Exercise 2.

It is said in the slide that is the context of a single real-valued quantity . What this means may be that , where is , the set of reals, , and , where is the set of rationals.

(1) The worlds in product Context are continuous tuples of reals, that is, , where are reals, continuously many, that is, as many as reals.

(2) The information states in product context are continuous tuples of open intervals with rational endpoints, that is, , uncountably many.

(3) I don’t think that the information states correctly model the learner’s situation. Because it is implausible that people can have, like, continuous asynchronous data.

And it is highly implausible that the set of information states is uncountable. After all, all of us are finite beings, all we can get are finite in a finite time. At most we can get countable information, but only in the limit.

(4) An improved model of the context may be that , where is the set of natural numbers. Because We learners can have at most countably many, like, asynchronous data. And this makes the set of information states countable.