CONSTRUIT!

An introduction to making construals

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Session 1

- Welcome to CONSTRUIT!
- Introduction to C5
- Orientation on Making Construals
- Examples of construals

Objectives for C5

A learning activity to support the development of online resources for Making Construals (MC):

- a curriculum ("the MCC")
- an environment ("the MCE")
- online materials ("the MCM")

Running in parallel with a Virtual Workshop

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

“Construal”?

- ‘my explanation’ for phenomenon X
- how I think about X
- how I think X works
- how I think X is constructed / put together

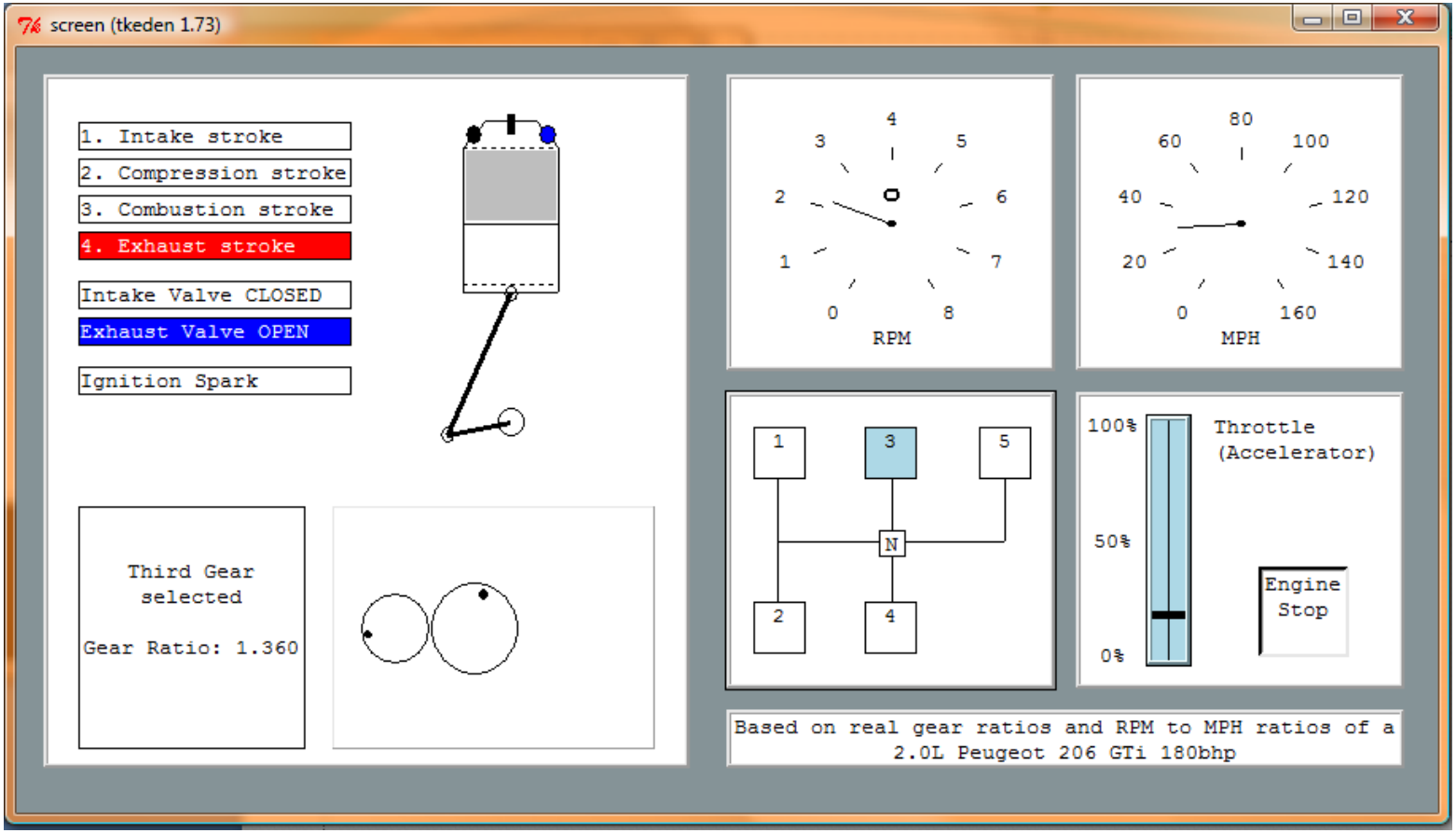
Varieties of construal we make …

- … of things we understand very well e.g. how a internal combustion engine works
- … of unexpected occurrences for which we have no ready explanation
- … of how learning activities take place
- … of what it might be possible or desirable to construct

Examples of construals

- A car engine [enginewithgearsSidbury2010]
- Adventures in a lift ...
- Playing noughts-and-crosses [oxoGardner1999]
- A design for a room [roomdemolabShao2012]

An engine with gears construal



Logic and Commonsense Knowledge 1

I am at a conference in the Netherlands.

I arrive late at night and hardly notice where my room is.

Next morning, I notice that my room is on the top floor.

I walk down to breakfast thinking about my talk later on.

After breakfast I meet two other delegates X and Y.

We get in the lift to return to our rooms.

Logic and Commonsense Knowledge 2

X presses the button for floor 4.

Y says he is on the floor above X, and selects floor 5.

Since the top button is selected, I don't press a button.

We talk as we ascend. The lift stops. The door opens.

The floor numbers aren't clearly marked.

I say to X – 'this must be floor 4' – he gets out.

Logic and Commonsense Knowledge 3

Y and I carry on talking.

When the lift next stops, the floor is still unclear.

I say to Y ‘X is on the floor below you; this is your floor’.

Y gets out. I think something is not quite right.

I think ‘is this the top floor?’ and ‘should I get out?’.

I’m unsure, but notice that the button for floor 5 is still lit.

Logic and Commonsense Knowledge 4

I proceed to the top floor which is the next floor, floor 5.

When I get out of the lift, I can't find my room.

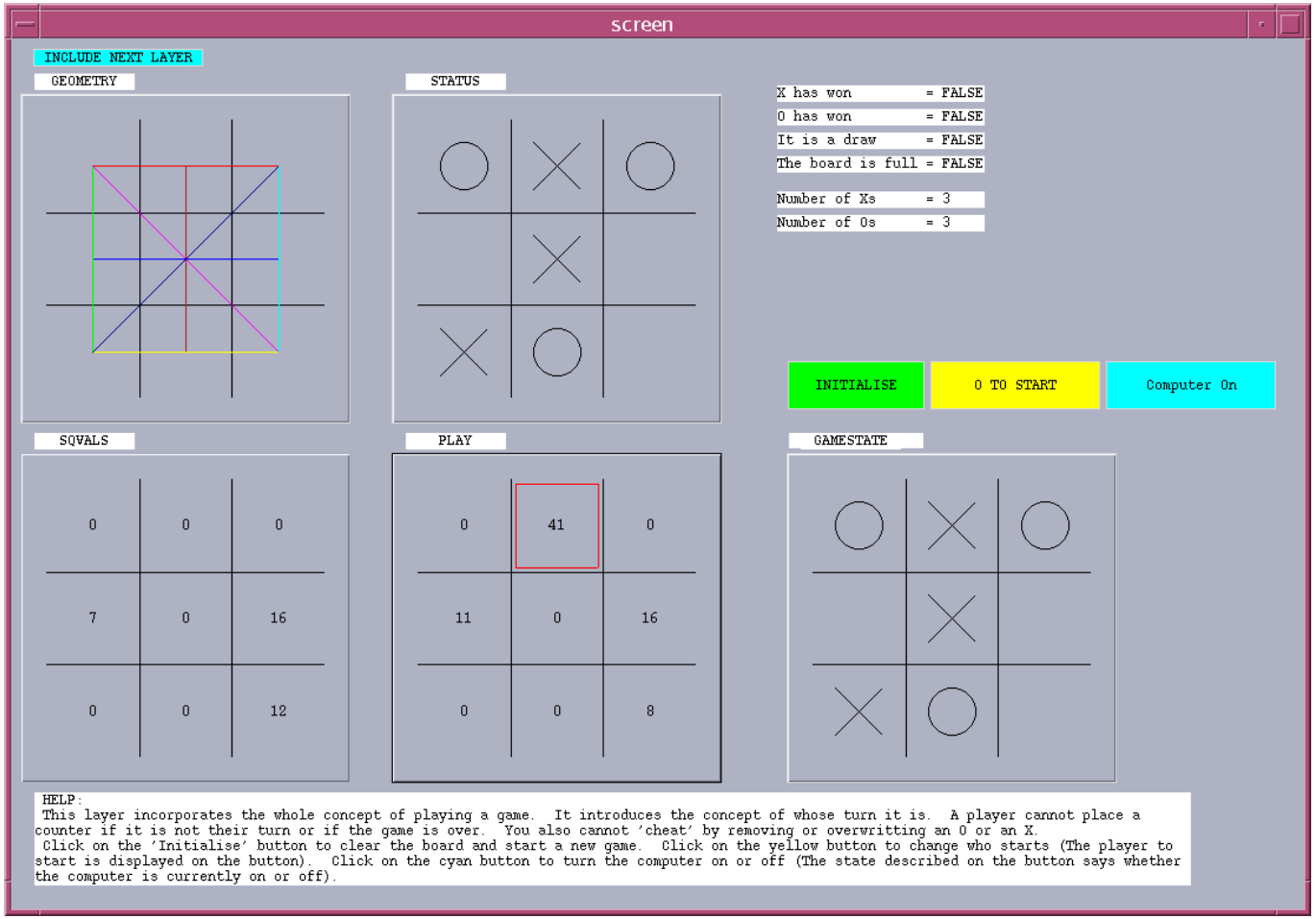
There's no room where my room is on floor 5.

I walk down to floor 4, and pass Y on his way to floor 5.

When I reach floor 4, I meet X coming up from floor 3 …

How did I manage to get all 3 of us to the wrong floor?

Playing noughts-and-crosses

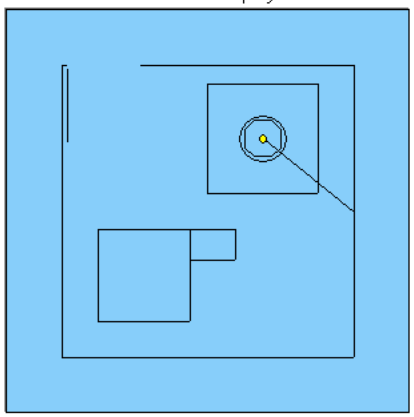


A construal of a room

EMPE

Presentation Environment

Interactive display:



Input Box:

```
%donald
within table {
        SW = {500,550}
# moving the table
}
```

Accept | %eden | %donald | %scout

Imagine a little more intelligent room. We can arrange for the lamp to appear to be on when the door is open, and off when it is closed:

```
%donald
within table{
      within lamp{
                circle bulb
                bulb = circle(centre, size div 5)
        }
}
%eden
A_table_lamp_bulb is "fill=solid,color=" // ((_door_open)
```

execute | copy to input box

The observable `A_table_lamp_bulb` refers to the attributes of the Donald observable `table/lamp/bulb`.

To shut and open the door:

```
%donald
door/open = false # shut the door
```

execute | copy to input box

< Hide | Show tkeden | Copy Definitions | Quit

Slide 15 of 16

Edit slide | Add slide | <- Previous | Next ->

Making construals

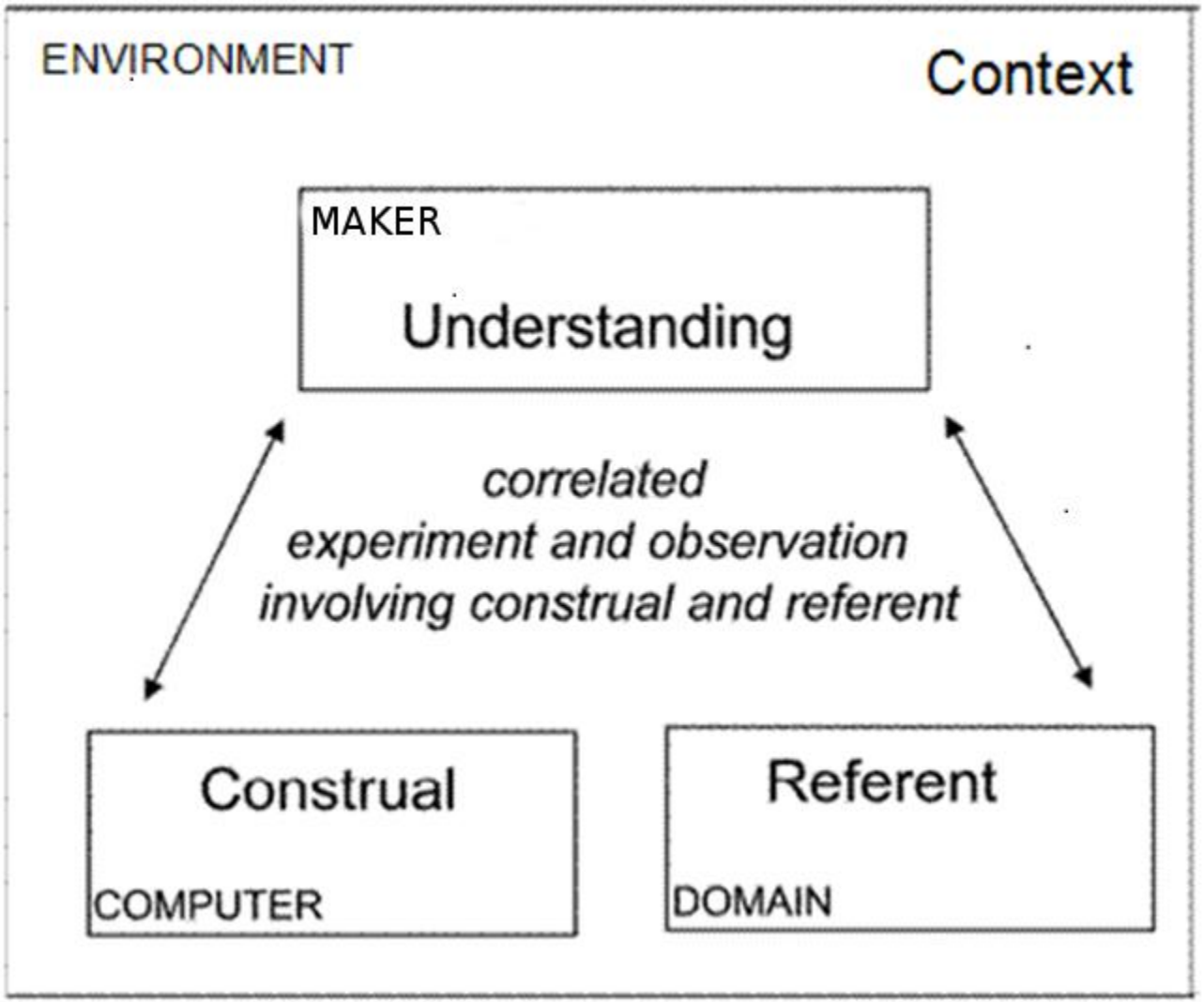
- Knowing precisely what something may not help us to construct it cf. programming/modelling
- Knowing what a construal ideally is is valuable, but doesn't account for how construals are made
- Construals are actually very hard to define cf. a genuine construal can be a *misconstrual*

"once bitten, twice shy"

A working definition for CONSTRUIT!

A construal of X is anything that somebody can experience as connected with X

Making construals



Key notions

- There is no right construal [some might wish to say ‘in general’]
- The fundamental diagram is about capturing what we understand partially, provisionally, personally and quite possibly mistakenly
- Confronting confusion and making mistakes is of the essence in making construals

Summary

- The fundamental diagram expresses the way in which meaning is captured through interaction
- Construals can be expressed using a script of definitions and an associated cloud of interactions in the form of re-definitions
- Which interactions are meaningful depends on who/what is making the re-definitions and in what context

Summary

- The fundamental diagram expresses the way in which meaning is captured through interaction
- Construals can be expressed using a set of dependencies between observables and a cloud of interactions in the form of re-definitions
- Which interactions are meaningful depends on who/what agent is making the re-definitions and in what context