How do Philosophers Think their own Discipline?

Reports from a Knowledge Elicitation experiment

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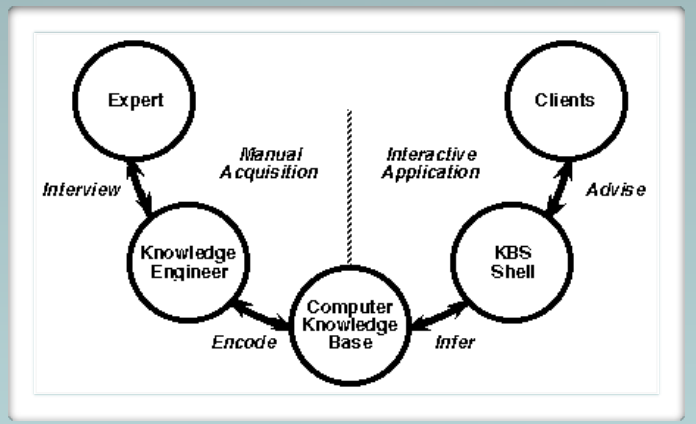
Knowledge Elicitation

implicit *explicit*





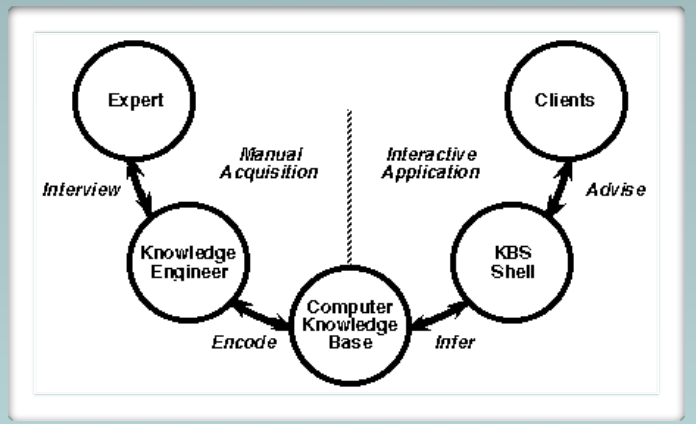
Kidd, A. L. (1987). *Knowledge acquisition for expert systems: a practical handbook*. New York, NY, USA: Plenum Press.

Knowledge Elicitation

- interviews
- observation
- teachback
- questionnaires
- goal related
- construct elicitation
- sorting
- laddering

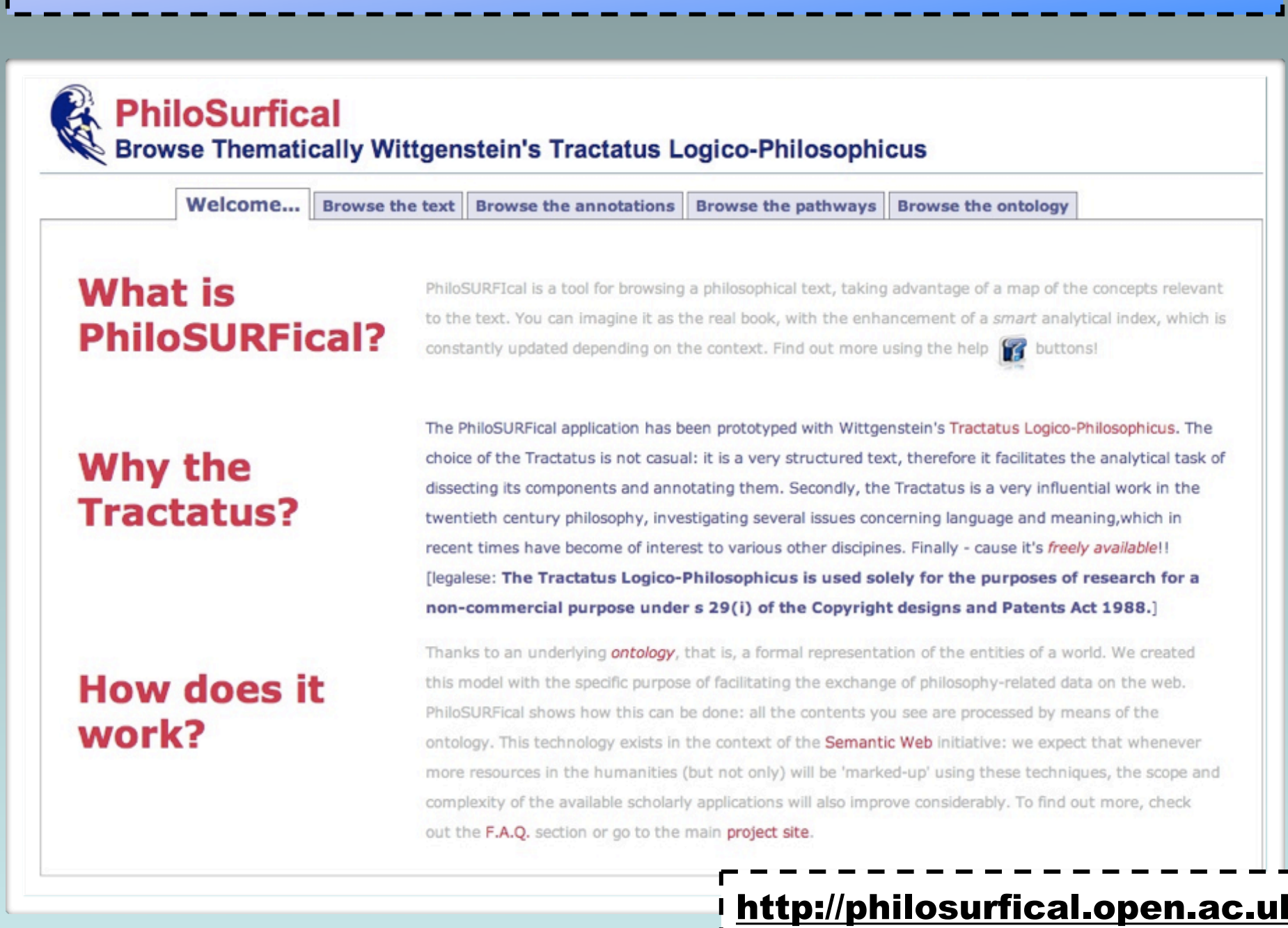
implicit

explicit



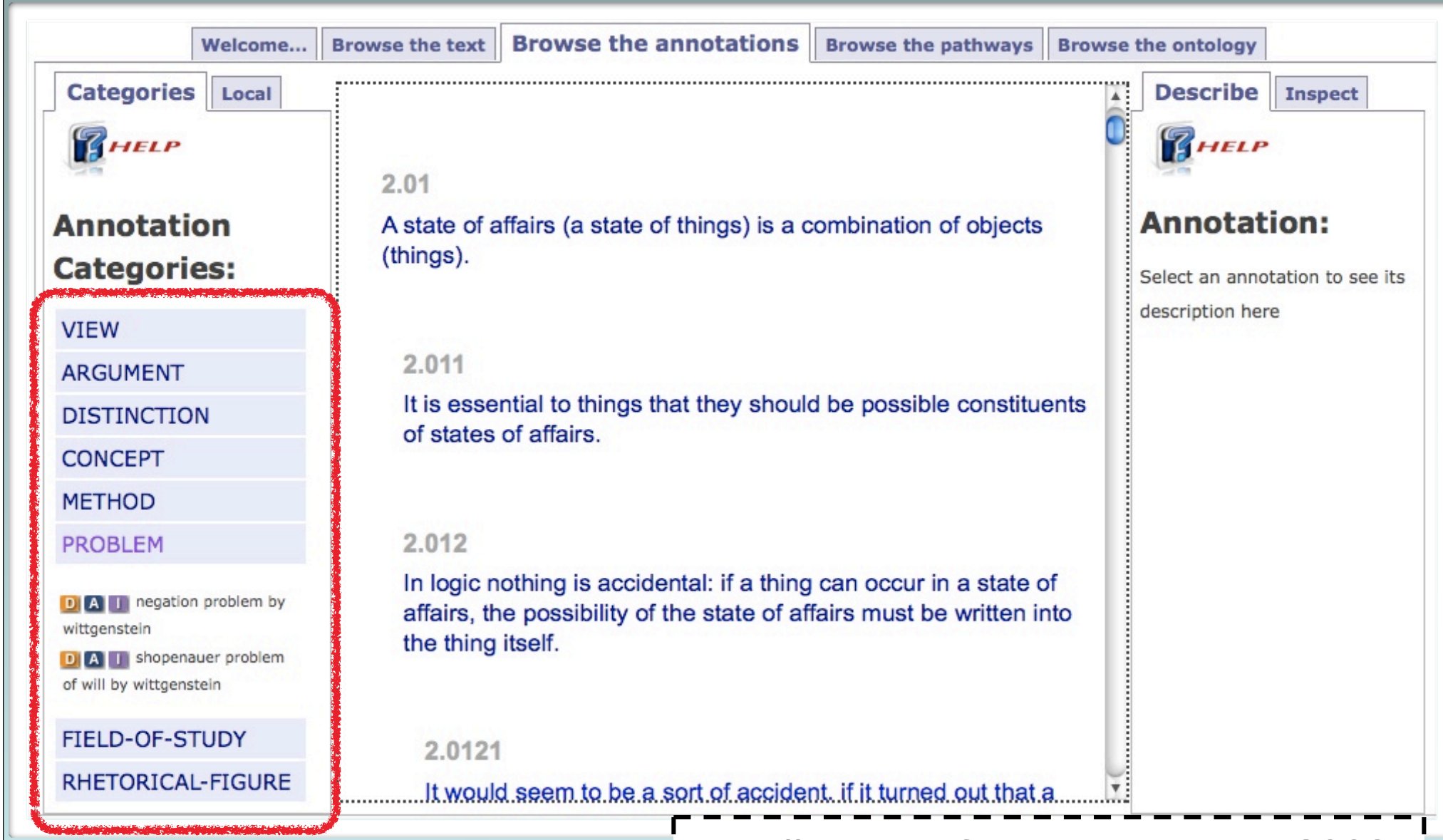
STRUCTURE

Context and purpose of the experiment



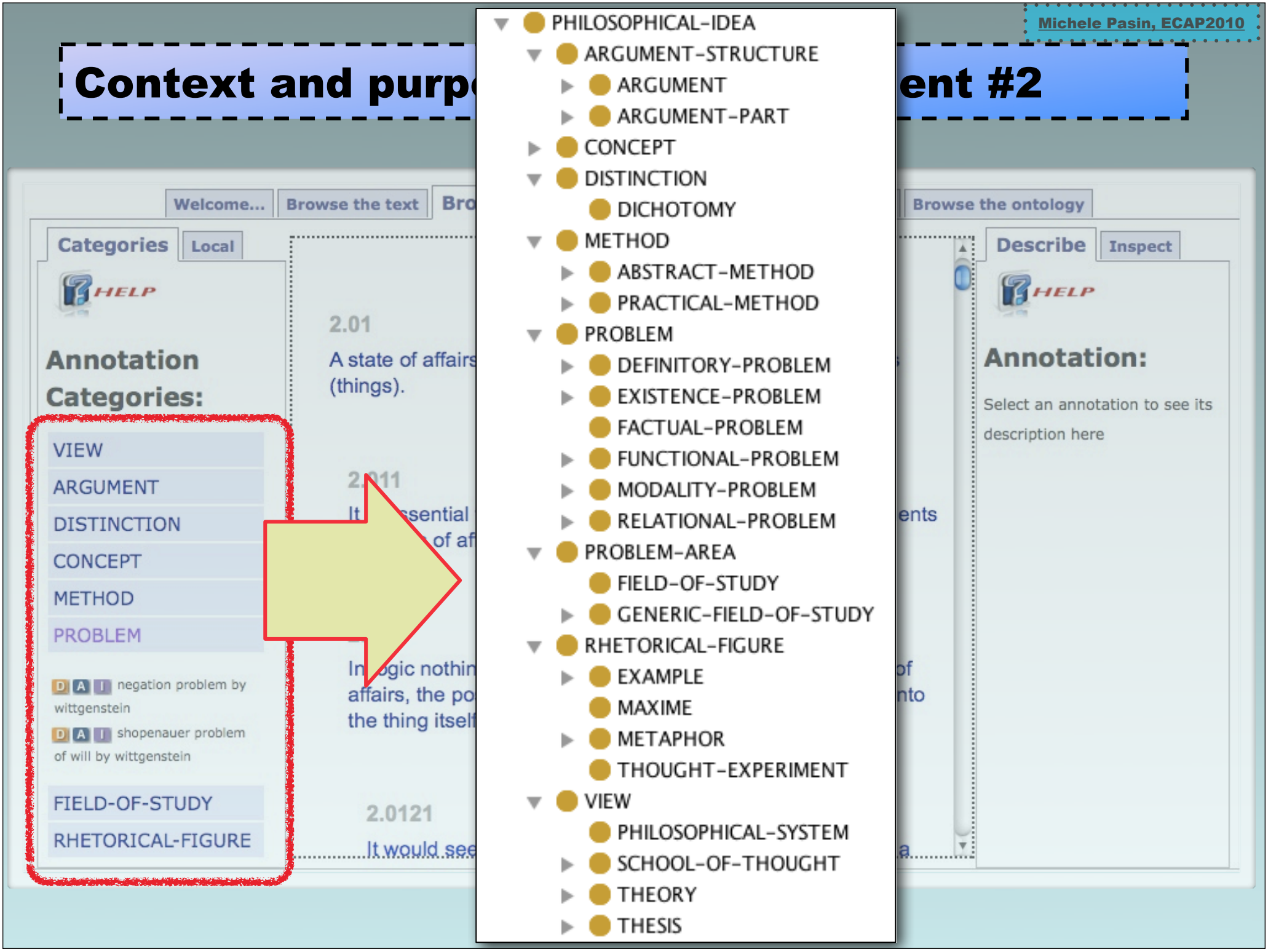
http://philosurfical.open.ac.uk

Context and purpose of the experiment

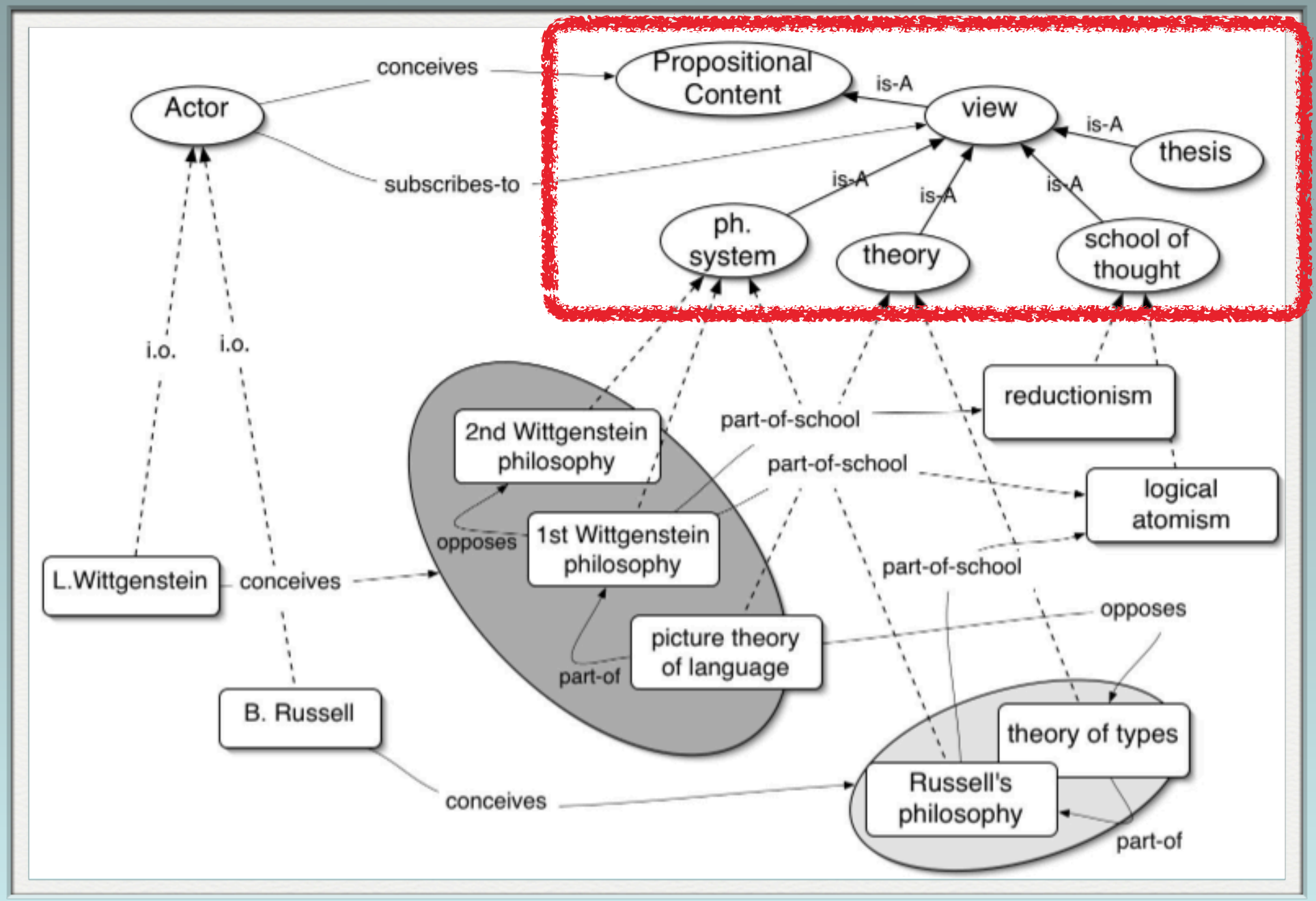


http://philosurfical.open.ac.uk [2008]

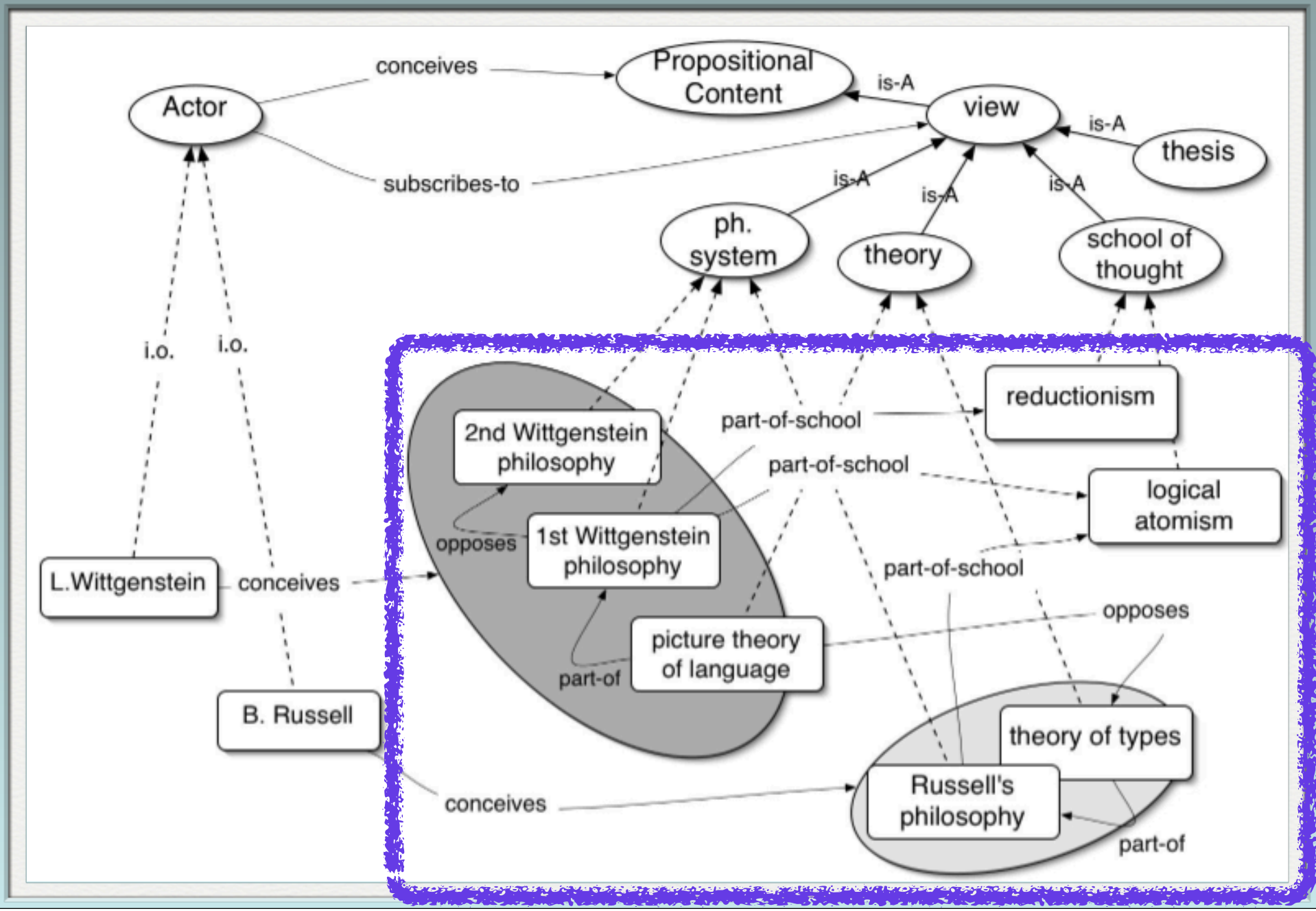
Context and purpo ent #2



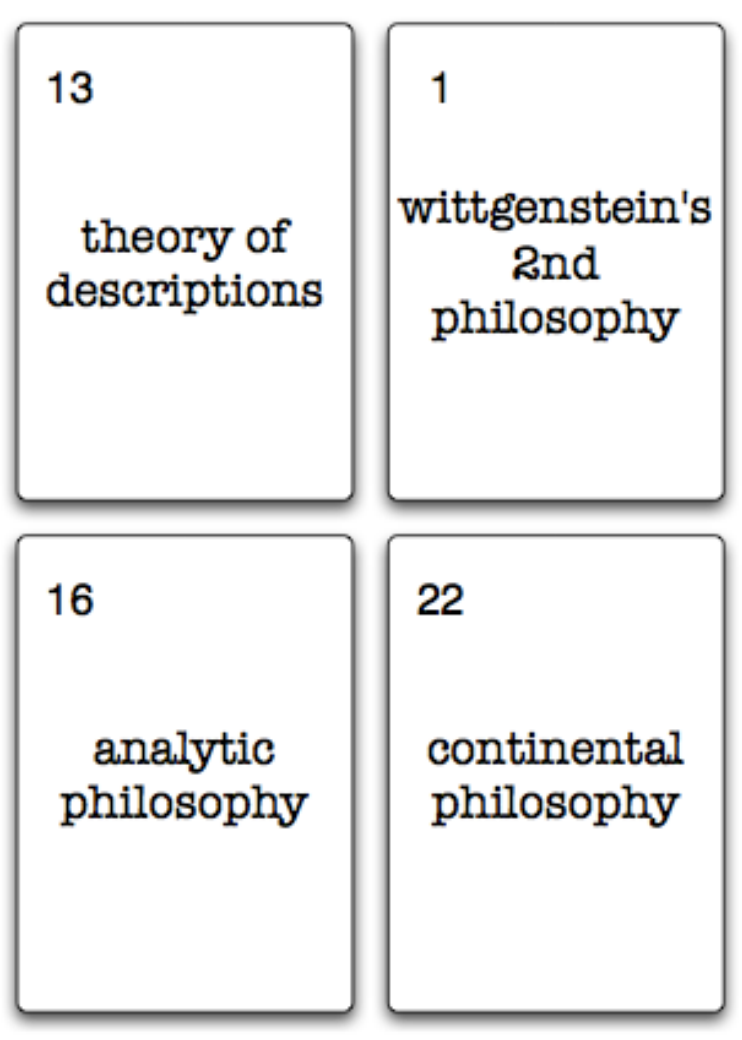
Ontology: a dynamic view (classes)



Ontology: a dynamic view (instances)



Experiment set-up

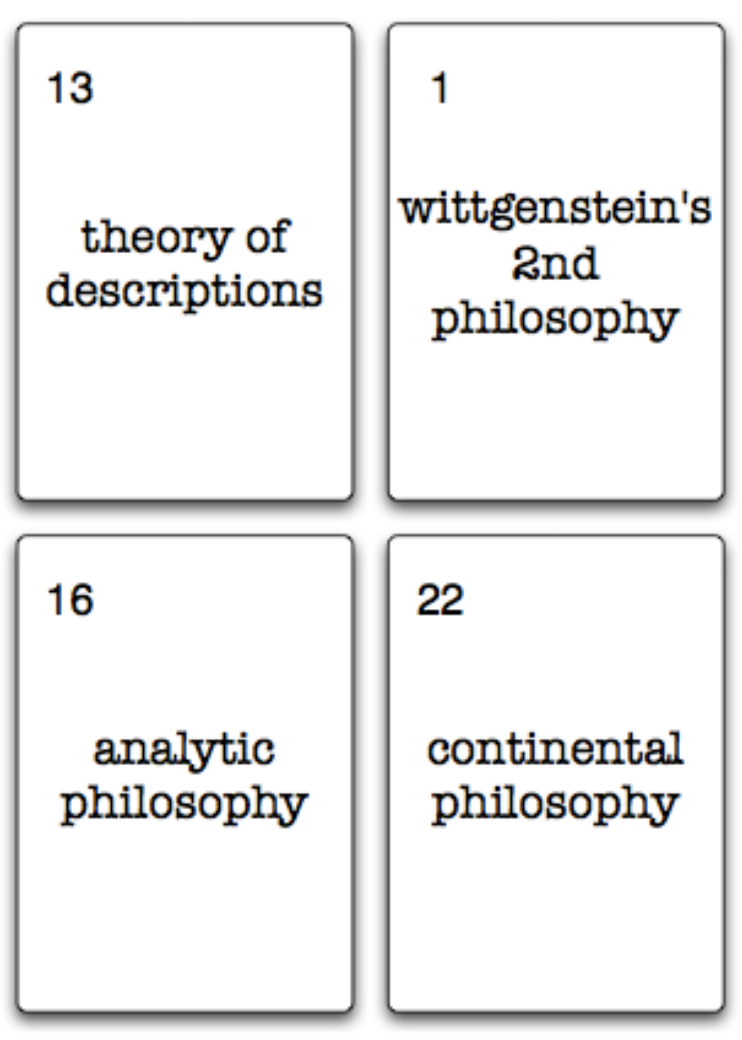


- card sorting KE technique
  - good for eliciting categories, especially non scalar ones
  - easy to implement

- cards represent domain entities
  - respondents are asked to sort them repeatedly
  - each sort is done according to a criterion
  - each sort determines a possible *categorization* of some entities

Rugg, G., & Mcgeorge, P. (2005). *The sorting techniques: a tutorial paper on card sorts, picture sorts and item sorts*. Expert Systems, 22(3), 94-107.

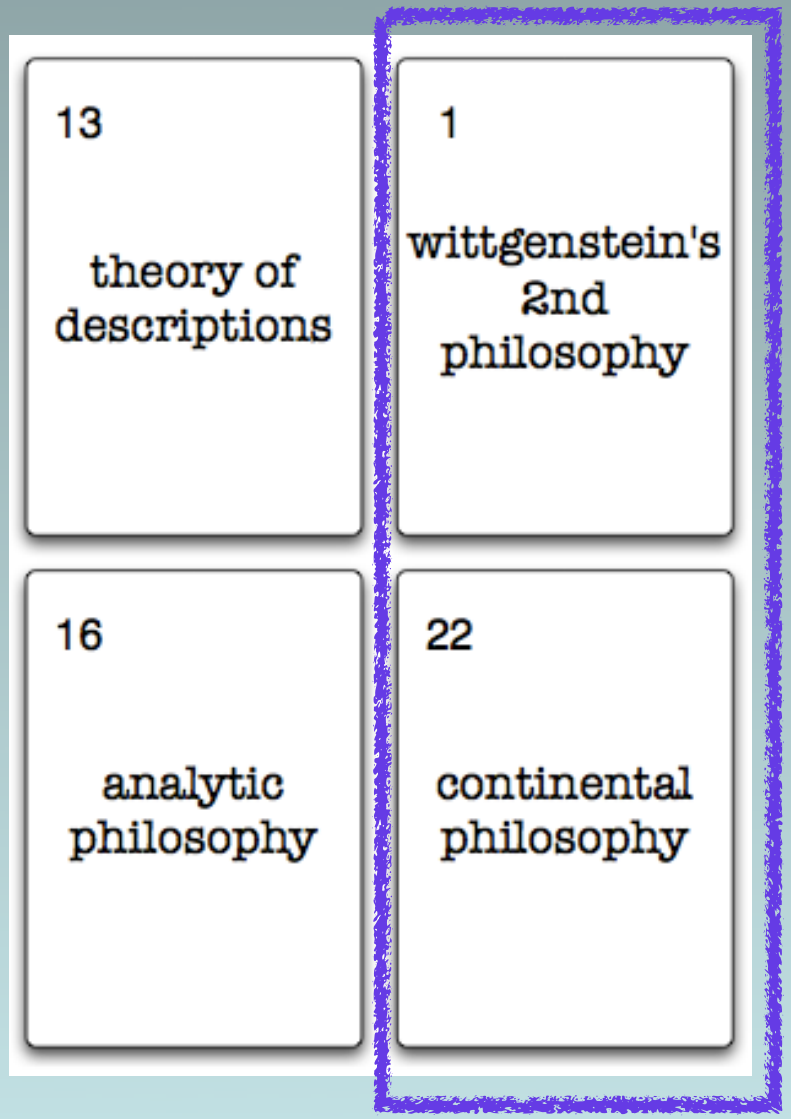
Experiment set-up: an example



- *criterion* chosen: "**generic philosophical approach** "

- *groups* generated (aka *constructs*, or *categories*):

Experiment set-up: an example

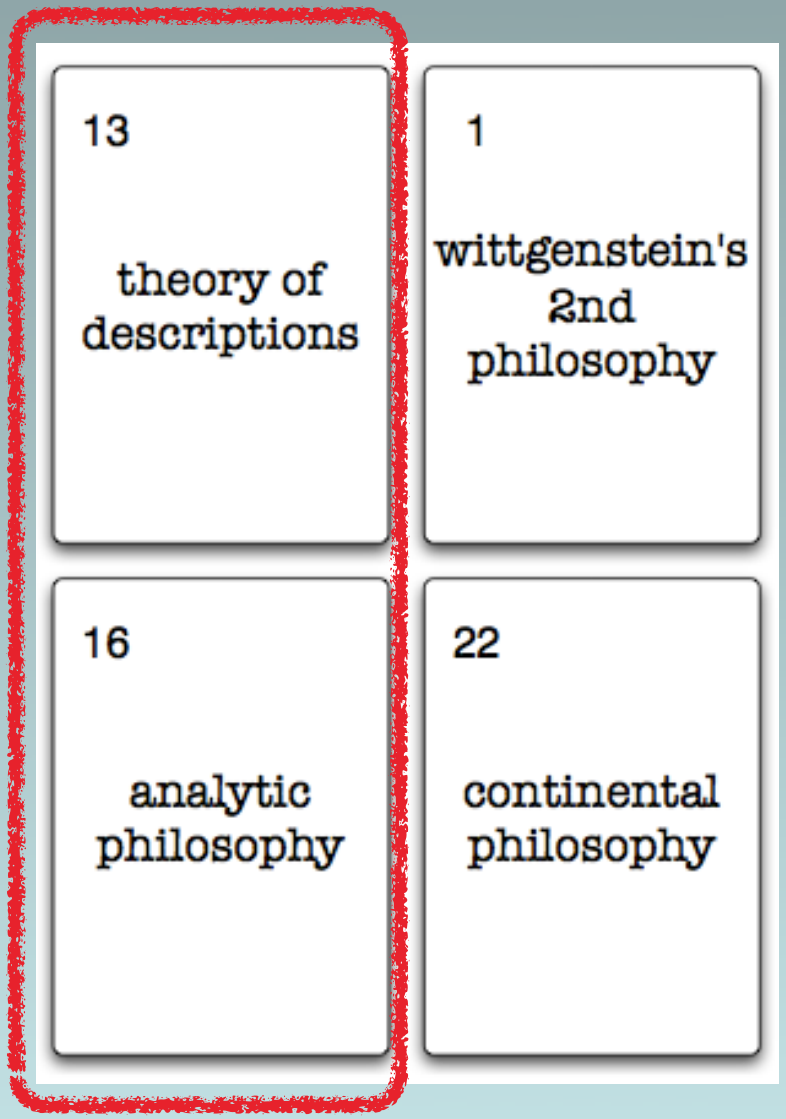


- *criterion* chosen: "**generic philosophical approach** "

- *groups* generated (aka *constructs*, or *categories*):

A) continental approaches

Experiment set-up: an example



- *criterion* chosen: "**generic philosophical approach** "

- *groups* generated (aka *constructs*, or *categories*):

A) continental approaches

B) analytic approaches

Experiment set-up: cards & volunteers

21 ontology	20 logical atomism	23 world	11 substance problem	13 theory of descriptions	1 wittgenstein's 2nd philosophy	15 circle of vienna	4 monism
18 wittgenstein's ontology	10 philosophy of religion	9 Ludwig Wittgenstein	14 truth table method	16 analytic philosophy	22 continental philosophy	7 enlightement	2 nominalism
12 a posteriori	6 mathematics	8 Aristotle's philosophy	5 dialectic	19 Plato	17 meaning	3 epoche'	

Experiment set-up: cards & volunteers



- 23 cards
  - representing philosophy-related concepts

- 12 volunteers
  - 6 lecturers (the 'experts')
  - 6 PhD students (the 'less experts')
  - 20 minutes for sorting session

Experiment results: overview

	GROUP A	GROUP B	TOTAL
CRITERIA	26 (avg. 4.33 per person)	26 (avg. 4.33 per person)	52
CATEGORIES	104 (avg. 17.3 per person)	72 (avg. 12 per person)	176

Criteria	No of Categories	Volunteer
Types of entities	7	2
Relation to philosophy	1	2
Types of entities, alternative classification	6	2
Degree of connection to Wittgenstein	2	2
historical problems, and generic ones	3	3
historical period, according to the cambridge syllabus	2	3
umbrella terms and specific philosophy topics, as used in a pedagogical context	2	3
importance of topics, according to a specific school of philosophy (cambridge)	3	3
By subject areas	3	3

Experiment results: a first look

	GROUP A	GROUP B	TOTAL
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CATEGORIES	104 (avg. 17.3 per person)	72 (avg. 12 per person)	176

- the **total number of criteria** is the **same** for the two groups

- **experts** provided **30% more categories** than non-experts

Experiment results

Criteria	No of Categories	Volunteer
history of philosophy related	2	1
Things I like reading	3	1
chronological ordering	7	1
Pedagogical criterium - things a philosopher should know, resembling a curriculum-creation criteria	3	1
types of philosophical entities	7	1
Specificity of theoretical approaches (the specificity is associated with the fact that the approach solves a specific problem, and that it refers to a specific philosopher)	4	1
Type of entities and connection to Wittgenstein	5	2
Abstract/concrete distinction	2	2
Types of entities	7	2
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Experiment results: verbatim criteria

Criteria	No of Categories	Volunteer
history of philosophy related	2	1
Things I like reading	3	1
	7	1
	3	1
	7	1
Specificity of theoretical approaches (the specificity is associated with the fact that	4	1
	5	2
	2	2
	7	2
	1	2
Types of entities, alternative classification	6	2
Degree of connection to Wittgenstein	2	2
historical problems and generic ones	3	3
		3
		3
importance of topics, according to a specific school of philosophy (cambridge)	3	3
By subject areas	3	3

- no verbatim criteria were exactly the same
- often only wording differences (e.g., 'type of entities' and 'type of things')

- no verbatim categories, too, were exactly the same
- also here, often only wording differences (eg. 'techniques, methods' and 'methods')

==> grouped criteria into meta-criteria
- according to their similarities (intended meaning)

Meta-criteria (1-4 of 9)

Meta-criteria	ex. verbatim criteria	Tot. No. Of Criteria	Group A	Group B	Tot. No. of Categories
1) Types of entities	"Philosophical schools of thought, or not"	15	9	6	73
2) Time-based ordering	"Historical ordering"	8	5	3	26
3) Subject area	"Themes related to enlightenment, or not"	8	3	5	22
4) Types of problems tackled	"Correlation to the semiotic/ meaning problem"	7	3	4	20

Meta-criteria (5-9 of 9)

Meta-criteria	ex. verbatim criteria	Tot. No. Of Criteria	Group A	Group B	Tot. No. of Categories
5) Correlation to a specific author	"Stuff related to Wittgenstein, or not"	6	2	4	16
6) Type of theoretical approach	"analytic philosophy"	6	4	2	20
7) Importance/ pedagogical perspective	"Importance of topics, according to a specific school of philosophy (Cambridge)"	3	3	0	8
8) Things I like/know	"Concepts which are familiar to me, or not"	3	1	2	7
9) Type of method	"Ordering based on the type of methods usually associated with a concept"	1	0	1	3

Conclusions #1

- ‘Group of people’ ~ ‘school of thought’

They represent different aspects of the same multifaceted entity

- ‘Historical’ vs ‘Timeless’

Abstract things can always be easily ‘specified’ by associating them to concrete ones, and vice-versa..

Conclusions #2

- ‘Problems’ and ‘problem areas’

Our ontology classified problems differently!
Accent on *contents*, rather than *structure*...

ProblemAreas generally contain problems - although often they are mixed..

- A ‘person-centric’ world view

tendency to identify things (= ideas) through associating them to their authors, or, in general, to some of the people who are related to them

Conclusions #3

- Different types of philosophical theories

  - *content* rather than *structure*

  - dyadic characterization: '*groups of approaches*' vs '*theoretical approaches*'

  - triadic: '*philosophical position*' vs '*philosophies of an author*' vs '*doctrines*'

Future work and methodological issues

- Running different CS experiments focusing on specific entity-types, eg:
  - views of different granularity (e.g., schools of thought, theories or philosophies)
  - how experts would organize problems and subject areas into a consistent representation

- Cars Sorting method never used for classifying 'ideas' :
  - would other approaches (such as *laddering*, or *repertory grids*) produce more interesting results?

Questions ?





Thanks to:
Enrico Motta, Zdenek Zdrahal



