

# Group 1

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- Discussion of building a model of individuals and groups that would predict how they would react/ behave in different situations – use that to predict - designs what to build
- Mathematical modeling can provide
  - Help us make predictions that we would not be able to see
  - Help us design for robustness
    - Crowdsourced disaster management
    - Identify which designs were more robust
    - Design or predict which platforms support collective action

- Modeling units
  - How do design parameters effect the units (like the shape or connection of the network)
  - Applications for the long term health care, workforce development, broadening participation, something results in the next facebook

# Core Challenges

- Develop generative models that scale
  - Individual
  - Sub-groups
  - Enable predictions
- Should include some known dimensions
  - Cognitive, perception
  - User Interface
  - Algorithmic
  - Social
- Speed/Enable design and empirical activities

# What is modeling good for?

- Models can then be used for
  - Understanding/Predicting shocks to the system
    - What happens to a social system when all participants from Australia are blocked
  - Answering questions about fit for particular use
    - Does one system work better for a particular collective action
  - Understand robustness of the system
    - How well does the system respond to disaster
  - Finding new open questions
    - Possible predictions by the model, not easily observable

# Compelling Applications

- Collective action
  - Predict which platforms enable or prevent people from building coalitions
- Crowdsourced disaster management
  - Identify which designs were more robust
- Health and Wellness
  - Detect opportunities to intervene

# Concrete Short-Term Challenges

- Build models that replicate existing results
  - Survivability of groups (wikia)
    - Robustness of the group to different shocks
  - Success of groups (github, Wikiprojects, scratch)
    - Will a group produce a product
  - Content diffusion
    - Rumors, ideas, usages