



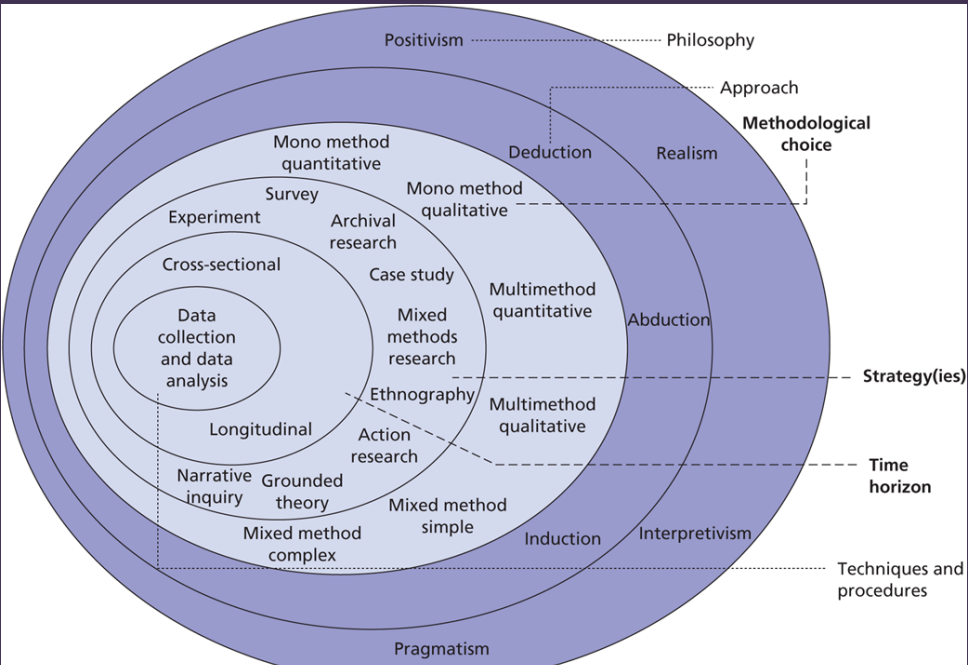
FALMOUTH
UNIVERSITY

COMP240: Game Development I: Production

4: Research Methods

Learning Outcomes

- ▶ **Compare** research methods
- ▶ **Distinguish** between qualitative and quantitative measurement
- ▶ **Assess** the suitability of a research design for a given question
- ▶ **Design** a suitable market research task



Philosophy and Practice

- ▶ **Ontology**—your view of the nature of reality; assumptions on what the world is and how the world works
- ▶ **Epistemology**—your view of the nature of knowledge; beliefs on what constitutes knowledge and acceptable evidence
- ▶ **Axiology**—your view of the role of people in research; how professional researchers should conduct themselves
- ▶ **Approach to Inference**—the ways in which you approach sense-making and form conclusions; notably, deduction, induction, and/or abduction

Well-Known Philosophies

- ▶ **Positivism**

Knowledge derived from logical and mathematical treatments and reports of sensory experience are the exclusive source of all authoritative knowledge

- ▶ **Interpretivism**

The social realm may not be subject to the same determinism and laws as the natural world; knowledge is constructed from understanding the interpretations that social actions have for the people being studied

Mary's Example

Mary wants to understand how permanent loss in persistent game worlds influences the stress-levels, interest, and purchasing behaviour of players. To this end, she starts planning a research project.

However, many approaches are possible:

- ▶ An observational study or experiment exploring measurable indicators of stress, while tracking in-game behaviour and events
- ▶ An interview study where the researcher investigates workers perspective on stress and its influence on them

Mary's Example

So, what are your philosophical positions?

Discuss with a partner for **5** minutes

- ▶ Focus on ontology, epistemology, axiology, and approach to inference
- ▶ Probe whether you are positivist, interpretivist, or neither

Discuss openly with the class for **10** minutes

- ▶ Debate the 'best' philosophies
- ▶ Identify how many people in the class are positivist, interpretivist, or neither

Research Design

Research design is a **coherent framework** that outlines each procedure involved in all stages of the research, from the hypothesis to the analysis.

- ▶ Complex maze of decisions to navigate
- ▶ Fundamentally based on your own philosophy
- ▶ Conventionally, market researchers typically assume an empirical position—that knowledge should be drawn from observations
- ▶ Four key decisions:
 - ▶ Mono or Multi Method
 - ▶ Qualitative or Quantitative or Mixed Measurement
 - ▶ Longitudinal or Cross-Sectional
 - ▶ Objectivist, Subjectivist, or Critical Modes of Collection

Methodology

- ▶ **Mono-Method**

Use a single data collection method

- ▶ **Multi-Method**

More than one data collection/analysis method

Types of Data

- ▶ **Quantitative**

Numerical data

- ▶ **Qualitative**

Systematic coding and decomposition of meanings from observations

Time-Frame

- ▶ **Longitudinal**

Repeated over a long period of time; trends in the market

- ▶ **Cross-Sectional**

Study of a particular situation at a particular time; the status-quo

Data Collection Methods

- ▶ **Objectivist**

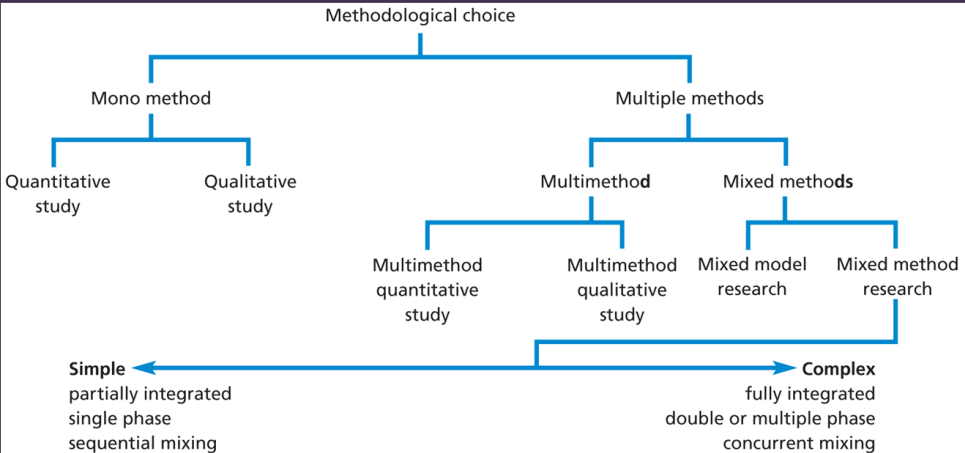
Test; Questionnaire; Experiment; Quasi-Experiment;
Structured Observation (e.g., Market Data)

- ▶ **Subjectivist**

Interview; Focus Group; Ethnography; General
Observation

- ▶ **Critical**

Content Analysis



Activity

In pairs, review and analyse the following proposal:

https://www.academia.edu/4420526/Research_Proposal_Video_Game_Preferences_Empathy_trait

Pay careful attention to the underlying philosophy, methodology, and its credibility.

(20 minutes)

Activity

As a class, discuss the content of the proposal. Could we draw useful insight from this research?

(10 minutes)

Be Critical

- ▶ Ensure sources of data are credible
- ▶ Assure validity and reliability in measurement
- ▶ Apply reasoning appropriate to your philosophy
- ▶ If applying statistical analyses, assure assumptions hold
- ▶ Respect limitations

Market research done wrong can be disastrous:

<https://www.qualtrics.com/blog/coca-cola-market-research/>