

Towards a Theory of Principled Polysemy: The Case of *In*

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1. Introduction

- To characterize some of the problems to be accounted for by a theory of word-meaning
- To present a theory which attempts to address such issues: **Principled Polysemy** (Evans and Tyler To appear, 2003; Tyler and Evans To appear, 2001, 2003)
- To make the case for using prepositions as a “laboratory” for investigating issues in word-meaning

2. Issues to be addressed by a theory of word-meaning

i) Lexical items can be used in a range of contexts in which novel meanings are derived (cf. Herskovits 1986)

- (1) There's some fruit in the bowl
- (2) There's a crack in the bowl
- (3) There's some dust in the bowl
- (4) There's a bee flying around in the bowl
- (5) There's an apple in the bowl

This relates to developing a distributed spatial semantics (Sinha and Kuteva 1995). Two factors :

- a) Encyclopedic Knowledge
- b) Inferencing Strategies

ii) Polysemy

Early attempts in CL: Full specification models (Bugman and Lakoff 1988; Lakoff 1987):

- (6) Sam climbed over the wall
- (7) The bird flew over the wall
- (8) Sam walked over the hill

This leads to methodological problems. Two factors:

- a) criteria for distinguishing the central sense
- b) criteria for distinguishing distinct senses

iii) Part of Speech Flexibility

- (9) The cow is in the field
- (10) The sun is in
- (11) The student turned in a paper

3. A distributed view of Spatial Meaning

i) Best Fit

- (12) There's a crack in the bowl
- (13) ?There's a crack on the bowl
- (14) ??There's a crack at the bowl

But compare:

The bitch is in heat (US) vs. The bitch is on heat (UK)
 (People are standing in line vs People are standing on line-NY)

ii) Knowledge of real-world force dynamics

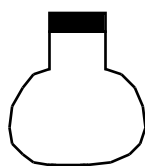


Figure 1 After Vandeloise (1994: 172).

- (15) The bulb is in the socket
- (16) ??The bottle is in the cap

iii) Topological Extension

- (17) a. The cow munched grass in the field
- b. The tiny oasis flourished in the desert
- (18) a. China is in Asia
- b. London is the largest city in the United Kingdom
- c. She lives in New York City
- (19) a. The flag flapped in the wind

- b. The child shivered in the cold
 - c. The rabbit froze in the glare of the car's headlights
- (20) a. The child couldn't be seen in the crowd
b. The old cottage was located in the wood

4. Meaning-extension as a Motivated Phenomenon

i) Polysemy

- (21) a. The puppy is in the box
b. She is in love
c. Ok, class, put your chairs in a circle
d. In the northern territories you can get snowed in for months

ii) Actuation

- Pragmatic Strengthening (Traugott 1989) or decontextualization (Langacker 1987)

(22) She is in the prison [Containment]

(23) She is a prisoner

(24) She is in prison [State]

iii) The modelling issue

a) Radial Category (Lakoff 1987):

- Semantic network
- Proto-scenes (derived from spatial scenes)
- Chaining (Lakoff 1987)

b) Criteria for determining the central sense (proto-scene)

- 1) earliest attested meaning,
- 2) predominance in the semantic network,
- 3) use in composite forms,
- 4) relations to other spatial particles (contrast sets), and
- 5) predictability of other senses in the network.

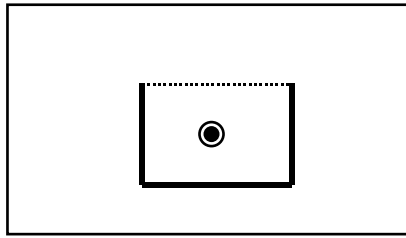


Figure 2: Proto-scene for *in*

- c) Criteria for determining distinct senses
- 1) Distinct (non-spatial) meaning
 - 2) Can't be predicted from context

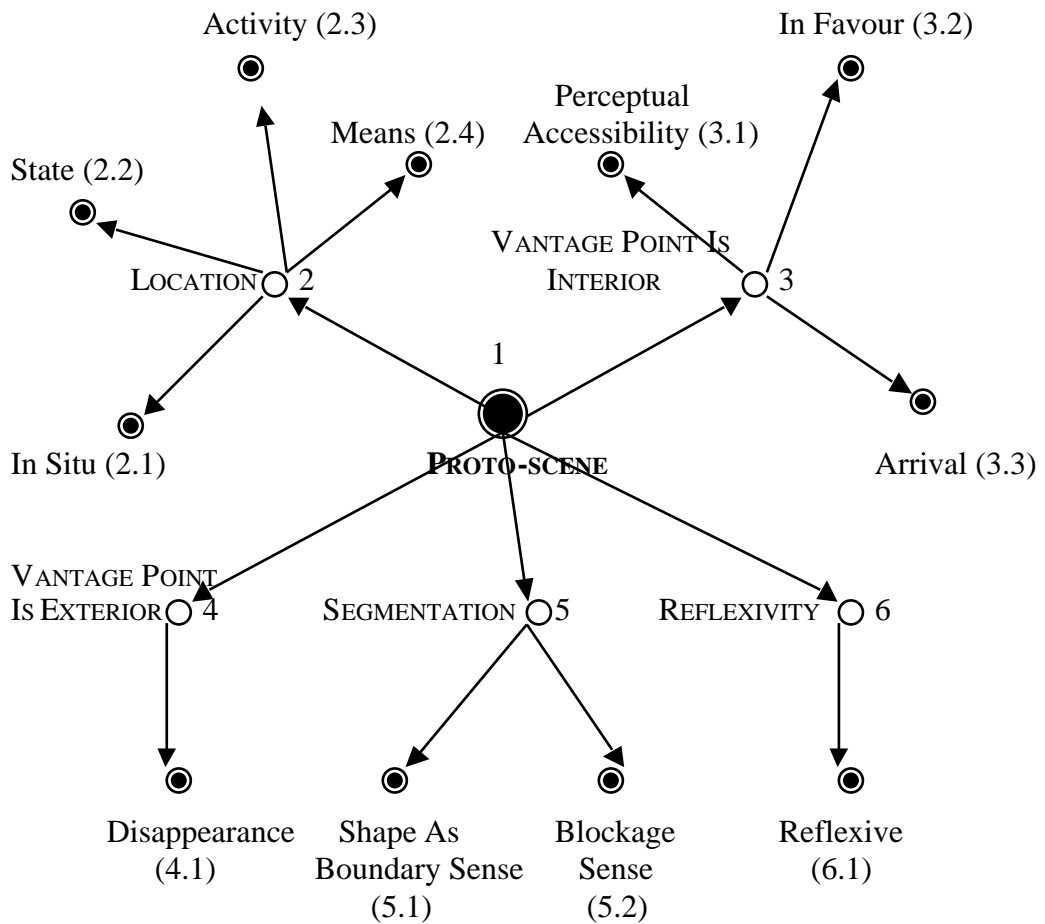


Figure 3: A Partial Semantic Network for *in*

5. Grammatical Profiles

- (25) The boy is in the house
 (26) The sandcastle fell in

6. Principled Polysemy: Summary

- 1) Accounts for semantic extension, the phenomenon of polysemy, due to the interaction between spatio-physical experience with an abstract proto-scene and situated language use (pragmatic strengthening),
- 2) avoids the polysemy fallacy by setting forth explicit criteria for determining distinct senses versus contextual uses of the proto-scene,
- 3) providing explicit criteria for determining the sanctioning sense, and
- 4) explicitly articulating the inferencing strategies processes, etc., that give rise to the meaning of novel uses of a lexeme in context (distributed semantics).

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