CONSTRUIT!
Progression of ideas

Objectives for C1

To equip the project team

- to contribute to the design and development of the resources for making construals to be deployed in an open online course
- to appreciate how and where this course might be usefully deployed
- to assess the six key claims for Making Construals set out on p24 of the proposal

Curriculum for making construals

Scope of the curriculum ("six claims"):

- Accessibility
- Comprehensibility
- Scope for collaborative development
- Scope for assessment and evaluation
- Serving as a resource for creating OERs
- Wide applicability across disciplines

Examples of construals

- Playing noughts-and-crosses [oxoGardner]
- Your new office []
- The construal of CONSTRUIT! []

Orientation

- Experience
  - Awareness of experience [Dewey]
- Classification of experience
  - observables / dependency / agency

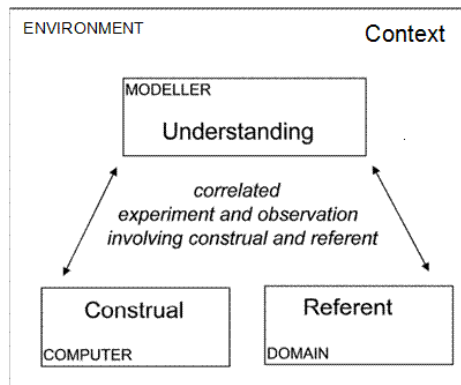Concrete and situated examples informing key abstractions in making construals

Abstractions from experience

Ingredients common to all three examples:
  - you as maker
  - your construal
  - its referent
  - your context

... the fundamental diagram
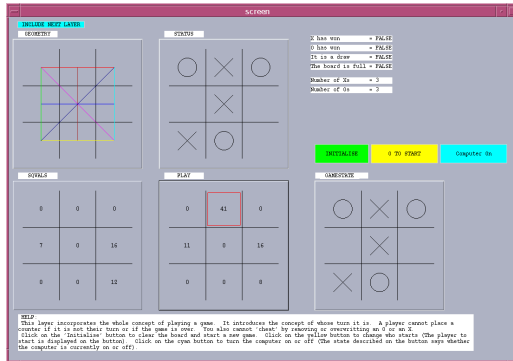
The "Fundamental Diagram of EM"

Character of the diagram

A slice through an ongoing interactive experience:

- the **construal**
- its **referent**
- the maker's **understanding**
- the **context** are all co-evolving

oxoGardner1999

An environment for making construals

Symbol list comprising

- Definition list – observables + dependencies
- Function list – framing dependencies
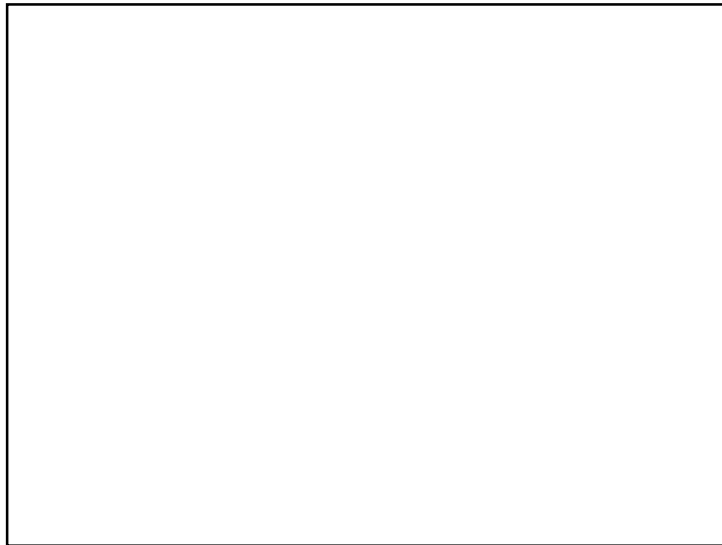- Action list – automating agency

Abstract dependency relationships
    dependency map

An environment for making construals
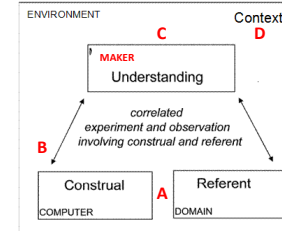
Symbol lookup table: Explicit dependencies

Script manipulation

- history / script generator / state timeline
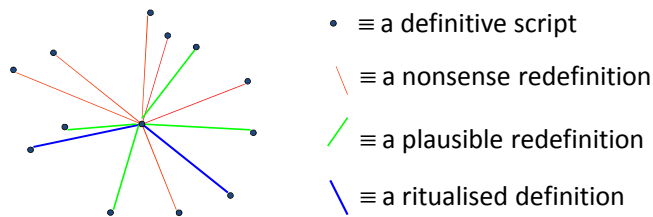- restoring state
- merging state

The "Fundamental Diagram of EM"

A - correlation in experience

B - construal as embodied in latent patterns of meaningful interaction

C - understanding as awareness of patterns of meaningful interaction

D - context subject to evolve, or to be revised by the maker at will
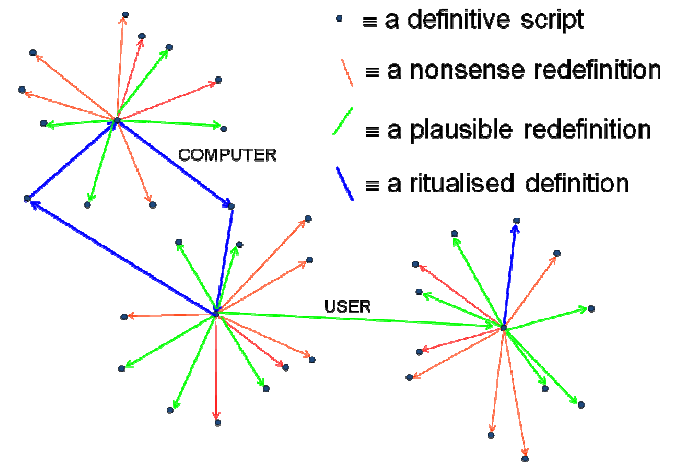

ENVIRONMENT — Context
C — D
MAKER
Understanding
correlated experiment and observation involving construal and referent
B
Construal — A — Referent
COMPUTER — DOMAIN

A – the semantics of construals cf. digit-cabinet, lines
B – cf. malaria / lift adventure
C – what it means to play a game of noughts and crosses / using vi editor
D – the experimental paradox / making the transition from construal to program

Definitive scripts as "fuzzy blobs"

• ≡ a definitive script

\ ≡ a nonsense redefinition

/ ≡ a plausible redefinition

\ ≡ a ritualised definition

Plausible : *could* open the desk drawer
        – note continuous spectrum of redefinitions
Ritualised : door *automatically* closes after being opened
Nonsense : opening the drawer makes the room smaller

• ≡ a definitive script
\ ≡ a nonsense redefinition
/ ≡ a plausible redefinition
\ ≡ a ritualised definition

COMPUTER

USER

3 ingredients in construal development:

- engineering the states within which the agency of the user and the computer operate;
- crafting the behaviours which these agents then play out;
- projecting meanings on to the agent actions

"Vertical", "horizontal" and "orthogonal" dimensions of state

Different kinds of conjunction

- Perceived as concurrent – 'vertical' dimension
- Flowing one into another – 'horizontal'
- Evoking associations with a referent – 'orthogonal'

Relate to the annotated fundamental diagram: resp. developing context cf. D, patterns of interaction B +C, and semantic link A

Key features of making a construal

- opens up such a profusion of possible interpretations, stimulating the model-builder's imagination and creativity.
- is an open-ended activity that resembles organic growth rather than building to a specification

A famous quote from Heraclitus

"No man ever steps in the same river twice, for it's not the same river and he's not the same man."

- In its proper context, this is great wisdom ...
- ... on the other hand, how perverse it would be to disregard the perceptions of sameness in men and rivers ....
- We can choose ("have discretion"), and because we have a choice we *construct* our context

Fundamental perspective in EM

Perceived connections

= connections *given-in-experience*

= conjunctive relations (William James – 1910)

What is meant by *experience* here? (Dewey)

Key concepts

The ODA framework
- observables, dependency and agency
- different varieties of perceived connection

LSD: "language for specification and description"
- Classification of observables
  - states, oracles, handles, derivates, privileges

Perceived connections …

An **observable**: same identity different status

Cluster of observables resembles an object

Changes to observables connected by **dependency**

Part of same stream-of-thought …
- successive positions "in the same game"
- lectures in the same module

Perceived connections …

Cluster of observables resembling an object co-existing as coming and going 'at the same time' – potentially an **agent**

Being concurrent in the present moment

Changes being associated with / attributed to a specific agent