

# Conceptual Metaphor and Metonymy

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# Some ways of organising and understanding concepts

- Prototype Theory
  - ▶ Explains internal category structure
  - ▶ Graded membership
  - ▶ Central vs peripheral members
- Metaphors and Metonymy
  - ▶ Explains cross-domain conceptual mapping
  - ▶ Metaphor maps prototypical structure
  - ▶ Metaphor creates radial category extensions
  - ▶ Metaphor can reshape prototypes over time



# Roadmap

- 1 Prototypes
- 2 Metaphors



# Prototypes

- Concepts are organized in groups around a **prototype**
- These have typical members (remembered as **exemplars**)
  - ▶ What is typical **furniture**?
  - ▶ What is a typical **bird**?
- prototypes have **characteristic features**:  
a **bird**
  - ▶ has feathers
  - ▶ warbles
  - ▶ flies
  - ▶ lays eggs
- This work was pioneered by (**Rosch, 1973; Rosch et al., 1976**)  
(very readable)



# Relations between Concepts

- Concepts are linked in many ways
- Most common relationship is **hyponymy**: **dog** is-a **animal**
- Typically subordinate terms inherit from superordinate terms
- Larger units of knowledge, such as **frames** are similar
- Much recent computational work on these
  - ▶ WordNet
  - ▶ FrameNet



# Basic Level Categories

- Some categories (concepts) seem to be more psychologically basic than others
  - ▶ Pictures of objects are categorized faster at the basic level
  - ▶ Basic level names used more often in free-naming tasks
  - ▶ Children learn them earlier
  - ▶ Basic-level names are more common in adult discourse
  - ▶ Basic-level categories are common in different cultures
  - ▶ Basic level names tend to be short
  - ▶ Basic-level names tend to be common in compound nouns

superordinate	basic	subordinate
<i>vehicle</i>	<i>bus</i>	<i>school bus</i>
<i>jewelry</i>	<i>necklace</i>	<i>bib necklace</i>
<i>animal</i>	<i>dog</i>	<i>poodle</i>



- Basic level categories are a decomposition of the world into maximally informative categories.
  - ▶ BLCs maximize the number of attributes shared by members of the category
  - ▶ BLCs minimize the number of attributes shared with other categories
- It can be hard to agree on what is the Basic Level: whereas *dog* is a basic-level category at the species level, *bird* and *fish* sit at a higher level, etc. The levels may be different for different groups of people.
- Similarly, the notion of frequency is very closely tied to the basic level, but not exactly the same.



# Linguistic Relativity

- The language we think in makes some concepts easy to express, and some concepts hard
- The idea behind **linguistic relativity** is that this will effect how you think
  - ▶ Korean lexicalizes politeness and has rigid social hierarchies
  - ▶ English and Chinese speakers differ as to whether they conceptualize things as substances or individuals
  - ▶ Gendered language speakers have different connotations: **key**
    - (German: masculine) 'hard, heavy, jagged, metal, and useful'
    - (Spanish: feminine) 'golden, intricate, little, lovely, shiny, and tiny'
  - ▶ It is easier to differentiate colors that you have names for
- Most confirmed differences are very, very subtle



# The Sapir-Whorf Hypothesis

**strong** language determines thought and linguistic categories  
limit and determine cognitive categories


**weak** linguistic categories and usage influence thought and  
certain kinds of non-linguistic behaviour

The terms "Strong/Weak Sapir-Whorf Hypothesis" are widely used even though Edward Sapir and Benjamin Lee Whorf never co-authored anything and never stated their ideas in terms of a hypothesis let alone with two versions.



## What Whorf actually said

*We dissect nature along lines laid down by our native language. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscope flux of impressions which has to be organized by our minds—and this means largely by the linguistic systems of our minds. We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way—an agreement that holds throughout our speech community and is codified in the patterns of our language [...] all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated.*

*Whorf (Carroll; Ed.); 1956: pp. 212–214* 

# Roadmap

1 Prototypes

2 Metaphors

- More Metaphor: Anger



# Metaphors and Mechanisms of Interpretation

A metaphor is an extension of the use of a word beyond its primary meaning to describe referents that bear similarities to the word's primary referent.

- **eye** “body part used for vision”

(1) *dull end of a needle (with a hole for the thread)*



(2) *the bud on a potato*



(3) *the centre of a storm*



- The similarities between these referents and the primary referent of the word **eye** are their roundish shape and their more or less central location on a larger shape.

# Grammaticalization

- Once a metaphor becomes accepted, speakers tend to view the metaphorical meaning as separated from its primary meaning
  - (4) *booking a flight*
  - (5) *tabling a motion*
  - (6) *seeing the point*
  - (7) *stealing the headlines*
  - (8) *buying time*
- These are **dead/conventionalized metaphors**: we don't need to specially process them



# Metaphors as non-prototypical use

- In a way, metaphors are non-prototypical uses of a word.
  - ▶ Humans understand words by referring to a prototypical usage, and they match a new example against the characteristics of the prototype.
  - ▶ Use of words with broken typicality conditions happens all the time.
- (9) *The price of brussel sprouts went up.*
- (10) *Marigold is coming out of a coma.*
- (11) *Felix is under age.*
- (12) *I killed his argument.*
- (13) *Their love affair is blossoming.*
- (14) *She has a fertile imagination.*
- However, depending on how you count frozen metaphors, we may use metaphors more than literal uses!



*Our conceptual system is fundamentally metaphorical in nature*

George Lakoff

- Cognitive semantics:  
There is no separation between cognition and linguistic knowledge
- Features of Metaphor
  - ▶ **Conventional**: some metaphors are very well established (but remain metaphorical)
  - ▶ **Systematic**: understood as part of larger domains
  - ▶ **Asymmetrical**: normally understand the **abstract** in terms of the **concrete**



# Metaphors We Live By

- Metaphor is pervasive in everyday life, not just in language but in thought and action.
- Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature.
- If we are right in suggesting that our conceptual system is largely metaphorical, then the way we think, what we experience, and what we do every day is very much a matter of metaphor.

*George Lakoff and Mark Johnson (1980) Metaphors we live by  
University of Chicago Press.*



# Prototypical metaphors I

Some metaphors are not as good as others because not all broken typicality conditions result in prototypical metaphors. What is a prototypical metaphor?

- Similarity and dissimilarity have both been stressed.
- Items must not be too similar:

(15) #*Wine is whisky*

(16) #*Cars are trucks*

(17) #*Jam is honey*



# Prototypical metaphors II

- They should not be too dissimilar:
  - (18) *#His feet were stars*
  - (19) *#Her cheeks were typewriters*
  - (20) *#Her knees were penguins*
- In a prototypical metaphor then, items compared are likely to come from different lexical fields but they are also similar in that they do share some minor characteristic. Dissimilarity signals the listener to do some active semantic matching.
  - (21) *Life is a subway train*
  - (22) *Men are thistles*
  - (23) *He posted the toast down to his stomach*



# Target and Source Domains

*Metaphors enable us to understand one domain of experience in terms of another.* *Lakoff and Turner (1989)*

- We map from a **source domain** to a **target domain**  
often written: **TARGET** is **SOURCE**



# DESIRE is HUNGER

(24) *He was drooling over her.*

(25) *He is sex-starved.*

(26) *She thirsts for recognition.*

(27) *His sexual appetite is enormous.*

(28) *She hungers for her touch.*

- Target domain: SEX (DESIRE, LUST)
- Source domain: FOOD (HUNGER, EATING)



# ARGUMENT is WAR I

- (29) *Your claims are indefensible.*
- (30) *He attacked every weak point in my argument.*
- (31) *His criticisms were right on target.*
- (32) *I demolished his argument.*
- (33) *I've never won an argument with him.*
- (34) *You disagree? Okay shoot!*
- (35) *If you use that strategy, he'll wipe you out.*
- (36) *He shot down all my arguments.*
- (37) *He was defeated by the argument.*



# ARGUMENT is WAR II

- We don't just talk about argument in terms of war. We can actually win or lose arguments.
- Many of the things we do in arguing are partially structured by the concept of war. Though there is no physical battle, there is a verbal battle.
  - ▶ We see the person we are arguing with as an opponent.
  - ▶ We attack their positions and defend our own.
  - ▶ We gain and lose ground.
  - ▶ We plan and use strategies.
- The metaphor is not only in the words we use — it is in our very concept of argument. We talk about arguments that way because we conceive of them that way — and we act according to the way we conceive of things
- But we could think of an argument as a search for truth, ...



# Argument: When losing is winning

- Daniel H. Cohen (2013) argues that the argument as war metaphor is counterproductive
  - ▶ Suppose you and I have an argument. You believe a proposition, P, and I don't. I've objected, I've questioned, I've raised all sorts of counter-considerations, and in every case you've responded to my satisfaction. At the end of the day, I say, 'You know what? I guess you're right.'
  - ▶ So I have a new belief. And it's not just any belief, but it's a well-articulated, examined and battle-tested belief.
  - ▶ So who won that argument? Well, the war metaphor seems to force us into saying you won, even though I'm the only one who made any cognitive gain.
  - ▶ The war metaphor forces us into thinking that you're the winner and I lost, even though I gained — there's something wrong with that picture.



# Spatial Metaphors

- **Spatial metaphors** have to do with spatial orientation: *up-down, in-out, front-back, on-off, deep-shallow, central-peripheral*.
- Spatial metaphors give a concept a spatial orientation eg. HAPPY is UP: *I'm feeling up today*
- Though polar oppositions *up-down, in-out* are physical in nature, the spatial metaphors based on them can vary from culture to culture. (e.g. in most cultures FUTURE is FRONT but in at least one FUTURE is BACK)
  - ▶ Aymara, who live in the Andes highlands of Bolivia, Peru and Chile, have future behind them



# HAPPY is UP

- (38) *I'm feeling up.*
- (39) *That boosted my spirits.*
- (40) *My spirits rose.*
- (41) *You're in high spirits.*
- (42) *Thinking about logic gives me a lift.*
- (43) *I'm feeling down.*
- (44) *I'm depressed.*
- (45) *He is really low these days.*
- (46) *I fell into a depression.*
- (47) *My spirits sank.*



# HEALTHY is UP

- (48) *He's at the peak of health.*
- (49) *Lazarus rose from the dead.*
- (50) *He's in top shape.*
- (51) *He fell ill.*
- (52) *He is sinking fast.*
- (53) *He came down with the flu.*
- (54) *His health is declining.*
- (55) *He dropped dead.*



# CONTROL is UP

- (56) *I have control over her.*
- (57) *I am on top of the situation.*
- (58) *He's at the height of this power.*
- (59) *He's in high command.*
- (60) *He's in the upper echelon.*
- (61) *His power rose.*
- (62) *He ranks above me in strength.*
- (63) *He is under my control.*
- (64) *He fell from power.*
- (65) *His power is on the decline.*



# AWAKE is UP

- (66) *Get up.*
- (67) *Wake up.*
- (68) *I'm up already.*
- (69) *He rises early in the morning.*
- (70) *He fell asleep.*
- (71) *He dropped off to sleep.*
- (72) *He's under hypnosis.*
- (73) *He sank into a coma.*



# VIRTUE is UP

- (74) *He is high-minded.*
- (75) *She is upright.*
- (76) *She is a upstanding citizen.*
- (77) *He is underhanded.*
- (78) *I wouldn't stoop to that.*
- (79) *That is beneath me.*
- (80) *That was a low trick.*



(81) *The number of books printed keeps going up.*

(82) *The number of errors he made is incredibly low.*

(83) *What is the upper bound?*

- Our experience of physical objects and substances provides a further basis for understanding.
- UP is positive
  - ▶ if we pile things up, more reach higher
  - ▶ healthy people stand upright
  - ▶ when we are awake, we stand up
- Understanding our experiences in terms of objects and substances allows us to pick out parts of our experience and treat them as discrete entities.



# MENTAL HEALTH is a (FRAGILE) OBJECT

- (84) *Her mental health is very fragile.*
- (85) *We have to handle him with care since his wife's death.*
- (86) *He broke under cross-examination.*
- (87) *She is easily crushed.*
- (88) *The experience shattered him.*
- (89) *I'm going to pieces.*
- (90) *His mind snapped.*
- (91) *He cracked up.*



# MIND is a MACHINE

- (92) *We're still trying to grind out the solution to this equation.*
- (93) *My mind just isn't operating today.*
- (94) *Boy, the wheels are turning now!*
- (95) *I'm a little rusty today.*
- (96) *We've been working on this problem all day and now we're running out of steam.*
- (97) *He broke down.*



# LIFE is a JOURNEY

- The person leading a life is a traveler
- Their purposes are destinations
- The means for achieving purposes are routes
- Difficulties in life are impediments to travel
- Counsellors are guides
- Progress is the distance traveled
- Things you gauge your progress by are landmarks
- Material resources and talents are provisions.



# Metonymy

- **Metonymy** is a shift of reference *within* a single conceptual domain
- One entity provides mental access to another related entity
- Based on **contiguity** (association, connection), not similarity

## Examples

- *The White House announced new policies.* (building → institution/people)
- *She enjoys reading Shakespeare.* (author → works)
- *The kettle is boiling.* (container → contents)
- *All hands on deck.* (part → whole person)

**Key idea:** Metonymy navigates structure that is already present.



# Metonymy vs. Metaphor

## Metonymy

- Within-domain shift
- Based on contiguity
- Referential shortcut
- Exploits existing frame structure
- Example: *Brussels decided to impose tariffs.*

**Metonymy:** A stands for B (same frame)

**Metaphor:** A is understood in terms of B (different domains)

## Metaphor

- Cross-domain mapping
- Based on similarity or analogy
- Structures abstract domains
- Creates new conceptual links
- Example: *He attacked my argument.*



# Metonymies I

- PART for WHOLE (synecdoche)  
(98) *Can you lend a hand?*
- WHOLE for PART (synecdoche)  
(99) *NTU won the soccer.*
- CONTAINER for CONTENT  
(100) *The lunch menu had five dishes.*
- MATERIAL for OBJECT  
(101) *I won gold.*
- PRODUCER for PRODUCT  
(102) *I'll get an IBM*



# Metonymies II

- PLACE for INSTITUTION (toponym)  
(103) *Downing Street has made no comment*
- INSTITUTION for PEOPLE RESPONSIBLE  
(104) *Albert raised its prices.*
- PLACE for EVENT  
(105) *Hiroshima changed our view of war.*
- CONTROLLER for CONTROLLED  
(106) *A truck rear ended me.*
- OBJECT for USER  
(107) *They are a hired gun.*



- **Lakoff (1995)** states that different political groups base their understanding of the world on different metaphors
  - ▶ **nurturant parent** (liberal) family is one that revolves around every family member caring for and being cared for by every other family member, with open communication between all parties, and with each family member pursuing their own vision of happiness.
  - ▶ **strict father** (conservative) family revolves around the idea that parents teach their children how to be self-reliant and self-disciplined through "tough love".

# Nurturant Parent

- **Morality:** The basis of morality is in understanding, respecting, and helping other people, and in seeking the happiness of one's self and of others. The primary vices are selfishness and anti-social behavior.
- **Child development:** Children develop morality primarily through interacting with and observing good people, especially good parents. Punishment is necessary in some cases, but also has the potential to backfire, causing children to adopt more violent or more anti-social ways. Though children should, in general, obey their parents, they will develop best if allowed to question their parents' decisions. Moral development is a life-long process, and almost no one is so perfect as not to need improvement.
- **Justice:** The world is not without justice, but it is far from the ideal of justice. Many people, for example, do not seem properly rewarded for their hard work and dedication. We must work hard to improve everyone's condition.

# Strict Father

- **Morality:** Evil is all around us, constantly tempting us. Thus, the basis of morality is strong moral character, which requires self-reliance and self-discipline. The primary vices are those that dissolve self-discipline, such as laziness, gluttony, and indulgent sexuality.
- **Child development:** Children develop self-discipline, self-reliance, and other virtues primarily through rewards and punishment, a system of "tough love". Since parents know the difference between right and wrong and children still do not, obedience to the parents is very important. Moral development basically lasts only as long as childhood; it's important to get it right the first time, because there is no "second chance".
- **Justice:** The world may be a difficult place to live, but it is basically just; people usually get what they deserve. The difficulties in one's life serve as a test to sort the deserving from the undeserving.



# Metaphors in Sherlock Holmes

- (108) *"Oh, sir, do you not think that you could help me, too, and and at least throw a little light through the dense darkness which surrounds me"*
- (109) *"You may advise me how to walk amid the dangers which encompass me."*
- (110) *" 'Tell me, Helen,' said she, 'have you ever heard anyone whistle in the dead of the night?'"*
- (111) *"my sister was quite alone when she met her end"*
- (112) *"My companion sat in the front of the trap, his arms folded, his hat pulled down over his eyes, and his chin sunk upon his breast, buried in the deepest thought"*
- (113) *"As we passed out he exchanged a few words with the landlord, explaining that we were going on a late visit to an acquaintance, and that it was possible that we might spend the night there."*

- Emotions are often considered to be feelings alone, and as such they are viewed as being devoid of conceptual content.
- In fact emotions have a fairly complex conceptual structure which can be studied through metaphors.
- Lakoff and Johnson's cultural model of anger  
Physiological effects of anger:
  - ▶ Increased body heat
  - ▶ Increased internal pressure
  - ▶ Agitation
  - ▶ Interference with accurate perception
  - ▶ As anger increases, the physiological effect increases
  - ▶ There is a limit beyond which the physiological effects of anger impair normal functioning.



# ANGER II

- Body heat:

(114) *Don't get hot under the collar.*

(115) *Billy's a hothead.*

(116) *They were having a heated argument.*

(117) *She got all hot and bothered.*

- Internal pressure:

(118) *When I found out, I almost burst a blood vessel.*

(119) *He almost had a hemorrhage.*

(120) *I exploded at them.*



- Redness in the face and neck area:

(121) *She was scarlet with rage.*

(122) *He got red with anger.*

(123) *He was flushed with anger.*

- Agitation

(124) *She was shaking with anger.*

(125) *I was hopping mad.*

(126) *He was quivering with rage.*

(127) *He's all worked up.*

(128) *She's all wrought up.*



- Interference with accurate perception
  - (129) *She was blind with rage.*
  - (130) *I was beginning to see red.*
  - (131) *I was so mad I couldn't see straight.*



# ANGER is HEAT I

- ANGER is HEAT forms the basis of the most general metaphor for anger
- There are two versions to this metaphor, one where the heat is applied to fluid and the other where the heat is applied to solids.
- The fluid version is more elaborated
- The body is a container for the emotions

(132) *He was filled with anger.*

(133) *She couldn't contain her joy.*

(134) *She was brimming with rage.*

(135) *Try to get the anger out of your system.*



# ANGER is HEAT II

- The ANGER is HEAT metaphor when applied to fluids combines with the metaphor the body is a container for the emotions to yield the central metaphor of the system:
- ANGER is HEAT OF A FLUID in a container.

(136) *You make my blood boil.*

(137) *Simmer down!*

(138) *I had reached the boiling point.*

(139) *Let him stew.*

(140) *She was seething with rage.*

- Similarly ***pissed off*** is used only to refer to anger — “hot liquid under pressure”



# ANGER is HEAT III

- Cool and calm corresponds to the lack of anger.  
(141) *Keep cool.*  
(142) *Stay calm.*
- When The Intensity Of Anger Increases The Fluid Rises

(143) *His pent-up anger welled up inside him.*

(144) *She could feel her gorge rising.*

(145) *We got a rise out of him.*

(146) *My anger kept building up inside me.*

(147) *Pretty soon I was in a towering rage.*



# ANGER is HEAT IV

- We also know that intense heat produces steam and creates pressure on the container. This yields the metaphorical entailments:
- Intense Anger Produces Pressure On The Container

(148) *He was bursting with anger.*

(149) *I could barely contain my rage.*

(150) *I could barely keep it in any more.*

(151) *He suppressed his anger.*

(152) *He turned his anger inward.*

(153) *He managed to keep his anger bottled up inside him.*

(154) *He was blue in the face.*



# ANGER is HEAT V

- When the pressure on the container becomes too high, the container explodes.
- When Anger Becomes Too Intense The Person Explodes

(155) *When I told him, he just exploded.*

(156) *She blew up at me.*

(157) *We don't like your outbursts.*

(158) *She blew a fuse.*

(159) *He blew a gasket.*

(160) *He erupted.*



- When A Person Explodes, Parts Of Them Go Up In The Air.

(161) *I blew my stack.*

(162) *I blew my top.*

(163) *She flipped her lid.*

(164) *He hit the ceiling.*

(165) *I went through the roof.*



# ANGER is HEAT VII

- The central metaphor of Anger as heated fluid in a container indicate that the anger scale is not open-ended, it has a limit. Just as hot fluid in a closed container can only take so much heat before it explodes, so we conceptualise the anger scale as having a limit point. We can only bear so much anger before we explode.
- The conceptual metaphors are motivated by our own physiology.
- There may be cross-cultural differences
- And there are many possible metaphors
  - ▶ ANGER is FIRE
  - ▶ ANGER is INSANITY
  - ▶ ANGER is an OPPONENT
  - ▶ ANGER is a DANGEROUS ANIMAL



## ANGER IS HOT SPICES

(166) one=k                      helo n-o'oN      sili    lia'  
heart=1SG.POSS like 3SG.exist chilli ginger

“I am furious (lit. there exist chilli and ginger in my heart).”

Adonara-Lamaholot is a small language spoken on Eastern part of Flores Island, Solor Island, and Lembata Island of Eastern Indonesia. From the PhD thesis of Elvis Albertus bin Toni (NTU 2018).



# Conclusions

- We can combine words in non-compositional ways
- But still there are shared conventions
- Some things we have to learn (**idioms**), some things we work out on the fly (**metaphors**)
- The distinction is somewhat fuzzy
- **Saeed (2009)** talks a little about Constructions in Section 11.8 and Metaphor in 11.4.
- **Kroeger (2022)** talks a little about Figurative Language (including Metaphor) in Section 5.4



# Glossary of Key Terms (English–Czech) I

## English

Basic Level Category

constraint-based

construction-based, constructionist

conventional

dead metaphor

decomposable

embodied

empirical

formal(ized)

idiom

lexicalist

metaphor

metonymy

## Čeština

základní úroveň kategorizace

založený na omezeních

konstruktivistický

konvenční

mrtvá metafora

rozložitelný

vtělený

empirický

formální, formalizovaný

idiom

lexikalistický

metafora

metonymie



# Glossary of Key Terms (English–Czech) II

mono-stratal	monostratální
non-decomposable	nerozložitelný
nurturant parent	pečující rodič
prototype	prototyp
sign	znak
source domain	zdrojová doména
spatial metaphor	prostorová metafora
strict father	přísný otec
symmetrical	symetrický
systematic	systematický
target domain	cílová doména



# Glossary of Key Terms (English–Czech) III



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