

# Cognitive Semantics: The meaning of words for back,

colours and  
emotions

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# Cognitive Semantics

**Language** is a creation of human beings to communicate with other human beings.

**Semantics** deals with 1 aspect of human cognition.

**Cognitive linguistics** is the systematic study of language, constrained by the relations that human beings

- (1) perceive in nature;
- (2) have experience of in the world;
- (3) conceive of in abstract and metaphysical domains.

**Perception** is the categorization of sensory data using biologically & culturally determined criteria.

**Cognitive Semantics** determines the influence of perception in linguistic categories, semantic fields & frames.



# The meaning of words for *back*

Human mind & body constrain our perception & cognition.  
Let's have a look at the word *back*:

Language is **anthropocentric**



humans describe the world with reference to the **human body & its everyday experiences**.



All speech communities use the **human body & its parts** to describe things in the world around them:

] Most **counting systems** based on 4, 5 (fingers on a hand), 10 or 20 because of our hand or feet structure.

] Units of measurement are also parts of human body: *foot*, *inch* or *hand*.



# The meaning of words for *back*

□ Most people are right-handed }  **right hand** is regarded as +  
**positive** than left hand.


□ Gender terms to animals often determined by importance of animal's sex.

So language is human-centered:

□ **Canonical human bearing**: the upright bipedal human being confronting the world by walking forward.

□ **Canonical human encounter**: 2 people confront one another face-to-face.

□ The human body is a location & a proper part, f. ins. *back*.

“Part or location located across the shoulders & lengthways with the spine” (prototypical notion). 



# The meaning of words for *back*


1. The **intrinsic core back**: *The back* is on the opposite side of the body from the “**interactive-side**”, i. e. the side where the mouth, breasts, belly and external genitals are located & from which the limbs extend (the **side of main interaction & access to a person** involved in food ingestion, sexual reproduction, nurturing & different social interaction).

2. The **peripheral back**: *The back* is on the opposite side from the leading edge (= *the front*) when a person is walking normally.





# The meaning of words for *back*

3. *The back* names the part of location of a **static concrete inanimate object** on the opposite side to an intrinsic front if the front is the “interactive-side” confronting the human viewer  computers, cupboards, fridges or houses.



4. *The back/tail end* or *rear* of an **object capable of mobility** is on the opposite end from the leading edge when the object is in motion. *The front* of a cow or a snake is determined from where its head is.





# The meaning of words for *back*

The way in which speakers perceive the world &, as a result of their perceptions **CONCEIVE** of it, informs their linguistic categorization.



A front & a back are ascribed to a static inanimate object depending which side of it the human viewer is facing.

## Matter of cultural convention



5. *The back/rear* of a crowd, herd, flock or caravan facing in a direction is that part in the collection from about **halfway** through the collection **in** the direction **the rears** of its individual members are facing.





# The meaning of words for *back*

The semantic relations for uses of *back* derive from the JOURNEY SCHEMA, an elaboration of 4 “opposite to the leading edge of a human”.



A person moving forward towards place D (destination) from place B (base) journeys through both space & time.



**Back**<sub>stative adv</sub>: people & things are back to B either in time or space: *an hour back, a mile back*.

**Back**<sub>dynamic adv</sub>: Anything moved from B to D can be said to be going *back* to B if it returns to B: *move back, put back, ...*

**Back**<sub>relational loc</sub>: Anything that journeys from B to D, being all points in space & time between B & D *behind* the entity journeying: *X was kept back a year, X is behind others*.



# The meaning of words for *back*

**Back**<sub>motional v</sub>: Anything that moved from B to D goes back from D if it *runs backwards* with its back as the leading edge when moving from D:

*Cars back up* (“move in reverse”).

*People back off/away* (“retreat backwards”).

**Back**<sub>support v</sub>: A supports C if A is supporting C in some attempt & A is located behind C in a formal parade:

*The manager has refused to back our proposal.*



# The semantic-syntactic network of *back*

**THING.** Noun head in NP: *the back of NP*

**PLACE.** Locative preposition governs a proper part of NP: *on my back, at the back of*

**PLACE.** Spatial locative preposition governs noun with no determiner: *in back of* (= “in place of”, “in time of”)

**ATTRIBUTE.** Prenominal adjective: *back seat, back end.*

**SPATIAL or TEMPORAL STATE.** Stative predicate: *be back.*

**ACT. V<sub>support</sub>** Active nonmotional predicate: *back sth or sb*

**DIRECTION.** Adverbial particle with motional verb: *go back, (cf. go up).*

**ACTION.** Motional verb: *back* “move back”



# Colours and vantage theory

Basic colour terms described the relationships of the colours named (*warm-light, cool-dark*), but did not explain **what people do with colour terms**.

Experiments on colour focus

With composite colours such as *grue*, subjects may

locate the focus in **green**

**blue**

**both**

Largely dependent on  
the language they speak

Set theory offers no explanation, but **Vantage Theory**

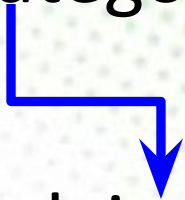


# Color and vantage theory

Vantage theory: Theory of categorization in terms of point of view.



Categorization reflects human needs and motives



It explains

- a) how people construct categories by analogy to the way they form points of view in space-time
- b) how categories are organized
- c) the relations between them
- d) the cognitive dynamics of colour naming & mapping.



# Color and vantage theory



In the World Colour Survey, subjects are asked 3 things:

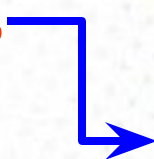
1. To name the colour of each chip.
2. To identify the focus of each colour term.
3. Place a rice grain on every chip a name can apply to; then repeat the process on the left chips.



# Color and vantage theory

All beings with normal sight experience the **same sensory colour data**, but languages reveal an **evolutionary sequence** from 2 to 11 terms (Berlin & Kay, 1969).

Evolution in terms = **gradual change** that rearranges **cognitive relations** among **pre-existing terms & categories**



Expected in closed semantic field (colour)

Colour-category evolution induced by **societal complexity**, as **novelty & difference are + highly valued** than similarity.



# Color and vantage theory

But discrimination is physiologically constrained

Contrast **dark-bright** — starting point for colour naming

Brightness/luminance perceived before **hue**

Colour category pays greater attention to  
brightness or hue

Emphasis on similarity	Emphasis on difference
favours composite colours	favours individual hues

↓ & + categories

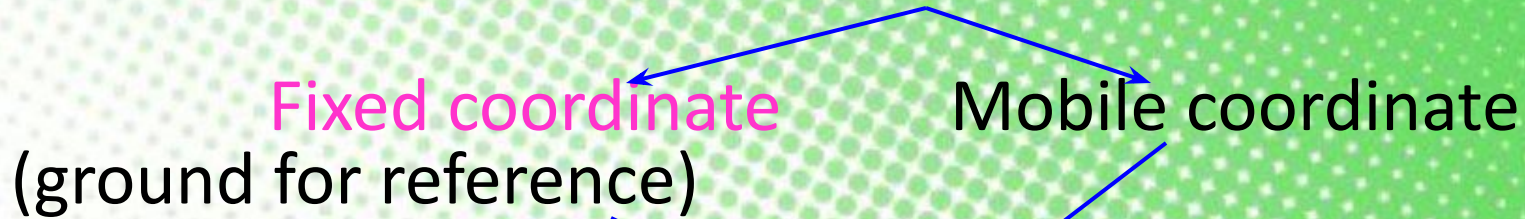
- distance bet. stimuli

+ distance bet. stimuli



# Color and vantage theory

Colour categories are analogous to physical experience, as if 1 or + points of view on a spatial field.



A person concentrates on only 1 **relation at a time** between mobile and fixed coordinates

When 2 colours are **coextensive** there's equal emphasis on their similarity & difference, but usu. 1 of the terms dominates.

*Dominant term* used for frequent naming, + centrally focused

*Recessive term* used for sparse naming, narrow focus.



# Color and vantage theory

Speakers within the same language may differ in the **number of basic colour terms**.

With **cool composite** colours  **much variation**

How can people **succeed** in communicating colour?

 Understanding what the speaker means involves **interpreting what s/he could have meant** (intention)

## Summary:

The meaning of colour terms is based upon human being's **viewpoint of emphasis** in responding to sensory data.

BUT individual's perception is communicated by **adapting their private perception to the conventional perceptions of their speech community**.



# Color and vantage theory

## Drawback:

Vantage theory explains use & development of colour terms, but says nothing about **semantic specification of a colour term**.

A congenitally blind person **cannot experience colour**; s/he can **only understand it analogically & conceptually**.

*A banana is yellow*

Colour-of relation without knowing what **yellow** means.



# The meaning of colours

The meaning of colors can vary depending on culture and circumstances. Colours themselves have no meaning, but we culturally assign meanings to them.



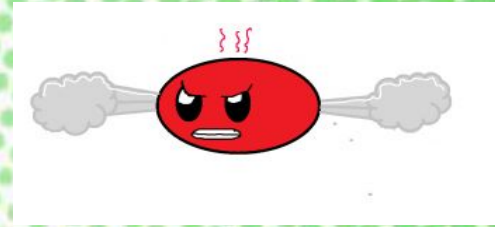
Colors evoke feelings and emotions; thus, speakers attach to them psychological properties, esp. in Western cultures.

Primary colours (red, blue, yellow & green) relate respectively to the body, the mind, the emotions & the essential balance between these 3.



# The meaning of colours

For example, warmth because of the color of fire  
**red** means anger because of the increased  
redness of the face when it flushes with  
blood



**Purple** symbolizes royalty because the purple dye available for many centuries was very expensive.



Color	Western meaning
RED:	warmth, love, anger, danger, boldness, excitement, speed, strength, energy, determination, desire, passion, courage, socialism
PINK:	feminine, love, caring, nurture
ORANGE:	cheerfulness, low cost, affordability, enthusiasm, stimulation, creativity, aggression, food, halloween, liberal (politics)
YELLOW:	attention-grabbing, comfort, liveliness, cowardice, hunger, optimism, overwhelm, Summer, comfort, liveliness, intellect, happiness, energy, conflict
GREEN:	durability, reliability, environmental, luxurious, optimism, well-being, nature, calm, relaxation, Spring, safety, honesty, optimism, harmony, freshness
BLUE:	peace, professionalism, loyalty, reliability, honor, trust, melancholia, boredom, coldness, Winter, depth, stability, professionalism, conservatism
PURPLE:	power, royalty, nobility, elegance, sophistication, artificial, luxury, mystery, royalty, elegance, magic
GRAY:	conservatism, traditionalism, intelligence, serious, dull, uninteresting
BROWN:	relaxing, confident, casual, reassuring, nature, earthy, solid, reliable, genuine, Autumn, endurance
BLACK:	Elegance, sophistication, formality, power, strength, illegality, depression, morbidity, night, death
WHITE:	Cleanliness, purity, newness, virginity, peace, innocence, simplicity, sterility, snow, ice, cold



# Synesthesia

Do you see white when you stub your toe?

Do you dislike the personality of your bedroom's doorframe?

Does Monday look blue to you? ... Literally?

Can you hear, taste or smell colours?



# Synesthesia

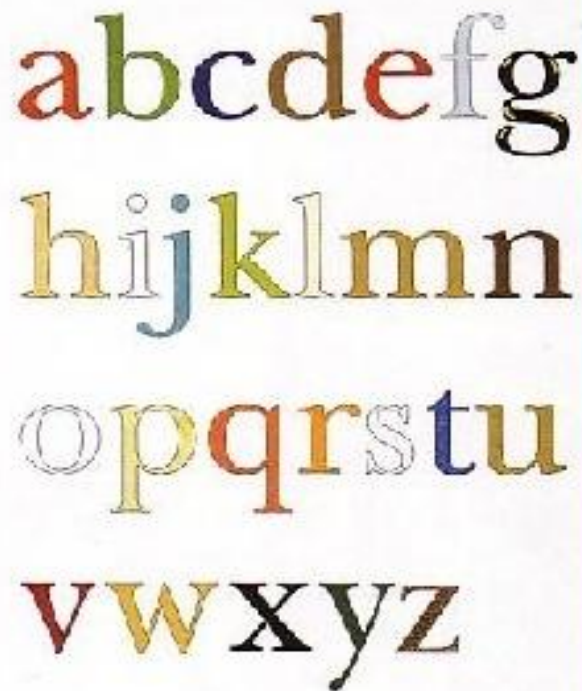
## Definition:

- Synesthesia literally means *joined perception*.
- It is the **merging of 2 or more senses**: sound & sight.
- Any of the 5 senses can be joined.
- Current research is investigating other sensations, such **emotions or passage of time**.
- Many report colour hearing, but **colored letters or numbers** are also common.
- Synesthetic relationships are **unique** to the individual & usu. **operate in 1 direction**: sight may induce touch, but touch will not induce visual perception.



# Synesthesia

The colored alphabets of 2 synesthetes



abcdefghijklmnopqrstuvwxyz

Two synesthetic colored alphabets: on the left, the author's; on the right, artist Carol Steen's.



abcdefghijklmnopqrstuvwxyz

(Duffy, 2001)

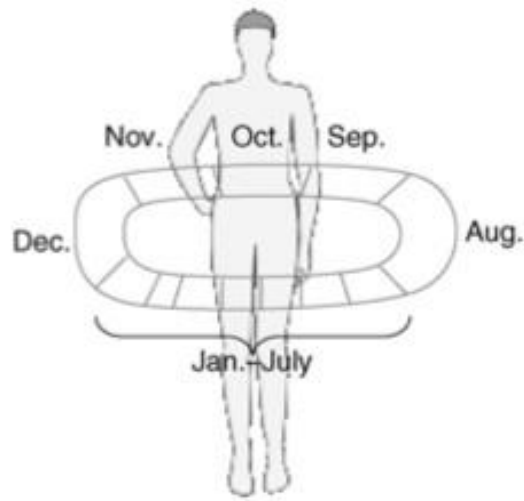


# Synesthesia

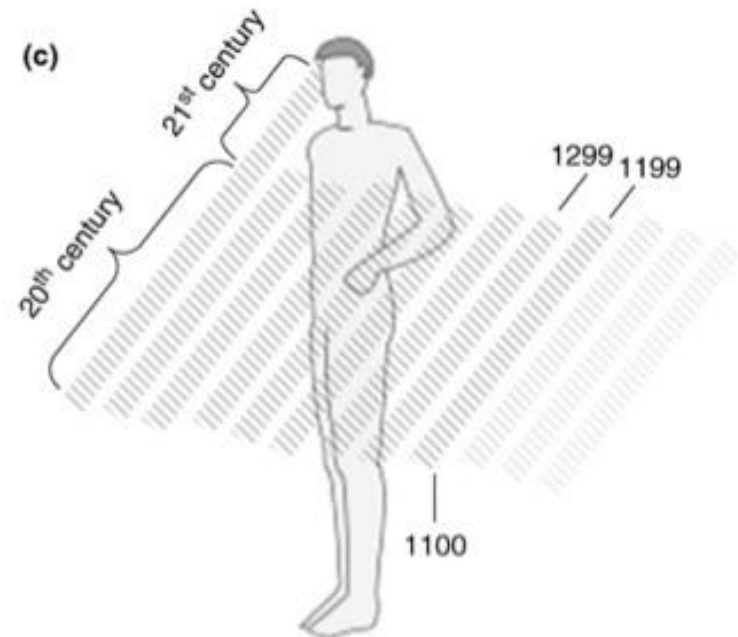
(a)



(b)



(c)





# Synesthesia

Colors in the synesthetes' world have properties that most of us would never dream of:

- **red** is solid, powerful and consistent
- **yellow** is pliable
- brilliant and intense chocolate is rich **purple**
- confusion is **orange**

The cause remains a mystery. There are several theories:

1. **Irregular sprouting** of new neural connections within the brain leads to a **breakdown of the usual boundaries** between the senses. Thus, synesthesia is the collective chatter of sensory neighbors once confined to isolation.



# Synesthesia

2. All infants may begin life as **synesthetes**. Animals and humans are born with **immature brains** that are highly malleable. Connections between different sensory parts of the brain later **become blocked as an organism matures**. If this is so, then infants should experience the world in a way that is similar to synesthetic adults (Maurer & Mondloch 2005).