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Logic & Cognition

edition 2023-2024

Contents

1 About the course

The course is aimed at deepening participants' insights into contemporary theory and practice of reasoning and inference. On the theoretical side, we shall discuss the very notions of reasoning and inference from the point of view of cognitive science, considering the impact of the new influential psychologistic paradigm in logical research. On the practical side, we shall examine certain important developments in analysis of reasoning and inference processes and their applications, concerning moral reasoning and decision making, the concept of rationality, as well as some methodological issues of empirical research on human reasoning.

1.1 Topics

- What is university (for)?

- Two system theories of reasoning: proponents and critics.

- Moral reasoning.

- Rationality.

1.2 Assessment

110 pts possible:

- Tutorials (80 pts):

  - 4 tasks (30 pts max in total: 7, 8, 8, 7), at the end of each in-class tutorial, concerning topics just covered;
  - term paper (50 pts); topic of your choice, but approved.

- Final exam (30 pts): open-book.

The scale:

Pts (tutorials)	Grade	Pts (total)	Grade
more than 65 – 80	5	more than 100 – 110	5
more than 55 – 65	4,5	more than 90 – 100	4,5
more than 50 – 55	4	more than 80 – 90	4
more than 45 – 50	3,5	more than 70 – 80	3,5
more than 35 – 45	3	more than 55 – 70	3
0 – 35	2	0 – 55	2

1.3 Term papers

- Your individual work.

- ca. 8–10 pages of text (excluding references), and a separate title page.

- In English.

- Topic of your choice, related to the course themes.

- Topic and abstract (ca. 250 words) need to be approved; use the first round of individual appointments for discussion (the appointments are compulsory for a paper to count towards the final grade). At the second appointment we shall discuss the progress. At the third round you are expected to provide a detailed outline of the paper. The fourth one is, again, about the progress.

- Deadline for submitting the paper is one week before the fifth appointment, at which we shall discuss the paper itself. This one is compulsory for a paper to count towards the final grade.

As for formatting:

- Standard LaTeX article class.

- 11 pt font.

- Author-year citations (`apacite` will do).

- If you don't want to or can't install LaTeX, use e. g. Overleaf.

- Title page: author's first and last name, e-mail address, student index number, title of the paper, abstract, 3 to 5 keywords.

Evaluation criteria are these:

- Form (10 pts):
    - Does the content of the paper correspond to the topic specified in the title? (2)
    - Is the content well-structured? (3)
    - Is the paper well-written? (3)
    - Are the references adequate? (2)

- Content (40 pts):
    - Is the thesis and argumentation clear? (15)
    - Are there any author's own arguments? Are they sufficiently justified? (15)
    - Is there any novel perspective involved? (10)

1.4 Calendar

13.10.2023–17.11.2023 classes, with readings assigned.

24.11.2023 Individual appointments, first round (compulsory: discussions on topics and abstracts of term papers).

01.12.2023 Individual appointments, second round (compulsory: how's going?).

08.12.2023 Individual appointments, third round (compulsory: reporting on the progress).

15.12.2023 Final versions of abstracts due.

12.01.2024 Individual appointments, fourth round (compulsory: pure joy of engagement).

19.01.2024–26.01.2024 Term papers due, depending on the date of the fifth appointment.

26.01.2024 Individual appointments, fifth round: term papers vivas.

02.02.2024 Individual appointments, fifth round: term papers vivas.

February 2025 Exams, sometime.

2 Readings and tasks

13.10.2023 What is university (for)?

Reading: Walter Rüegg, "Themes", ch. 1 of *Universities in the Ninetheenth and Early Twentieth Centuries (1800–1945)*, Cambridge UP, 2004.

27.10.2023 Two system theories of reasoning: proponents and critics

Reading: Stenning and van Lambalgen (2008). Human Reasoning and Cognitive Science, The MIT Press (ch. 5: From the Laboratory to the Wild and Back Again, 117-137).

10.11.2023 Moral reasoning

Reading: Haidt (2008). The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment (ch. 53 of J. E. Adler & L. Rips (eds.) Reasoning. Studies of Human Inference and Its Foundations, Cambridge UP).

17.11.2023 Rationality

Readings: (1) Stenning and van Lambalgen (2008). Human Reasoning and Cognitive Science, The MIT Press (ch. 11: Rationality Revisited, 347–366); (2) Sorensen (2004). Paradoxes of Rationality (ch. 14 of A. R. Mele & P. Rawling (eds.) The Oxford Handbook of Rationality, Oxford UP).

Stenning and van Lambalgen's book is available on EBSCOhost via USOS or here; Adler and Rips' is here, Sorensen here and Rüegg's here).

2.1 What is university (for)?

1. Name one to three goals of the university, the one(s) most important from your perspective.

2. Formulate a set of principles according to which your ideal institution of higher education should be organised.

3. Characterise:

   (a) the Napoleonic model of the university;
   (b) the Humboldtian ideal of the university.

   Identify most important differences between and similarities of the two. Characterise also their (i) ideal candidates and (ii) model alumni.

4. What undermined the Napoleonic model?

5. Why has the Humboldtian model eroded?

6. Characterise the causes of the crisis of the German university model at the turn of 20th century.

7. University organised according to which model would you prefer to enrol in?

8. Identify Napoleonic and Humboldtian elements in the current reality and debates on the role of the university in your country.

9. What is your opinion on the 6 obstacles to meaningful change in university education, as identified by Schank (2nd additional reading, below)?

10. Why are you here?

Additional materials

- pages 44–53, 55–61 of "Patterns", by Christophe Charle (ch. 2 of *Universities in the Ninetheenth and Early Twentieth Centuries (1800–1945)*).

- Roger C. Schank (2005). "The Fundamental Issue in the Learning Sciences", in: *The Cambridge Handbook of the Learning Sciences*, Cambridge UP, pp. 587–592.

- David Brooks, *The Practical University*, http://www.nytimes.com,

- Noam Chomsky, *The Purpose of Education*.

Written assignment (choose one; ca. 3.500 characters) – due October 20th, 2023.

1. Provide a comparative evaluation of the two models of the university. You may choose a specific vantage point, or specific feature, or more comprehensive perspective (what will be evaluated is argumentation, not the thesis).

2. Design your preferred assessment rules for this course (different than the actual ones, please). Take into account learning outcomes from the syllabus (if absolutely necessary, adjust them). Justify.

2.2 Two system theories of reasoning: proponents and critics

Two system theories of reasoning: proponents and critics
Readings: Stenning and van Lambalgen,"From the Laboratory to the Wild and Back Again"
(ch. 5 of *Human Reasoning and Cognitive Science*, The MIT Press, 2008)

1. Recall what is the difference between reasoning *to* vs reasoning *from* an interpretation. Give examples of both.

2. Apply Marr's Tri-Level Hypothesis of analysis of information processing system (computational / algorithmic / implementational) to the study of reasoning.

3. Give a one-sentence (could be a compound one) summary of the main claims of each of the three "schools" in psychology of reasoning.

4. Explain the claim that "Reasoning is the idle pastime of the academy, but not the bread and butter of the real world".

5. Explain the distinction between system 1 and system 2 processes discussed in dual process theories of reasoning. Apply it to the claim of task 4.

6. Explain the authors' account on Luria's "white bear" dialogue in terms of Ajdukiewicz's distinction between reasoning and inference.

Additional materials

- Keith Frankish (2010) "Dual-Process and Dual-System Theories of Reasoning", *Philosophy Compass*, 5/10, 914–926.

- Arie W. Kruglanski, Gerd Gigerenzer (2011) "Intuitive and Deliberate Judgments Are Based on Common Principles", *Psychological Review*, Vol. 118, No. 1, 97–109.

2.3 Moral reasoning

1. First, have a look at these Plato's allegories:

    (a) allegory of the cave (or den): *The Republic*, 514a–520a (the very beginning of the Book VII; Polish translation),

    (b) chariot allegory: *Phaedrus*, 245c–249d (here look for "a pair of winged horses and a charioteer" and then for "I divided each soul into three"; Polish translation).

2. Characterise the basic assumptions of the rationalist approach in moral psychology.

3. Do the same for the social intuitionist model. Then describe the model in details.

4. Find out more about experimental setups employed by Kohlberg and Turiel *et al.*. Examine them (critically, perhaps).

5. Is there – in your opinion – any kind of a fundamental difference between Kohlberg's 'Heinz the robber' story and Haidt *et al.*'s eating one's dead pet dog and the remaining ones?

6. What does it mean: "morally dumbfounded"?

7. Examine (again, critically), the definitions of moral judgement, moral reasoning and moral intuition.

8. Which of the four reasons (to doubt the causal importance of reason) are most compelling from your point of view?

9. Where the moral intutions come from?

10. Characterise the five foundations addressed in the Moral Foundations Theory.

Additional materials

- Jesse Graham *et al.* (2009) "Liberals and Conservatives Rely on Different Sets of Moral Foundations", *Journal of Personality and Social Psychology*, Vol. 96, No. 5, 1029–1046 (available via Ebsco) and Haidt's TED talk,

- Bert Musschenga (2013) "The promises of moral foundations theory", *Journal of Moral Education*, Vol. 42, No. 3, 330–345 (available via Ebsco).

- Jesse Graham *et al.*, Moral Foundations Theory: On the Advantages of Moral Pluralism Over Moral Monism,

- https://www.moralfoundations.org/.

Additionally additional materials

- Tal Eyal a *et al.* (2008) "Judging near and distant virtue and vice", *Journal of Experimental Social Psychology*, Vol. 44, 1204–1209.

- Iris L. Žeželj, and Biljana R. Jokić (2014) "Replication of Experiments Evaluating Impact of Psychological Distance on Moral Judgment", *Social Psychology*, Vol. 45, No. 3, 223–231.

2.4   Rationality

Rationality
Reading: Roy Sorensen, "Paradoxes of Rationality"
(ch. 14 of A. R. Mele & P. Rawling (eds.) *The Oxford Handbook of Rationality*, Oxford UP, 2004)
Readings: Stenning and van Lambalgen,"Rationality Revisited"
(ch. 11 of *Human Reasoning and Cognitive Science*, The MIT Press, 2008)

Just one task (it is also your fourth and last assignment; individual work, please): formulate five to seven questions or issues you would like to discuss; they may arise from reading Sorensen's chapter or just concern the topic of rationality in general. Send them in by midnight, Thursday, November 4th, at the usual e-mail address.

Additional materials

- Chapters of A. R. Mele & P. Rawling (eds.) *The Oxford Handbook of Rationality*, Oxford UP, 2004:

    - Robert Audi, "Theoretical Rationality: Its Sources, Structure, and Scope", ch. 2.
    - Alfred R. Mele, "Motivated Irrationality", ch. 13.

- Entries in the "Stanford Encyclopedia of Philosophy":

    - Instrumental Rationality.
    - Practical Reason.
    - Historicist Theories of Scientific Rationality.