

Game Theory

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1 Lecture 1: Intro

1.1 Prisoner's Dilemma

a	C	D
C	$-1, -1$	$-5, 0$
D	$0, -5$	$-3, -3$

Normal Form.

Pure Strategies.

Mixed Strategies.

Expected Utility.

Utilities & Rationality

2 Lecture 2

2.1

People tend to be *risk-averse*—they choose the less risky, even if the expected value is worse.

Anchoring: People latch onto (possibly irrelevant) information and it influences decisions.

Definition 2.1. *Positive affine:* $u'(x) = c$

Positive affine transformations preserve agent behaviour (equivalent games).

Remark 2.1. *Test*

- Common-payoff game
- Zero-sum game
 - Matching Pennies

- Rock, Paper, Scissors
- Nonzero-sum game
 - Prisoner's Dillema