what is state
that in the present
of that in the past
which affects that of the future

defining state
two problems:
- too little state
elements missing from specification
  may be deliberate
  e.g. dialogue level spec.
- too much state
too many states, too complex state
  may be deliberate
  redundancy, extensibility

too little state
- forgotten elements
  e.g. 'typing' flag for calculator
- checking:
  - dialogue state
can you work out current dialogue state?
  - action specification
do you have enough information?
  - implicit global variables (see also later)
suggest state missing
too much state

- unreachable states
- too few actions (see later)
- constraints

states are not orthogonal

- spare variables: constant/functional dependent
- dependent state
e.g. first point of line, number being typed
- indistinguishable states
  what is observable?

defining actions

- framing problems
  = too little in result state
- unreachable states – insufficient actions
- using ‘global’ variables
  implicit in operation definition
- beware extreme cases
  (e.g. empty document, cursor at end of line)