yield the same answers, even the youngest children gave mostly correct answers. However, tasks in which the 2 reasoning strategies resulted in different answers proved unusually difficult even for the older children.

In her lectures Rafetseder discussed different options for the developmental stages that children go through before eventually fully understanding counterfactual thought.

Matthias Schurz gave a course based on a meta-study of 71 brain imaging studies. Many psychologists agree on what theory of mind is for. The theory of mind enables us to attribute mental states to others, which then allows us to anticipate how people will behave. However, there is an ongoing debate about how our mind affords this ability. Some researchers claim that the theory of mind is implemented by a unitary and specific cognitive feature or module. Others have hypothesized that theory of mind is afforded by a number of sub-processes, which could be specific for the domain of theory of mind or even domain-general (also used by other mental operations, as for example, the general process of orienting attention). In his course Schurz sketched out which answer brain imaging offers to that question. For nearly two decades, brain imaging was used to study theory of mind in the brain. To date, hundreds of empirical studies on the topic can be found. Schurz meta-analyzed imaging findings by forming different task-categories based on the stimuli and instructions given to the participants in experiments. Results show that one specific brain area of the brain is consistently engaged in all forms of theory of mind reasoning, reflected by the different task-categories in the meta-analysis. The class then discussed whether this could be seen as the locus of the functional core of the theory of mind, and whether this would correspond to the fundamental role that perspective taking seems to play in the theory of mind tasks studied.

In his second course, Schurz further explained the fundamental role that perspective taking seems to play. Visual perspective-taking received a large amount of attention from developmental psychologists. For example, Flavell and colleagues defined level-1 perspective taking as the ability to judge that someone else might not see an object that you yourself can see, whereas level-2 perspective-taking refers to the understanding that an object that is simultaneously visible to both the self and another person may give rise to different visual impressions or experiences in the two if their viewing circumstances differ. In the course, Schurz reviewed some of the psychological evidence on how these two forms of perspective taking differ. Level 1 perspective taking has been shown in explicit responding by the age of 24-months and in implicit monitoring of gaze direction even in infants. Moreover, recent research indicates that level-1 perspective taking may be an automatic and spontaneous process in adults. In contrast level-2 perspective-taking abilities cannot be found in infants and children up to age four and there is no evidence of automatic level-2 perspective-taking in adults. Finally, recent brain imaging research shows that level-1 and level-2 perspective taking is also implemented by two different neural systems.

d) Assessment of the results and impact of the event on the EUROCORES programme.

In the seminars we had very fruitful discussions on all of these topics, which also continued with the students long after class. Perhaps the most interesting result that should be mentioned was a new experimental design that was developed after discussing a student’s criticism of the general

hypothesis by the NormCon group (viz. that perspective taking tasks and the ability to pass the false belief test are closely related). The student cited evidence from a study that seemed to show that children can detect desires even in the case of a person acting on a false belief, before they manage the false belief task as such. In the discussion we developed an alternative interpretation of the experimental results and designed an experiment that could tell which interpretation is correct. The NormCon group plans to carry out the designed experiments in the near future.

e) List of speakers and participants

Name and affiliation are sufficient. The detailed list will be uploaded online directly.

Organization /Teaching:

Daniel Cohnitz, Tartu (Organizer, Teacher)
Frank Esken, Salzburg (Co-Organizer, Teacher)
Jussi Haukioja, Trondheim (Teacher)
Beate Priewasser, Salzburg (Teacher)
Eva Rafetseder, Stirling (Teacher)
Matthias Schurz, Salzburg (Teacher)

Students:

Bruno Mölder, Tartu
Stephen Ryan, Edinburgh
Victor Fernandez, Granada
Uku Tooming, Tartu
David Kashtan, Jerusalem
Martin Vacek, Bratislava
Eve Kitsik, Tartu
Janine Reinert, Tilburg
Riin Köiv, Tartu
Neri Marsili, Sheffield
Indrek Löbus, Tartu
Vera Lyubenova, Sofia
Merike Reiljan, Tartu
Vivian Bohl, Tartu