

# Cognitive Iconicity, Conceptual Spaces, Meaning, and Gesture

## Lecture 4

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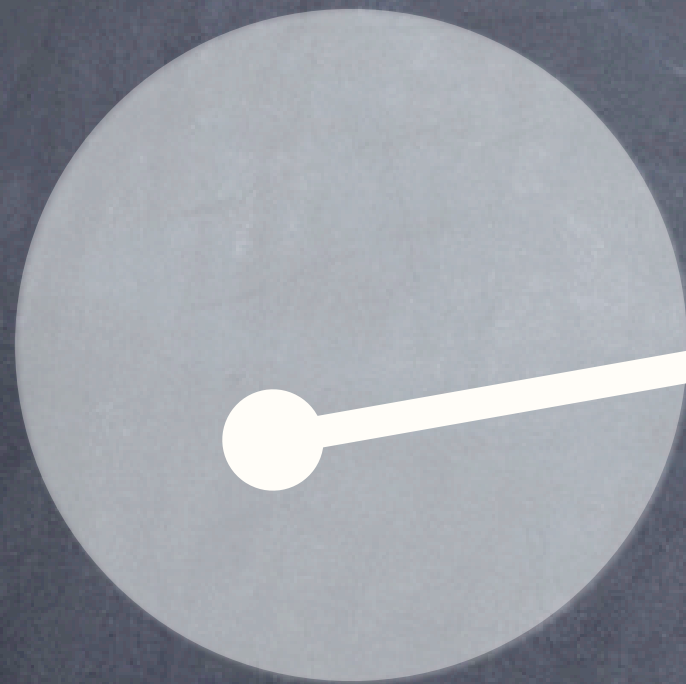
*Sherman Wilcox — Beijing, China*

# Iconicity: The “traditional” view

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- ❖ Wilbur (1987: 162) defines iconicity as “a reflection in language of the actual state of affairs in the real world”.
- ❖ Valli and Lucas (1995: 6) regard the iconic relation to be one in which “the form of the symbol is an icon or picture of some aspect of the thing or activity being symbolized”—again implying that the relation is between linguistic form and some objective, uninterpreted world.





Language



The "real world"



# Cognitive Grammar

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- ❖ Cognitive Grammar claims that lexicon and grammar are fully describable as assemblies of symbolic structures, that is, pairings of semantic and phonological structures.
- ❖ The elements of grammatical description reduce to form–meaning pairings.

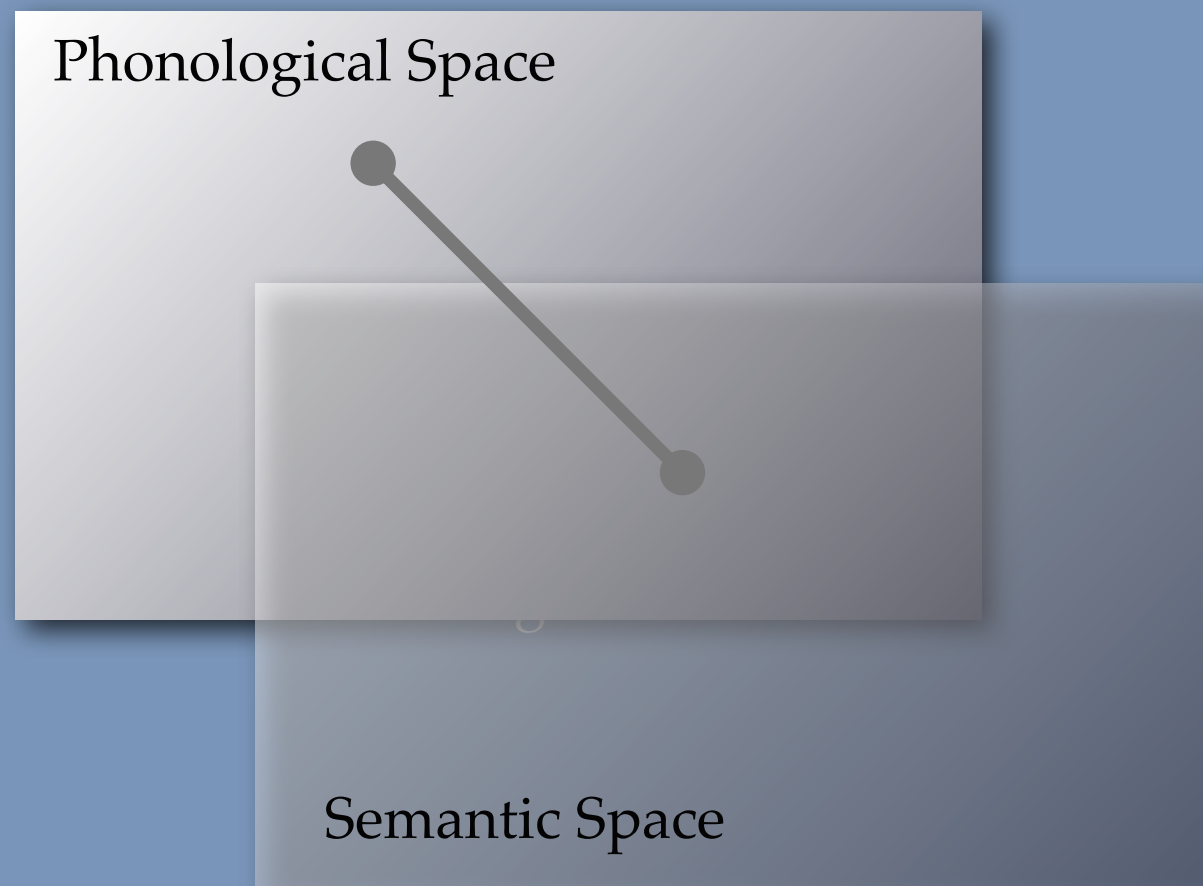


# Conceptual Space

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- ❖ Conceptual space encompasses all of our thought and knowledge, “the multifaceted field of conceptual potential within which thought and conceptualization unfold” (Langacker 1987: 76).
- ❖ Semantic structures and phonological structures reside within our overall conceptual space (as do other, non-linguistic regions of conceptual space: musical conception, artistic conception, movement conception, mathematical conception, etc.)

# Conceptual Space





# Conceptual Spaces: The Geometry of Thought

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- ❖ Peter Gärdenfors (Professor of Cognitive Science, Lund University, Sweden):
- ❖ **Conceptual spaces as a framework for representations**
- ❖ “We frequently compare the experiences we are currently having to memories of earlier episodes. Sometimes we experience something as entirely new, but most of the time what we see or hear is, more or less, the same as what we have already encountered. This cognitive capacity shows that we can judge, consciously or not, various relations among our experiences. In particular, we can tell how *similar* a new phenomenon is to an old one.”



# Conceptual Spaces

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- ❖ “The structure of ... conceptual space will make it possible to talk about *distances* along the dimensions. There is a tight connection between distances in conceptual space and similarity judgments: the smaller the distance is between the representations of two objects, the more similar they are.” (Gärdenfors, 2000, p. 5)



# Conceptual Distance

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- ❖ These similarity / topological distance relations can be determined at both the semantic pole (which is primarily what Gärdenfors is talking about), or at the phonological pole.
- ❖ The phonological pole reflects our conceptualization of pronunciations, which range from the specific pronunciation of actual words in all their contextual richness to more schematic conceptions, such as a common phonological shape shared by all verbs, or a subset of verbs, in a particular language.

# Cognitive Iconicity

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- ❖ The claim that phonological space and semantic space are subregions of conceptual space plays a critical role in my understanding of iconicity.



# Cognitive Iconicity

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- ❖ In this view, iconicity is a distance relation within conceptual space:
- ❖ When a symbolic structure is iconic, its semantic pole resides in the same conceptual region as its phonological pole.
- ❖ When a symbolic structure is arbitrary, the semantic and phonological poles reside in distant regions of conceptual space.



# Conceptual Distance

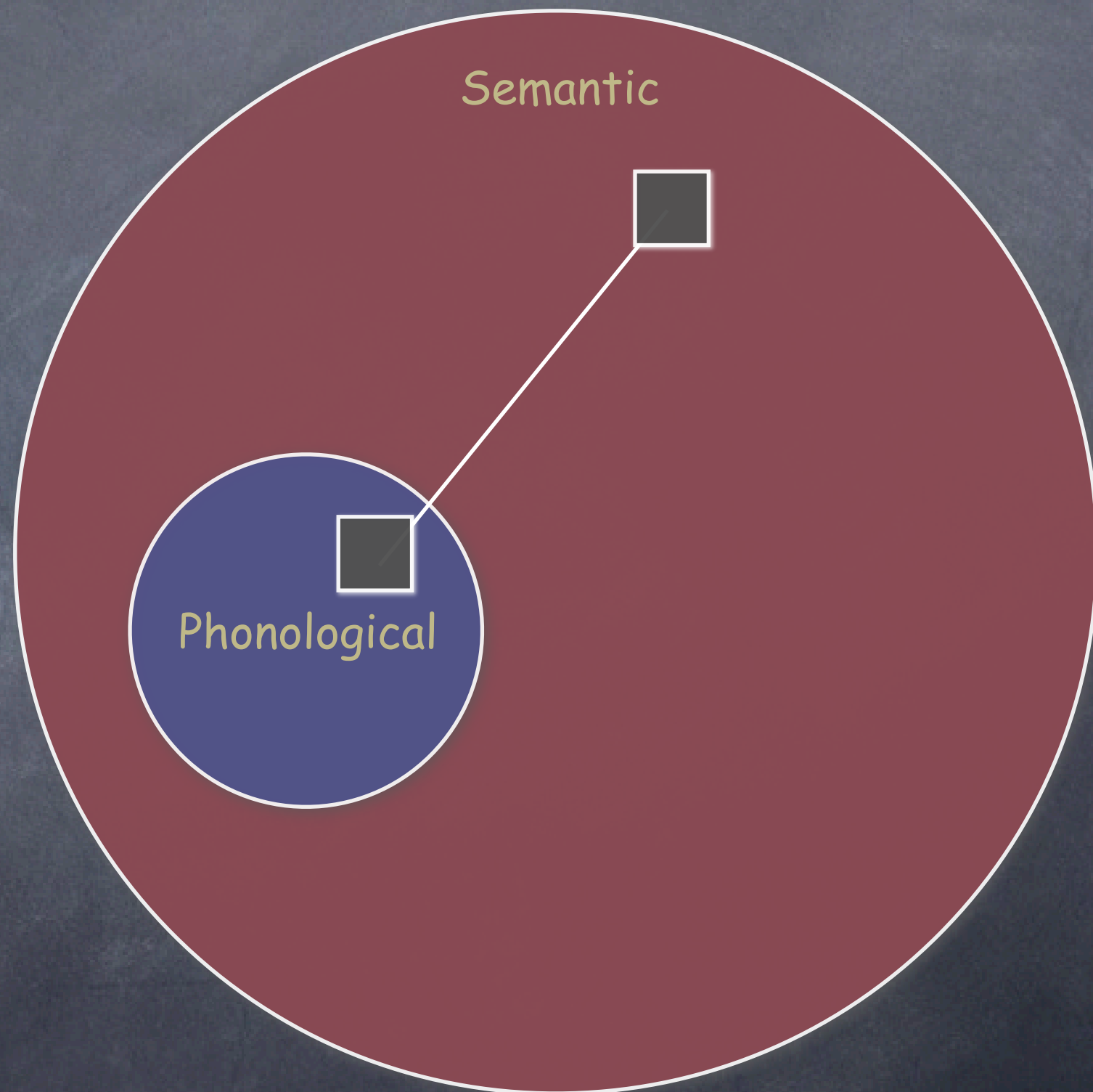
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- ❖ The typical case for language is that the semantic pole and the phonological pole of a symbolic structure reside in vastly distant regions of conceptual space. The sound of the spoken word *dog*, for example, has little in common with the meaning of the word. This great distance in conceptual space and the resulting incommensurability of the semantic and phonological poles is the basis for *l'arbitraire du signe*.
- ❖ Alternatively, when the phonological and semantic poles of signs reside in the same region of conceptual space, arbitrariness is reduced.



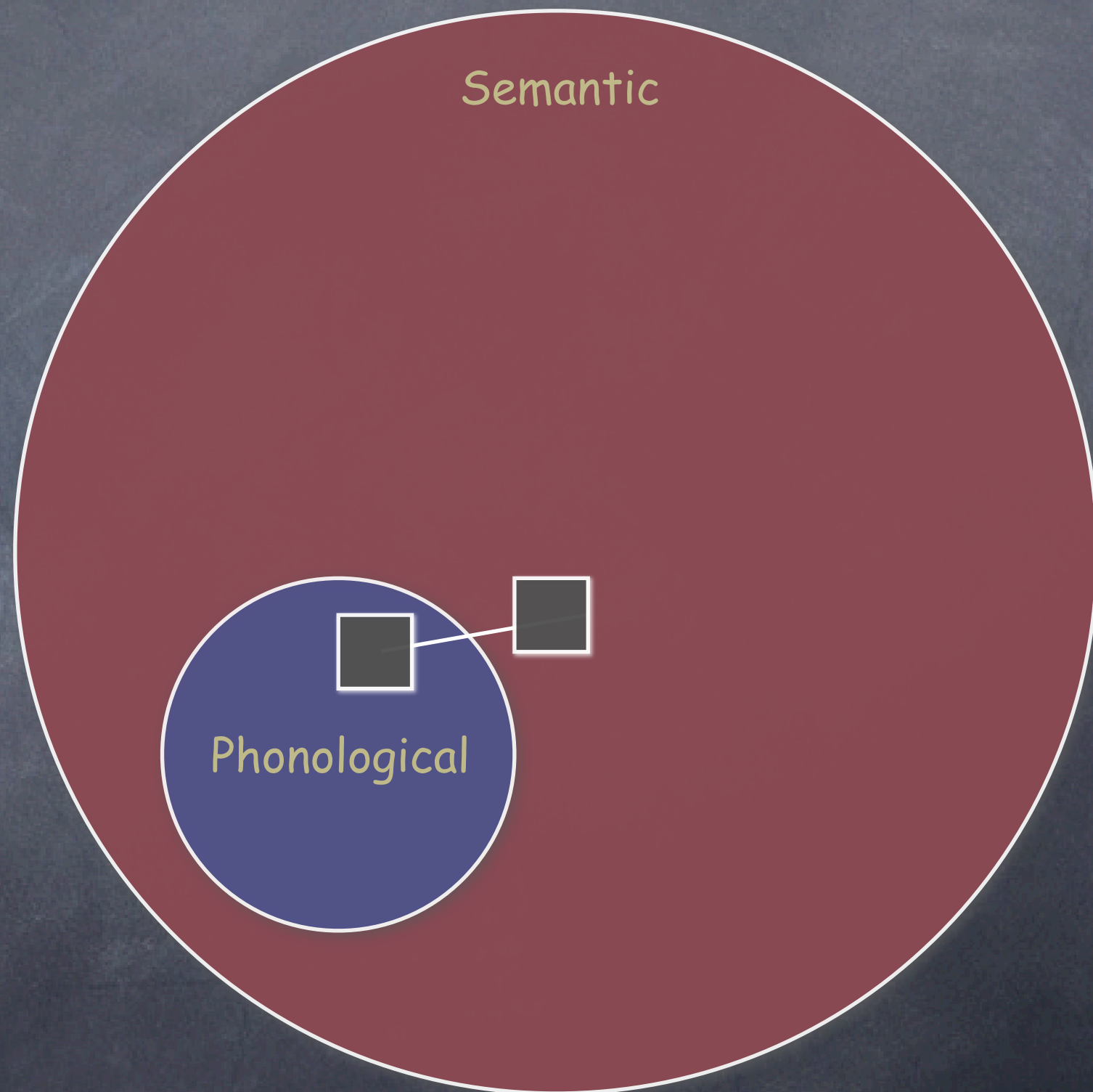
# Symbolic structures

• Arbitrary



# Symbolic structures

• Iconic





# Construal

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- ❖ An expression imposes a particular **construal**, reflecting just one of the countless ways of conceiving and portraying the situation in question.
- ❖ “Meaning consists of both conceptual **content** and a particular way of **construing** that content” (Langacker 2008, p. 43)







# The VERY-SLOW example

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# Grammar submerges iconicity

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- ❖ “Regular grammatical processes operate on ASL signs without regard to any iconic properties of the sign themselves; rather, they operate blindly on the form of signs. One of the most striking effects of regular morphological operations on signs is the distortion of form so that iconic aspects of the signs are overridden and submerged.”

Klima & Bellugi, 1979



# The VERY-SLOW example

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- ❖ Klima & Bellugi's analysis: "Thus the form of 'very slow' is incongruent with the meaning of the basic sign" (1979: 30).

# VERY-SLOW

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- ❖ What is the linguistic structure of VERY-SLOW?
- ❖ Root SLOW + intensifier
- ❖ How do we understand ‘intensity’?
- ❖ Kövecses (2000) notes that one folk understanding of anger involves a cognitive model in which intensity of offense outweighs intensity of retribution creating an imbalance that causes anger. As a result, a common cross-linguistic metaphorical expression of anger involves the conceptual metaphor AN ANGRY PERSON IS A PRESSURIZED CONTAINER.



# VERY-SLOW

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- ❖ Where is iconicity — in the root SLOW or the intensifier morpheme?

# Intensity

Semantic pole

Phonological pole

"container under pressure"

ASL intensifier

1. hold (the lid on)
2. build up pressure
3. sudden release

1. hold
2. build up pressure
3. sudden release



Iconicity



# VERY-SLOW

iconic



Grammatical  
morpheme

intensifier



Lexical  
stem

# More examples of cognitive iconicity

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# Noun Archetype

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- ❖ A physical object is composed of material substance
- ❖ We think of an object as residing primarily in space, where it is bounded and has its own location
- ❖ In time, an object may persist indefinitely, and it is not thought of as having any particular location in this domain.
- ❖ An object is **conceptually autonomous** in the sense that we can conceptualize it independently of its participation in any event.



# Verb Archetype

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- ❖ An energetic interaction is not itself material, consisting instead of change and thus the transfer of energy
- ❖ An event resides primarily in time; it is temporally bounded and has its own temporal location.
- ❖ By contrast, an event's location in space is more diffuse and also derivative, as it depends on the location of its participants.
- ❖ This is so because an event is **conceptually dependent**; it cannot be conceptualized without conceptualizing the participants who interact to constitute it.



# The Conceptual Significance of Visible Articulators

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- ❖ Hands as moving objects in space
- ❖ Handshapes and the Noun Schema
- ❖ Movement and the Verb Schema

# Conceptualizing the articulators

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- ❖ The hands (handshape) are autonomous objects manifest in the spatial domain.
- ❖ Movement is a dependent property of location, manifest in the temporal domain — movement is a *change in location*.
- ❖ Location is a dependent property of the hand, manifest in the spatial and temporal domain.
- ❖ Orientation is a dependent property of the hand, manifest in the spatial domain.



# Classifiers in signed languages

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- ❖ “ASL uses certain handshapes in particular orientations for certain semantic features of noun arguments. Thus the verb MEET has no “neutral” form: the citation form actually means ‘one person meets one person’, or perhaps more specifically ‘one self-moving object with a dominant vertical dimension meets one self-moving object with a dominant vertical dimension’. If trees started walking, they would MEET one another in the same way. Many of these classifiers are productive and analyzable, although not strictly transparent.” (Frishberg 1975)



# Complex polymorphemic forms

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- ✦ “The handshape is a classifier for the semantic category (e.g. human vs. animate nonhuman vs. vehicle) or size and shape of the moving object; the movement path (one of a small number of discretely different movements, e.g. straight vs. circular vs. arc) is a morpheme representing the path of motion of the moving object; the manner of movement is a morpheme for the manner of motion along the path (e.g. bounce vs. roll vs. random); a second handshape (typically produced on the left hand) is a classifier for a secondary object, with respect to which the primary object moves; and the placement of the second handshape along the path is a morpheme for the spatial relationship of the movement path with respect to this secondary object (e.g. from vs. to vs. past).” (Newport & Meier 1985)



# ASL Verbs of Transfer

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- ❖ BOOK, <sub>1</sub>GIVE-TO<sub>2</sub>[cl]      “The man gave the book to the boy.”

# Autonomy/dependency again

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- ❖ An object is **conceptually autonomous** in the sense that we can conceptualize it independently of its participation in any event.
- ❖ An event is **conceptually dependent**; it cannot be conceptualized without conceptualizing the participants who interact to constitute it.



# Verbs of Transfer

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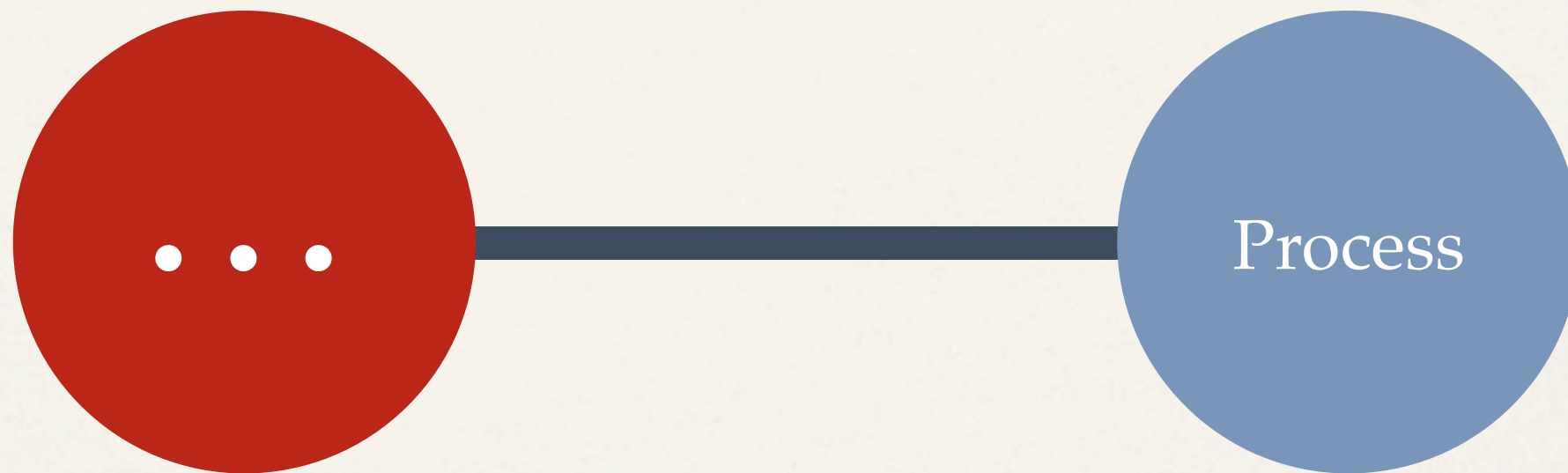
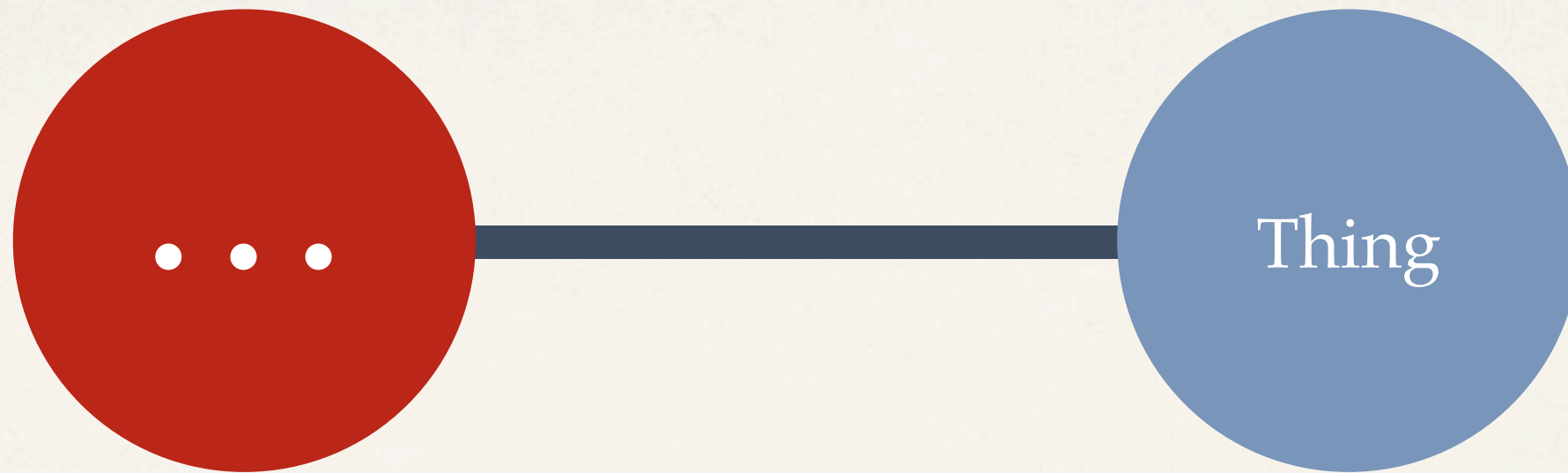
Grammatical Role	Semantic A / D	Phonological A / D
Verb 'give'	dependent <i>(event/process)</i>	dependent <i>(movement)</i>
Moved 'book'	autonomous <i>(thing)</i>	autonomous <i>(handshape)</i>
Agent 'person 1'	autonomous <i>(thing)</i>	autonomous <i>(location)</i>
Recipient 'person 2'	autonomous <i>(thing)</i>	autonomous <i>(location)</i>

# Grammatical Classes in ASL

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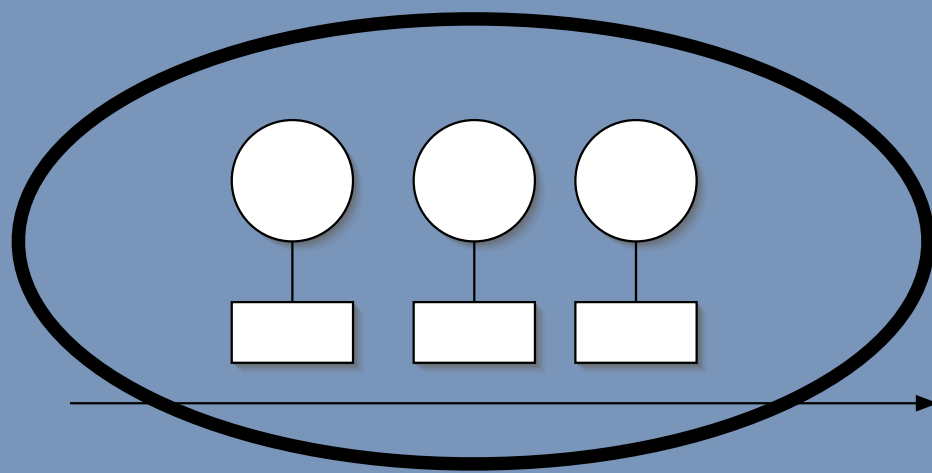


- ✦ **Noun:** an expression that profiles a *thing*

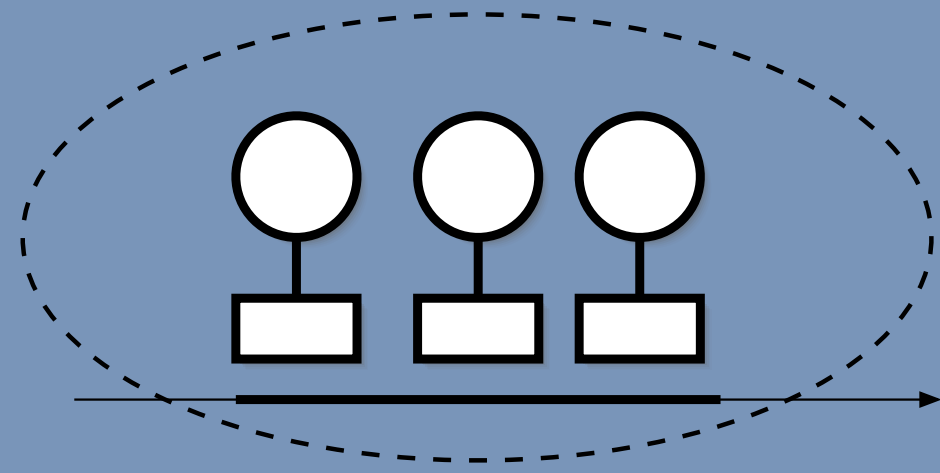


- ✦ **Verb:** an expression that profiles a *process*

# Semantic Pole

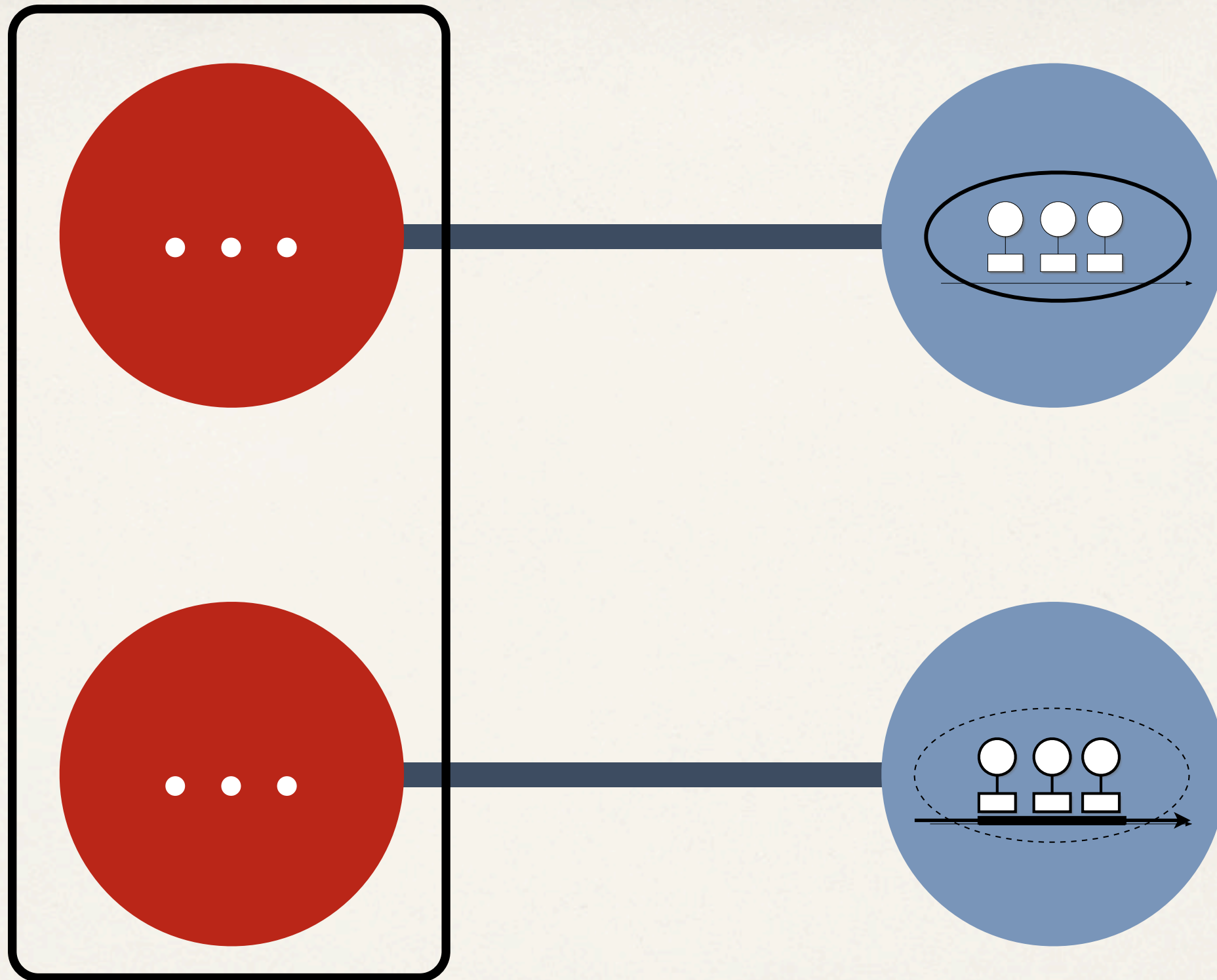


Noun



Verb





# Noun-verb Pairs in ASL

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Both continuous and hold manner occur in the verb signs (a **continuous sweep** as opposed to a noticeable stop at the end of the movement); the related noun forms show a **consistently restricted** pattern: they are the same as the verb forms except that they have reduplicated movement and a restrained manner (that is, the muscles are tightened in performing the movement). As a result of the restrained manner the **nouns are typically made with smaller movements than their related verbs.**

Klima & Bellugi 1979



# Iconicity of Nouns and Verbs in ASL

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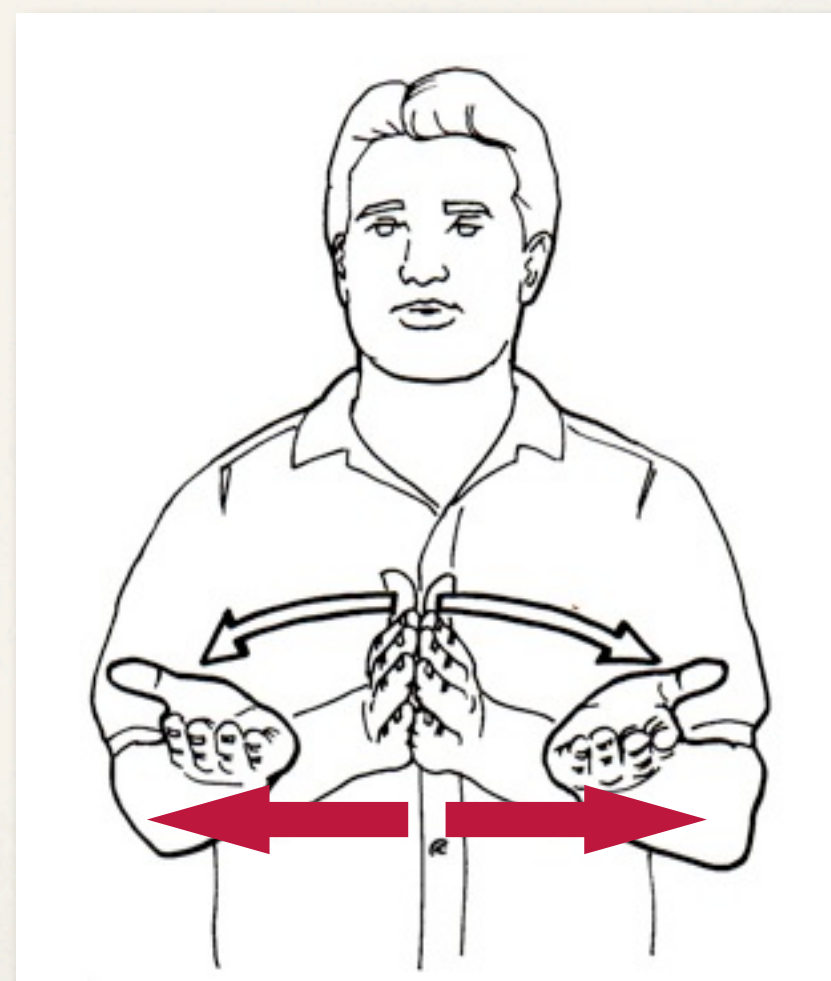
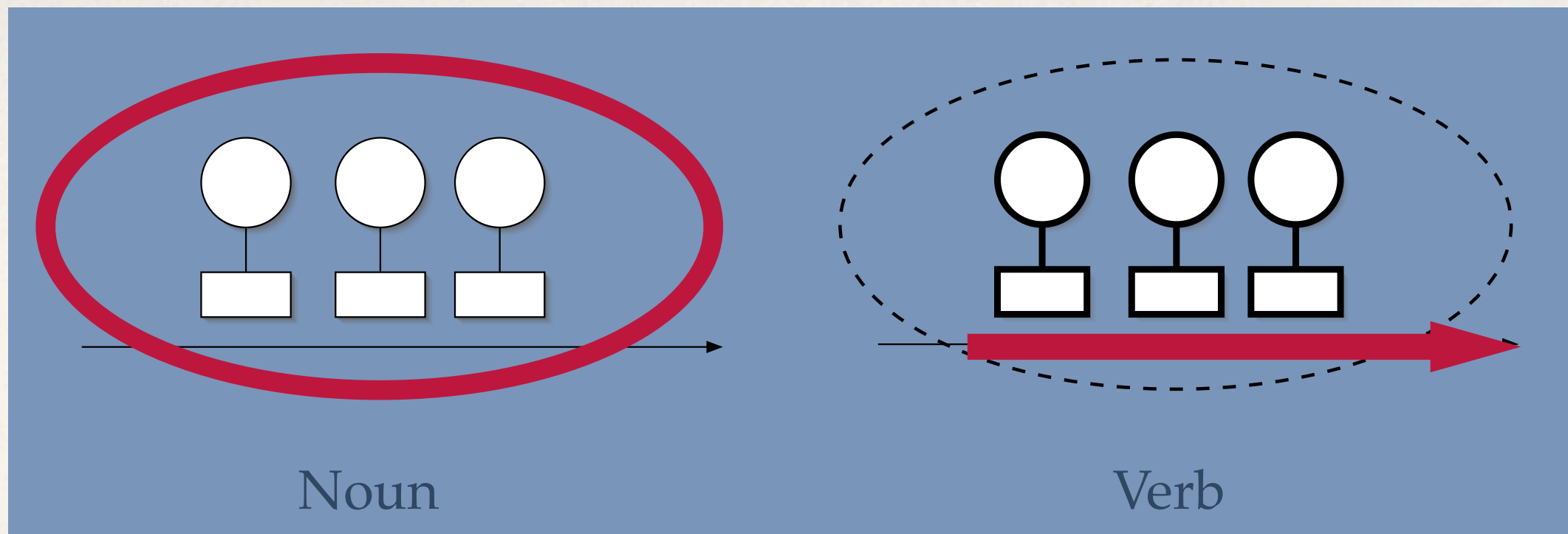
- ❖ Sign linguistics have claimed that while a specific noun sign in ASL may be iconic, or a specific verb may be iconic, the **classes, or grammatical categories**, noun and verb are not iconic

- ❖ “It is probably true that the form of the sign SIT is an iconic representation of human legs sitting ...[However,] focusing on its iconicity will not provide much insight into the interesting relationship between SIT and the noun CHAIR, and other noun-verb pairs.”

Valli & Lucas 1995



- ❖ That is, Valli & Lucas are claiming that while SIT looks like a person sitting, SIT doesn't 'look like' a **verb**, and CHAIR doesn't 'look like' a **noun**.



Valli & Lucas 1995: 176



- ❖ The articulation of ASL **noun forms** in a restricted region of space motivates their construal as things at the phonological pole.
- ❖ ASL **verb forms** make salient in their articulation motion through space; they are thus construed as processes at their phonological pole.
- ❖ The mapping of **phonological** thing and process onto **semantic** thing (noun) and process (verb) respectively makes these noun-verb pairs iconic, not for the specific meanings of the nouns and verbs they represent but for the grammatical class of noun and verb.



# Atemporal vs. Temporal Relations

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- ❖ Simplex vs. complex prepositions
- ❖ Simplex:
  - ❖ *in the garage; under a tree; near the exit*
- ❖ Simplex prepositions describe a single location



# Atemporal vs. Temporal Relations

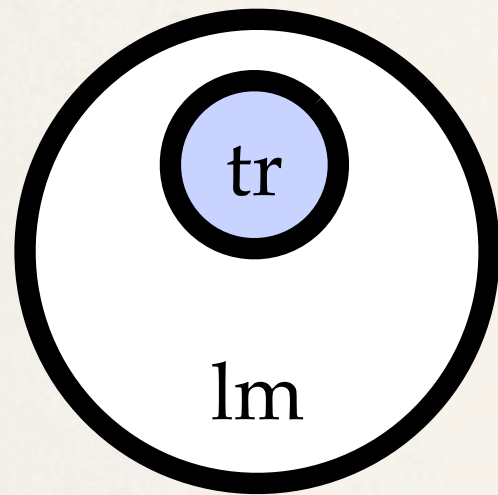
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- ❖ Complex prepositions:
  - ❖ *into the garage; along the river; through a tunnel*
- ❖ Complex prepositions describe a **series** of locations amounting to a spatial path

# Atemporal vs. Temporal Relations

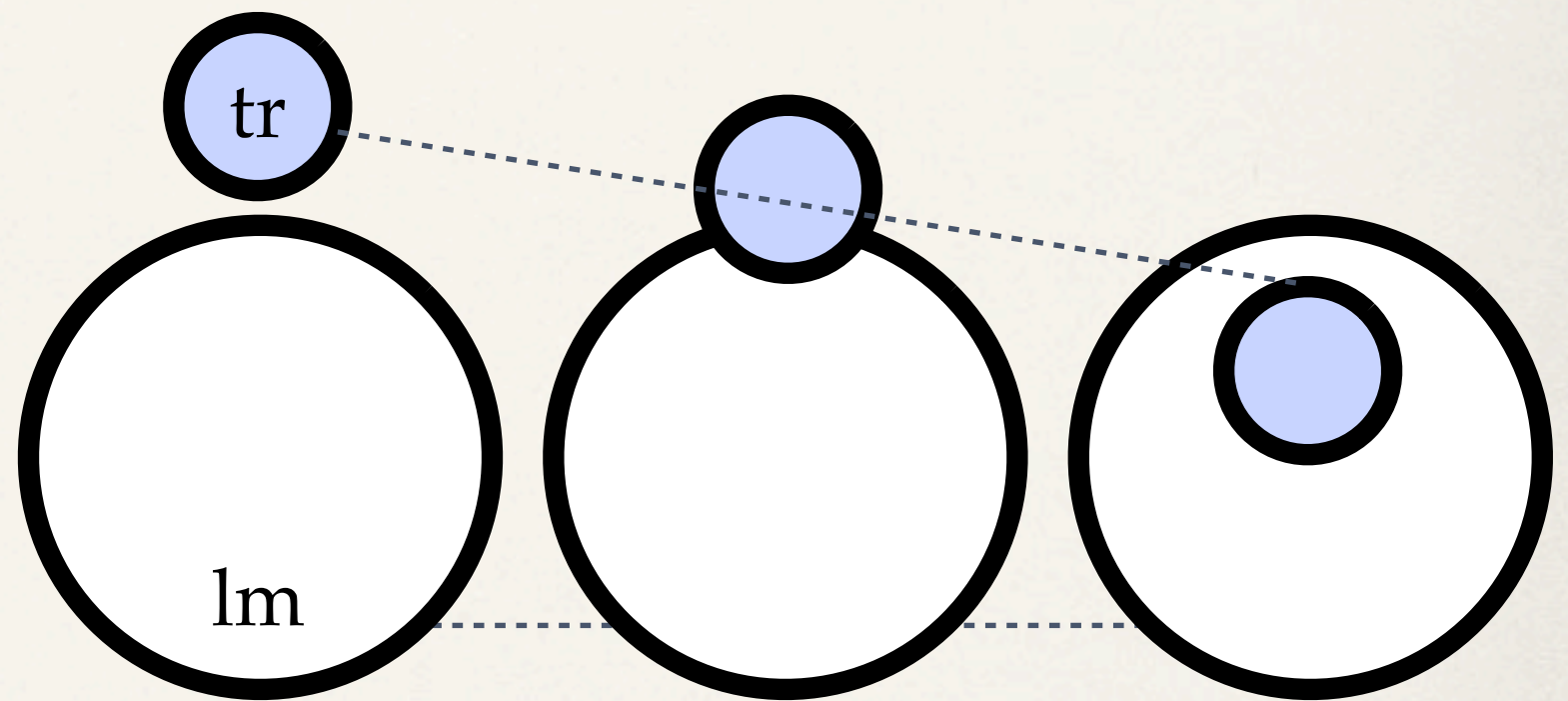
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*in*



Non-processual  
relationship  
(simplex)

*into*



Non-processual  
relationship  
(complex)



# Atemporal vs. Temporal Relations

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- ❖ Atemporal relations (prepositions) vs. temporal relations (verbs)
- ❖ Again, the difference is not one of **conceptual content**; rather, it is the **construal** of that content

# Atemporal vs. Temporal Relations

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- ❖ The verb *enter* construes the content **temporally**, whereas the preposition construes the content **atemporally**
- ❖ The verb invokes conceived time and portrays the complex relationship as developing along this axis
- ❖ In the preposition, time remains in the background



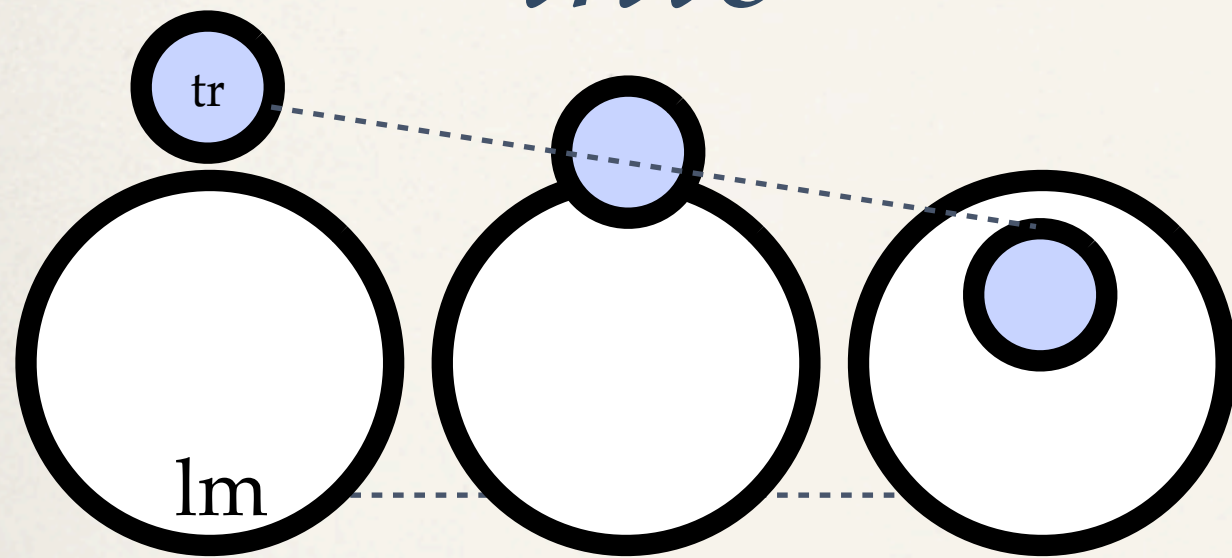
# Atemporal vs. Temporal Relations

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- ❖ The verb highlights temporality by scanning through the component states **sequentially**, whereas the preposition scans them in **summary** fashion and portrays the result in a holistic view, designating only the final state of the overall process

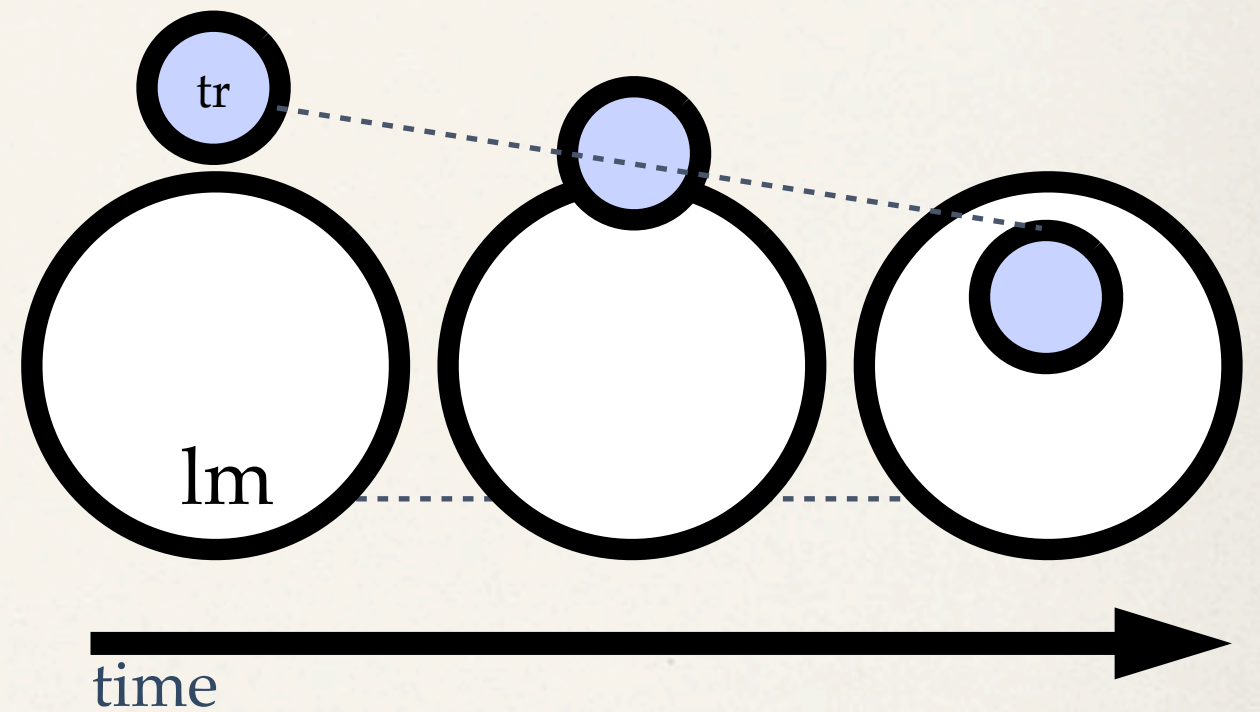
# Atemporal vs. Temporal Relations

*into*



Non-processual  
relationship  
(complex)

*enter*



Process  
(verb)



# ASL examples

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- ❖ MUCH CHANGE ‘much has changed’ vs. CHANGE-OVER-TIME ‘a slow and steady change has taken place during this time’
- ❖ SITTING-ACROSS ME  
vs.  
MOVE-TO-LOCATION-ACROSS-FROM ME





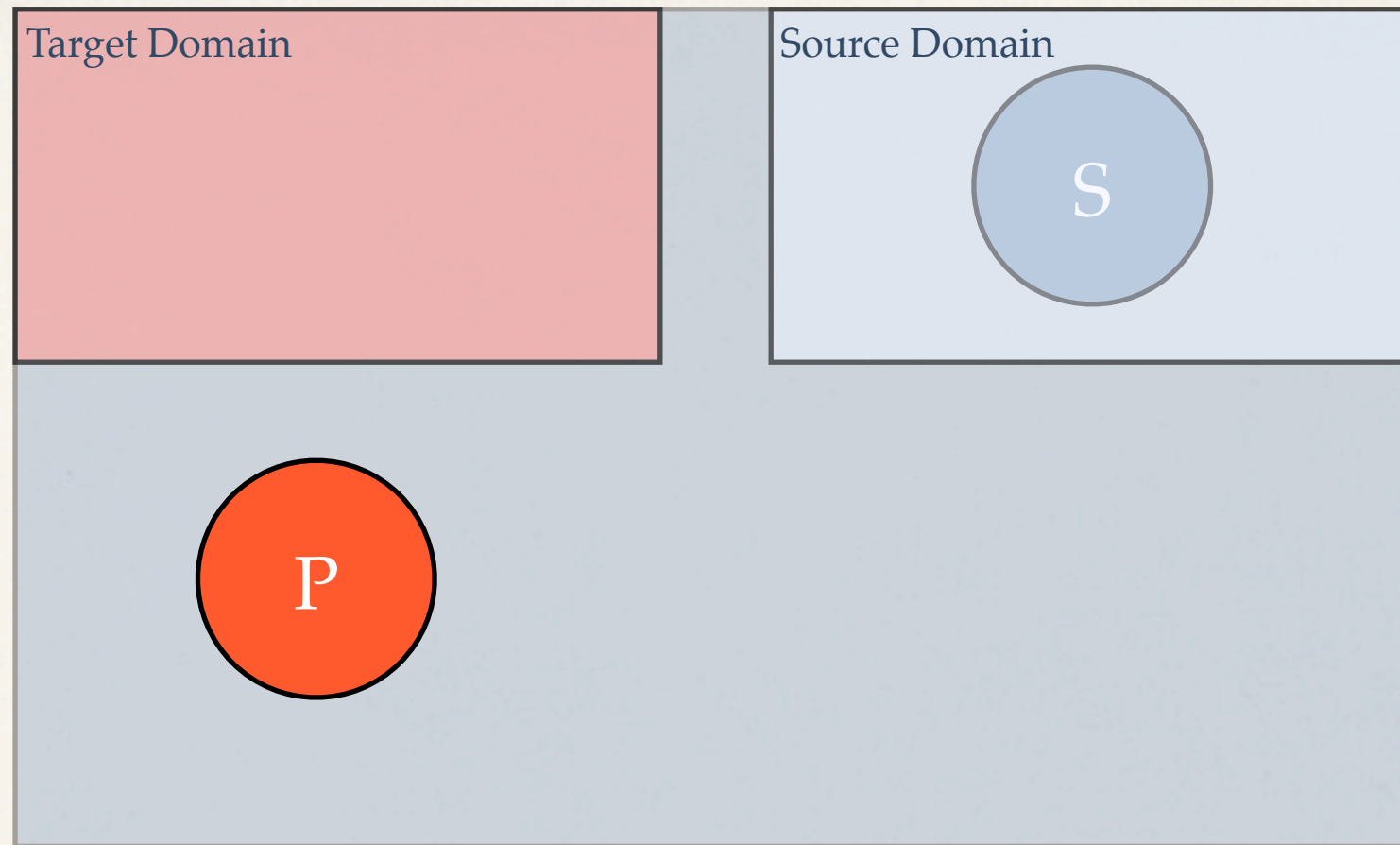


# Metaphor and Iconicity

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- ❖ Metaphor can create iconicity where it did not exist before. How is this?
- ❖ Metaphor is a mapping in semantic space



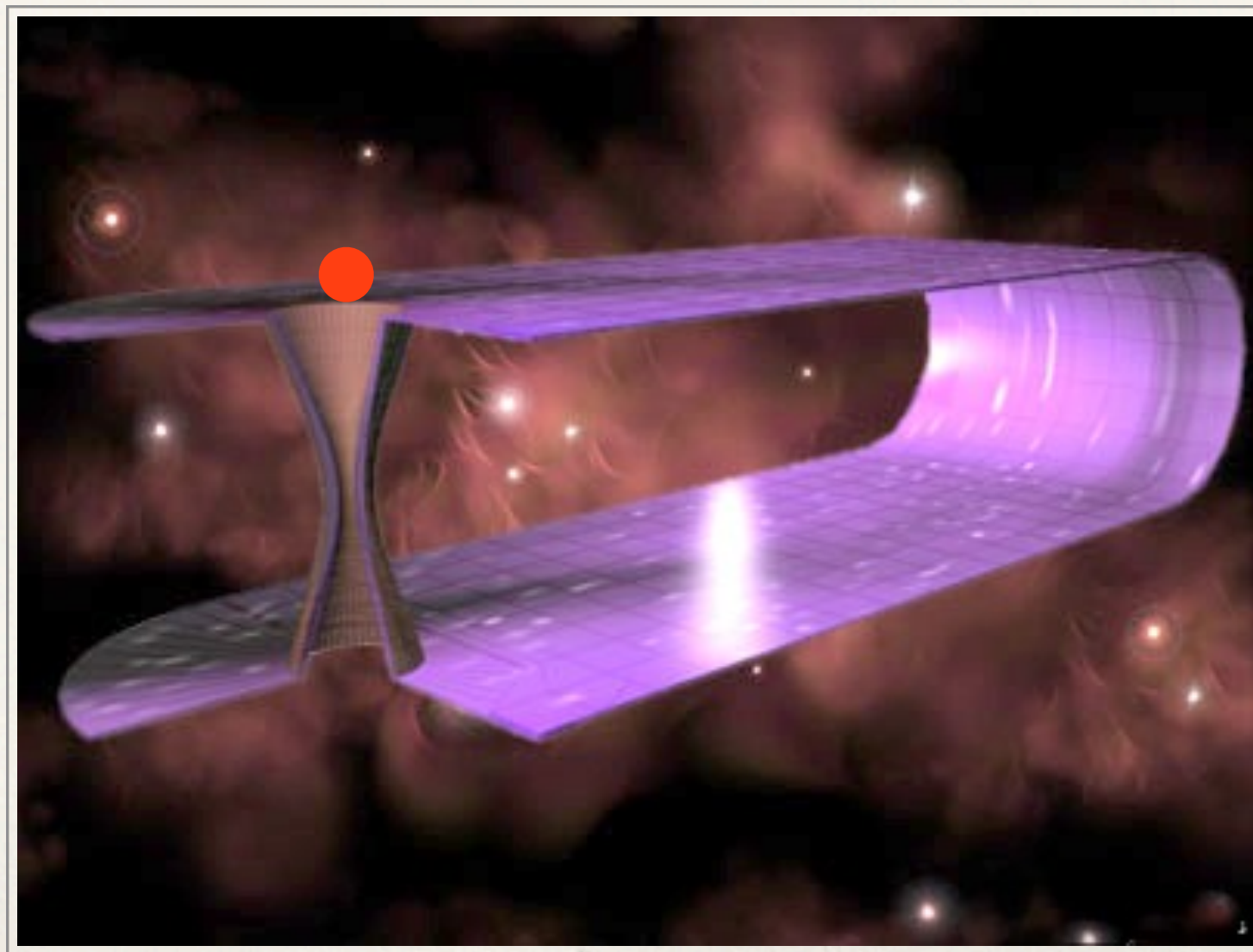


Metaphor as Mapping Across Conceptual Domains

# Metaphor as a ‘wormhole’ in semantic space

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- ❖ In physics, a wormhole is a topological feature of spacetime that would causes a “shortcut” through spacetime.

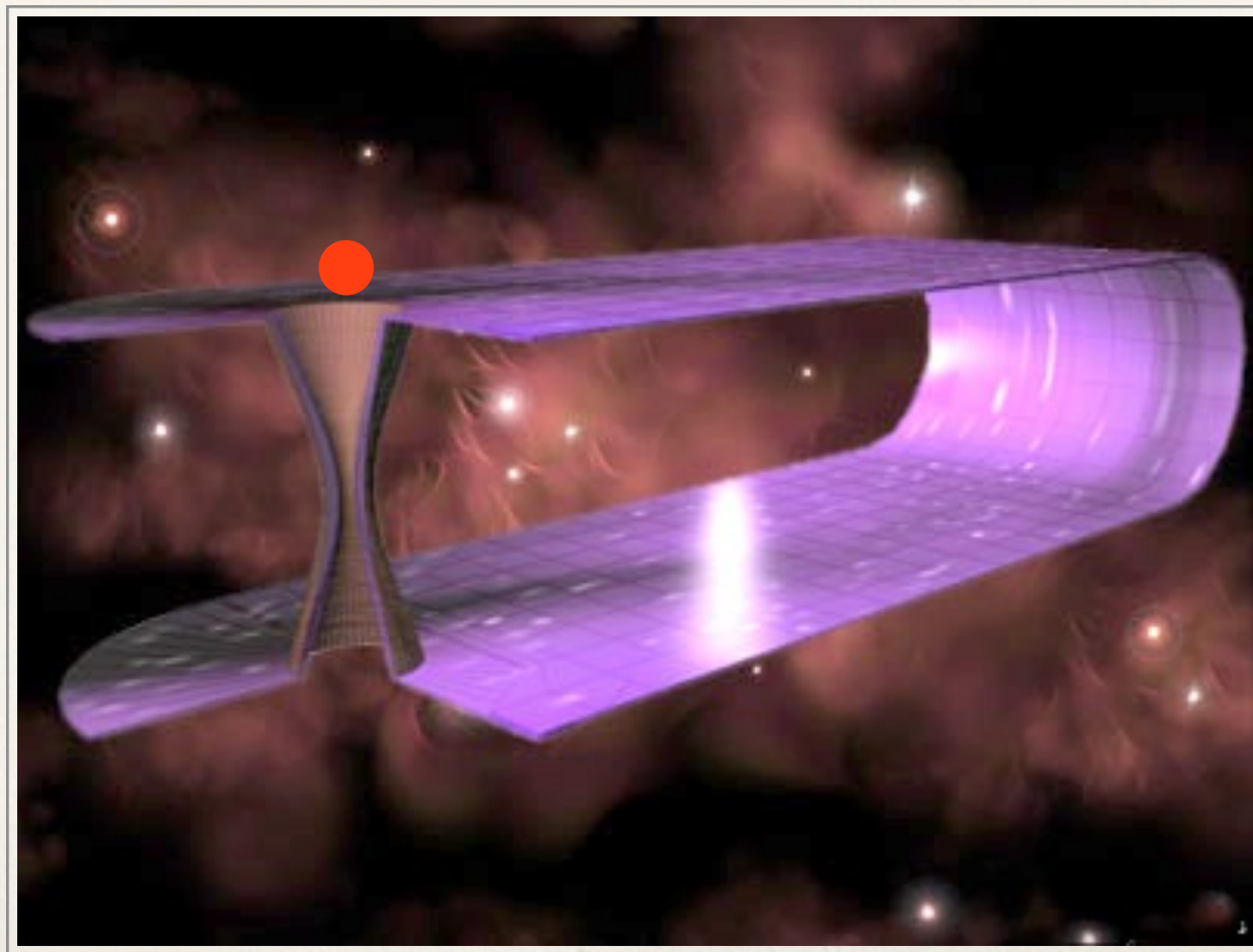




# Metaphor as a ‘wormhole’ in semantic space

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- ❖ In physics, a wormhole is a topological feature of spacetime that would causes a “shortcut” through spacetime.





- ❖ Because metaphor relocates positions in conceptual space — it ‘warps’ conceptual space — it can change distance relations. It can move the semantic pole of a linguistic unit *closer* to its phonological pole, within conceptual space. Thus, it can create cognitive iconicity.



❖ Thank you!