

Metaphor & Its Generation

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An Example of Metaphor

- “Juliet is the sun” (*Romeo and Juliet*, Act 2, Scene 2)
- Syntax of verbal metaphor: A is B

[JULIET appears above at a window.]

But soft! What light through yonder window breaks?

It is the east, and **Juliet is the sun.**

Arise, fair sun, and kill the envious moon,

Who is already sick and pale with grief,

That thou, her maid, art far more fair than she.

...

Two of the fairest stars in all the heaven,

Having some business, do entreat her eyes

To twinkle in their spheres till they return.

What is Metaphor?

- Involving two concepts:
 - Tenor (target/principal subject/topic), e.g., Juliet
 - Vehicle (source/subsidiary subject), e.g., sun
- Main effect of metaphor:
 - Highlight certain aspect of the tenor or introducing some new information about it



Goal of generation

Properties of Metaphor

- Asymmetrical
- Only part of the attributes of the vehicle are transferred to the tenor
- Pre-existent similarity is not a necessary condition
- Generate emergent attributes (which are salient for neither the tenor nor the vehicle)

Pictorial Metaphor



No Metaphor in Music !!??

- Krantz 1987, Zbikowski 2008

Krantz, Steven C. 1987. Metaphor in Music. *The Journal of Aesthetics and Art Criticism*, 45(4), 351-360.

Zbikowski, Lawrence M. 2008. Metaphor and Music. In Raymond R. Gibbs, Jr. (ed.) *The Cambridge Handbook of Metaphor and Thought*, 502-524. New York: Cambridge University Press.

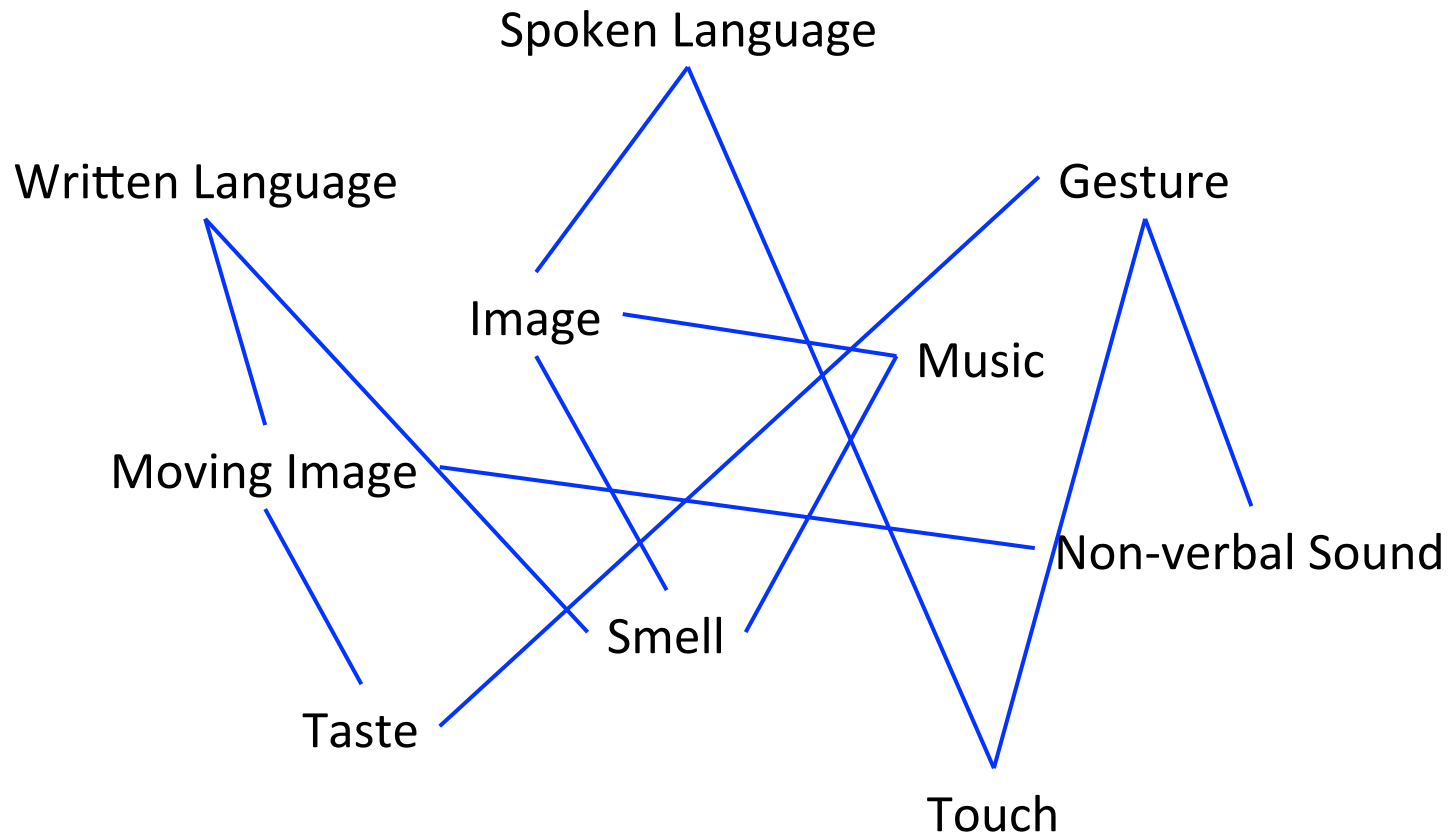
Music in Film

- Metaphor: *La Dolce Vita*, fountain scene

Multimodal Metaphor

- Metonym: the music accompanying the movements in cartoons

Multimodal Metaphor



How to Generate Metaphors?

- I. Knowledge
 - II. Aptness
 - III. Context
- State of the art:
 - Mainly verbal metaphor, a bit pictorial metaphor
 - Mainly at Stage I

Metaphor Generation: Knowledge

- Thesauruses, knowledge bases (Xiao and Blat 2013)
- Web milking (Veale and Hao 2007)
- Statistical language models: word associations, semantic clusters (Abe, Sakamoto and Nakagawa 2006)
- Generation approach:
 - Find nouns that are associated with a given property/properties

Metaphor Generation: Aptness

- Salience imbalance (Ortony 1979)
- Similarity between vehicle and tenor (Tourangeau and Sternberg 1981)
- Concreteness and imageability of vehicle (Katz 1989)
- Affect polarity
- Prosody
- Novelty

Metaphor as Conceptual Interaction

- (Richards 1936, Black 1962)
- The tenor and vehicle of a metaphor are two conceptual spaces.
- A metaphor works by applying the conceptual space of the vehicle to the tenor. *How to do this?*
- Any elements in the tenor's conceptual space conform to the vehicle's conceptual space will be emphasized, and those that does not will be suppressed.

Metaphor Generation: Context

- Waiting for your contribution!

Generating Pictorial Metaphors

- *Vismantic* (Xiao and Linkola 2015)

Input: music, powerful



References

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Thank You!

