

## 6SSEL045 – Language Origins

### Lecture 8 Interactive: Prisoner's Dilemma, Monty Hall, Snowdrift games

#### **Prisoner's Dilemma**

Two prisoners are in solitary confinement with no means of communicating with the other. Each prisoner has two options:

1. Say that the other person committed the crime;
2. Stay silent

If both take option 1, each of them serves two years. If A takes option 1 and B takes option 2, A is freed and B serves three years (or vice versa). If both take option 2, both are freed.

***As prisoner A, what option do you choose?***

#### **Monty Hall Problem**

You are given a choice between three doors: Behind one door is £100, behind the others, nothing. You pick a door, say door 1, and one of the other doors, say door 3, is opened to show nothing behind it. You are now given the chance to keep your chosen door 1, or switch to door 2.

***Do you keep door 1 or switch to door 2?***

#### **Snowdrift Game (also known as the Game of Chicken)**

You are the leader of a country (the USSA) with a nuclear arsenal, and in conflict with an enemy (the USR) with a similar arsenal. The USR has invaded your ally, Germolene.

**Do you:**

1. **Stick to conventional warfare and try to take back Germolene.**
2. **Threaten to use your nuclear weapons unless the USR withdraws from Germolene; but, if they don't withdraw, stick to conventional warfare.**
3. **Threaten to use your nuclear weapons unless the USR withdraws from Germolene; and, if they don't withdraw, fire your nuclear weapons.**

*(N.B. Any similarity to countries, alive or dead, is coincidental.)*