Funding for Carnegie Mellon's OLI has been provided by the William and Flora Hewlett Foundation
Carnegie Mellon’s Unique Assets to Address “Online” Learning

• Newell-Simon legacy, continued by faculty at CMU today:
  – Don’t start with the technology, start with the human brain
  – Lead with cognitive science
  – Iteratively improve based on data gathering, theory refinement
  – The effort so often missing in “online courses”

• Create tools with IT, AI, and HCII.
Learning Environments that Engage the Student in Active Learning Practice with Frequent Opportunities for Feedback

MODULE 3: INDETERMINISTIC CAUSATION

2400 Cell Phones Revisited

Both the cell phone and Colored Square simulations you used in the previous sections are examples of indeterministic causation. In this section we discuss how an indeterministic response structure only appears to be indeterministic because some of the causes for an effect were left out.

If the original simulation on the cell phone, you probably only managed to get about half of your calls to go through. Why? Isn’t hitting the "10010" button a cause of a call getting through? The answer is yes, it is a cause, but not the only cause.

We only showed you part of the story in the cell phone simulation. Here we uncover another cause of getting the call to go through: whether you are in range of a cell phone tower or not. You cannot control whether you are in range of the tower — but in this simulation you can observe it (your location appears as a small square).

In the simulation above, which quantity can you directly intervene on, as opposed to just observe? (Choose only one answer - and be careful - this is a little tricky)

Choose exactly one of the following:
- A. The Light Bulb.
- B. The Red Handle on the spigot.
- C. The Turbine Wheel.
- D. None of the above
Mental Scaffolding Supports Students’ Knowledge as it is Constructed Through Practice.
Tools that allow Instructors to Create Interactive Student Activities that Support Varied Practice

The IrYdium Project -- Virtual Laboratory
The Student is a Participant as Well as an Observer in Experiments that Teach Economic Principles
Tools that allow Instructors to Create Interactive Student Activities that Support Varied Practice

Causality Lab
All OLI courses are being instrumented to collect data about student use to inform the next iteration of course design.