Indication (Covariance Clarified)

Occurrences of $S$ indicate that $O$ is $A$, just in case if $O$ weren’t $A$, $S$ wouldn’t have occurred

- Tree rings indicate age
- Tree rings also indicate age

($S$ is a signal: word, bit pattern, neural pattern)
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Representation (Covariance With a Purpose)

Occurrences of $S$ represent that $O$ is $A$, just in case:

- $S$ has the function of indicating that $O$ is $A$
What is a Representational System (RS)?

A system whose function is to indicate how things stand with respect to some other object, condition or magnitude.

- Suppose the RS’s function is to indicate whether $O$ is in condition $A$ or $B$ and the way RS performs this function is by occupying one of two possible states 1 (indicating that $O$ is $A$) and 0 (indicating that $O$ is $B$).
What is a Representational System (RS)?
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- Then 1 and 0 are the elements of RS and they represent that $O$ is $A$ and that $O$ is $B$
Kinds of Representational Systems
Three Types

- 3 importantly different kinds of RS's
Kinds of Representational Systems

Three Types

- 3 importantly different kinds of RS's
  1. Purely Conventional Systems
Kinds of Representational Systems

Three Types

1. Purely Conventional Systems
2. Hybrid Systems: Partly Conventional, Partly Natural
Kinds of Representational Systems

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▶ 3 importantly different kinds of RS’s

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3. Natural Systems
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- They differ on:
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- They differ on:
  1. How the elements serve their function
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▶ They differ on:
   1. How the elements serve their function
   2. How the elements indicate
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- They differ on:
  - 1. How the elements serve their function
  - 2. How the elements indicate

- We’ll see examples in a moment...
Conventional Representation
A Summary

Example Conventional RS
A basketball game re-enacted with popcorn and coins

Conventional Representation: Type 1

1. Elements are called symbols
Conventional Representation

A Summary

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Conventional Representation: Type 1

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   ▶ Popcorn kernels and coins
Conventional Representation

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A basketball game re-enacted with popcorn and coins

Conventional Representation: Type 1

1. Elements are called **symbols**
   - Popcorn kernels and coins

2. Symbols indicate because there is a person making sure they covary with world
Example Conventional RS
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Conventional Representation: Type 1

1. Elements are called **symbols**
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   - Popcorn & coins indicate game because I am making them covary w/game
Example Conventional RS
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Conventional Representation: Type 1

1. Elements are called symbols
   ▶ Popcorn kernels and coins
2. Symbols indicate because there is a person making sure they covary with world
   ▶ Popcorn & coins indicate game because I am making them covary w/game
3. Symbols can have the function of indicating anything
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   - Popcorn & coins indicate game because I am making them covary w/game
3. Symbols can have the function of indicating anything
   - We get to assign them!
Hybrid Representation

Hybrid Representation: Type 2

1. Elements are called signs
Hybrid Representation

Hybrid Representation: Type 2

1. Elements are called signs
2. Signs indicate because of natural dependency between them and what they indicate
Hybrid Representation: Type 2

1. Elements are called signs
2. Signs indicate because of natural dependency between them and what they indicate
   - Needle on gas gauge and fuel level
3. Signs can have the function of indicating a range of things, but a limited range
4. Sign users determine which of these functions it has
   - We give a gas gauge the function of indicating fuel level, not electrical current in gas tank
   - But it could serve either function
Hybrid Representation

A Summary

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Natural Representation: Type 3

1. Elements are called **natural signs**

   - Magnetosomes in marine bacteria indicate whereabouts of oxygen-free environments

2. Natural signs have an intrinsic function that derives from the way they are used and developed by the system of which they are part

   - Magnetosomes indicate many things, but they represent oxygen-free environments because that's their function in marine bacteria
Natural Representation: Type 3

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3. Natural signs have an intrinsic function that derives from the way they are used and developed by the system of which they are part
   - Magnetosomes indicate many things, but they represent oxygen-free environments because that’s their function in marine bacteria
(1) ... Tree Rings
(2) ... Smoke
(3) ... Spots
**Exercise:** Can you think of any other example of *natural* signs?
However, the kind of signs we are interested in this course are *artifacts* which are made to represent something.
But the ways artifacts can represent is extremely multifarious and diverse.
For example, consider the case of *pictures*. Pictures seem to represent by *resemblance*. Presumably, the portrait below represents the philosopher Francis Bacon by resembling *him*:
The following picture represents a ship by looking alike a ship:
**Exercise:** Can you think of any counterexamples to the claim that pictures represent what they do by resemblance?
Other signs represent what they do *by stipulation*:
We *have* to learn that the following sign means *denial of access*:
Presumably, we don’t have to learn that the following picture represents a woman thus and so (although, of course, we need to be told who the woman featured is):

![Mona Lisa](image-url)
Other kinds of signs represent by a mixture of stipulation and resemblance:

- Aries
- Taurus
- Gemini
- Cancer
- Leo
- Virgo
- Libra
- Scorpio
- Sagittarius
- Capricorn
- Aquarius
- Pisces
Another example of mixed representation:
Still another one:

I'd take the extra-long route, saving no real reason to go home.

All there was in this part of town: lumberyards and old body shops.

You might call it a "no man's land".

But I'd still see people walking around, carrying groceries and carrying on.

Conversations, I know, like they live around here.

In the semi-industrial underbelly of the city...

That I really only appreciate for its entirely unintentional aesthetic charm.

Another thing is that it wasn't unusual to see entire city blocks abandoned, condemned, or simply unbuildable.

I took it for granted at the time, but it's unapproachable in the city where I live now.

I think I used to look at things a lot more closely than I do now.

In addition to the famed... and weathered lumberjack.

Those plastic letters and forgotten placards left most signs mere empty frames.

I was always struck by the amount of signage trends overlooking this area.

Looking at them was like looking through windows into a ghost town.
Representational Systems
What Kind?

Carlotta Pavese
Intentionality & Representation
Representational Systems
What Kind?

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