

PINO TROGU – SAN FRANCISCO STATE UNIVERSITY USA

THE DOUBLE CONSTRAINTS OF CONVENTION AND COGNITION IN SUCCESSFUL GRAPHIC DESIGN

CREDIT – RECIFE BRAZIL
6TH INFORMATION DESIGN INTERNATIONAL CONFERENCE
STI INFODISEN
WEDNESDAY 11 SEPTEMBER 2013

*There really is no such thing as Art.
There are only artists.*
— Ernst Gombrich

CONVENTION **COGNITION**

I. A BEAUTIFUL DESIGN THAT DID NOT WORK

New York Subway Map 1972 (1978)
The original map was considered too abstract and difficult to understand.
New York City Transit Authority (NYCTA)

New York Subway Map 1979 (2013)
The map was redesigned to make it easier to understand.
New York City Transit Authority (NYCTA)

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ART AND ILLUSION
COURSE IN GENERAL LOGICISTIC
A book on Psychology of Art
by Ernst Gombrich

ERNST GOMBRICH
ART AND ILLUSION, 1960

JACQUES BERTIN
SEMILOGY OF GRAPHICS, 1967

JACQUES BERTIN
SEMILOGY OF GRAPHICS, 1967, 2004 p.419

PERCEPTUAL SYSTEMS
The system is open to new meaning.
Multi: Nonfigurative
Verbal language: Polysemic
Figurative image: Monosemic

immediate memory
short-term memory
working memory

ALAN D. BADDELEY
WORKING MEMORY, 1974

2. THE PEEPHE or WORKING MEMORY

Working Memory (site of awareness and of thinking)
Long-Term Memory (factual knowledge and procedural knowledge)

FIGURE 6: Just about the simplest model of the mind possible.
(Willingham, 2009)

Environment → Working Memory → Long-Term Memory

Working Memory

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Age幼兒, Alice Kunzli, 1981

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My problem is that I have been persecuted by an integer.
GEORGE A. MILLER
MAGICAL NUMBER SEVEN, 1956

4-3-4-6-5-9-6-2-3
“chunks”
434-65-9623

CONCEPT MAP
ABSTRACT REFERS TO ABSTRACT

ROAD MAP ANALOGY
ABSTRACT REFERS TO CONCRETE

Seconds – Not items
Chinese students' mental math advantage: number words in Chinese have fewer syllables and thus take a shorter time to process.
(Geary et al. 1996)

3. THE DUALITY of WORKING MEMORY: THE VERBAL AND THE VISUAL

WORKING MEMORY MODEL

“NAMING” and SUB-VOCALIZATION

VERBAL TEMPORAL
Visual
Spatial

THE GEICO GECKO advertisements
(Government Employee Insurance Company)

4. CONVENTION AND CONTEXT (1): SHARED KNOWLEDGE

THE MYTH OF THE GIVEN
(Sellers, 2009)
Every form we perceive is post-perception.

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Every form we perceive is post-perception.

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The New York Times

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CFNINB

CNN FBI

007 JAMES BOND

5. CONVENTION AND CONTEXT (2): POLYSEMY and GENRE

RABBIT or DUCK?

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GENRE CLASSIFICATION
(Roth & Lloyd, 1978)

“SHOT”
Genre & Context
(Miller, 1999)

“SHOT”

“SHOT”

“SHOT”

“SHOT”

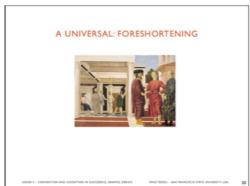
The Dog That (Almost) Roared

Pioneer 10 NASA, 1972
(Gombrich, 1982)

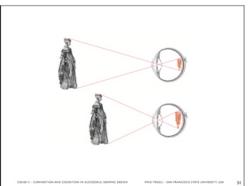
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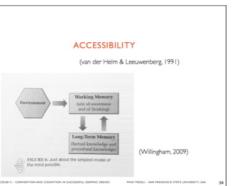
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cidi2013 / trogu - 52



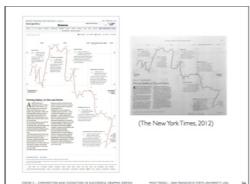
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cidi2013 / trogu - 54



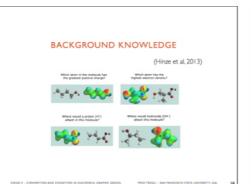
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cidi2013 / trogu - 56



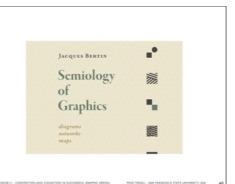
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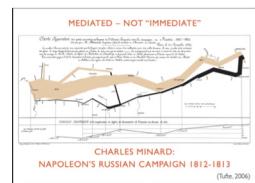
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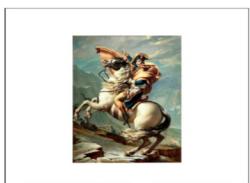
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cidi2013 / trogu - 60



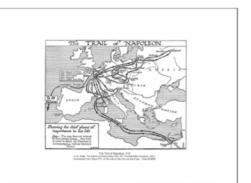
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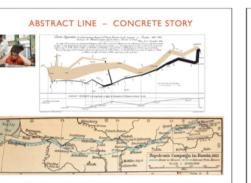
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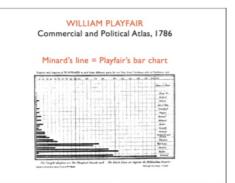
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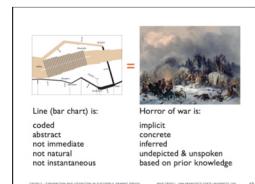
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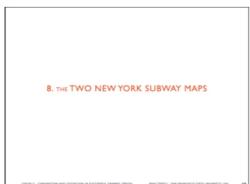
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cidi2013 / trogu - 66



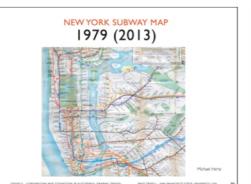
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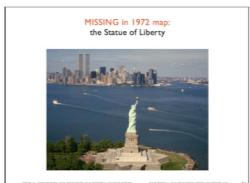
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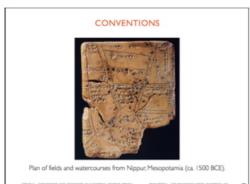
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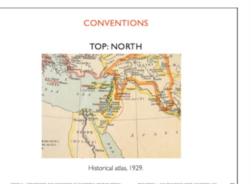
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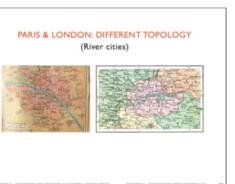
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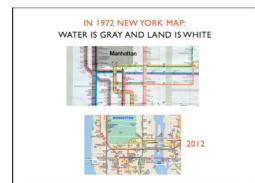
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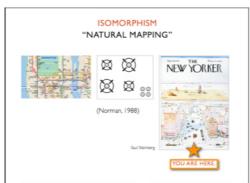
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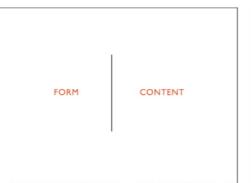
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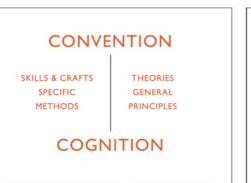
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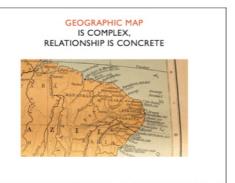
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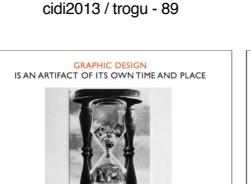
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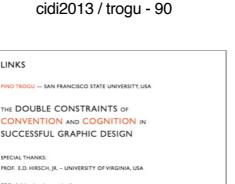
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