

# INTERACTIVE FIAT OBJECTS

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# *The broad context of the talk:*

**Ontology:** the study of being(s)

→ ‘On what there is’

**Epistemology:** theory of knowledge

→ ‘How do we know (what there is)?’

- **Psychology** (cognitive, ecological, behavioral)
- **Philosophy** (of perception, of mind)
- **Cognitive Science** (embodied approaches)

*The narrow context of the talk:*

Ontology of objects and  
boundaries

&

Embodied cognition

# *Two families of entities:*

## **Bona Fide vs. Fiat**

(Bittner & Smith, 2003; Smith, 2001; Smith & Varzi, 2000)

- Members of the *bona fide* family have an intrinsic/genuine, and thus mind-independent existence, whereas
- Members of the *fiat* family owe their existence to mind-dependent acts of human decision or demarcation.

*...but both families are equally relevant  
for human cognition!*

# ONTOLOGICAL TYPOLOGY

(Bittner & Smith, 2003; Smith, 2001; Smith & Varzi, 2000)

<i>Family</i> <i>Entity</i>	<b>BONA FIDE</b>	<b>FIAT</b>
Objects	<i>The Earth, a tennis ball, an island, a chair, a mountain,</i>	<i>The Southern hemisphere, my right cheek, a tree's trunk,, a neighborhood</i>
Boundaries	<i>The Rio Grande, a shoreline, my skin, a table's edge, my death</i>	<i>The North Pole, the equator, Colorado's stateline, drinking age</i>
Processes	<i>Digestion, combustion, my cat's life, a storm</i>	<i>A ceremony, 'les soldes' in France, adolescence, a party, summertime, this talk</i>

# We will focus on:

<i>Family</i> <i>Entity</i>	BONA FIDE	FIAT
<b>Objects</b>	<i>The Earth, a tennis ball, an island, a chair, a mountain,</i>	<i>The Southern hemisphere, my right cheek, a tree's trunk,, a neighborhood</i>
<b>Boundaries</b>	<i>The Rio Grande, a shoreline, my skin, a table's edge, my death</i>	<i>The North Pole, the equator, Colorado's stateline, drinking age</i>
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# Some previous remarks:

- Ontological overlap (and ‘parasitic’ dependence) between bona fide and fiat objects: *Ex. my leg/my calf; the top of a mountain*
- Vagueness of boundaries (whether bona fide or fiat): *The shoreline; downtown’s delimitation; cheek vs. chin*
- Corresponding referent guarantees truth, *but*
- We’ll only deal here with referents of mesoscopic and pragmatic relevance (thereby fixing scale and granularity).

# Ontological dependence of fiat objects on their fiat boundaries:

Fiat objects are demarcated and cognitively apprehended through their corresponding fiat boundaries, and these “...are boundaries which exist only in virtue of the different sorts of demarcations effected cognitively by human beings” [Smith, 2000 : 5]. **The recognition/establishment of the boundaries, vague or otherwise, is of crucial importance in the constitution of fiat objects: it is a necessary condition for their existence.**

# Ontological dependence of fiat objects on their fiat boundaries (*cont.*):

**Partitioning activity is that which recognizes/establishes the boundaries on which fiat objects or fiat processes depend for existing. This activity is the result of ‘decisions’ or conceptually-guided ‘demarcations’, that seem to demand a symbolic, reflexive or linguistic capacity on the part of the agent. For this reason, fiat ontology seems to be ultimately concept-dependent and hence accessible only to linguistic (human) beings.**

# Fiat objects:

I) Depend on high-order cognitive acts for their existence;

II) are describable and communicable through concepts encoded in language;

III) are public and stable through time;

IV) have a meaningful and sometimes powerful incidence on our lives.

*With the exception of 'I', all the other traits are shared by bona fide objects.*

However...three claims:

- a) **there is a kind of fiat object whose existence does not essentially depend on the recognition/establishment of its fiat boundaries** (at least not in the sense that ‘recognition/establishment’ are usually understood);
- b) the existence of **such kind of objects** does not squarely fall into, nor derives from, any of the fiat sub-categories hitherto evoked; in fact, it **has an ontological status and cognitive relevance of its own;**
- c) It satisfies **only partially** traits I-IV (above).

I call this kind of (fiat) object:

## **Interactive Fiat Objects (IFOs)**

(In order to acknowledge them, we should switch to an *embodied approach on cognition* –as opposed to the traditional conceptual/linguistic approach)

*What is embodied cognition?:*

“To say that cognition is embodied means that **it arises from bodily interactions with the world.** From this point of view, cognition depends on the kinds of experiences that come from having a body with particular perceptual and motor capacities that are inseparably linked and that together form the matrix within which memory, emotion, language, and all other aspects of life are meshed. The contemporary notion of embodied cognition stands in contrast to the prevailing cognitivist stance which sees the mind as a device to manipulate symbols and is thus concerned with the formal rules and processes by which the symbols appropriately represent the world.” [Thelen et al, 2001 : 20]

*Add two key notions for clarifying the nature of IFOs:*

*Affordances:*

*(Enable purposeful action, ensure survival, of dynamic access, relative to the ecological niche)*

*Cf. Gibson, 1979*

*Ad hoc categories:*

*(Goal-derived, ephemeral, gradient-like, unstable)*

*Cf. Barsalou, 1983, 1987, 1991*

# Interactive Fiat Objects (IFOs):

## *Like affordances:*

- Enable purposeful action
- Are dynamically accessed
- Are relative to the ecological niche
- (In some cases) ensure survival

## *Unlike affordances:*

- Are cognitively penetrable (Pylyshyn)
- Are exquisitely sensitive to conceptual guidance and can be communicable and learned
- Are ontologically dependent on the agent

# Interactive Fiat Objects (IFOs):

## *Like ad hoc categories:*

- Are goal-derived and constituted ‘on-line’
- Are/can be ephemeral and unstable
- Are gradient-like
- Are not captured by compact names

## *Unlike ad hoc categories:*

- Are perceivable and concrete
- When stable, they leave traces (physical or linguistic –in compact terms: ex. ‘sweet spot’)

*Some concrete examples:*

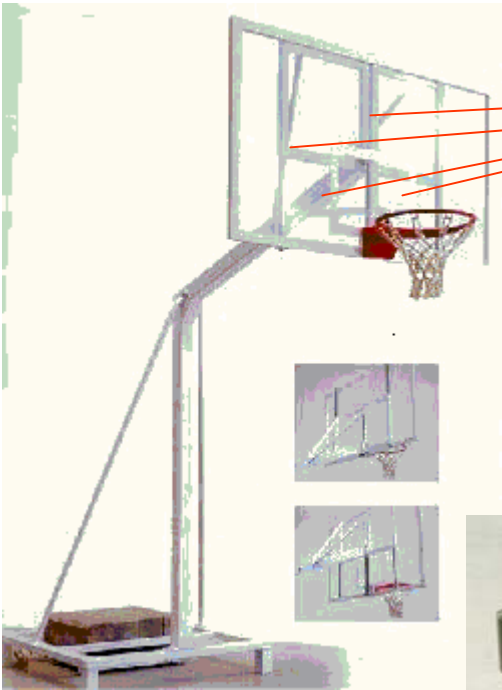


**IFOs**



# *Some concrete examples:*

**I****F****O****s**



*Some concrete examples:*



**I****F****O****s**




Table # 1 (some approximate distinctions for illustrating three types of objects):

<b>OBJECTS:</b>	<i>Bona Fide</i>	<i>Fiat: 'Regular'</i>	<i>Fiat: Interactive</i>
• Cognitively accessible and behaviorally relevant?	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
• Intrinsic existence?	<i>Yes</i>	<i>No</i>	<i>No</i>
• Ontological dependence on conceptual/linguistic resources?	<i>No</i>	<i>Yes</i>	<i>No</i>
• Ontological dependence on boundaries?	<i>Yes</i>	<i>Yes</i>	<i>No</i>
• Ontological dependence on bodily interaction?	<i>No</i>	<i>No</i>	<i>Yes</i>
• Ontological dependence on functions fulfilled/goals?	<i>No</i>	<i>?</i>	<i>Yes</i>
• Boundary-dependent for being cognized?	<i>?</i>	<i>Yes</i>	<i>No</i>

**OBJECTS:***Bona Fide**Fiat: 'Regular'**Fiat: Interactive*

- |  |            |            |            |
|--|------------|------------|------------|
| • Are boundaries naturally perceivable?  | <i>Yes</i> | <i>No</i>  | <i>No</i>  |
| • Gradient-like existence according to level of cognizing expertise?             | <i>No</i>  | <i>?</i>   | <i>Yes</i> |
| • Is the cognitive access dynamically-constituted?                               | <i>No</i>  | <i>No</i>  | <i>Yes</i> |
| • Typically concept-guided?  | <i>No</i>  | <i>Yes</i> | <i>No</i>  |
| • and linguistically-encoded?  | <i>Yes</i> | <i>Yes</i> | <i>No</i>  |
| • Ontologically modified by the situation/context and inner states of the agent? | <i>No</i>  | <i>No</i>  | <i>Yes</i> |
| • Public and stable through time?  | <i>Yes</i> | <i>Yes</i> | <i>?</i>   |
| • Meaningful and with incidence in our lives?                                    | <i>Yes</i> | <i>Yes</i> | <i>Yes</i> |

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