ARCF 9001

MODES OF INQUIRY: METHODS OF RESEARCH & SCHOLARSHIP

SEMESTER 2 (JULY-OCTOBER) 2007

Professor: Professor Gary Moore

Contributors: Special guests representing fundamentally different epistemologies of research and scholarship will join the seminar to discuss the mode of inquiry characteristic of their discipline.

Time & Place: Tuesdays 2:00-5:00 and most Thursdays, 2:00-4:00 pm, Seminar Room 557, Wilkinson Building. Tuesdays are content-oriented lecture/seminars involving the readings; Thursdays are workshops related to research proposal preparation.

Office Hours: Thursdays 1:00-2:00 pm, Room 511.

Requirements: This is a required unit of study (“course”) as part of probationary requirements for all PhD and MPhil students in the Faculty. New research students should complete the course in the first semester after enrolment. Honours students, honours postgraduate coursework students and research students from other faculties and schools and from other universities are welcome to join with prior permission.

Definition: According to the Oxford English Dictionary, inquiry is “the action of seeking for truth, knowledge or information; search, research, investigation, examination.” In modern dictionaries and international use, inquiry is the standard form, though enquiry is still sometimes used, as one person put it, as “a subtlety of the local dialect” or to refer simply to “a question.” But research as inquiry is much more than a question – it is the search for truth, or at least for knowledge.

Objectives: To provide newly admitted research students with a fundamental understanding of the nature of inquiry through research, the philosophy of scientific research and interpretive scholarship and a range of fundamentally different epistemologies or “modes of inquiry.”

The range of modes of inquiry to be explored includes the following:

- The field-based empirical, social scientific epistemology used heavily in architectural science, design cognition, environment-behaviour studies, urban planning and other field-based research, including experimental, quasi-experimental, survey, naturalistic, ethnographic and case study research;

- The text-based, interpretive epistemology used heavily in architecture and the allied arts and other humanities disciplines, including archival, historical, theoretical, interpretative and other text-based interpretive scholarship;

- The computationally-based epistemology used heavily in design computing and other IT-based disciplines, including axiom- and conjecture-based, simulation, virtual reality, prototyping and development research; and

1 © Gary T. Moore, University of Sydney, 2007. All rights reserved.
• The policy-oriented, communication-contingency and modelling epistemologies used heavily in urban and regional planning and other policy-based disciplines, including archival, strategic and evidence-based policy research, communications and morphological analyses and quantitative modelling;

• As well as interdisciplinary combinations, triangulations and mixed modes.

An important part of these discussions will be quality assurance – how to judge the quality of research, both qualitative and quantitative, including how to judge the trustworthiness of data, logic and analysis, in reading research and scholarship, in formulating proposals, and in conducting and reporting research.

There are a number of related issues with which all new researchers need to become familiar, including but not limited to: literature searches and electronic bibliographic databases; qualitative and quantitative data analysis; research software packages including qualitative and quantitative data analysis packages; ethics including human ethics, plagiarism and intellectual property rights; how to write research grant proposals, publishable papers, reports, theses, CVs and business plans including presentation skills; and planning your research and professional development post-PhD – but not all of these can be covered in this unit.

Assignments:

To help you with formulating your research ideas and developing a preliminary research proposal, several iterative assignments will culminate in a comprehensive research proposal.

1. **Preliminary and Revised Research Statements:** Tentative title for the research (including your name and research group or discipline), purpose of the research, and research questions (max 1 page). **Due:** See Syllabus (below).

2. **Quality Assurance:** Revised tentative title of your research (including your name and research group), revised purpose and research questions/claims. Emphasis in this submission should be on quality assurance: first, discussion of at least two research works in your domain of research that have used particularly good ways to assure trustworthiness, with critique of the advantages and limitations of how they have attempted to assure the four categories of trustworthiness, and, second, your first thoughts of how you propose to assure the various forms of trustworthiness in your own research (2 pages). **Due:** See Syllabus (below).

3. **Annotated Bibliography:** A brief report (maximum 5 pages or approximately 1500 words plus references and bibliography) that is a summary of your data base search as an annotated bibliography, and includes the following: (1) tentative title for your research, name, etc., (2) a one-paragraph synopsis (max 150 wds), (3) revised research questions, (4) an annotated bibliographic summary of the most important ca 10 papers and books reporting on prior research on your topic or very closely related to your topic in your domain, and (5) a longer list of ca 30 additional papers and books relevant to the topic and domain. Each annotated summary should be one paragraph in length and include (a) **Purpose:** the purpose of the research or the research question or claim being addressed, (b) **Methods:** brief summary of the mode of inquiry and specific methods used in the research, (c) **Findings:** most important findings from that research, and (d) **Conclusions and Implications:** conclusions from the research and implications for your research. Use a database for storing and organising your information, eg, EndNote, so you can change the style easily. Include a reference citation for each publication in standard bibliographic format, using one of the following three standard bibliographic formats: (a) the Harvard/Royal Society science/social science style (preferred in the AS, design cognition part of DCC, EBS and URPP disciplines – cf American Psychological Association (2001), *Publication Manual* (5th ed.), also available at [http://www.apa.org > APA Style]; (b) the MLA/Chicago humanities style (preferred in the AAA discipline – cf University of Chicago (1993), *The Chicago Manual of Style* (14th ed.), also available at [http://www.mla.org > MLA Style]); or (c) the ACM computer science and ITC style

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2 For any students simultaneously taking INFO 4990, every effort will be made to coordinate assignments and due dates.
4. **Critical Literature Review Essay:** An essay (max 10 double-spaced pages or ca 3000 words plus references) that comprehensively, systematically and critically reviews the most important previous research literature pertaining to your research topic and questions. Include up to 30 properly referenced research papers or books. Structure and organise the review around the questions or claims relevant to your research or around the subareas of relevant previous research. Identify the modes of inquiry and research methods used in each study reviewed, and comment critically on the strengths and limitations of those research methods (especially in terms of how they do or don’t deal with the four criteria of trustworthiness). Indicate the contributions of the previous research literature by describing the relevance of the literature to the field and to your topic. At the end of this essay, include your revised research questions (ie, revised in the light of the identification of gaps in current knowledge). Assessment criteria are the following: (a) systematic and comprehensive review of relevant literature in the research domain, (b) identification and critical commentary about the research methods and (c) clarity of revised research questions. We will of course also be looking for clarity of English presentation along with appropriate methods and quality assurance followed by a proposed research plan, research design, information collection methods, information analysis methods and quality assurance methods of research and/or scholarship to be adopted for your research. Ensure your presentation makes clear how and why the methods proposed are suitable for answering the research questions, ie, there should be a clear mapping of research methods back to the questions they are intended to answer. The subcategories within research methods will depend on the type of questions you are asking and modus operandi of your discipline, but at a minimum should include: (a) fundamental mode or modes of inquiry, (b) specific information collection or testing methods most likely to be employed, (c) methods of information analysis or evaluation and (d) how you propose to assure quality, ie, trustworthiness. It is important not only to state what you propose to do, but also why, ie, to justify your proposed methods. As well as consulting with me during office hours if you wish, it is important that you consult closely with your Supervisor and perhaps your Associate Supervisor during this phase. **Due:** See Syllabus.

5. **Outline of Research Methods:** Following your latest restatement of research questions, provide a brief outline (text and/or dot points) the mode of inquiry and most likely methods of research and/or scholarship to be adopted for your research. Ensure your presentation makes clear how and why the methods proposed are suitable for answering the research questions, ie, there should be a clear mapping of research methods back to the questions they are intended to answer. The subcategories within research methods will depend on the type of questions you are asking and modus operandi of your discipline, but at a minimum should include: (a) fundamental mode or modes of inquiry, (b) specific information collection or testing methods most likely to be employed, (c) methods of information analysis or evaluation and (d) how you propose to assure quality, ie, trustworthiness. It is important not only to state what you propose to do, but also why, ie, to justify your proposed methods. As well as consulting with me during office hours if you wish, it is important that you consult closely with your Supervisor and perhaps your Associate Supervisor during this phase. **Due:** See Syllabus.

6. a. **Preliminary Research Proposal:** A written research proposal (2500-3000 words, between 12 and no more than 15 pages including title, abstract, body, figures, tables and references). A detailed template will be distributed for the format and content of the Research Pre-Proposal, but it should include an abstract, objectives and importance, critical literature review, research questions/claims, research methods including research plan, research design, information collection methods, information analysis methods and quality assurance followed by a proposed time line. A detailed proforma with assessment criteria will be distributed and will be used by referees in the assessment of the Preliminary Research Proposal. **Due:** See Syllabus.

b. **Oral/Ppt Presentation:** An oral and PowerPoint summary presentation of your preliminary proposal at the end of your first semester of candidature, ie, 15 minutes of presentation with 5-7 high quality Ppt slides. Assessment criteria are as follows: appropriateness, completeness and quality of the slides, and clarity of oral presentation. **Due:** Scheduled during the first examination week, Tuesday and Thursday if necessary, 12:00 to 5:00 each day; see Syllabus for details.

**Assessment:**

As this is a postgraduate research course in preparation for a higher degree, it is a Pass/Fail unit, but a minimum of a “Credit” level in all aspects is required to pass this unit of study.

Assessment will be based on (1) annotated bibliography summary of database search, (2) critical literature review essay, (3) outline of research methods, (4a) preliminary research proposal, (4b) oral presentation and (5) demonstration through critical class discussion of having done and understood the readings.
Following a tradition begun at the University of Toronto in Canada, in assessing your submissions I will be looking for evidence of development in four areas: (1) your grasp of the subject matter of different modes of inquiry and research methodologies, (2) the organisation of your knowledge about research, (3) ability to critically evaluate methods used in prior studies and (4) original thinking regarding appropriate modes of inquiry and research methodology for the research questions you seek to answer.

The final Research Pre-Proposal will be read and judged by two readers using a standard refereeing form, and must be evaluated by them as being of a minimum credit level (min 65%) to be considered to be of passing quality in this unit. Likewise, the overall assessment at the end of the semester must be of a credit level for you to successfully complete and pass this unit of study.

Research Seminars:

All disciplines and other research groups in the Faculty hold research seminars where members of the group meet to discuss research issues of mutual interest. Seminars are presented by staff, post-docs, research students and visiting scholars. You should attend at least one seminar groups that most relates to your research area – most groups require attendance and participation of all research students in the discipline, but you are free to join other group seminars as well, and if you are not in a formal discipline group, you should attend the seminar group most alighted to your research topic:

**Architecture and Allied Arts (AAA) Research Seminars** – most Thursdays during term, 5:00-6:00 pm, Seminar Room 557, contact Dr Glen Hill for information.

**Audio & Acoustics (A&A) Research Seminars** – every Friday, year round, 1:00-2:00 pm, Audio Surround Sound Studio, Room 134, contact Dr Densil Cabrera for information or see [http://www.arch.usyd.edu.au/~densil/projects/talks](http://www.arch.usyd.edu.au/~densil/projects/talks).

**Architectural Science (ArchSci) Research Seminars** – occasionally during term, Seminar Room 557, contact Dr David Gunaratnam for information.

**Environment, Behaviour & Society (EBS) Research Seminars** – every Friday, year round, 12:30-2:00 pm, Seminar Room 557, contact PhD candidates Chumporn Moorapun or Leilei Xu, both in Room 556, for information or see [http://www.arch.usyd.edu.au/research/env_behaviour.shtml](http://www.arch.usyd.edu.au/research/env_behaviour.shtml).

**Key Centre of Design Computing and Cognition (KCDCC) Research Seminars** – every Wednesday, year round, 1:00-2:00 pm, The Sentient, Room 206, contact Dr Michael Rosenman or Hons student Mercedes Paulini for information or see [http://www.arch.usyd.edu.au/kcdc/seminars](http://www.arch.usyd.edu.au/kcdc/seminars).

**Urban & Regional Planning & Policy (URPP) Research Seminars** – most Fridays during semesters, 3:00-5:00 pm, Seminar Room 557, contact Dr Nicole Gurran for information.

Student Effort:

Contact time is 3 hours in lecture/seminars, 2-3 hours of tutorial workshops plus somewhere between 6-8 hours per week of methods reading and another 6-8 hours per week of research proposal preparation.

Outcomes:

Upon successfully completing this unit, students will have an understanding of the range of modes of inquiry and a beginning understanding of some of the specific methods of research and scholarship used in a broad range of disciplines. Students will also be able to locate and analyse research literature, have a more critical attitude toward research, be able to formulate a preliminary but robust research proposal, and have a beginning understanding of how to prepare, present and publish papers resulting from their research.

Books:

A wide variety of books is available on different methods of research and scholarship.

Required texts:

The below are required text books, available form the University Coop Bookshop, and will also serve as useful additions to your reference library. The Groat and Wang focuses on different modes of inquiry in architecture, design, urban planning and other environmental
disciplines, while Leedey and Ormrod is a practical how-to research book that also has useful chapters on historical, interpretive and qualitative research.


** Recommended:**

Specialised books are available through the Denis Winston Architecture Library and the University Fisher Library. Those with an asterisk are in high demand and have been placed on reserve. Please let the Denis Winston Architecture Library know if any others are more generally needed, and they will add them to reserve.

There will also be readings from journals, conference proceedings and other books that will be required from time to time as indicated in the syllabus.

In the past, research students have located and shared reading materials, including making personal photocopies in the Research Student Printing Hub, Room 515 (door access code C93826, photocopy code available to research students on request of Kim in Room 313).

Based on feedback from previous PhD, MPhil and Hons students, I would recommend you purchase some of the following as important methods reference books for your personal reference library:


**Literacy:**

As a research student, you are expected to know how to use the Fisher and new SciTech Libraries, Inter-Library Loan, electronic catalogues and databases, etc. The Architecture Librarians in the Sci-Tech Library provide tours and bibliographic instruction at the beginning of each semester; please contact Mr Michael Arndell or any of the librarians who will be able to assist you.

You are also expected to write succinctly in clear, grammatical prose with no jargon, and to reference according to a standard format. The University's Learning Centre at [http://www.usyd.edu.au/lc/courses.html](http://www.usyd.edu.au/lc/courses.html) has a variety of short-courses (2 to 9 hours) that former students – both international and domestic – have found very helpful for improving their writing. Some supervisors require students to take them; all are highly recommended.

There are also many excellent reference books on writing available in libraries and bookstores. The ones listed below are helpful for writing research proposals, dissertations and theses, and papers:


**Attendance:**

Students are expected to attend all classes and workshops. If you are unable to attend a session, please notify me before class. The Faculty Handbook states that if a student does not fulfil attendance requirements, without documented reasons under the policy for Special Consideration, they may receive the grade of AF (Absent Fail).

**Participation:**

As this is a seminar course, you are expected to participate actively. In order to maximise your learning, and have meaningful discussions, read and think about the readings ahead of time so you are prepared to critically discuss the readings and raise issues for discussion.

**Assessment Submissions:**

All assignments are be submitted by the due date. Extensions or late submissions are only granted in the event of and with documentation of illness, misadventure or, for part-time graduate students, unexpected employer demands (http://www.arch.usyd.edu.au/ >Current Students >Postgraduate Students >PG Late Submission Policy and >PG Special Consideration).

**Honesty vs Plagiarism:**

The role of the University of Sydney is to create, preserve, transmit and apply knowledge through teaching, research, creative works and other forms of scholarship. The University is committed to academic excellence and high standards of ethical behaviour as the cornerstones of scholastic achievement and quality assurance. The University has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. You are responsible for the honest completion and representation of your work, for the appropriate citation of sources and for respect of others' academic endeavours. The University is opposed to and will not tolerate plagiarism. It is the responsibility of all students to: (a) ensure that they do not commit or collude with another person to commit plagiarism, (b) report possible instances of plagiarism and (c) comply with the University’s policy and procedure on plagiarism. The University will treat all identified cases of student plagiarism seriously (see http://www.usyd.edu.au/senate/policies/Plagiarism.pdf). Please read the University Policy on Academic Honesty and submit the appropriate cover sheet with your signature with each assessment submission.

**Harassment:**

Sexual, bullying and any other forms of harassment are reprehensible, should not occur and will not be tolerated by the University. They subvert the mission of the University and threaten the experience and well-being of students and staff. Concerns should be brought to the attention of the University’s Equal Employment Opportunity Office, who will treat them very sensitively and strictly in confidence.

**Disabilities:**

Contact me if you need special accommodations for any of the requirements of this unit.
Observances: Please let me know of any religious holidays or other days of special religious significance that may interfere with your participation. I will do my best to accommodate these events. You may complete requirements that are missed because of a religious observance.
## SYLLABUS

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Required Readings &amp; Assignments</th>
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|      |            | **Part I: Research Planning**                                        | **Required Readings:** All required readings (**) are to be read before the class in which they are to be discussed – read the inclusive page numbers, but try read more broadly. Readings without asterisks are optional. All are available from the two required textbooks or on reserve in the Library. Highly recommended (*) and other readings are listed for deeper knowledge in subject areas.\n
**Leedy & Ormrod, parts of Chaps 1-2, in particular pp 1-11, 31-42.**  
**Groat & Wang, Preface & part of Chap 1, pp vii-xiii, 6-13.**  
* Watson, *The Double Helix* (a very good and quick read – available in the Library, also inexpensively from Amazon.com and elsewhere). |

### 1a
- **Tuesday 24 July**
- **2-5 pm**

**Introduction and Orientation to the PhD/MPhil/Hons Program and to the Nature of Research:**
- What is research? What are basic vs applied research and research applications?
- The nature(s) of research and scholarship. Inductive and deductive research. What are the social scientific, interpretative, computational and policy epistemologies? How are they similar and different? Are they equally valid as ways of conducting research to discover new knowledge?

### 1b
- **Thursday 26 July**
- **2-4 pm**

**Research Proposal Workshop**
- **Preliminary Research Topic:** Round-table discussion of research topics – your first statement of research problem/questions/claims.

**Assignment 1a – Preliminary Research Statement:**
- Tentative title of the research (including your name and research group), purpose of the research, and preliminary research questions/claims (max 1 page; see Leedy & Ormrod, pp 45-50).
- Due – beginning of class, multiple copies (1 copy as a handout for each person, ie, 11 copies).
- Oral presentation – 5 minutes maximum per person – followed by questions and discussion – no PPT.

### 2a
- **Tuesday 31 July**
- **2-5 pm**

**Research Planning:**
- What is a good research question? What are “real” vs “pseudo” research questions or problems? Strategies for conceptualising problems and asking the right questions.
- Research planning and research design. What makes for a good research plan? What is the difference between research methodology and research methods, or strategies (modes of inquiry or methodologies) vs tactics (techniques, methods)?

**Leedy & Ormrod, Chaps 3 & 5, pp 43-63, 85-mid-97.**  
**Creswell, *Research Design: Quantitative, Qualitative and Mixed Modes*, Chap 7, pp 119-141.**  

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3 All sessions by Professor Moore unless otherwise indicated. Syllabus subject to revision depending on needs of the students and constraints of the Faculty.
4 All substantive sessions are on Tuesdays, 2-5 pm, unless otherwise noted. Workshop sessions are on Thursdays, 2-4 pm, as noted. Due to Professor Moore’s travelling schedule this semester, some weeks may be offered in a more intensive mode with two or even three sessions per week. The third session would be Wednesdays, 2-4.
<table>
<thead>
<tr>
<th>2b</th>
<th>Thursday 2 August 2-4 pm</th>
<th><strong>Research Proposal Workshop – Revised Research Questions:</strong></th>
<th><strong>Assignment 1b – Revised Research Statement:</strong></th>
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<td>Round-table discussion of research topics – Second, revised abstract with revised research questions.</td>
<td>Tentative title of the research (including your name and research group), revised purpose of the research, and revised research questions/claims (max 1 page; again see Leedy &amp; Ormrod, pp 45-50).</td>
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<td>Due – beginning of class, multiple copies (1 copy as a handout for each person, ie, 11 copies).</td>
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<td>Oral presentation – 3-4 minutes maximum per person – followed by questions and discussion – no PPT.</td>
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<tr>
<th>3a</th>
<th>Tuesday 7 August 2-5 pm</th>
<th><strong>Literature Searches and Reviews:</strong></th>
<th><strong>Leedy &amp; Ormrod, parts of Chaps 2 &amp; 4, pp 12-21, 64-84.</strong></th>
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<td><strong>Gifford, The consequences of living in high-rise buildings. Architectural Science Review, 50(1), 2-17.</strong> (Skim, read portions – excellent example of a systematic and critical review of literature – be ready to replicate.)</td>
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<tr>
<th>3b</th>
<th>Thursday 9 August 2-4 pm</th>
<th><strong>Workshop on Library Resources:</strong></th>
<th><strong>Visit the Fisher Library and the Denis Winston Architecture Library before this class. Find your way around; know where the sections are that relate to your area(s) of research interest.</strong></th>
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<th>4a</th>
<th>Tuesday 14 August 2-5 pm</th>
<th><strong>Research Quality Assurance: Reliability, Validity &amp; Trustworthiness:</strong></th>
<th><strong>Leedy &amp; Ormrod, Chaps 2 &amp; 5, pp 25-29, 91-93, 97-100.</strong></th>
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<td></td>
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<td>What is quality assurance, and why is it important? What are reliability, validity and the other measures of trustworthiness? The four essential criteria underlying trustworthiness in research. The post-positivist approach to trustworthiness.</td>
<td><strong>Groat &amp; Wang, Chap 2, pp 34-43.</strong></td>
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### 4b Thursday 16 August 2-4 pm
**Workshop on On-line Database Searching:**
Advanced bibliographic searching, online databases, subject specific search engines, evaluating web resources

Special Guest: Michael Arndell, Architecture Liaison Librarian, Denis Winston Architecture Library

**Review and be completely au fait with:**

**Refer to and find your way around inside two different Online Databases from:**

### 5a Tuesday 21 August 2-5 pm
**Research Proposals, Quality Assurance and Trustworthiness:**
Means of assuring the various forms of trustworthiness appropriate to your research.

Review and be completely au fait with:
- Leedy & Ormrod, Chaps 2 & 5, pp 27-29, 91-93, 97-100.
- Groat & Wang, Chap 2, pp 34-43.

**Assignment 2 – Quality Assurance:** Revised tentative title of your research (including your name and research group), revised purpose and research questions/claims. Emphasis in this submission should be on quality assurance: first, discussion of at least two research works in your domain of research that have used particularly good ways to assure trustworthiness, with critique of the advantages and limitations of how they have attempted to assure the four categories of trustworthiness, and, second, your first thoughts of how you propose to assure the various forms of trustworthiness in your own research (2 pages).

Due – beginning of class, multiple copies (1 double-sided/back-to-back copy as a handout for each person, ie, 11 copies).

Oral presentation – 2-3 minutes maximum per person – followed by questions and discussion – no Ppt.

### 5b Thursday 23 August 2-4 pm
**EndNote Bibliographic Workshop**
Special Guest: Michael Arndell, Architecture Liaison Librarian, Denis Winston

**Insure you have EndNote installed on your computer (if not, contact the ICT Centre and have it installed before this class)**

**In preparation for this workshop, access and explore the Library’s EndNote online tutorial at**
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<td><strong>Part II</strong></td>
<td><strong>Epistemologies of Research and Scholarship – Different Modes of Inquiry and Approaches to Research</strong></td>
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| **6a** | **Tuesday 28 August 2-5 pm** | **Theory and Epistemology:** Different modes of inquiry, theories and related research methodologies. We need to ask several questions: What is epistemology? What is theory, and why is it important in research? What are some of the major different modes of inquiry and approaches to research and scholarships? How can we think of them epistemologically? How do Boyer’s four scholarships reconsidered fit into the typology? And what are the connections between epistemology, theory and methodology?  
**Groat & Wang, Chap 1& 2, pp 13-34, Chap 4, pp 73-98.**  
**Moore (1997), Toward environment-behavior theories of the middle range. In Moore & Marans (Eds.), Advances in Environment, Behavior & Design, Chap 1, pp 1-16 plus Figure 8, pp 22-27, 33-34.**  
| **6b** | **Thursday 30 August 2-4 pm** | **Theory and Epistemology Workshop**  
Round-table follow-up discussion of issues raised in the above lecture class. Focus on new scholarships.  
**Leedy & Ormrod, Chaps 9 & 10, pp 179-211, 217-239 (plus skim Chap 7, pp 133-160).**  
**Groat & Wang, Chap 7, pp 173-202 (plus skim Chaps 8-9, pp 203-273).**  
**Campbell & Stanley (1973). Experimental and Quasi-Experimental Designs for Research. See esp. Sources of invalidity, Table 1 on p 8 and text around.** |
| **7a** | **Tuesday 4 September 2-5 pm** | **The Empirical Field-Based Epistemology:**  
Quantitative, qualitative and mixed modes – an introduction and overview of the major social science based research methods appropriate to architecture, design and urban planning research  
**A: Experimental laboratory**  
**Leedy & Ormrod, Chaps 9 & 10, pp 179-211, 217-239 (plus skim Chap 7, pp 133-160).**  
**Groat & Wang, Chap 7, pp 173-202 (plus skim Chaps 8-9, pp 203-273).**  
**Campbell & Stanley (1973). Experimental and Quasi-Experimental Designs for Research. See esp. Sources of invalidity, Table 1 on p 8 and text around.** |
and quasi-experimental field research

**B: Correlational/differential/ survey research**

**C: Case study, ethnographic and naturalistic research**

The focus in the first session will be on the essential qualities of field research designs, followed by attention to experimental and quasi-experimental research designs.

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<th>Reference</th>
<th>Details</th>
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<tr>
<td>Creswell (2002, rev ed.).</td>
<td>Components of an experimental method plan, Chap 9, pp 162-178; also pp 123-125, Fig 7.1-7.3.</td>
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<tr>
<td>University of Kent Ethnographic Gallery, e-published ethnographic studies. Available at <a href="http://lucy.kent.ac.uk/csac/eg.tabs/Main">http://lucy.kent.ac.uk/csac/eg.tabs/Main</a> (retrieved 29 July 2006).</td>
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<tr>
<th>7b</th>
<th>Thursday</th>
<th>Research Proposal Workshop:</th>
<th>Assessment 3 – Summary of Electronic Database Search – Annotated Bibliography:</th>
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<tr>
<td>6 September</td>
<td>2-4 pm</td>
<td>Round-table discussion of electronic database search results and annotated</td>
<td>See detailed assignment description in the first part of the syllabus.</td>
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bibliography. The focus should be on what you found to be (a) the major areas of current research in your domain and one or two of the most important findings relevant to your topic within each of these domains, (b) gaps you discovered in current research knowledge relative to your topic, (c) how the literature search to date has helped refine or change your research questions.

Annotated Bibliography: A brief report (maximum 5 pages or approximately 1500 words plus references and bibliography) that is a summary of your data base search as an annotated bibliography, and includes the following: (1) tentative title for your research, name, etc., (2) a one-paragraph synopsis (max 150 wds), (3) revised research questions, (4) an annotated bibliographic summary of the most important ca 10 papers and books reporting on prior research on your topic or very closely related to your topic in your domain, and (5) a longer list of ca 30 additional papers and books relevant to the topic and domain. Each annotated summary should be one paragraph in length and include (a) Purpose: the purpose of the research or the research question or claim being addressed, (b) Methods: brief summary of the mode of inquiry and specific methods used in the research, (c) Findings: most important findings from that research, and (d) Conclusions and Implications: conclusions from the research and implications for your research. Use a database for storing and organising your information, eg, EndNote, so you can change the style easily. Include a reference citation for each publication in standard bibliographic format, using one of the following three standard bibliographic formats: (a) the Harvard/Royal Society science/social science style (preferred in the AS, design cognition part of DCC, EBS and URPP disciplines – cf American Psychological Association (2001), Publication Manual (5th ed.), also available at http://www.apa.org > APA Style); (b) the MLA/Chicago humanities style (preferred in the AAA discipline – cf University of Chicago (1993), The Chicago Manual of Style (14th ed.), also available at http://www.mla.org > MLA Style); or (c) the ACM computer science and ITC style (preferred in the computational parts of the DCC discipline – cf http://www.acm.org/sigs/pubs/proceed/template.html or http://www.acm.org/pubs/submissions/msword_style/).

Due – Electronic submission due before class, 11 copies to be distributed in class, plus send one to your Supervisor and Associate Supervisor.

8a Tuesday 11 September 2-5 pm

The Empirical Field-Based Epistemology:
Quantitative, qualitative and mixed modes – an introduction and overview of the major social science based research methods appropriate to architecture, design and urban planning research

B: Correlational/differential/survey research
C: Case study, ethnographic and naturalistic research

** Leedy & Ormrod, Chaps 9 & 10, pp 179-211, 217-239 (plus skim Chap 7, pp 133-160).


Plus at least one of the unstarred readings from the above list 7a-8a.
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<th>8b</th>
<th>Thursday 13 September 2-4 pm</th>
<th><strong>Research Proposal Workshop:</strong> Continued round-table discussion of electronic database search results and annotated bibliography.</th>
<th><strong>Assessment 3 – Summary of Electronic Database Search – Annotated Bibliography:</strong> See detailed assignment description in the first part of the syllabus.</th>
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| 9a | Tuesday 18 September 3-5 (1 hour with GTM, 2 hours with guests with GTM in attendance) | **The Text-Based Interpretive Epistemology:** Archival, critical, historical, theoretical, argument and interpretive “text”-based research  
* 1. Introduction: The Text-Based Interpretive Epistemology (2:00-3:00 pm)  
* 2. Historical Text-Based Research  
Special Guest: Dr Greg Castillo (3:00-4:00 pm)  
* 3. Research Workshop: Example of Text-Based Interpretive Research  
Special Guest: PhD candidate Sing D’Arcy (4:00-5:00 pm)  
**Note:** Dr Glen Hill, who normally does a segment of this topic on Critical Theoretical Research, is unable to join us this semester. If you interested in knowing more about that approach, please contact him personally or during his office hours. | **Leedy & Ormrod, Chap 8, pp 161-178.**  
**Groat & Wang, Chaps 6 & 11, pp 135-172, 301-340.**  
| 9b | Thursday 20 September | **Research Proposal Workshop:** | **Assessment 4 – Critical Literature Review Essay:** An essay (max 10 double-spaced pages or ca 3000 words) |
2-4 pm
(Note the short time – due to the AVCC Common Week next week, we need to complete all 10 reviews during this class – each presentation will be maximum 10 minutes including discussion)

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<th>Time</th>
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<td>10b</td>
<td>Thursday 4 October 2-4 pm</td>
<td><strong>Research Workshop: Examples of Field-Based Simulation and Survey Research</strong></td>
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Special Guests: PhD candidates Rohan Lulham and Mozammel Mridha

** The Digital Computational Prototype Epistemology: **
The research epistemology(ies?) underlying design computing and cognition research, including axiom- and conjecture-based, simulation and virtual reality, prototyping and development research and new frontiers.

PS: GTM will not be able to be present for this class, as is conflicts with a previously planned trip. Nevertheless, I have met with the DCC group to plan the session ahead of time.

** Research Workshop: Examples of Digital Computational Research **

Special Guests: PhD candidates TBD

** Part III **

** Ethical Considerations in Research, Data Analysis & the Publication of Research **

** Ethical Considerations in Research:** Human ethics; intellectual property; credit vs plagiarism; publications and authorship; and professional codes of ethics (tentative)

** Leedy & Ormrod, parts of Chaps 5, pp 101-104, 150 (top).**

** Relevant University of Sydney websites on ethics in research – access and review all:**
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<th><strong>Part IV</strong></th>
<th><strong>Presentations of Preliminary Research Proposals</strong></th>
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<tr>
<td><strong>Final Seminar</strong></td>
<td><strong>During Exam Week</strong></td>
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**Research Proposal Workshop:** Continued Round-table Discussion of Preliminary Research Methods

**Assignment 5 – Outline of Research Methods:**
See details above in the first part of the syllabus.

Due – Electronic submission due to your supervisior and Associate Supervisor. It is recommended that you have a group/committee meeting to get feedback from your supervisory team on this very important submission.

**Introduction to Data Analysis:**
Qualitative and quantitative data analysis; interpretive analysis; data analysis spiral; descriptive and inferential statistics; parametric and non-parametric statistics; qualitative and statistical software packages; eg, SPSS and ZMET

Special Guests: PhD candidates Leilei Xu and Donna Wheatley

And

**Research Proposal and Papers Workshop:**
How to write research grant proposals; publishable papers and where to publish; theses; CVs and business plans; and PPT presentation skills (tentative – time permitting, 4-5 pm)

**Leedy & Ormrod, Chaps 7, 11 & Appendix, pp 150-156, 303-308.**

**Miles & Huberman (1994), Qualitative Data Analysis.** (skim the whole book so you have an idea of the topics covered in this book for future reference)

**Zaltman, G. (1997). Rethinking market research: Putting people back in. Journal of Marketing Research, 34(4) 424-437. Also available at:**

**Leedy & Ormrod, Chaps 6 & 12, pp 115-132, 282-302.**

**Day & Gastel (2006), How to Write and Publish a Scientific Paper (6th ed.).** (skim)

**Strunk & White (2005), The Elements of Style.** (skim – keep close to hand while you are writing)
| Thursday 8 November 12-6 pm | All research Supervisors and Associate Supervisors will be invited – and anyone else to whom you would like to extend an invitation.  
Set-up time for all students is 12:00-12:30 pm. First presentation at 12:30 pm. The afternoon will end with refreshments from 6:00-6:30 pm – all invited.  
than 15 pages in length including illustrations and references. See details above in the first part of the syllabus.  
Give one full hard copy of your draft Research Pre-Proposal and PPT handout to each of your Supervisor, Associate Supervisor and me.  
Also, bring multiple copies of just your PPT handout for all attendees.  
**Oral Presentation:** maximum 10 minutes presentation each, with maximum 7-8 PowerPoint slides, followed by 10 minutes for questions, discussion and critique.  
**Final Submission:** In the light of the discussion and feedback, edit the written version of your Research Pre-Proposal, submit electronically and send copies to your Supervisor and Associate Supervisor.  
**Due: 9:00 am, Monday 12 November** |