

problem of representation

X

abstraction from X

Succession of abstractions from X

experience X' that refers to X

Environment whose interaction with models resembles referent

- open-ended character bottomless of referent
- specific, subjective essence of referent
- timeliness of apprehension
directness
- suff to purpose of representation
- possibility for grounding experiential correspondence "metaphor"
- acceptability of other kinds of presentation
tables, spreadsheet for accountant, numerical values in rel table, red light
what robot sensors deliver
- semantics not abstract but experiential depends who, what apprehends
84 in my age class shock
84 in my wrist measurement oth.
no good saying $\left[\sqrt{979} \right] - \left[\frac{11}{e} \right] (\text{largest prime} < 10)$

Handwritten notes at the top of the page, possibly including a title or introductory text.

Main body of handwritten text, consisting of several lines of cursive writing.

A small handwritten note or signature in green ink, located in the lower middle section of the page.

Final section of handwritten text at the bottom of the page, possibly concluding the document.

Billiards

"real-world objects"

objective physical quantities
traditional math variables

common sense table

size of pockets etc.

put balls on table : possibly game in itself?

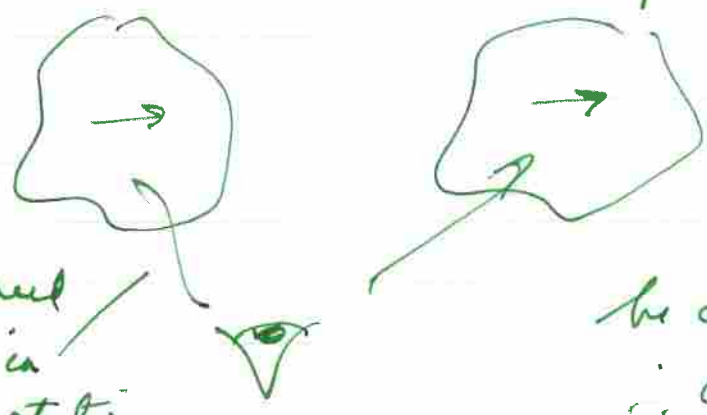
used to idea of diff. viewpoints / contexts.
"states of mind"

table in context of motion of balls.
"designing the motion"

* one experience ^{knows} represents another ^{grounding}
agency / experiment, influences our state eg our motion of ball
all behaviour of and ball pre-conceived intentions

Perspectives

- suff. approx \Rightarrow can predict behaviour with the model in respect
- model for communication
- subjective use : adapt table for training purposes
eg. big / small holes
- extrapolate use of symbolic elements acquired convention



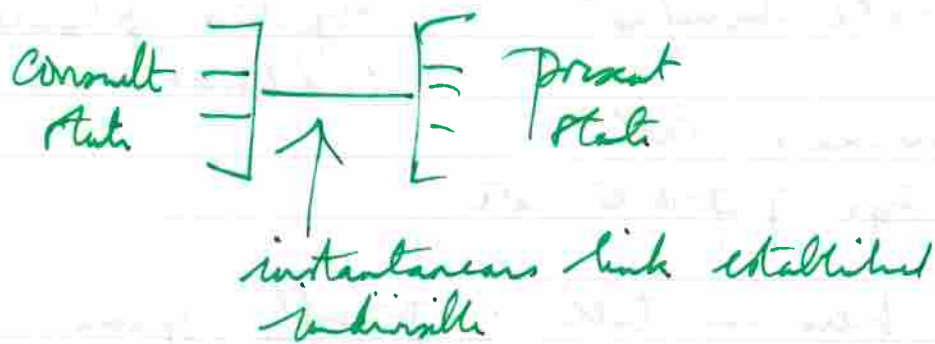
may need skill in interpretation

observable

significance can be approached instantaneously
 \therefore can be a part of current state

e.g. knowing language, reading music

- Such a notion is highly dependent on the age



Script ——— Screen display

notations
instrument

manipulating or constructs

or constructs frame or expectations.
eg. billiard balls magnetism.

bottomless quality: balls don't spin, but can still 'enjoy' game
of topcat doesn't need to resemble a cat
cf actor on TV not in person

designer object

UML referent of some feature → "real-world" entity

NOT to be interpreted as a formal representation of

X as experienced ↔ X as abstracted

open for explanation extension → add

Not "an abstraction from"

⇒ reference to an experience

PERVERSE TO IGNORE THESE QUESTIONS

issues that determine behaviours (patterns of state change) ^{trials}

- Who is responsible for state-change?
- When do they act?
- Why do they act when they do?

assumptions ^{needed in} about the answering the questions are plausible

^{feasible} state-changes attributable to agents or i.e. the agents have the means to change state and can be cues to act in a timely fashion

LED analysis concerned with matters of cues, means + simulation means + timely

ISSUES RELATING TO WHY CORPORATE INTERACTION GENERATES PATTERNS MUST ADDRESS DEPENDENCY BETWEEN ACTION & CUES

subordinary but ^{very} important ques: why is corporate effect such as to realize certain states / goals? (2)
agent = human user / actor

m/c = programmable computer

"not essential" in an abstract sense to do with how these goals can be used in practice

eg. human user may not be able to specify how user performs role

in a coherent way. don't have to be explicit about the way in which state is apprehended, or role of memory, or detailed specification of how an action is done

no other option (?) with m/c other than to exploit pre-conceived ~~known~~ stimulus response patterns (modules emergence)

ie. Can reasonably expect a human user to perform actions that are not coded or part of a protocol in exceptional circumstances

- don't expect this of a device

constraints important here

can't say that a m/c does X because Y but experience strongly commands this view + diff to give role to any m/c action that can't be construed in some such way

Construct of human behaviour

typically don't demand them

interesting aspects of human behaviour
individual can't be construed

weaknesses in human parts of ~~the~~ prog
stem from failure to anticipate

"take it for granted that user has access to me"

- in some circumstances enabled
- another passing train obscures view

of ongoing
prog development

a construct

an activity

abstract understanding

real-world

not with static model
accept / interaction

not normally prompted by explicit attack or goal

design / engineering activity
explore potential for subsystems
creativity

no method
don't want to create an effective tool without expert

SCIENTIFIC METHOD

Frustration engendered by OOA vs OOD issues
not a matter of how to make this abstract
work

but what better abstraction should be adopted
why is OO so badly conceived?
not how can it be made effective.

May be too strong: why is it as good as it is
of Deutsch OO + stimulus-response.

object abstractions are part of the key to system
behavior

experimental techniques can achieve a certain
amount by ^{studying} isolated phenomena
isolated

But this is not suff. to address
corporate interaction / phenomena in context.