LSA 119

Mental spaces and conceptual blending
Gilles Fauconnier & Mark Turner
155 Donner Lab
MW 10:30-12:15

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http://markturner.org
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   **Department of Cognitive Science, University of California, San Diego**

   **Mark Turner**  
   **Case Western Reserve University - Department of Cognitive Science**

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What Are We?: The Convergence of Self and Communications Technology

Mark Turner
Case Western Reserve University - Department of Cognitive Science


Abstract:
The invention of each new communications technology has brought new opportunities for understanding the self by blending our vague, diffuse notions of self over time with our notion of self as a user of the technology. These technologies include semaphore signaling systems, signed language, telegraphy, personal letter writing, telephony, radio, television, e-mail, and chat rooms. We know our technologies better than we know ourselves. Our communications technologies are designed to operate at human scale and are therefore at the center of what we know best. Accordingly, we think of ourselves in terms of them, by blending our general concept of ourselves with our understanding of how the communications technology works.

Keywords: conceptual integration, blending, technology, identity, cognitive science

Accepted Paper Series

Date posted: November 02, 2008; Last revised: November 02, 2008
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Mark Turner

turner@case.edu
Institute Professor
and
Professor and Chair of Cognitive Science
Case Western Reserve University

I study the nature and emergence of higher-order cognitive operations that distinguish human beings from other species and appear in the record of our descent during the Upper Paleolithic.

Some Forthcoming and Recent Presentations


Eötvös Loránd University, Budapest. 28 September 2007.

Tomorrow’s Research
Today
Tomorrow’s Research Today

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A typical network
The riddle of the Buddhist Monk

A Buddhist monk begins at dawn one day walking up a mountain, reaches the top at sunset, meditates at the top overnight until, at dawn, he begins to walk back to the foot of the mountain, which he reaches at sunset. Make no assumptions about his starting or stopping or about his pace during the trips. Riddle: is there a place on the path which the monk occupies at the same hour of the day on the two separate journeys?
The riddle of the Buddhist Monk
The riddle of the Buddhist Monk
The riddle of the Buddhist Monk
The riddle of the Buddhist Monk
Input spaces

Input Space 1

Input Space 2
Cross-space mapping

Input Space 1

Input Space 2
Generic space

Input Space 1

Input Space 2
Projection to the Blended Space

Input Space 1

Input Space 2

Wednesday, July 8, 2009
Emergent Meaning in the Blended Space

Input Space 1
time $t'$ (day $d_1$)

Input Space 2
time $t'$ (day $d_2$)

Blended Space
time $t'$ (day $d'$)
A typical network
Mental Spaces and Blending

Terms familiar from the field of cognitive linguistics

- mental spaces
- conceptual structure
- connections, relations, mappings, projections, matching, fictive structure
- frames, scripts, models
- identity, role-value, category, analogy, similarity, counterfactuality, negation, metonymy, synecdoche, apostrophe, catachresis, figure, metaphor, . . .
- relational networks of form-meaning pairs
- relation of conceptual structure and cognitive operations to grammar
- . . . .
Mental Spaces and Blending

But fundamental differences . . .

• nature of meaning and language
• compression
• emergent structure
Mental Spaces and Blending

Important corrections

- Conceptual connection and blending are
  - basic, not special
  - not costly
  - mostly run in backstage cognition,
    almost never visible to consciousness,
    too complicated for consciousness
Mental Spaces and Blending

Important corrections

• Conceptual connection and blending are mostly not supplemental to putative cognitive operations (creativity, metonymy, counterfacuality, metaphor, . . .) but rather, for the most part, the source of these phenomena.
Mental Spaces and Blending

Important corrections

• Conceptual connection and blending are available across all conceptual domains
  • as far as we have been able to determine, available across all conceptual domains
Mental Spaces and Blending

Important corrections

• Although conditions in any particular behavior - such as discourse, presentation, language, gesture, art, - can be consequential for particular integration networks, those conditions are not starting points for analyzing the operations of mental space networks and blending. The basic mental operations are general over all these conditions.
Blending Box Experiments

Selective Projection
Emergent Structure
Blending Box Experiments
Blending Box Experiments
Mental Spaces and Blending

Important corrections

- Blending is a basic mental operation that works over conceptual networks of many different shapes, sizes, forms, and natures. It is not represented by any particular diagram with a certain number of spaces in a certain array and a certain dynamic development.
Mental Spaces and Blending
Mental Spaces and Blending
Mental Spaces and Blending
Mental Spaces and Blending
Mental Spaces and Blending
Coming into existence special case

Location 1  
Stork  
Location 2  

Location 1  
Carrying container  
Location 2  

Stork flying

Person p with object o in container c at Location 1

p carries o in c

Person p with object o in container c at Location 2

Carrying + container

person p

Flying Stork/person with baby/object in diaper/sling/carrier at location 1

carries

Stork/person with baby/object in sling/carrier arrives at location of parents

Newborn who can hold its head up, hold rattle, smile, wear diaper

Baby old enough to hold its head up, hold rattle, smile, wear diaper

Birth of baby

time
Orange county's predicament

**BEGGAR frame**
- OC
- bankrupt
- asks for help
- beggar
- poor
- bangs on tin cup

**RICH PERSON frame**
- OC
- wealthy
- born with silver spoon
- person
- wealthy
- has silver spoon

**Orange county**
- beggar /OC
- poor/bankrupt
- bangs on tin cup
- rich beggar /OC
- poor/bankrupt/wealthy
- bangs on tin cup
- WITH silver spoon

**Wednesday, July 8, 2009**
Legendary general

Napoleon

Waterloo

Wellington

Napoleon

Napoleon loses at Waterloo

Waterloo

ANALOGY

Alexander

undefeated

Napoleon, like Alexander, is undefeated

father

son

son like father

father

Napoleon wins at Waterloo

DISANALOGY

Alexander (father, undefeated)

Napoleon (son)
Health Movies Vampires

Horror Movies

Heat Emotion Body

Story of Emotion and Body

Blend

Wednesday, July 8, 2009
Mental Spaces and Blending

But fundamental differences . . .

• nature of meaning and language
• compression
• emergent structure
An Inconvenient Truth

“An Inconvenient Truth” is the film version of Al Gore’s slide-show presentation on global warming. Close to the end, Gore shows a picture of the Earth as a what he calls a “pale blue dot.” The Earth is a single pixel on a huge cosmological screen, difficult even to pick out when he points at it. The picture was taken from a distance in space of 4 billion miles. Gore says, “Everything that has ever happened in all of human history has happened on that dot. All the triumphs and tragedies, all the wars and all the famines, all the major advances. That is what is at stake—our ability to live on planet Earth, to have a future as a civilization.”

And then he concludes the film with this blend: “Future generations may well have occasion to ask themselves, 'What were our parents thinking? Why didn’t they wake up when they had the chance?’ We have to hear that question from them now.”
Pale Blue Dot
The Time Blend
at the end of
“An Inconvenient Truth”

And then he concludes the film with this blend: “Future generations may well have occasion to ask themselves, 'What were our parents thinking? Why didn’t they wake up when they had the chance?' We have to hear that question from them now.”
Mirror Network: Fictive Interaction

World Record in the Mile
World Record in the Mile
Linguistic constructions are made available by network projections

“Hicham el-Gerrouj beat Roger Bannister.”

“Hicham el-Gerrouj defeated Roger Bannister by 120 yards”
Fictive Interaction


Mental Spaces and Blending

But fundamental differences . . .

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• compression
• emergent structure
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