* Communicate with a central party making a decision
* How to frame and package in multi agent systems
  + Mdp from players standpoint
  + Dec mdp
* When you try to decide any real world problem you get observations along n dimensions, and rhere is some truth
  + What is adams goal type or what is adams type as demonstrated by its actions
  + Make it clear that Cartesian plane is representative of the real world
* Change number of dimensions
  + What if observers can only make observations along only 1 dimension?
* Example: diagnosis in a hospital, different observers seeing independent dimensions
* Can learn something fundamenrtsl abour teamwork – leaders in the world have to classify something but has a team that can get different observations
  + What is the value of increasing number of dimensions of observability
  + Is it better if the observations are joint or disjoint?
  + If your goal is to classify something, how should you organize information collection?
  + If we see a team in the real world with dimensions of observability, what problems or heuristics do they use
* Does the structure of how they are getting the observations change how the team functions?
  + You can then decide optimal ways to structure teams in the real world
* Caption in latex to explain why things are relevant
* Who gets to see what
* Don’t normalize graphs
* Fr graphs: say sum across any vertical x is 1
* For combining observations from multiple agents
  + Graph combined probability of each type
  + Graph percentage of agents that think it is a certain type

To show for each graph:

* Normalized graph of type probabilities over average game
* Normalized graph of type probabilities over all games
* Raw graph of type probabilities over all games

To do for graph:

* Given a set of filenames, generate each graph above
* For comparisons between graphs, just compare the spline graphs for the correct goal

Comparisons to Run And Variables to Change

*Single Observer Experiments*

* Grid size
  + 2 fixed goals in 10x10 and 20x20 grids
* Number of fixed goals
  + 2, 3, and 4 fixed goals in the 20x20 grid
* Fixed versus random goals
  + 2 fixed goals versus 2 random goals in the 20x20 grid

*Multiple Observer Experiments*

* Number of observers
  + For each scheme
    - 2, 3, and 4 observers
* Observation uncertainty: single dimension
  + Disjoint observations: rotate observers each time
  + Disjoint observations: randomly choose observer each time
  + Random observations: 1/n chance of seeing each observation
  + For each number of observers
    - Graph of comparison of 3 consensus methods
* **TO DO**
  + Graph combined probability versus each individual probability for multiple observers
* Consensus method
  + Weighted overall probabilities versus voting
  + Have one graph that shows that the two methods are equivalent
* Observation uncertainty: goal uncertainty
  + For each observer, mutate the true goal by an offset of 1, 2, or 3

Possible extensions

* Fixed vs random goals
  + Distance between goals?