GV103: Introduction to International Relations

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Information Problems

Introduction

- Two goals for this lecture
  - Demonstrate that war can occur as a result of a failed bet
  - Discuss how this explains why there isn't less conflict

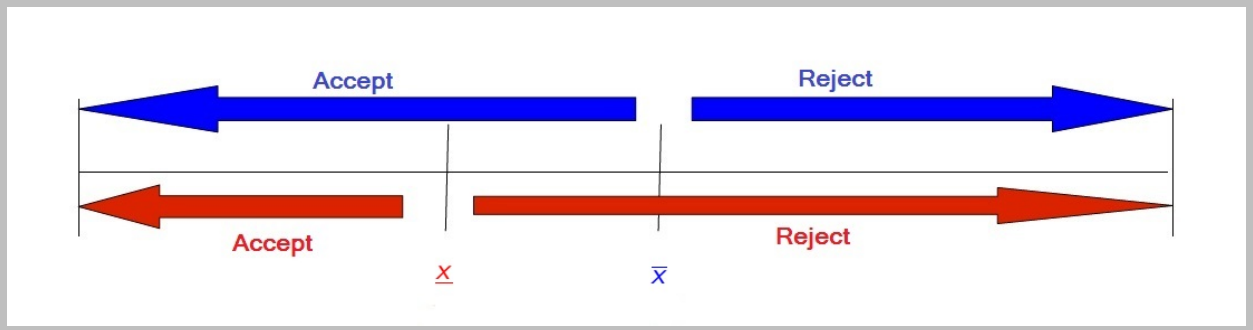
A Model of Bargaining While Facing Uncertainty

- Everything the same as in basic model except
  - We now assume $w = \dfrac{e_C m_C}{e_C m_C + e_D m_D}$
  - And C does not know D's martial effectiveness
  - Only knows $pr(e_D = \underline{e}_D) = \phi$ and $pr(e_D = \overline{e}_D) = 1 - \phi$
  - Which implies $pr(w = \overline{w}) = \phi$ and $pr(w = \underline{w}) = 1 - \phi$

D's Acceptance Rule

- Still true that D accepts iff $u_D(\text{peace}) \geq u_D(\text{war})$
  - Blue type accepts iff $x \leq \overline{x}$
  - Red type accepts iff $x \leq \underline{x}$
  - Where $\overline{x} \equiv \overline{w} + c_D$ and $\underline{x} \equiv \underline{w} + c_D$

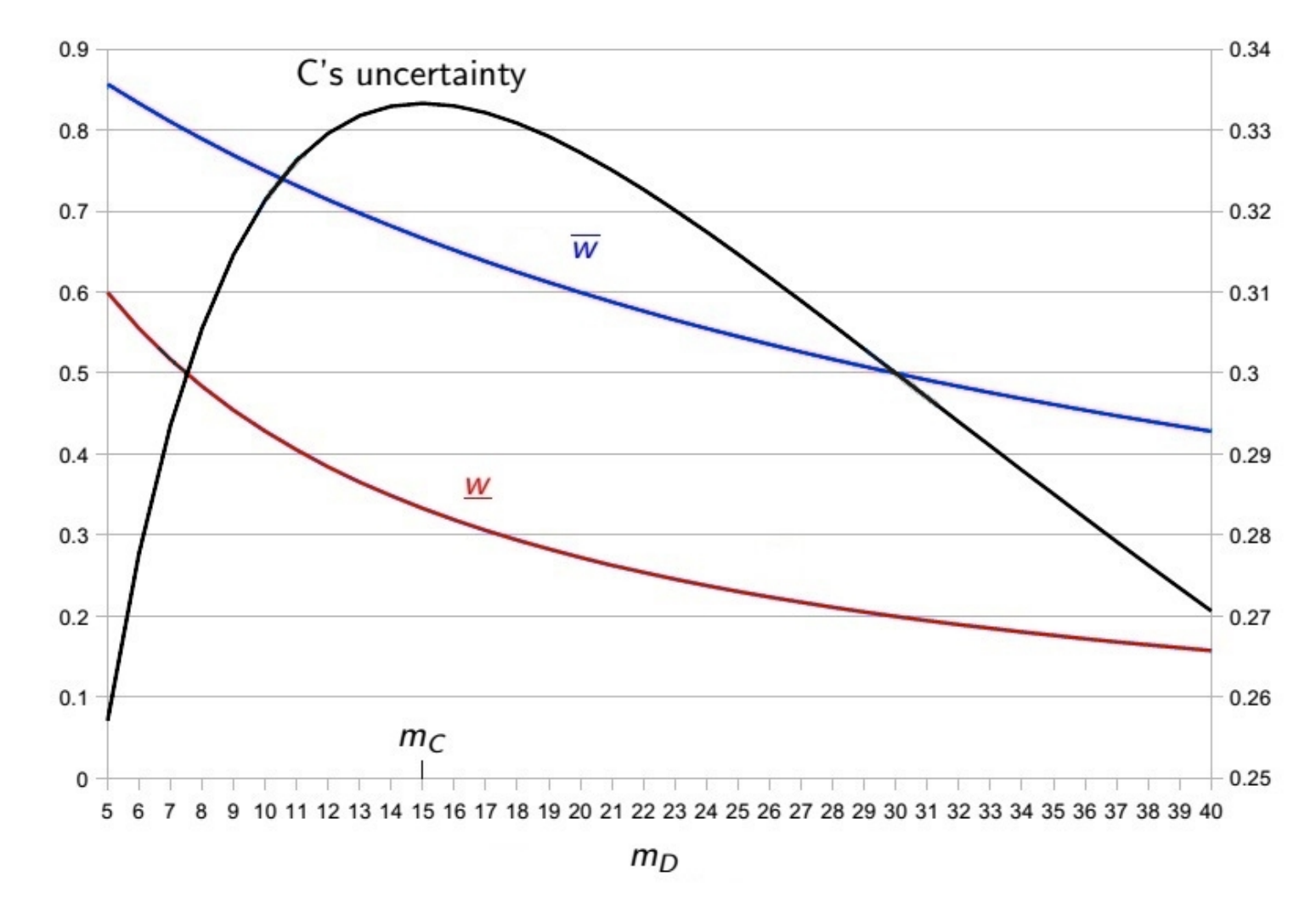
- C can readily infer the following
  - $pr(D \text{ accepts}) = 1$ if $x \leq \underline{x}$
  - $pr(D \text{ accepts}) = \phi$ if $\underline{x} < x \leq \overline{x}$
  - $pr(D \text{ accepts}) = 0$ if $x > \overline{x}$



C's Choice of x

- When C sets $x = \underline{x}$
  - Good news: probability of war is zero
  - Bad news: possible that D would have accepted $\overline{x}$
- When C sets $x = \overline{x}$
  - Good news: if D accepts, C gets best achievable outcome
  - Bad news: risks war
- When does C prefer $\underline{x}$ to $\overline{x}$?
  - $u_C(x = \underline{x}) = \underline{x}$
  - $E(u_C(x = \overline{x})) = \phi\overline{x} + (1 - \phi)(\underline{w} - c_C)$
  - $u_C(x = \underline{x}) \geq E(u_C(x = \overline{x}))$ holds iff $\phi \leq \hat{\phi}$
  - Where $\hat{\phi} \equiv \dfrac{c_C + c_D}{\overline{w} - \underline{w} + c_C + c_D}$

Parity and Uncertainty



Historical Examples

- Adolf Hitler and estimates of Russian strength
- Azzam Pasha's comments to Abba Eban
- Dean Acheson's military defense perimeter
- Saddam Hussein's estimates of US casualty tolerance

Data

- Observations: all dyad-years from 1821 to 1913, 1946 to 2007
- y: outbreak of war w/ 2 states on opp sides
  - Taken from Correlates of War interstate war data
  - Excludes those who suffered $<$10% of fatalities on their side, unless that state fought alone for an extended period
- xs: Parity of Milcap, Total Cost
  - Parity of Milcap $= \frac{m_L}{m_L+m_H}$ where m_L is smaller m score
  - Total Cost based on energy consumption, distance

Results

	War
Parity	$+^*$
Total Cost	$-^*$