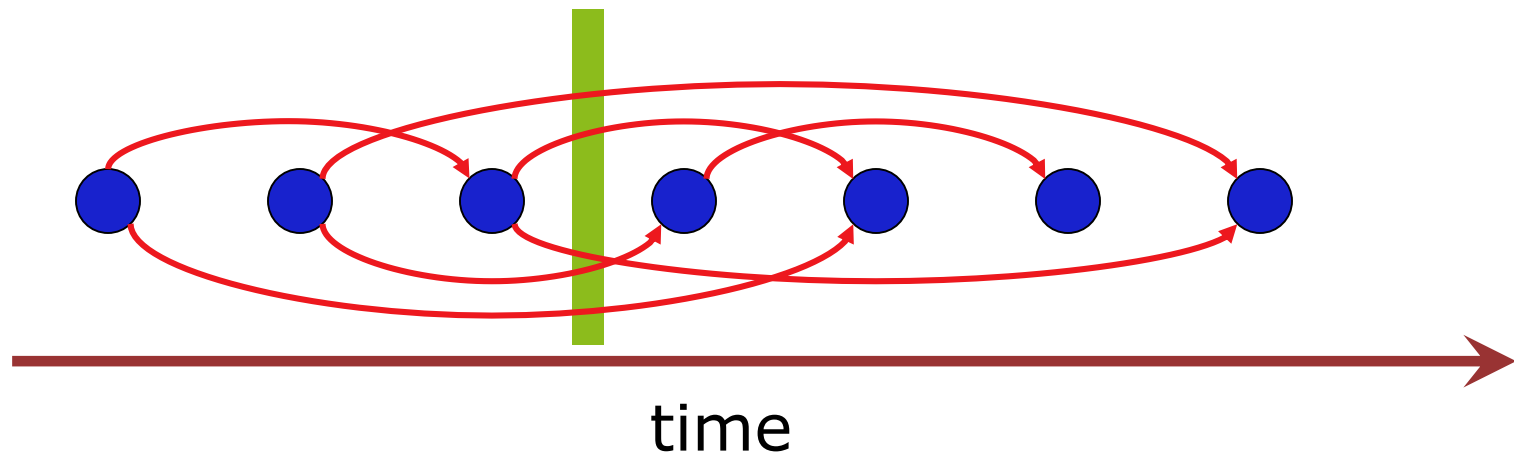


what is state

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)