Netzwerke und Kooperationen - als inter- und transdisziplinäre Aufgabe

Dr. Machiel Keestra, Institute for Interdisciplinary Studies, UvA
Netzwerke und Kooperationen DENKEN, Innovation in der Hochschullehre
- online Diskussionsbeitrag, 5. Mai 2021
Bratman on joint action:
- shared goal
- separate purposes/aims
- meshed plans
- acknowledging differences re actions and goals/norms
- some stability is necessary

Pluralism can be maintained!
Metakognition als Bedingung der Kooperation

Self-knowledge, monitoring & regulating one’s cognition:

– awareness of one’s own representations, strategies etc.

– recognition of differences in representation & cognition

– preparedness to subsequently employ this pluralism

(Keestra 2017: https://tinyurl.com/Keestra-Metacognition)
Von individuellen zum team Kognition und Representationen

- Bratman on ‘joint action’: shared distribution & coordination of tasks & knowledge

- Distributed across members of a group
- Distributed across internal & external structure
  - (space, organization, artifacts, etc.)
- Distributed through time, with interactions
  - (Hutchins, 2000, ‘Distributed cognition’ in IESBS;
  - Vesper e.a. 2018; fig. D’Angelo 2018)

Table from https://workfutures.substack.com/p/10-work-skills-for-the-postnormal
“Interdisciplinary research is a mode of research in which an individual scientist or a team of scientists integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge, with the objective to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice.”

(Nat. Academies of Science, 2005; in Menken & Keestra, eds., Introduction to Interdisciplinary Research, 2016)
Integration und Interaktion sind ko-dependent

<table>
<thead>
<tr>
<th>Level of Interaction and Integration</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Investigator works largely independently on a research problem with his or her lab.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Each group member brings expertise to address the research problem.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Group members work on separate parts of the research problem, which are later integrated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Data sharing or brainstorming among lead investigators varies from limited to frequent.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated Research Team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Each team member brings specific expertise to address the research problem.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Team meets regularly to discuss team goals, individuals’ objectives, and next steps.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Team shares leadership responsibility, decision-making authority, data, and credit.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From: Bennett e.a. 2010: Starting to think about Team Science
Unterstuetzung der Kollaboration durch mentale Modellen, Repräsentationen

“… delineating various types of mental models (...), we posit that the existing constructs represented in the literature can be categorized as team-level mental representations focused on four basic types of knowledge content: -task related -team related -process related, and -goal related.”

(Wildman e.a. 2012, 92)

Æ Metacognition applies to cognition of these types of content
Kollaboration in unterschiedlichen Phasen - bedingt durch Koordination

Cf. coordinated collaborations in transdisciplinary research project with different parties in phases of:
- problem framing
- research
- integration & implementation of results
  (cf. Scholtz 2017)
Collaboration requires team metacognition, reflection, and communication on e.g.:

– Project goals
– Different cognitive processes
– Differences in norms, interests
– Mutual expectations
– etc.

(Keestra 2017: https://tinyurl.com/Keestra-Metacognition)
Diversity policies must attend to:
- composition of team/community
- reflection upon different positions
- ensuring an trusting, safe environment
- conditions for equal participation
- allowing individuals’ belongingness & uniqueness

(Cf. Brewer’s optimal distinctiveness theory; Shore e.a. 2011; Settles 2019 ‘Team climate mediates the effect of diversity’; fig. Garrison 2010)
Persoenlicher Dialog zur Auswechselung und Bildung des Vertrauens

Dialogue is effective as it entails:
- Voluntary inter-group contact
- Perspective taking
- Decreased intersubjective anxiety
- Building trust
- Empathy

Structured dialogue:
- silent reflection
- equal speaking time
- listening is essential
- sharing feelings

Schema of Keti KotiTable dialogue structure

**Preparation**
1. Forming couples
2. Topic presentation and dialogue question
3. Silence - for 1 minute

**Dialogue part I**
4. First speaker - for 3 minutes
5. Silence - for 1 minute
6. Listener speaks - for 2 minutes

**Dialogue part II**
7. Second speaker - for 3 minutes
8. Silence - for 1 minute
9. Listener speaks - for 2 minutes

**Conclusion round of dialogue**
10. Shared reflection - for 5 minutes
11. Plenary discussion
12. Goodbye - and possibly change of dialogue couples

**If possible**
**Next round of dialogue**
Repeat from step 2 with next dialogue question
Dialogue question(s) #1

- Have you ever experienced a feeling of loneliness, or being excluded, within the context of the university/UvA?
- Can you share the emotional impact of that experience?
Dialogue question(s) #2

- Did you ever feel connected with someone really different from you - yet not daring to reach out to her/him?

- What made you hesitate about making a connection?
Contact: M.Keestra@UvA.nl
https://tinyurl.com/Keestra-Metacognition
https://tinyurl.com/Keestra-Future-ID
Homepage: www.uva.nl/en/profile/m.keestra
Institute for Interdisciplinary Studies: www.iis.uva.nl
Ass. for Interdisciplinary Studies: http://www.interdisciplinarystudies.org/