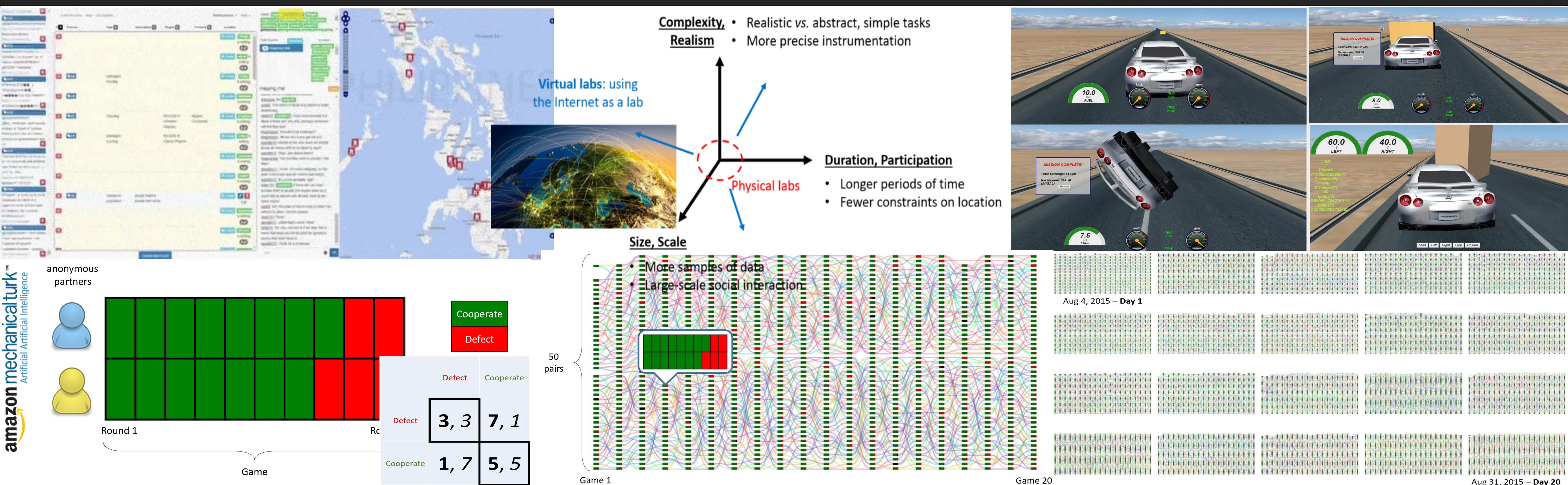


# Virtual Lab Tool for Computational Social Science Study

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## PROBLEM

The “Virtual Lab” refers to using software-controlled experiments with Internet participants to overcome many of the limitations of traditional lab experiments. To help researchers study more complex tasks and set up interactions that happen over longer periods of time or among larger numbers of people. This allows us to design behavioral experiments that would have been very hard to do in the past.

## METHOD

Easier real-time programming using the Node.js web app framework  
Building synchronous experiments and studying group interaction  
Fast frontend response and high concurrency in asynchronous backend  
A live web-based experimenter console showing all connected participants  
The ability to create one-way mirrors to view behavior in real time

## RESULTS

Many successful experiments from MSR NYC labs show that we can go from very artificial environments to studying realistic, complex tasks such as teamwork and collective intelligence:

- Crisis Map Crowd Mapper – Andrew Mao, Winter Mason, Siddharth Suri, Duncan Watts
- Long-run Cooperation – Andrew Mao, Lily Dworkin, Siddharth Suri, Duncan Watts
- Intertemporal Choice – Kevin Gao, Dan Goldstein
- FRUS – Kevin Gao, Amit Sharm, Matthew J. Connelly, Duncan Watts
- Inclusive Marketing Experiments – Kevin Gao, David Rothschild, Shawndra Hill

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QR  
Code