Good Afternoon, Colleagues

Are there any questions?
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- Go over Gibbard-Satterthwaite
- Can you get around Arrow by weighting preferences?
Logistics

- Final tournament time
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• Final tournament time
  – Everyone in the tournament
Logistics

- Final tournament time
  - Everyone in the tournament

- Some topics from this week to next week
Logistics

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- Some topics from this week to next week

- Final project now assigned
Logistics

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• Some topics from this week to next week

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• US Open opportunity
Your Progress Reports

- Overall quite good! (writing and content)
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- Best ones motivate the problem before giving solutions
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• Clear enough for outsider to understand
  – Exchange papers for proofreading
  – Use undergraduate writing center
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• Enough detail so that Mazda or I could reimplement
Style

- More about your approach, less about the process
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  – Not "What I did on summer vacation"
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  – Not just “we decided.”
  – How? Why? What alternatives?
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  - Motivation: why interesting/needed
  - Foreshadow whole paper (not p.2 to find out)
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- Overall more like a conference paper
  - Results, related work, etc.
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  – Slides on resources page
Details

- Motivate your constants: what else tried?
  - OK to say “nothing”
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• Randomness in simulator (for experiments)

• Mazda’s favorite comment:
  “You will have to work day and night”
Class Discussion

Ryan Hatfield on auctions with time limits
Voting vs. auctions

- Auctions: maximize profit
  - result affects buyer and seller

- Voting: maximize social good
  - result affects all
Gibbard-Satterthwaite

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What about Clarke tax algorithm?
Arrow’s Theorem

**Universality.** The voting method should provide a complete ranking of all alternatives from any set of individual preference ballots.
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**Pareto optimality.** If everyone prefers X to Y, then the outcome should rank X above Y.

**Criterion of independence of irrelevant alternatives.** If one set of preference ballots would lead to an overall ranking of alternative X above alternative Y and if some preference ballots are changed without changing the relative rank of X and Y, then the method should still rank X above Y.
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Non-dictatorship. There should not be one specific voter whose preference ballot is always adopted.
Types of Tactical Voting

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- **Push-over:** Rank someone higher to get someone else elected
  - e.g., in a protocol with multiple rounds
Condorcet Voting

- Strategy proof under weaker irrelevant alternatives criterion
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- A pairwise method
Condorcet Voting

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Example