



An analytical framework for Place Research

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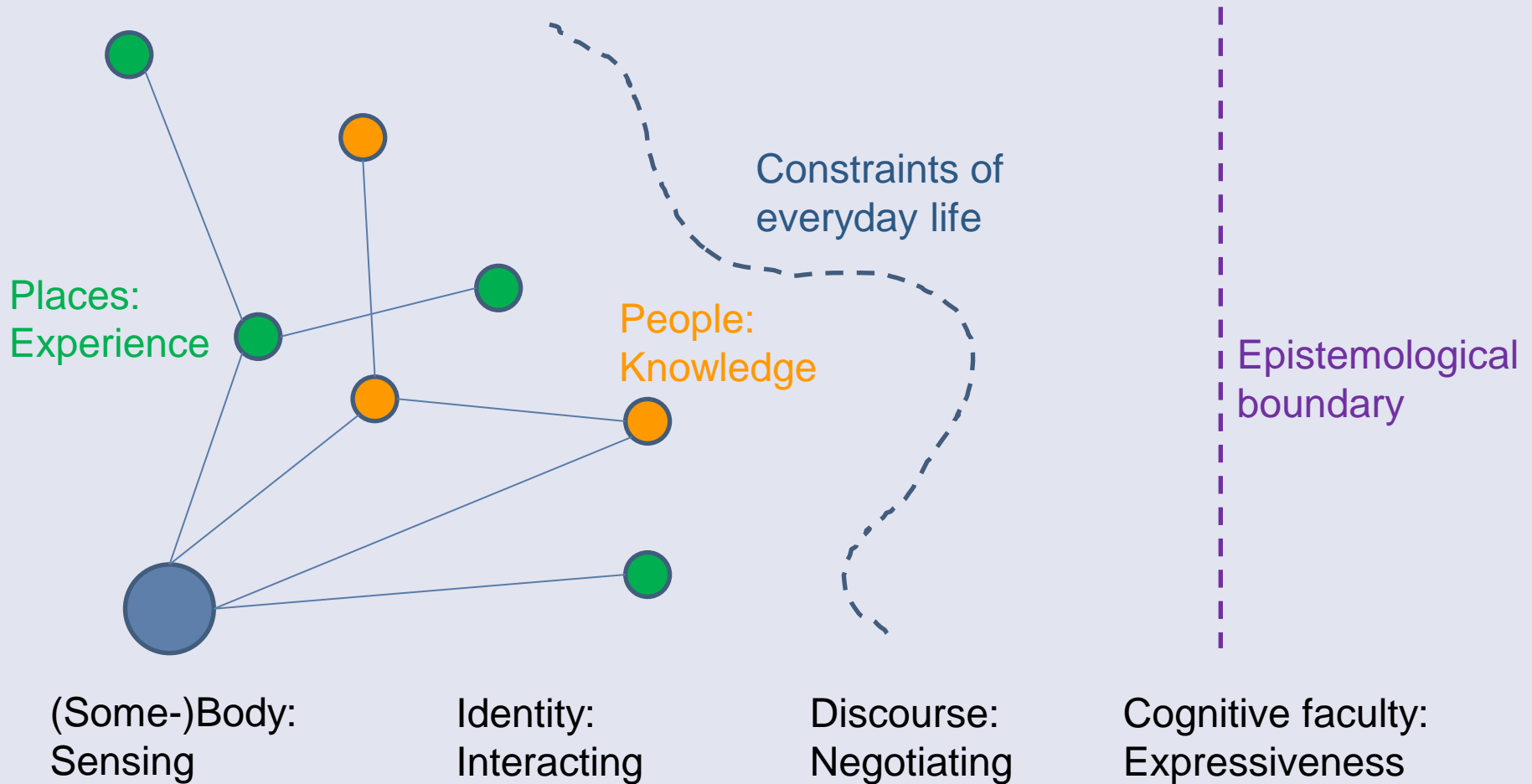
Disparate approaches?

- **Place research**
e.g. Tuan 1977, Cresswell 2004, human geography
 - Location
(relational where)
 - Locale
(social setting/stage)
 - Sense of place
(assigning meaning)
- **Methods**
 - interpretative-qualitative
 - generating theory
- **Spatial Cognition**
intern. conference since 1998, cognitive psychology
 - Perception
(sensing)
 - Memory
(processing)
 - Knowledge
(learning)
- **Methods**
 - empirical-quantitative
 - testing hypotheses

Connecting opposites

- The social factor in cognition
 - *“we understand social concepts [...] by simulating relevant motor, perceptual, and emotional experiences, and [...] our understanding [...] is embedded in the social and physical environment”*
(Hostetter et al. 2012)
- The cognitive bias in social sciences
 - *”Discourses have productive power not simply because they affect bodies but more importantly because they are derived from them.“*
(Butcher 2012)

Epistemological boundaries of social space



A framework for human geographers?

- Typical approach in cognitive sciences
 - Identify theoretical background
 - Identify appropriate patterns
 - Formulate hypotheses
 - Evaluate these
 - Interpret results
- Place as social concept
 - Theoretical background
 - Need for heuristical operationalization
 - Real time processes
 - no well controllable experimental setting
- Main question
 - Are there generative mechanisms underlying typical place consumption patterns?

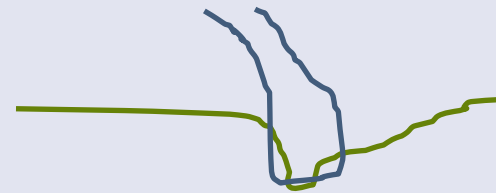
Close monitoring data

- Tracks and photos
 - 76 tourists visiting the Old Town of Bamberg
 - GPS-Logger
 - GPS-Camera
 - Questionnaire
 - May-11/June-12
- Eye tracking (at site)
 - 15 tourists viewing a Bamberg panorama
 - Sep-12
- Speech
 - 48 local inhabitants talking for ca. 1 hour about their Bamberg experience
 - Recorded speech
 - Transcripts
 - June-11

Movement patterns

- Criteria
 - Stop: no change of position or low velocity
 - Microexploration: notable activity but no netto approaching rate
 - Encounter: temporal cooccurrence

- Examples



Action patterns

- Place popularity
 - marginal return model
 - action at site as vote: contribution to popularity
 - Place p
 - Person x in visitor set $T_p, |x| = k$
 - n pictures taken vs.
 - t minutes of stay time

- Photos taken

$$pop_{image}(p) = k + \sum_{x \in T_p} \log n(x)$$

- Stay time

$$pop_{time}(p) = k + \sum_{x \in T_p} \log t(x)$$

- Examples

Inviting for exploration, but no spectacular vista



Nice view, but exhausted in a few minutes

Language patterns

- Criteria

- Place names
(spatial gazeteer, part of speech analysis)
- Simple evaluation or assertion of meaning
(cooccurrence analysis)
- Discursive formation, metapragmatic markers
(?)

- Examples

- *“Bamberg”, “At the end of the road”, “there”*
- *“I like Bamberg”, “At the end of the road I saw a picturesque mountain”*
- *“Others say...”, “The so called ‘center’”, “without doubt this means”, “Obviously”*

Requirements analysis

- (1) beside behavioral locomotion data, the framework has to support action sequences (e.g. image data) and text as input data.
- (2) The framework should allow place to be identified as locomotion pattern, action pattern and as argumentation pattern.
- (3) The association of all types of patterns should be supported.
- (4) Temporal analyses regarding change and connectivity of places have to be possible.

Thank you...

- ...for your attention!
- I appreciate questions and comments!