Nobody has complete information about their environment – especially the preferences, resources and options of competitors.

Many games are based on asymmetric information.

People have ‘bounded rationality’ – rational within the limits of their information and computational capabilities.

The mind uses shortcuts to manage the huge amount of information in life – making us vulnerable to the manipulation of others.
Markets both transmit information and depend on its effective transmission.
Recent micro-economic theory is distinguished from the past by its recognition of the importance of *imperfect information* in markets.

Transaction cost economics emphasises that information is costly – eg. in monitoring the behaviour of agents and partners.

Imperfect information – eg. asymmetric information – creates business opportunities (arbitrage, and malfeasance!)
Recent theory and management practice emphasises the importance of information to firms.

Knowledge (information + understanding) is the major source of a firm’s continuing competitive advantage [eg. in the resource-based view of the firm].

Information management – using IT and other systems – can provide powerful advantages and opportunities to firms.
Risk

Known probabilities
Uncertainty

Precise probabilities not known (eg. re terrorist attacks BUT this is art at Narita)
Risk assessment and management are now responsibilities of business managers.

Risk assessment involves identifying all potential threats to an organisation and its activities, assessing the probability of the event arising, and estimated costs.

Risk management is a holistic approach that should inform all decisions – reducing risks where cost effective (ie. not no risk but a risk-adjusted return calculation).
Unstable responses to uncertainty

- Often under-estimate probability of rare catastrophic events
- And then over-estimate the probability once an example of it arises
- Many surveys show people are poor at estimating the odds of certain negative events
Game Theory I

- Very sophisticated formal theory of decisions in situations of one or more other parties
- The parties’ choices impact on each other
- Most ‘games’ are non-cooperative and characterised by information asymmetry
Many of the scenarios can be applied to the understanding of decisions in business.

Examples include in negotiation, price setting in imperfect markets (that is, with a number of competitors whose decisions influence each other – the norm in business).

Choices therefore have signalling effects to other parties.
Mature stable industries
Predictable for experienced ‘players in the game’ but rule or technology changes disrupt
Very difficult

‘paradox of knowledge’ – Kenneth Arrow

It is difficult to know how much information is enough – therefore how much money should be spent on it. Because...

You don’t know what you don’t know..

Also selling information is difficult because it is difficult to show its value to a customer before they pay for it as they won’t pay if they have it.

And they won’t pay if they can’t be sure of its value

All information goods have this problem
Selling experience & information goods

- Techniques used to overcome this include samplers (eg. movie shorts, sample chapter etc)
- Secondary information markets – reviews etc – become very important – need to be independent to be effective
- Eg. ratings agencies in financial markets are fundamental to financial risk management
Information Goods

- Are a huge business
- Consulting, medical advice, books, movies, music, education etc
- But entail distinct marketing challenges owing to the ‘paradox of knowledge’
- Applies to all ‘experience goods’ or ‘intangible goods’
Risks are/should be known

But people are so often innocently surprised when something goes wrong!
Moral Hazard + Adverse Selection

- Key concepts in finance & human resource management
- Will explore in next class
- **Moral hazard** changes the riskiness of a partner through guarantees that you give to them
- **Adverse selection:** the partner (customer, employee) conceals their riskiness in order to deal with you
Information Case Study: Facilitation

Some businesses are based on

- Information asymmetry
- Related coordination problems
- Bringing people together who can profitably interact but who can’t find each other easily
Professional facilitators

- Stock brokers and stock markets
- Real estate agents
- Ship brokers
- Headhunting & recruitment firms
- Dating agencies
- Buyer’s agents are becoming more common
- Platforms such as '99designs' to match clients & professionals