

Breaking all the rules
Verbs of separation in metaphoric usage

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This study asks

- How can we account for the difference in selectional restrictions of physical vs. metaphoric uses of the same verb?
- Specifically: a look at metaphoric and physical uses of separation verbs (*cut* and *break* verbs)

Overview

- Semantics of physical uses of *cut & break*
- Frame semantics
- Conceptual metaphor theory
- Database study of metaphoric uses
 - Metaphoric object example 1
 - Metaphoric object example 2
- Conclusions

Physical uses of cut and break verbs

Causative

- Tear the paper / # Shatter the paper
- Cut the paper / ? Slice the paper

Inchoative

- The paper tore / # shattered, # chipped
- # The paper cut / chopped / sliced

Metaphoric objects

- break the Olympic record in swimming
- break the law/the rules
- trim expectations

Frames

- “Meanings are relativized to scenes (Fillmore 1977).”
- Scenes include a wide array of information from very schematic to very detailed. Include participants and their interrelationships.
- Lexical and grammatical items evoke frames (Bouveret & Sweetser 2009; Sullivan 2007)
- Perspectivized

Work on physical use frames

- Fujii, Radetzky & Sweetser (2011): How can we account for physical meanings of break when no physical breaking is taking place?
 - My computer broke.
 - The car broke down.
 - Oh, no! I broke my cell phone!
- *Casser, briser, rompre* in French (Bouveret & Sweetser 2009)

Example Frame (FrameNet)

Removing frame

An **Agent** causes a **Theme** to move away from a location, the **Source**.

– Core Frame Elements:

- Agent, e.g., **He** tore a page from the book.
- Cause, e.g., **The wind** tore posters off of walls.
- Source, e.g., He tore a page **from the book**.
- Theme, e.g., **He** tore a **page** from the book.

Example Frame

Removing frame Lexical Units (LUs)

- *clear.v, confiscate.v, **cut.v**, discard.v, disgorge.v, dislodge.v, drain.v, dust.v, eject.v, ejection.n, eliminate.v, elimination.n, empty.v, evacuate.v, evacuation.n, evict.v, eviction.n, **excise.v**, expel.v, expulsion.n, expunge.v, expurgate.v, extract.v, extraction.n, file.v, flush.v, oust.v, pluck.v, prise.v, purge.n, purge.v, removal.n, remove.v, rinse.v, **rip.v**, roust.v, scrape.v, shave.v, skim.v, snatch.v, strip.v, swipe.v, take.v, **tear.v**, unload.v, wash.v, weed.v, withdraw.v, withdrawal.n*

Frames used in study

Frame	
Separating	Render non-functional
Cutting	Impact
Breaking apart	Damaging
Breaking off	Removing
Interruption of connection	Create shape (representation)
Interruption of continuity	Open a surface
Caused_fragmentation	Destruction

USING FRAMES TO UNDERSTAND METAPHORIC USES

Frames and Metaphor

The foundations of his theory are shaky. We have to take apart the theory piece by piece and reconstruct it from scratch.

Target (abstract)

COMPLEX COGNITIVE
STRUCTURES

THEORIES

Source (concrete)

COMPLEX PHYSICAL
STRUCTURES

BUILDINGS

Theoretical foundations

Core arguments

Construction of theory

Deconstruction of theory

→ Foundation of building

→ Skeletal framework

→ Construction of building

→ Demolishing of building

Frames as constraints on lexical meaning

- *Metaphorically mapped frame structure can be directly compared with the frame structure evoked by the non-metaphoric senses of lexical items (Sullivan 2007, and forthcoming in 2012, p. 50).*

= Semantic frames constrain mappings, and hence constrain possible metaphors

Physical and metaphoric uses

Verb Argument Structure Construction Database
(Sweetser, Bouveret, Radetzky, Fujii, & David)

Metaphoric uses (tokens):

- *Cut*: 74% (559/758)
- *Break*: 81% (454/563)

Verb families

Cut and break family verbs:

(Guerssel et al. 1985; Majid et al. 2007, 2008; Levin 1997)

- **CUT** family: chop, clip, snip, hack, slash, slice, slit, trim, (*cut*), chip, carve
- **BREAK** family: shatter, smash, snap, split, rip, tear, crack, (*break*), chip, burst

Metaphoric objects: records

- Break / smash / shatter *the record*
- ? Crack
- # Chip
- #Tear / # rip
- #Cut / chop / slice

Metaphoric objects: records

- He broke the world record in the 100-meter dash.
- ...reach four hundred seventy-six million dollars that would shatter the all-time record for an America lottery . (COCA)

Metaphoric objects: records

Target (abstract)	Source (concrete)
purposeful action	goal-directed motion along a path
Speedy action	Speedy motion along a path towards a goal
Standards of successful action	physical barriers on path to goal
overcoming difficulties in purposeful action	Destroying physical barriers from your path

- Standards → Barriers
- Effort in attaining purpose → physical effort in getting to and through barrier
- Degree of standards → Toughness of barriers

Cause_to_fragment & Impact frames

- Source frame: **Cause_to_fragment**
 - An Agent suddenly and often violently separates the Whole_patient into two or more smaller Pieces.
Has to be complete, not partial:
 - ? chip the record
- Source frame: **Impact**
 - While in motion, an Impactor makes sudden, forcible contact with the Impactee.

Metaphoric objects: rules and laws

- Break the rules, laws, codes of conduct
- # Shatter
- #Split / crack
- # Chop / cut / slice

Metaphoric objects: rules and laws

Target (abstract)	Source (concrete)
purposeful action	goal-directed motion along a path
hard to overcome difficulties	rigid physical obstacles in your path
overcoming difficulties in purposeful action	Eliminating rigid physical obstacles from your path by fragmenting them

- course of desired action → path of motion to a desired goal
- difficulties in action → physical object in your way to the goal

Cause_to_fragment frame

- Source domain frame: Cause_to_fragment
 - An Agent suddenly and often violently separates the Whole_patient into two or more smaller Pieces, resulting in the Whole_patient no longer existing as such.

Metaphoric objects: expectations

- *The IMF's World Economic Outlook **TRIMMED** its expectations of growth in world output in 1992 **from** 1.4 percent in May **to** 1.1 percent.*

(BNC)

- Trim the hedges.
- Trim the crust off the pie.
- Trim hair (vs. *cut* or *chop* hair)

Removing frame

- An Agent causes a Theme to move away from a location, the Source.
 - Special case: removing excess from a whole

Metaphoric objects: prices and taxes

- | | |
|-------------------------|---------------------|
| • Cut prices (1310000) | Cut taxes (2240000) |
| • Slash prices (369000) | Slash taxes (70000) |
| • Chop prices (?) | Chop taxes (3000) |
| • Slice prices (?) | Slice taxes (5600) |
| • Trim prices (?) | Trim taxes (16000) |
| • Carve prices (2170) | Carve taxes (64) |

Cut vs. break verbs in metaphor

- (Physical) cutting scenarios and frames do not focus on the resulting state of the object, so metaphoric uses of frames reflect **purposes, intentions, and subsequent actions** surrounding cutting event
 - Removing_to_reduce ('chop prices' 'trim expectations')
 - Injure ('words cut through her heart')
 - Division_for_allocation ('slice up sovereignty')
 - Interruption_of_connection ('we got cut off')
- Break frames do focus on resulting state of the object, so metaphoric uses tend to elaborate on more specific instances of **result** types
 - Destruction
 - Damaging
 - Caused_fragmentation

Conclusions

- Concrete source domain frames influence metaphoric uses.
- This will inferentially inform and constrain the way metaphoric uses become acceptable.
- There is no class-based distinction, rather a gradient

THANK YOU!

References

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- Sullivan, Karen S. 2007. *Grammar in Metaphor: A Construction Grammar Account of Metaphoric Language*. PhD dissertation UC Berkeley.

Database information

- FrameNet: <https://framenet.icsi.berkeley.edu/fndrupal/>
- VACDB
- <http://linguistics.berkeley.edu/~sweetservacdb/index.html>
- MetaNet - not yet available, check with us soon!
- ICSI release:
<http://www.icsi.berkeley.edu/icsi/gazette/2012/05/metanet-project>