

# Research Methodology Design

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“Why are humanities researchers so hopeless at describing their research methodology?”

# Today's Schedule

- Research methodology and its description
  - Recap on last seminar
  - Types of research methodology
  - Describing research methodology
- Q&A
- Refreshment break
- Discussion groups
- Concluding remarks

# Major Sections of a Research Proposal

## Part I: Summary of Research Proposal

- Project Title
- Primary Field/Secondary Field
- Keywords
- PI & Co-I/Project duration & summary of budget
- Abstract of Research

## Part II: Details of the Research Proposal

- Project Objectives – long term impact + objectives
- Background of research
  - Work done by others
  - Work done by you
- **Research Plan and Methodology**
- References

(Ip, 2015)

# Research Plan and Methodology

- The **most important** section of your proposal (it will “make or break” your proposal)
- Goal is to **convince experts** that the proposed approach will work
- Discuss **alternative solutions** to show that you have considered other possible approaches
- Indicate **preliminary results** of research already attempted
- You must convince reviewers that the approach proposed is **FEASIBLE**

(Ip & Chan, 2015)

# External Reviewers' considerations in assessing your research plan and methodology

- Is it **clearly defined** and **well organized**?
- Do the tasks adequately address the **research objectives**?
- Is it too aggressive or not sufficiently ambitious given the project time frame and/or the current state of development in the field?
- Does it build upon the **knowledge in the field**?
- What are the **original** or **novel** aspects of the proposed work?
- What are the **strengths** and **weaknesses** of the methodology?
- Is the proposed research methodology **FEASIBLE**?

(Ip, 2015)

# How can we satisfy the external reviewers?

- Know your **audience** and write to purpose
- Take **time** to design your methodology
- Ensure your methodology is **appropriate** for the purpose of the research
- Include all relevant **information**
- **Clarity** of explanation & organization
- Emphasize **originality/novelty** of methodology
- Take **advice** & **review** your proposal

# Know your audience

- External review process (GRF)
  - use of **expert reviewers** in the research field
  - very **detailed** description according to discipline
  - do not try to bluff the reviewers
  - **language** should be discipline specific
- Internal review process (your own institution)
  - Reviewers from **cognate field** or **outside your field**
  - need to explain your approach to a **non-expert**
  - avoid using too much disciplinary **jargon**



# Take adequate time to develop your research methodology

- **MONTHS**, not hours, of preparation
- Start the process early & **do not rush!**
- Start when the call for applications is announced
- Break the process into **stages**
- Take adequate time at each stage of developing and writing up your methodology
- Leave time for seeking **peer comments**
- Leave time for **re-writing and editing**

# Choose the appropriate methodology

- Consider **different approaches** to the problem
- Read the **literature** in the field of research
- What methodologies are **appropriate** for the particular research project?
- What methodologies are **inappropriate**?
- What methodologies might be **borrowed** from other disciplines?
- Ask colleagues for their **advice**
- Seek **advice** from outside your institution
- Be prepared to make **changes** if necessary

# Types of Research Methodology

- (1) Methodological approach
- (2) Taxonomic approach
- (3) Disciplinary approach

# Types of Research Methodology (1): Methodological Approach

- Empirical
  - laboratory experimentation
  - field observation
  - case studies
- Opinion-based
  - surveys/questionnaires
  - individuals & groups
- Archival
  - primary sources
  - secondary sources
  - physical remains
- Analytical
  - internal logic (“metaphysical”)

(Buckley, Buckley & Chiang, 1976)

# Matching methodologies to disciplines

- Empirical - the sciences
- Opinion-based - the social sciences
- Archival - the humanities
- Analytical - philosophy & mathematics

# Types of Research Methodology (2): Taxonomic Approach

## **Scientific Approaches**

- Laboratory experimentation
- Field observation or experimentation
- Surveys (data-based)
- Case studies
- Theorem proof
- Forecasting
- Simulation

## **Interpretative Approaches**

- Subjective/argumentative (creative or speculative)
- Reviews
- Action research (practical)
- Case studies
- Descriptive/interpretative
- Futures research
- Role/game playing

# Matching methodology with approach

- Laboratory experimentation: quantitative analytical techniques
- Case studies: data collection & qualitative analytical techniques
- Theorem proof: mathematical modeling
- Forecasting: regression & time series analysis
- Action research: participant observation
- Descriptive/interpretative: qualitative data from various textual sources

# Types of Research Methodology (3): Disciplinary Approach

- disciplinary
- “non-disciplinary”
- interdisciplinary
- multidisciplinary
- transdisciplinary



# Disciplinary Research Methodologies

- Specific to particular academic disciplines
- Specialist approaches/methodologies
- Well-tested and generally accepted in the discipline: “standard methodologies”
- Appropriate training received at postgraduate level
- Applicability usually well understood
- Multiple methodologies within one discipline
- Competing methodologies
- Further testing in new situations
- Will non-standard research methodologies be accepted/respected by peers in the discipline?

# “Non-disciplinary” Research Methodologies

- Generally accepted across many disciplines
  - quantitative methods
  - qualitative methods
  - observer participation
  - textual analysis
- BUT disciplinary rules as to their use
- Often a basis for interdisciplinary explorations
- Most often used methodologies

# Interdisciplinary Research Methodologies

- Crossing traditional academic boundaries between two disciplines
- Methods and insights transferred from different disciplines
- Integration of different schools of thought and methodologies
- Modification of methodologies to suit new research needs
- Integrity of the larger disciplinary framework
- Some disciplines are more flexible than others

# Multidisciplinary Research Methodologies

- Using appropriate methodologies from multiple disciplines to examine complex questions
- Redefinition of existing problems outside normal disciplinary boundaries
- Collaborative research/teamwork
- Much greater organization required
- Complex/detailed methodology statements

# Benefits of Interdisciplinary and multidisciplinary methodologies

- A more holistic approach to complex research problems
- A better understanding of complex systems
- Understanding interrelated subsystems
- Choice of approach from simple collaboration through to deep integration of knowledge
- Better chance to help solve “real world” problems
- New frameworks for discovery and innovation
- Applicable to sciences, social sciences & humanities

(Trehella, 2009)

# Difficulties of interdisciplinary and multidisciplinary methodologies

- Differences in the language used by participating disciplines
- Understanding more than one approach takes more time
- Research teams may be difficult to organize and sustain
- Greater risks involved than with established disciplinary research methodologies
- Benchmarking is more difficult when more than one discipline is involved
- Peer review systems depend largely on experts from single disciplines who may not understand or appreciate the need for alternative approaches
- Publication of results may be more difficult because of journal focus on discipline-specific issues

# Transdisciplinary Research Methodologies

- “Unity of knowledge beyond disciplines” (Nicolescu, 2002)
- Charter of Transdisciplinarity (1994)
- Complex problems and a diversity of perceptions of these problems
- Equal weight to different perspectives and relating them to each other
- Moderation, mediation, association & transfer
- “Between disciplines, across disciplines, beyond disciplines”
- Collaboration between stakeholders and researchers
- Different levels of reality; greater complexity

Identify your methodology

Understand your methodology

Explain your methodology



What is the best way to explain my research methodology?

# Points to note

- Differences between disciplines (sciences, social sciences & humanities)
- Understand these differences – what are the requirements for my discipline?
- Ask for advice from experienced colleagues in your discipline
- Play by the rules
- Be innovative by all means, but deliver what is expected in a research grant application

What is expected in the Research Plan and Methodology statement?

Some examples of insufficient methodological explanation

I will **read** the later novels of Anthony Trollope to investigate the changing role of marriage in late nineteenth-century English literature.

I will use **traditional historical research methods** to investigate the early years of prostitution in Hong Kong. I will make use of **government records** in the National Archives in London, **newspaper reports** in English and Chinese newspapers in Hong Kong, and I will try to find **first-hand accounts** of Hong Kong brothels during this time period.

Data collection through **action research** and **field observation** with in-depth **interviews** of doctors, nurses and patients.

- **Musical and textual analyses:** examine English books and audio recordings of traditional Indonesian gamelan performances.
- **Participant observation:** visit various sites in Indonesia, participating in the performance of gamelan music with traditional practitioners.
- **Interviews:** of Indonesian gamelan musicians, especially those who have not travelled outside Indonesia for musical performance and/or music workshops.

**Interviews** will be conducted. Recordings will be **transcribed** and **thematically analyzed** using **qualitative text analysis software** (such as NVivo 10). I will use **feminist poststructuralist discourse analysis** (FPDA) to interpret the way in which interviewees position themselves in relation to the topic. FPDA focuses on complex relationships between power, gender and discourse (**Baxter, 2003**).



This project adopts a **sociological perspective** and will draw on **Marxist** and **Weberian** literature to provide a **theoretical framework**. It is **qualitative** in nature and is to be informed by conducting **archival research** and personal **in-depth interviews**. Preparatory work will include **initial archival review** and **planning the interviews**. When this is complete, **in-depth archival research** will be undertaken, after which **semi-structured interviews** with **local** and **expatriate lawyers** will be conducted in **Hong Kong** and **Singapore**. The whole process will take approximately 18 months.

# The problem of insufficient information

- **Length** matters!
- Up to **7 x A4 pages** for GRF applications (including background of research, research plan & methodology)
- An expectation of describing your research methodology in some detail
- **Detail** matters!
- This is the **most important part** of your application

# Elements to include in a research plan and methodology statement

- Statement of **research questions**
- Relationship of **research objectives** to **research questions**
- Breakdown of **research tasks** and/or **subtasks**
- **Methodology** for each research task
- Explain **non-standard methodologies** in detail
- Outline **sources** of data (for archival methodologies)
- **Sequencing** of research tasks
- Relationship of separate tasks to **ultimate goal**
- Consideration of **alternative approaches** (?)
- Include results of **pilot studies** already undertaken
- **Schedule** for individual research tasks
- Research tasks and **research deliverables**
- Highlight **innovative areas** of your methodology
- Highlight areas of **interdisciplinarity/multidisciplinarity**

# Examples of Research Plan and Methodology Statements

- examples taken mainly from the **humanities**
- general features vs. discipline-specificity
- **length of statements** varies considerably
- **structure of statements** also varies
- every research statement is **DIFFERENT**
- **individuality/innovation** is important in research
- experiment with **different statement styles**
- BUT, take note of **disciplinary requirements**
- ask for **advice** when you are not sure

# Example 1

Most of the methods deployed for this project are **well-established art historical methods**, while a few are less orthodox. The **first step** is to collect many more **primary source materials**: this requires (a) **finding** all possible **textual references** to Yuanming Yuan in English and French sources from the period, using **books, magazines, and specific archival sources** available in Hong Kong and **overseas libraries and archives**; (b) **finding** and **capturing** all possible Western **images** of Yuanming Yuan from the period, including **prints**, some post-1860 **photographs**, and possibly a few **drawings** by European visitors, which also requires **searching libraries, archives, and specific museums** in Hong Kong and overseas; (c) where possible, matching particular European descriptions and images with **exact source sites** and **objects** within the Yuanming Yuan complex; and (d) **identifying a sample set of works** of art that actually came from Yuanming Yuan and ended up in Europe after the looting – **this includes** the well documented objects in the Chinese Museum at Fontainebleau, **other objects** that might be found in British and French private and provincial collections, and objects recorded in **auction catalogues** of the 1860s and 1870s.

The **second step** involves **textual analysis** of texts and **visual analysis** of images to **identify patterns of interpretation**, combined with **contextual analysis** of the particular people making and receiving these materials and the general historical conditions in which they were acting; this again is **standard art historical contextual analysis**, informed by **social historical methods**, the **sociology of art**, and **reception theory**.

The **third and fourth steps** require **less conventional methods**.

The **third step**, intersecting some **issues discussed in museum studies and the history of collecting**, is to **trace** the ways in which **art objects** from Yuanming Yuan and images from Yuanming Yuan were **displayed or otherwise used** in France and England. A **preliminary analysis** of the **display practice** of the Chinese Museum at **Fontainebleau** is included in my article on Yuanming Yuan's looting; there is much more to explain about this display, and much still unknown about the display of objects in **Queen Victoria's collection**, the public display of objects by **private collectors**, and the representation of Yuanming Yuan objects in **newspapers** and **related print media**. Such analysis shifts attention from interpreting individual objects (the art historical norm) to **interpreting object ensembles set in architecturally specific spaces** (less established). It also **breaks with standard practice** focusing on reception of a particular medium (painting, porcelain, gardens, etc.), instead taking **a holistic view of multiple Chinese media collected and displayed together**.

A crucial **fourth step**, finally, is **complex comparative analysis**, based on **two parts**: (a) **comparing my findings** on the treatment of Chinese objects to the treatment of Japanese and Indian objects as established in ample existing secondary literature; and (b) **comparing French patterns of reception to British patterns of reception** in different historical phases – as well as possible **transnational patterns of sub-cultures** based on **religious or political ideology, class, profession, gender**, and so on.

**This kind of complex comparative analysis benefits from scholarship in gender studies and anthropology.**



# Example 2

This is an ambitious comparative literary research project but, fortunately, I have already done some **preparatory work**, so it is realistic to envisage **completion** in three years. I intend to **start the project** in September 2013 and submit a full draft of the **completed monograph** to an **international academic press** at the end of 2016 or in the spring of 2017. Before I turn to the contents of this project/ individual monograph chapters below, a few general words about **methodology** are necessary:

(Kuehn, 2012)

This project offers an **original** and **unique approach** to **Victorian prose writing** in that, in its attempt to highlight the impact of Germany on Victorian prose writing, it **reads a large number** of German and English **texts** of the 19th century (esp. the period 1837-1901) through their **aesthetic ideas**, **formal features** and **generic conventions**. Now that I have identified the **main genres** and **narrative modalities** – the seven listed above and below – it remains a **primary methodological step** to work further on the **preliminary corpus of texts** and **select those texts** on the German and English side that are **best suited** for discussion in the individual sections/ chapters. Once that **selection process** has been finalised, **close textual and comparative readings** with an eye to the formal aesthetics of the relevant novels, tales and (short) stories will follow. It is at this point that **secondary literature will be consulted** and called upon – the ones I have identified in the literature review above but also many secondary studies on, e.g. the relevant genre or narrative modality. Then, in the **writing process** that follows this research process, all received information will be **structured**, **assessed** and **brought to argument** in individual **8-10,000 word essays/ chapters**.

(Kuehn, 2012)

This research is in **English studies**, by route of a variety of **German texts**, and there is no Hong Kong-relatedness inherent to the project. Having said this, however, the **HKU library** is extremely well-stocked in **19th-century English novels and their criticism**, and it also houses, and perhaps astonishingly so, an impressive number of **German 19th-century novels** and **German criticism**. The latter stock hails from a period when German Studies were still taught in HKU's Faculty of Arts, which has now, sadly, had to reduce its German programme to language acquisition. **Many of the primary literary texts are therefore accessible in Hong Kong and in the HKU library**. The main bulk of the secondary, **critical literature** – if not available on-site or through HKALL loan – can be accessed either in the form of **e-books** or through **interlibrary loan**. The **German National Library** has an extremely good document supply and delivery service and there is direct, centralised, digital access to many of the holdings 24 hours a day. Those German-language studies that are not accessible from Hong Kong will be consulted during **the research trip to Germany**. Similarly, the few English-language studies that are not available in Hong Kong (either on-site, online or through loan) will be consulted during the intended research trip to the **British Library in London**.

(Kuehn, 2012)

## Contents – Individual Chapters

The project will contain seven sections in total which, for convenience's sake and with an eye to future publications in article/ monograph form, may be understood as individual essays or book chapters, discussing one particular idea or focus. A sampling of the literary texts to be discussed in each chapter.

### Chapter 1: the Gothic tale

The German tales of Hoffmann, Meinhold and de la Motte Fouqué will be at the centre of this chapter and with them, the supernatural, the dark, the *femme fatale*, the devilish and the medieval-historical. On the British side, the Pre-Raphaelites were directly and indirectly influenced by these three writers. While the German originals were, arguably, in themselves influenced by earlier British Gothic pieces by Lewis, Mrs Radcliffe and Walpole, the Meinhold-craze among the Pre-Raphaelites and, with it, the return to Hoffman and Fouqué is particularly noteworthy. Bridgwater (1999) has made first attempts to delineate these relationships but his excellent chapters sidestep the close readings of the individual prose texts that I am interested in: *Sidonia* influenced Rossetti's 'Sister Helen'; his *Sorrentino* looked back to Hoffman's *Devil's Elixir*; Meinhold caused Burne-Jones to paint 'Sidonia von Bork' and 'Clara von Bork'; Fouqué's *Sintram* impacted Morris's romance *The Wood Beyond the World*. Later, and outside the Pre-Raphaelite circle, Yonge's bestseller *The Heir of Redclyffe* shows traces of Meinhold and Hoffmann as does Gaskell's 'Lois the Witch'. And, later in the century and in post-Pre-Raphaelite mode, *Sidonia* lingered in Pater's conception of womanhood in 'Aesthetic Poetry' and in Swinburne's many poems in *Laugh and Lie Down*, *The Queen Mother*, *Chastelard* and 'Dolores' and 'Faustine' in *Poems and Ballads*. This overview will necessitate many close readings.

# Example 3

The **methodology** adopted in this project draws on **history** and **philosophy of science**, **botany**, **art history** and **visual studies**. It follows **well-established norms of close textual analysis and critical inquiry** into **written**, **pictographic** and **physical materials**. The project is organized around **the following questions**:

- (1) How do practitioners—botanists, physicians, and natural philosophers understand the enterprise of constructing the herbarium? How do they conceive of their ‘scientific selves’ in this process, e.g. as active or passive? What role does the herbarium’s collective character play in this process?
- (2) What epistemic virtues (e.g. TTN) inform work in the herbarium? Have these epistemic virtues changed over time, parallel (or not) with developments in other visual sciences? What can this epistemology and practice teach other sciences and humanities?
- (3) How do practitioners invest the herbarium with meaning(s)? Are these meanings contested? Put another way, does the herbarium mean different things to different people? Can we conclude that the herbarium, with its multiple meanings and roles, is a ‘boundary object’ or can it perhaps be better understood as a ‘trading zone’?
- (4) What can we learn from positing the herbarium as a site of knowledge creation where nature no longer appears as mere nature, but rather re-constituted as a series of orchestrated images of nature, that thereby contribute to, and shape knowledge of, plants and their environments in specific ways?

(Cook, 2014)

These questions shall be elucidated by studying **select cases** over four and a half centuries and consulting the many **digitized herbaria** now available (see e.g. [www.virtualherbarium.org](http://www.virtualherbarium.org) and direct links in bibliography). There is a wealth of material on which to draw: roughly **82 million plant specimens** are housed not only in the world's largest herbaria in Paris, London, New York, Geneva, Washington, DC, Montpellier, Lyon, St Louis and Leiden, but also in **3,780 smaller herbaria** worldwide possessing at least **10,000 specimens** apiece (Durand, et al., 28-30). Historical herbaria created by the following individuals shall provide **key cases** for the early-modern period:

- 16th century: Conrad Gesner, Ulisse Aldrovandi, Leonhard Rauwolf
- 17th century: Caspar Bauhin, Joseph Pitton de Tournefort, Sir Hans Sloane
- 18th century: Sébastien Vaillant, Linnaeus, Lamarck, Albrecht von Haller

(Cook, 2014)

**Other cases** may be selected as seems warranted during the course of my work. An important **note of caution** is in order regarding herbaria of the nineteenth century and later: these very large collections often incorporate collections made by individuals in previous centuries, often making it difficult to identify specimens from particular collectors. However, some herbaria, e.g. Geneva (Geneva Herbaria Catalogue), have digitized their collections and added **searchable databases** that enable these items to be found with a fair degree of ease.

(Cook, 2014)

## Plan of work to be done:

### Year 1:

SRA will identify herbaria and collectors of interest; compile key data concerning collectors and collections involved, and the scientific, professional or other social groups to which they belonged, thereby building a database for the project. The virtual herbaria and databases listed in the bibliography provide the foundation for this work. The PI will supervise this work, aiming to identify those specimens that best represent the different epistemological approaches outlined above.

### Year 2:

The PI will conduct data analysis in relation to the questions posed in the proposal above.

### Year 3:

In the last year of the project the PI will prepare the bulk of the manuscript of the sole-authored monograph. It is to be hoped that teaching relief will be available for this critical phase of the project.

(Cook, 2014)



# Collegiality & Collaboration

- No researcher is an island!
- New applicants will always need assistance
- Ask for advice from your colleagues
  - departmental co-researchers
  - postgraduate supervisors/fellow students
  - outside experts (but always declare involvement)
- Concerns about sharing original ideas
- Informal mentoring within departments
- Departmental research seminars
- Role of your Head of Department
- Formal institutional support mechanisms from drafting to revision and submission
- The best applications come from supportive research environments
- Do not isolate yourself from colleagues

Q&A

# Discussion tasks

- Groups have been arranged according to disciplines
- What are the main research methodologies used in your discipline?
- How rigid are the expectations in your discipline regarding standard research methodologies?
- Prepare a Research Plan and Methodology statement for a chosen project from the group

