PROTOTYPE THEORY

CATEGORIZATION
Prototype

• prototype of a predicate is an object held to be very typical of the kind of object which can be referred to by an expression containing the predicate

• prototype- most typical member of a category

  e.g. prototype of the predicate *man*: man of medium height and average built, btw. 30 and 50 years old with no distinctive features or defects (in certain parts of the world)

  a dwarf or a muscular body-builder cannot be a prototype of the predicate *man*
Categorization

- **E. Rosch** - psychologist, one of the founders of c. semantics, introduced the idea of a **PROTOTYPE**
- crucial research in understanding categories
- **CATEGORY** - one knowledge structure
- contrast btw. **classical** and **prototypical** c.
- classical c. - Aristotle, applicable to Trier’s semantic field theory
Aristotelian categories

1. **categories are defined in terms of a conjunction of necessary and sufficient features**
   
implies that m. can be absolutely determined

   e.g. two necessary and sufficient features for “man”: *two-footed, animal*

   • **law of contradiciton** - an entity cannot both be and not be (both possess a feature and not possess it)
   
   • **law of the excluded middle** – an entity must either be or not be, either possess a category or not possess it (either belong to a category or not)
2. **features by which we define membership are binary**

f. are a matter of all or nothing; f. is either involved in the definition of a c. or it is not; an entity either possesses a f. or it doesn’t.

- f. is either present or absent and can take on only one of two values: [+] or [-]
3. **categories have clear boundaries**

- Once established, a c. divides the universe into two sets of entities — those that are members of the category, and those that are not
- no ambiguous cases, no entities which ‘in a way’ or ‘to some extent’ belong to a category
4. **all members of a category have equal status**

- no degrees of membership in a c.; no entities which are better members of a c. than others
- are these classical c. sufficient to structure m. and knowledge?
- best applied to phonology
E. ROSCH

• cog. s. do not reject Aristotle, but cannot be applied to many l. features

• Rosch: rigorous structural and TG approach in contradiction to the nature of l., notion of c. needs to be more flexible

• inspired by L. Wittgenstein and “family resemblances”

• category of games: “games form a family” (interrelationship we find in non-classical c.)
• what is common to different games?
• empirical model - when comparing, not sth. in common to all, but “a complicated network of similarities overlapping and criss-crossing” - def. of a prototype category
• similarities = family resemblances
• no boundaries in natural l., result of the arbitrariness of linguists
Rosch’s experiments

1. New Guinea speakers of Dani-2 color lexemes (‘mili’ and ‘mola’), taught them English lexemes for various colors

first learnt: prototypical red (moving away from the focal member dark r., cherry r., scarlet later & with difficulty)
2. no words for various geometrical shapes
   first learnt: circle & triangle
   • perception-involved in v. learning; what is perceptually most salient is learnt first
   • Conclusion: human k. is organized, but c. borderlines are not fixed but fluid and vague
   • our knowledge: result of “MORE OR LESS PRINCIPLE”
Rosch’s 3 basic levels of categorization

1. superordinate level: fruit
2. basic level: apple
3. subordinate level: Mackintosh apple
“Prototype Semantics: The English Word Lie”

a) when you kill sb. and say you didn’t- **prototypical lie**

b) when you say dinner was delicious- **social lie**

btw.: **gradation**, structure of a category is defined according to the prototype range of gradation and prototype-determined by **culture**
“Application of a name to a thing is in general not a matter of yes or no, but rather of more or less.”

- basic attitude of c.s.: our knowledge and meaning are **encyclopedic**
  - e.g. natural category of birds: eagle-robin-chicken-penguin
    - perceptual & cultural saliency
  - category of vegetables: tomatoes-celery-potatoes-cabbage
  - **flexibility of categories** connected to **flexibility of concepts**
    - (development through life & physical surroundings and culture)
Charles Fillmore

- criticizes basic assumptions of c.a., but at the same time tries to offer a new framework
- what is the m. of a particular form? - wrong question
- what do I need to know in order to use a form appropriately and to understand others when they use it?
- m. cannot be analyzed without taking into consideration its relationship to man’s worldview, thought & understanding
- basic comm. function of l. necessarily implies not only linguistic k., but its interrelationship with the wider encyclopedic knowledge (of the world)
- criticism of Coseriu
Scenes & Frames

- rejects “cheklist theories” (inclusion in a category determined by a set of necessary and sufficient features)
- basic terms: SCENES & FRAMES
- scenes- prototypical images we have about entities (persons, objects, events); systems of concepts structuring and forming various aspects of human experience; “meanings are relativized by scenes”
- frames- systems of 1. choice directly connected to scenes
Fillmore’s examples

• ‘buy’ and ‘sell’- to understand the m. of these verbs, we need the knowledge of basic parameters: money, goods, sale= prototypical scene in which these verbs are used

• scenes differ from culture to culture (bargaining in the Middle East)= k. of the world

• Frames-lexical sets whose members index portions or aspects of some conceptual whole (can produce extensive nb. of sentences in which ‘buy’ and ‘sell’ appear, limited by grammar=k. of language)
‘walk’-prototypical v. of walking, most prototypical subject is ‘people’, not ‘animal’

*Dog walked down the street. I walked my dog around the block. I walked my hamster around the block.*

• whole scene organized from the most prototypical to the least p. member—"**more or less principle**"
Concluding remarks

• cog. semantics brought about **flexibility** in the perception of l. structures and connection btw. knowledge of l. and knowledge of the world

• slight individual differences neutralised by the prototype-shared knowledge