HONOURS IN PSYCHOLOGY

Program Guide

2017

Note: Information in this Guide may change before the start of the Honours year 2017

(Updated 17 January 2017)
Honours in Psychology aims to build on the knowledge and skills that you have learned in your undergraduate career and has been designed to emphasise both theoretical and practical knowledge in psychology. The aim of the program is to build on your knowledge of psychology and the principles that underlie the development of new knowledge in psychology. However, Honours is also a time of social, professional and intellectual development in which students become better acquainted with some of the central features of academic life: seminars, workshops, presentation of work to colleagues, research design and communication of scientific findings.

Accordingly, students are generally given more autonomy and responsibility for their own intellectual development during this year than before. Our Honours degree aims to develop your skills, under supervision, as an independent researcher and innovative thinker. Honours will also test your organisational skills, including your ability to prepare, define, plan, carry out and report on research. As an Honours student in psychology, you will undertake your own empirical research on a topic you choose to study in consultation with an academic supervisor. In doing so, your research should involve the creation of new information and knowledge in your chosen field.

Several learning goals underpin the program. By the end of the Honours program you will have further developed your:

- knowledge of theory, measurement and analysis in psychology;
- understanding of the relationship between causal factors, processes and outcomes;
- problem-solving abilities as both a producer and consumer of scientific knowledge;
- analytical and critical thinking skills;
- written and oral communication skills.

These learning goals provide the impetus for both the research project and the coursework components of the program.
# INFORMATION ABOUT STAFF

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<tr>
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STRUCTURE OF THE HONOURS PROGRAM

Coursework

By the end of the Psychology Honours Program, you will complete three compulsory courses. All students (including part-time) will complete all three coursework units in the first year of their enrolment. Part-time students will commence their research project in the second year of their Honours enrolment. The Research Methods course contains a core component plus a number of modules from which you select four. Some of these may be offered in second semester. Information about this will be given in the first Research Methods class, but an outline can be found below. Note the intensive work load in the beginning of the semester: three by two hours of lectures per week, for four weeks.

Statistics
- Semester 1
- 4 weeks x 6 hours (3 x 2 hour classes) plus additional seminars

Theory in Psychology
- Semester 1
- 9 weeks x 3 hours

Evidence-Based Assessment and Intervention
- Semester 2
- 9 weeks x 2 hours

Research Project

Thesis
- Full year
- Meetings to be arranged with Research Supervisor

MID-YEAR ENTRY INFORMATION

The closing date for mid-year applications is the last Friday in May.

Note that the range of potential supervisors during mid-year entry is limited, given that most of the supervisors take on all of their students in Semester 1. Because the mid-year honours entry process is slightly different and can be a different experience for students, it is suggested that you talk to one of the honours convenors for advice.

THESIS DUE DATE

NOTE: At the time that this document was released, the Research School of Psychology was still negotiating with both the ANU Joint Colleges of Science and the ANU College of Arts and Social Sciences to agree upon a common due date for all Psychology Honours students regardless of their degree. We will inform students as soon as possible of the thesis due date.
GUIDELINES FOR ASSESSABLE WORK

- All assessable work should be submitted through Turnitin, unless your course convenor suggests otherwise.
- Late work will incur a penalty of 5% per day. Weekends count as one day.
- For extensions to assignment deadlines, please refer to the ANU rules on extensions (https://policies.anu.edu.au/ppl/document/ANUP_004604).
- Extensions to thesis deadlines will only be granted due to circumstances that could not have been anticipated and that are completely beyond the student’s control. Such applications should be discussed with the Supervisor, and, following this, with the Honours Convenor – Pastoral Care (if your degree is in CMBE) or with the appropriate representative in CASS (if you are a BA student). Extensions must then be approved by the appropriate Deputy Dean within either CMBE or CASS. Note that the Psychology Honours Convenors can approve extensions only up to two weeks.

HONOURS RULES

We Expect That You Will:

- contribute to the academic life of the Research School of Psychology by attending all of the School’s Gibb Seminars;
- treat School and University facilities and resources with respect and care, and follow Occupational Health and Safety requirements;
- observe the relevant University and School rules and regulations;
- interact with other students and staff in accordance with the relevant University policies (e.g., Equity and Diversity Policies).

Grading

- You must pass each component of the Honours program (each course and your thesis) in order to pass the program as a whole and take out your degree.
- At the end of the year, final grades will be determined by averaging your coursework marks and then averaging this score with your thesis mark (i.e., 50% coursework, 50% research). The School Examinations Committee will make a recommendation to the College regarding the Honours grade to be awarded to each student.

Honours Grades

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<th>Marks</th>
<th>Grades (courses &amp; thesis)</th>
<th>Final grade categories</th>
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<tr>
<td>80-100</td>
<td>HD</td>
<td>H1 (First)</td>
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<tr>
<td>70-79</td>
<td>Distinction</td>
<td>H2a</td>
</tr>
<tr>
<td>60-69</td>
<td>Credit</td>
<td>H2b</td>
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<tr>
<td>50-59</td>
<td>Pass</td>
<td>H3</td>
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<tr>
<td>&lt;50</td>
<td>Fail</td>
<td>Fail</td>
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Data Falsification and Plagiarism

- The falsification of results gained during the course of your Honours work is a serious offence. It is essential that you maintain a careful written record of experimental procedures and results. Copying or summarising another person's results or ideas as if they were your own is a form of theft. The source of such material must always be cited in the text and Reference section of your written work.
- University rules and policies concerning data falsification and plagiarism are covered on: http://www.anu.edu.au/students/program-administration/assessments-exams/academic-honesty-plagiarism. Penalties for such offences may include termination of a student’s course of study.

### COURSE OUTLINES

All course outline information, including times, dates, locations, and assessment, will be made available to students on the ANU Wattle system. For your information, below we provide some information about the Statistics course.

**Statistics (Semester 1, Weeks 1 – 4)**

This section of the Honours coursework is divided into two phases. The first phase consists of core topics that all fourth-year psychology students need to be acquainted with:

1. Review of ANOVA, regression and the General Linear Model
2. Data-screening and cleaning
3. Introduction to power and confidence intervals
4. ANOVA: Nonorthogonal designs and fixed versus random-effects models
5. Interaction effects and interaction terms: Moderation
6. ANCOVA and the GLM
7. Path analysis
8. Mediation
9. Repeated-measures and mixed-design ANOVA
10. Introduction to multi-level models
11. Principal Components Analysis
12. Introduction to Factor Analysis

At the end of the first phase there will be an exam based on the 12 topics and an assignment. All students will then select at least four workshops to be offered later in Semester 1. The workshops enable you to choose topics on the basis of their interests and research needs. The list of topics that will be offered will vary from year to year, and be driven in part by student interest. Workshops that may be offered include:

1. Further applications of confidence intervals and power
2. Factor analysis
3. Matrix algebra for multivariate statistics
4. Structural equation modelling
5. Bootstrapping and resampling methods
6. Multiway frequency analysis
7. Introduction to time series analysis
8. Logistic regression
9. Meta-analysis
10. Computer simulation methods
11. Multi-level models
12. Planned comparisons in experiments

Workshops on specific techniques may be offered as demand or need arises. Note that some workshops may have others as prerequisites. Each workshop component will be assessed by participation, on an ungraded pass basis.

**GENERAL INFORMATION AND ACTIVITY DAYS**

**Orientation Day & Lunch**
**Semester 1**
**First Monday of the Semester, 20 February 2017, 11:00 am to 12:00, Room 2.01 (Peter Baume Building, 42A)**

The Director of the Research School of Psychology would like to welcome you to the School and to hear any ideas you may have about the structure or content of the Honours program. You will also meet the other teaching staff.

**Photograph Session and Lunch**
**On Orientation Day @ 12:00 noon – 2:00 pm**
**Psychology Building 39**

A poster will be printed consisting of photographs of all of the Honours students. Students will be asked to have their photograph taken during the above time and date. Note that lunch will be provided, and you will be able to meet your fellow Honours students and the teaching and support staff in the School.

**Special Ethics Seminar**
**Semester 1 - Date to Be Advised**

This seminar will include presentations from members of the ANU Human Ethics Committee and the Research School of Psychology. Its purpose is to explain to you the procedure of applying for ethics approval for your research project.
The research project represents a significant proportion of the workload in the Honours program and will contribute 50% of students’ final mark. Of this 50%, 45% is contributed by the thesis itself and 5% by students’ performance throughout the year, as assessed by individual supervisors.

The primary aim of this section of the course is to develop students’ skills as researchers. The research project also represents an opportunity for students to learn, in depth, about a particular topic area in psychology. Students will have the opportunity to conduct empirical research within a range of broad topics. Topics are largely dependent upon the research interests of staff.

Students will work on their own, individual research project under supervision.

The focus of the project will develop (to at least some extent) as a function of the supervisor’s areas of expertise and interest. Remember, however, that students are primarily responsible for developing their own piece of original empirical research, based on a specific research question.

By early May, each student will present a summary of his or her research aims, design, methods, and hypotheses to a panel of staff. This will give students an independent perspective on their planned project. Students will be expected to present for no more than 10 minutes. We will allow up to 20 minutes for discussion. This presentation is not marked; it should be clear but not overly formal. Because students may receive suggestions to change or modify aspects of their research project as a result of this presentation, students should not be collecting data before they present. If students do start collecting data before this presentation, they run the risk of having to start over to accommodate the suggested changes/modifications.

Students will be provided with more information about this presentation later in Semester 1 by their supervisor.

During this meeting, it is also advisable for students to decide on your thesis Advisor – this is another member of staff (in addition to the Supervisor) with whom students should meet a few times during the year for advice and an additional perspective on your thesis.

Many students who do Honours in psychology plan to do clinical studies. As a result, they think that they must do a clinical topic for their Honours thesis. This is not the case. The topic of students’ Honours thesis will have absolutely no bearing on entry to our clinical programs. What will affect students’ chances on entry is their Honours grade. Note that given the practical problems involved in conducting clinical research at the Honours level, we advise students not to do research dealing with clinical populations for their Honours thesis.

Getting a Supervisor

As of the 2017 academic year, the ANU Research School of Psychology has implemented a new procedure for the matching of honours students with research supervisors. The assignment procedure follows.

Students who are accepted into the ANU Psychology Honours program will be asked to rank-order their preferences for supervisors. The list of potential supervisors for this year is presented in Appendix A, along with most of the supervisors’ project descriptions and supervisory styles. Students are welcome to contact potential supervisors to speak with them in person (although, please note that some supervisors may not be available to meet with students prior to the ranking
deadline). Students can also find out more about potential supervisors and their research areas by reading information about them from their respective ANU web pages. Students can make their rankings on any basis they wish.

- Potential supervisors will also be able to rank-order their preferences for potential students. Accordingly, students are encouraged to at least send an email to supervisors with whom they wish to work and tell them a bit about themselves. Otherwise, it will be very difficult for supervisors to rank students whom they do not know.
- Based on these rankings, students will be assigned to supervisors. Preference will be given when there are consistencies between students’ and supervisors’ rankings, although final preferences will be given to students’ rankings.
- This procedure means:
  1. Students need not – and, indeed, cannot – arrange to have an ANU Psychology research supervisor prior to the submission of their application;
  2. Students may end up with an Honours research supervisor who is not their preferred choice (although note that we were never able to guarantee this in the past); clinical supervisors are often very popular, but not everyone who requested a clinical area or clinical supervisor will get their initial supervisory preference;
  3. Students do not need to have a research topic prior to being assigned to a supervisor;
  4. No supervisor can commit or promise to be any student’s supervisor;
  5. Students commencing their ANU Psychology Honours research in 2017 will be informed of who their supervisors are in January 2017.

Things to Consider When Ranking Supervisors

- Students will be spending a lot of time with their supervisor over the course of the year. Students, thus, should try to ensure that the supervision style is compatible with how they (the students) like to work.

- Students will be spending a lot of time working on the thesis, so it is best if they can work in an area of psychology in which they have some initial interest. However, students must know that the Research School of Psychology cannot and will not guarantee that students will be able to have their first (or even second or third) preference of supervisors or research topics.

Upon accepting students into the ANU Honours in Psychology Program, the Research School of Psychology will guarantee that every student will be able to have a supervisor. And, as noted above, we realize that it is most likely best for students to have supervisors in research areas in which they (the students) are most interested. However, a match of interests is neither a requirement nor a guarantee. In the end, what is most important is that students receive quality supervision in some area of psychological research. This means that some students may be asked to complete a Research Project in an area of psychology that is not one in which they have initially high levels of interest.

Expectations of Students and Supervisors

*Parts of this section have been taken from the College of Medicine, Biology and Environment Honours Handbook*

As an Honours student, you are at a stage intermediate between undergraduate and graduate work. Formally, the university classifies you as an undergraduate. However, your work is more like that of a graduate student. During Honours you will experience some of the independence and self-direction required of graduate research students, but you also have close contact and direction from your supervisor(s).
All Honours students have a supervisor. The relationship between supervisor and student involves obligations on the part of both parties. Your supervisor will assist you with advice, guidance and criticism and help you to achieve your personal academic goals. The supervisor is there to help you choose and design the research project, guide the research in a practical and productive way, and advise you on writing the best thesis of which you are capable. At the same time, your supervisor can only guide your efforts, and then only if you are receptive to advice. You must take the responsibility for the final results of your work.

We expect that you will:

- maintain a close dialogue and constructive working relationship with your supervisor(s);
- plan your research program with your supervisor(s);
- consider advice seriously. If advice is not taken, the supervisor should be informed and given the reasons for the decision;
- consult regularly with your supervisor. You should prepare in advance for consultations, by determining the help you require and the areas in which advice would be useful;
- complete, to the best of your ability, a well written, thorough and competent thesis of the highest standard.

Your supervisor also has responsibilities. These are to:

- assist you in selecting and defining the scope of a suitable thesis topic or problem;
- assist you in devising a schedule for the year's thesis work;
- guide you in the selection and application of appropriate data collection and analysis procedures and advise on the solution of any difficulties that arise;
- advise on matters of thesis content, organisation and writing, including the timely provision of comments, written and oral, on drafts or portions of the thesis;
- meet frequently with you to discuss and evaluate each stage of the thesis project;
- monitor your progress and advise you when progress is unsatisfactory;
- assist you in gaining clearance from the ANU Human Ethics Committee if required.

**Use of Shared/Secondary Data**

Following the Australian Psychology Accreditation Council guidelines for Honours theses, we now allow Honours students to share data and/or jointly collect data and to use secondary (or archive) data. Clearly, each student still needs to use the data to ask their own, unique research question, but in many cases students are working on similar issues with the same supervisor, and therefore jointly collecting data makes it much easier to obtain the data. This is especially true for research projects that require many subjects, such as social psychology experiments and cognitive experiments that investigate group differences (e.g., those comparing dyslexic and non-dyslexic children). There are also a number of existing data sets that can be used to answer new questions. Theses that make use of shared data and/or joint collection of data or secondary data are viewed and assessed in the same way as those in which the student collects data by themselves.

Students who share a dataset, jointly collect data, or use secondary data need to do the following.
• Students need to make a formal declaration in the acknowledgements section of the thesis that shared data/secondary data were used, and with shared data set out clearly their own unique contributions to the design and collection of the data.

• Students may need to enlarge on this acknowledgement and description, if necessary, in the Method and Results sections. They can also put information into an Appendix (so it will not be included in the word count).

• Students need to have more detailed and/or complex theory and results sections to compensate for not actually conducting the study themselves.

• With secondary data, students need to critique the existing measures and their appropriateness for pursuing their specific research questions (e.g., students may need to state whether different or better measures could be used, or what they would do in case they were designing the study, measures, or items themselves).
The Honours thesis is very different to anything that students have done during their undergraduate years. In order to give students some guidance as to how they should be progressing throughout the year, we have developed the following milestones that must be completed. It is important to note that – although we do not expect students to need an extension for the submission of their thesis, and such extensions are only given for delays caused by unforeseen factors outside of students’ control – no student will be eligible for an extension if they have failed to meet any of these milestones. Use the form on the following page to keep track of these milestones.

- **Milestone 1. Presentation of Research Proposal**
  This is to be done in Semester 1 prior to the commencement of data collection. Typically, presentations should be made about three months after the start of the semester (i.e., April/May or October/November for mid-year students). This should be arranged this with students’ supervisor.

- **Milestone 2. Mid-term Literature Review**.
  This is due about one month after students’ research proposal presentations. The exact format of this Review is open to discussions with students’ supervisor. At a minimum, the Review needs to consist of a five-page literature review that includes the theoretical question that the thesis will be addressing; it could also be a first draft of the Introduction. It must be given to students’ supervisor. Note: this will not be considered as constituting a draft of the Introduction.

- **Milestone 3. Signing off on the Data Collection and Analysis by the Supervisor and the Student**.
  About one month prior to the submission of the thesis, both the supervisor and the student must sign off on the scope of all data collection and data analysis required for the completion of the thesis, indicating that they think the thesis is on track. If they think the thesis is not on track, this needs to be discussed with the Honours Convenors immediately and the reasons for the problems explained. Extensions to the thesis due date will only be given for delays caused by unforeseen factors outside of students’ control.
ANU Research School of Psychology
Honours Milestone Completion Form
(Print a separate copy of this form.)

Student’s Name: ____________________________  Student’s Number: ___________

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Supervisor’s Signature: ____________________________  Date: ________________

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Supervisor’s Signature: ____________________________  Date: ________________

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Supervisor’s Signature: ____________________________  Date: ________________

Student’s Signature: ____________________________  Date: ________________
Ethics Approval

- All research projects must be approved by the appropriate ANU Ethics Committee.

- If you are not doing your research under your supervisor’s ethics approval, then you must apply for ethics approval using the appropriate ANU online Ethics Application form. Do not use any other form; the Committee will not accept it. The ethics seminar will provide the information for completing this process.

- You will need to know a lot about your research project before you can complete the form. However, you should aim to get your ethics form in as soon as you can, as approval usually takes from one to two months.

- Ethics forms received by the Ethics Committee by the end of the month will be reviewed at their next meeting at the beginning of the following month (e.g., forms received at the end of May will be reviewed in the first week of June, and if no problems arise with your proposal, will be approved by mid-July).

- You may not begin your research before getting formal approval from the Ethics Committee.

- All ethics forms should be reviewed by your Supervisor.

- In some cases, supervisors will have already obtained approval for projects that may well cover your research (if your research is similar enough). In these instances, it may be possible to simply add your name to the existing ethics protocol. It is a good idea to check this with your Supervisor as this option may save you some time.
The Thesis

- The typical thesis is between 10,000 and 12,000 words; the word limit is 12,000 words, NOT INCLUDING acknowledgements, title page, table of contents, in-text tables, in-text figures, titles of tables or figures, references in the Reference section and appendices. The word count INCLUDES the Abstract, Introduction, Method, Results, Discussion, in-text citations or references and in-text statistics. The length of the thesis must not exceed 12,000 words. Theses that exceed 12,000 words will be returned to the student for pruning. During the period of thesis reduction, normal late penalties apply.

- Supervisors can read and discuss various drafts of the thesis; however, only one draft of the Abstract, Introduction, Method, Results, Discussion, and then the whole thesis, should be submitted to your supervisor for formal written comments.

- The presentation of the thesis must adhere to accepted APA (American Psychological Association) format (see Appendices A and B for information on writing and handing in your thesis). A copy of the APA guide will be made available in the Honours room towards the end of the year.

- Penalties for late thesis submission are 5% per day for the first week. Weekends are counted as one day.

- The thesis will be submitted in hardcopy (unbound) and also on Wattle on the day specified by the College of Medicine, Biology and Environment. Note, however, that the hard copy must be submitted to the Psychology Enquiries Office by 4:00 p.m. on the due dates set by the College. (NOTE: The due date for Psychology has not been set at the time of this document’s creation).

Some Information on Hypotheses or Predictions

In some cases, it may be appropriate to make a single set of predictions. This occurs when you have one theory driving the research, and this theory predicts a clear set of outcomes in your study. For example, 'Theory X predicts that I will observe effects A, B and C.' THIS FORMAT IS NOT COMPULSORY, as many research questions are not of this form.

Often the aim of your project is to discriminate between two (or more) competing theoretical ideas. Under these circumstances it is not appropriate to illogically 'predict' that one particular set of outcomes will be observed. An appropriate format is 'If theoretical idea X is true, the outcomes A, B and C would be predicted. On the other hand, if theoretical idea Y is true, the outcomes D, E and F would be predicted.'

It is often appropriate to distinguish between 'predictions' with different degrees of theoretical status. Sometimes, you expect a particular outcome for one part of your study only because someone has observed that empirical finding previously, not because of any theoretical reason. In this case, it might be more appropriate to say 'Based on the findings of Z (2001), I expected to replicate the result A' rather than 'I predict result A'. Sometimes a result is predicted by theory, but is a well-established finding in the literature, and you merely need to replicate it before you can turn to your new questions of interest. In this case, an appropriate format might be 'Based on theory X and previous empirical findings (e.g., Z, 2001), I expected to replicate result A in the adult group. The question of interest was then whether children would show this same pattern, as would be predicted by developmental theory M, or whether they would fail to show the effect, as predicted by developmental theory N.'
Assessment of the Research Component of the Program

- The thesis will be marked by two examiners (not your Supervisor) whose assessment of your thesis will contribute 45% to your final Honours mark. Your Supervisor will give you a mark for your contribution to the development of the thesis (e.g., degree of initiative and independence shown) to be worth 5% of your final Honours mark. This is known as the ‘Supervisor’s mark’.

- Your Supervisor will also supply a thesis mark that will be called on in a resolution process in the event that examiners’ marks are widely discrepant. Resolution processes are overseen by the Honours Convenor (or a delegate if the Convenor is involved in the discrepancy).

- Marking criteria for Honours theses and ‘Supervisors marks’ are provided below.

### MARKING CRITERIA FOR HONOURS THERSES

The Research School of Psychology uses a marking guide to assess theses and to determine ‘Supervisor’s marks’. The College of Medicine, Biology, and Environment also provides a guide for the assessment of the research component of the Honours year. Both are provided below.

When marking an Honours thesis, judgements will be based upon students’:

- review of relevant research;
- statement of the problem and its justification in the light of previous theory and research;
- competence and sophistication in research design, including skills in design of measurement, equipment, or selection of subjects;
- competence in data analysis, and presentation of results;
- ability to relate results to previous research, to discuss their theoretical significance, and to suggest possibilities for further research;
- structure of the argument, clarity and elegance of expression, and adherence to APA guidelines;
- level of originality and initiative displayed throughout the year.

### College of Medicine, Biology and Environment Grading Criteria


The following criteria are used to assess the quality of theses and to assign grades. Departments will ask the supervisors to comment on whether the students have demonstrated some of these characteristics; while the judgement on other characteristics will rely purely on the thesis.

#### Honours III 50-59%

- The student has demonstrated some knowledge of the relevant background literature, but with serious gaps, and limited understanding;
- The student applied relevant techniques and carried out research work, but needed considerable assistance and showed limited understanding of the procedures employed;
- The student presented their results, though in a somewhat muddled and/or incomplete way.
Honours IIB 60-69%
As for Honours III, but in addition:

- The student has demonstrated a reasonable knowledge of the relevant background literature, with only a few gaps, albeit in a somewhat uncritical way;
- The student demonstrated that they had learned many of the relevant skills (which might include laboratory techniques, computer programming and statistical analysis);
- The student presented their results in an appropriate format, and communicated them effectively.

Honours IIA 70-79%
As for Honours IIB, but in addition:

- The student has demonstrated a thorough knowledge of the relevant background literature, though still with limited critical appreciation;
- The student demonstrated reasonable technical mastery of all the relevant skills;
- The student worked hard, efficiently and carefully;
- The student presented their results and/or data clearly and succinctly.

Honours I 80-89%
As for Honours IIA, but in addition:

- The student has critically analysed the relevant background literature rather than merely summarising it;
- The thesis demonstrates a clear appreciation of how their work fits in to the larger field of research;
- The student demonstrated considerable technical mastery of all the relevant skills;
- They showed some appreciation of the limitations of the experimental design or techniques used and have outlined future research directions that are feasible;
- The student put forward their own useful and valid ideas relating to the project;
- The student further demonstrated the ability to see, and take, the logical next step without excessive 'prodding', the ability to act independently of the supervisor's immediate direction and presence, but the maturity to know when the supervisor’s help is necessary;
- The student demonstrated the persistence and ability to carry on under difficulty;
- They picked up new concepts and skills rapidly;
- They showed the ability to work effectively in the presence of others.

Honours I >90%
As above, but in addition:

- The student obtained concepts and procedures independently from the literature and at least discussed a use for them in the study;
- The student demonstrated impressive technical mastery of all the relevant skills;
- They demonstrate a good understanding not only of the techniques they employed, but other alternative techniques and the reasons for choosing between them;
- They have outlined possible future directions which are not merely feasible but which show considerable originality;
- The student not only put forward useful and valid ideas relating to the project, but also demonstrated the ability to critically evaluate and act upon such ideas.
Research School of Psychology Marking Guide

- This description is intended as a guide only
- For any one criterion, the candidate does not have to satisfy all points under each grade to obtain that grade
- The candidate may satisfy any one criterion at different levels. Markers must exercise their own judgement in awarding grades against each criterion


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<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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| **HD 80-100** | - Review represents a thorough and appropriately detailed coverage of the relevant literature. The candidate may incorporate novel (but relevant) areas of research/ literature  
- Presentation and interpretation of theories and research findings are accurate and insightful  
- Interpretations of theory and statements of fact are clearly presented and given a strong and convincing basis in evidence  
- Where the candidate cites evidence, s/he uses the most appropriate reference  
- The candidate goes beyond already published claims and presents his or her own substantiated interpretation of the literature  
- The problem driving the research is clearly stated. The problem is broken down in terms of clear hypotheses, themselves in the form of statements of causal relationships  
- The problem and associated hypotheses are demonstrably derived from a sound and accurate understanding of the literature  
- The proposed problem or the approach to understanding the problem is worth pursuing and is insightful or creative |
| **D 70-79** | - Review covers all core areas of the literature in sufficient detail, with no significant intrusions of irrelevant material  
- The material presented is clearly understood by the candidate  
- Statements of fact or claims made are accurate, supported by evidence and are based on fact/logic, not opinion  
- The problem behind the research is identifiable and is framed in terms of statements of hypotheses. The candidate gives a clear presentation of predictions  
- The research problem represents a logical step forward, based on the presentation of the literature  
- The candidate proposes to make an original and worthwhile contribution to the development of theory, methodology or scientific knowledge |
| **Cr 60-69** | - Review covers most areas of the literature accurately but omits other key areas  
- The candidate may spend some time introducing areas of work that do not appear to make any real contribution  
- Statements of fact or claims made are usually but not always supported by evidence |
### Criterion 1: Literature Review and Critical Analysis

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<th>Grade</th>
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| HD 80-100   | - The literature is presented in a descriptive way, rather than in an analytical way  
- The candidate does not take up obvious opportunities to make conclusions or important points salient to the reader  
- The candidate may rely too heavily on a small number of references  
- The broad aims of the research are evident but are not spelled out in terms of distinct hypotheses or predictions  
- The research problem makes sense in the light of the literature  
- Review is relevant but heavily one-sided  
- The candidate does not explain theories adequately, does not appear to ‘engage’ with the literature or does not appear to fully understand the material  
- Minor statements of fact or claims are wrong or are misinterpreted from the literature  
- The literature is presented in an uncritical way  
- Makes improbable leaps of logic in the presentation of literature or arguments  
- Research aims and hypotheses are evident but do not follow from the treatment of the literature  

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<tr>
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</table>
| 50-59       | - The approach to answering the research question is highly original and imaginative. The design reflects an advanced understanding of the key issues in this area of research  
- Variables have been operationalised in creative and novel ways  
- The candidate employs a method of gathering data that is ideally suited to answering the research question. The method chosen is also technically sophisticated or highly creative. This study has been very well constructed and executed  
- A real and successful effort has been made to access the best sample of participants  
- The study contains nothing that is superfluous or irrelevant  
- AND – all criteria for a D grade have been satisfied  

### Grade 50-59

- Presentation and interpretation of theories and research findings is obviously and consistently wrong  
- Material has been clearly and substantially plagiarised (NOTE: sufficient for Fail grade of thesis)  
- The candidate fails to present any mention of his/her research aims/problem  
- The problem under investigation is irrelevant or not psychological in nature  

### Grade ≤49

- Presentation and interpretation of theories and research findings is obviously and consistently wrong  
- Material has been clearly and substantially plagiarised (NOTE: sufficient for Fail grade of thesis)  
- The candidate fails to present any mention of his/her research aims/problem  
- The problem under investigation is irrelevant or not psychological in nature


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- A real and successful effort has been made to access the best sample of participants  
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### Grade ≤49

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- Variables have been operationalised in creative and novel ways  
- The candidate employs a method of gathering data that is ideally suited to answering the research question. The method chosen is also technically sophisticated or highly creative. This study has been very well constructed and executed  
- A real and successful effort has been made to access the best sample of participants  
- The study contains nothing that is superfluous or irrelevant  
- AND – all criteria for a D grade have been satisfied
<table>
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</table>
| D 70-79 | - The research is original (not a simple replication, using the same design, sample, measures etc. as a previous study)  
- The design will allow a clear test of the research aims/hypotheses  
- The candidate has chosen an appropriate method/equipment to investigate the research question  
- Variables have been operationalised in a way that is valid  
- Measures are well targeted and their inclusion is justified (e.g., Measures are sensitive enough and allow the researcher to draw conclusions about causal factors)  
- If standard measures are being used, they are the most relevant available. The candidate has used a novel combination of instruments or measures  
- Manipulation checks (where appropriate) have been included and are appropriate  
- Scales are appropriate and useful  
- The study has been designed in such a way as to allow findings to be generalised beyond the sample tested  
- The sample is representative and theoretically relevant  
- The sample size is appropriate |
| Cr 60-69 | - The research represents a very simple extension of past work, using existing, standard measures  
- The method of gathering data (e.g., survey, experiment) is suited to the research question  
- The candidate appears to have included measures unnecessarily or without justification and/or the candidate may have omitted some key measures  
- The design has been constructed in order to provide a test of the research aims |
| P 50-59 | - The study is a simple replication of past research (is not original in any significant respect)  
- The method of gathering data is suitable but suboptimal for addressing the research question  
- The study is unwieldy or unnecessarily complex  
- Measures may make sense in the light of research aims but are not well thought out or constructed  
- The sample size is inadequate even though it would have been possible to obtain an adequate sample |
| F ≤49 | - The research method or design does not allow the candidate to address the research question |
Criterion 3: Competence in data analysis, and presentation of results.

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| **HD 80-100** | - The results section provides a very clear, insightful and appropriately detailed summary of the data  
- Analyses are appropriate for the hypotheses and are performed with a high degree of competency  
- The candidate has demonstrated a sophisticated knowledge of the procedures used  
- The result section gives the impression that the candidate is completely familiar with the purpose of the study and with the data  
- The results section does not contain any omissions or errors |
| **D 70-79** | - Data analysis is appropriate and provides a summary of the data that is relevant to hypotheses  
- All appropriate statistics/measures are reported  
- The data are presented clearly and the results section is succinct and easy to follow |
| **Cr 60-69** | - The analyses performed may not be optimal but they allow the candidate to draw conclusions about the data  
- The candidate may fail to report all measures or effects or may not perform all analyses implied by hypotheses/research aims |
| **P 50-59** | - The candidate presents analyses that are unnecessarily complex or insufficiently detailed  
- The candidate may not report all necessary measures  
- The candidate may not appear to have fully understood the data or purpose of the study |
| **F ≤49** | - The techniques used are fundamentally incorrect or are used incorrectly, despite being appropriate for a 4th year level thesis  
- The analysis may be done correctly but the candidate fundamentally misinterprets the data |

Criterion 4: Ability to relate results to previous research, to discuss their theoretical significance, and to suggest possibilities for further research.

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| **HD 80-100** | - Discussion provides a very thorough exploration of the implications of the findings for all relevant theoretical perspectives  
- The candidate provides a full discussion of hypotheses in the light of findings and does not go beyond or downplay the significance of the data  
- Candidate is appropriately critical of the design and method, neither downplaying nor overstating problems. Where there are problems, the candidate indicates how they may be avoided in future and may even give details of an improved design  
- The discussion of future research directions is insightful and reflects a thorough understanding of key issues |
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<th>Grade</th>
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<tr>
<td>D 70-79</td>
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</table>
- The candidate provides a discussion of the fate of hypotheses  
- Discussion provides an exploration of the meaning of findings but may not give full attention to all relevant theoretical issues  
- The conclusions drawn in the discussion are reasonable, accurate and follow from the results obtained. They serve to clarify and explain the results to the reader  
- The candidate makes a successful effort to examine his/her own research for methodological/statistical weaknesses and to suggest improvements  
- The candidate suggests future research directions. This is logical and well targeted |
| Cr 60-69 |  
- An effort is made to present the findings and discuss their meaning  
- The significance of the findings for relevant theoretical perspectives is addressed but in a limited fashion. The candidate may not demonstrate a full understanding of the issues  
- New and unexpected theoretical perspectives or issues are presented in the discussion  
- The candidate may draw some conclusions that are not warranted, or that s/he has no real evidence for  
- The candidate may fail to emphasise the strengths of the study, or may overstate or ignore the significance of obvious weaknesses  
- The candidate accurately points out limitations of the study but does not recommend how these may be remedied |
| P 50-59 |  
- The candidate provides a descriptive rather than an analytical account of the findings  
- Conclusions drawn are wrong in parts  
- The discussion may target hypotheses but represents a clear attempt to ‘push’ a one-sided interpretation of findings |
| F ≤49 |  
- The discussion of findings is overwhelmingly wrong or too brief to be useful |
Criterion 5: Structure of the argument, clarity and elegance of expression, and adherence to APA guidelines.

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<thead>
<tr>
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| **HD 80-100** | • The main points are developed logically. The reader quickly gains the sense of a developing ‘story’ that is maintained throughout the thesis  
• The candidate presents a clear and consistent argument through the thesis  
• The writing is fluent (e.g., paragraphs and sentences are well constructed and follow logically on from each other)  
• Correct grammar and spelling are used  
• The candidate demonstrates an excellent command of language. S/he writes in clear, plain English. The writing style is not overblown, verbose or unsophisticated  
• Headings are clear and accurately describe the content that follows  
• All sources are acknowledged correctly  
• References and citations are presented in the appropriate format  
• The thesis as a whole is presented neatly, using easily readable font and spacing |
| **D 70-79** | • The main points are developed logically and, taken together, present a coherent picture  
• The argument is consistent – the candidate does not ‘change tack’ in the middle of the thesis  
• The thesis is easy to read and generally flows well  
• The writing is clear and can be read and understood with minimal effort  
• Correct grammar and spelling are used, with a few minor exceptions  
• Headings make sense and help to structure the thesis  
• All sources are acknowledged correctly  
• References and citations are presented in the appropriate format  
• The thesis as a whole is presented neatly, using easily readable font and spacing |
| **Cr 60-69** | • The thesis is structured as a psychology report and material is categorised under the correct headings  
• The candidate makes a clear effort to present a logical argument  
• The argument, or material presented to support the argument, may not be consistent throughout the theses e.g., The candidate may present key theoretical material in the discussion that did not appear in the Introduction or vice versa  
• Although main points are clear the thesis is difficult to understand at times, either due to poor sentence/paragraph construction or due to a lack of structure in the argument as a whole  
• Grammar and spelling are wrong in places – the thesis does not have a ‘polished’ feel to it  
• Headings help to structure the thesis but may not be written clearly or may not be well chosen |
| P 50-59 | The candidate makes an effort to use appropriate referencing but clear errors creep in  
| References and citations contain some errors but are presented a consistent format |
| F ≤49 | The thesis as a whole is presented as a psychology report and each section contains relevant information  
| The candidate has made an effort to structure the thesis around some core issues but the argument as a whole may be quite difficult to grasp  
| The thesis is difficult to read as a whole and contains consistent and obvious errors in grammar and spelling  
| The candidate has used a consistent but incorrect format for referencing (e.g., Uses a style usually employed for a history rather than a psychology thesis) |
| | The candidate may have failed to structure the thesis as a psychology report  
| | It is difficult to discern any coherent argument  
| | The writing style is confusing and the thesis as a whole is extremely difficult to read  
| | The thesis contains no references or citations |
## Research School of Psychology Marking Guide – Supervisor’s Mark

*For Supervisors only:* The degree of originality, effort and initiative displayed by this candidate.

<table>
<thead>
<tr>
<th>Grade</th>
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| **HD 80-100** | As for D, but in addition:  
- The student frequently put forward their own useful, original and valid ideas relating to the project  
- The student prepared for meetings by setting an agenda or arriving with specific questions/ideas for discussion  
- The student also demonstrated the independent ability to critically evaluate and act upon ideas  
- The student demonstrated the ability to see, and take, the logical next step without excessive ‘prodding’  
- The student was able to act independently of the supervisor’s immediate direction, and had the maturity to know when help was necessary  
- The student demonstrated the independent ability to critically evaluate and act upon ideas  
- The student demonstrated persistence in their approach to exploring ideas and seeking information  
- They demonstrated technical mastery of the skills needed to complete the project or picked up new skills and ideas rapidly |
| **D 70-79** |  
- The student worked hard, efficiently and carefully  
- The student was prepared for meetings  
- The student consistently showed an ability to engage in discussion about ideas and was also able to make regular, worthwhile and original contributions to these discussions  
- The student was able to take the initiative in conducting activities relevant to the completion of the project (e.g., seeking out papers, obtaining ethics approval, collecting data)  
- The student independently sought advice where it was necessary  
- The student showed resilience in dealing with difficulties  
- The student demonstrated reasonable technical mastery of all the relevant skills |
| **Cr 60-69** |  
- The student was able to talk about the project and to make occasional independent/original contributions  
- The student responded to suggestions that s/he seek advice from others  
- The supervisor was the main driver behind the development of the research (design, analysis, etc.)  
- The student attended organised meetings but on a number of occasions showed a lack of preparation  
- The student applied relevant techniques and carried out research work, but needed considerable assistance and showed limited understanding of the procedures employed |
| **P 50-59** |  
- The student was able to talk about the project but did not make original contributions to these discussions  
- The student may have frequently appeared to be confused about the purpose of the research project |
| F ≤49 | The student relied on the supervisor to lead discussion and, although a participant, may have been passive  
|       | The student consulted others but did so excessively, in a way that suggested over-dependence and a lack of initiative  
|       | The student may have failed to respond to suggestions that s/he seek advice on matters to do with the research (i.e., did not show the initiative necessary to seek advice, even when prompted repeatedly)  
|       | The student attended organised meetings but was poorly prepared  
|       | The student may have missed meetings without explanation or warning  
|       | The student was able to carry out tasks necessary to the completion of the research project (e.g., gather their own data) but needed considerable instruction on even basic activities  
|       | The student made contributions to discussion but these consistently demonstrated a lack of understanding of issues/material  
|       | The student never demonstrated an understanding of the research project or its aims  
|       | The student consistently showed a lack of interest in discussing the project  
|       | The student was unable to carry out tasks necessary to the completion of the research project, even with instruction  
|       | Even with instruction, tasks may have been carried out incorrectly (on a repeated basis)  |
Guide timeline for completion of research project
Also refer to the milestone requirements above.

<table>
<thead>
<tr>
<th>January - February</th>
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<tbody>
<tr>
<td>- Students meet with Supervisor to discuss project</td>
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<tr>
<th>February to April</th>
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<tr>
<td>- Develop research question and hypotheses</td>
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<tr>
<td>- Prepare initial review of relevant literature</td>
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<td>- Design research tools (questionnaires etc.)</td>
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<tr>
<td>- Submit ethics proposal to ANU Ethics Committee and any other relevant ethics committee.</td>
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<tr>
<th>April</th>
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<tr>
<td>- Finalise research instruments so that experiment is ready to go when ethics approval is given</td>
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<tr>
<th>May</th>
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<tbody>
<tr>
<td>- Present research aims and design to staff panel in early May</td>
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<tr>
<td>- Continue review and write up of the literature. You should aim to have a draft Introduction section written by the beginning of second semester</td>
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<tr>
<td>- Write up Method section of the research report (thesis)</td>
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<tr>
<th>June / July</th>
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<tbody>
<tr>
<td>- Run study and analyse data</td>
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<tr>
<td>- Begin write up of Results and Discussion sections of the research report</td>
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<tr>
<th>August / September</th>
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<tbody>
<tr>
<td>- Update Literature review</td>
</tr>
<tr>
<td>- Complete first draft of thesis</td>
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<tr>
<td>- Give draft research report to supervisor (September)</td>
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<tr>
<th>October</th>
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<tr>
<td>- Polish research report, taking into account feedback from Supervisor</td>
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<tr>
<th>October</th>
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<tr>
<td>- End of semester, submit thesis for examination</td>
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Facilities for Students

Libraries
The ANU collection is located in several buildings, each of which houses a collection focusing on one broad discipline. Material of most relevance to psychology can be found in the Chifley (Arts) and Hancock (Science) libraries. However, depending upon your interests, you may also consult the Law Library, Menzies library and/or the library at the John Curtin School of Medical Research. The National Library may also be a valuable source of material. The library aims to stock all material published in Australia. You will be able to borrow books for a period of several hours, however you are unable to take material from the building. Photocopiers are available, but be prepared with change to purchase photocopy cards. The National Library is located in Parkes Place, Barton, near Old Parliament House.

Meeting and Work Room
Honours students have their own meeting and work room, which is located in the Peter Baume building (Room 2.08). The Honours room will be available from the start of the semester.

Photocopying
Students have access to a photocopier, located in the resource room, in the Peter Baume building (Room 2.09). The photocopiers and printers are not intended for large scale printing requirements. See below for printing questionnaires and surveys.

Keys
A key to the Honours room and student resources room will be given out for your use this year at the Orientation session. They will be available from the Enquiries Office after this date. Entry into the building after-hours is via your student card. You must return your key to the office when you hand in your thesis at the end of your Degree.

Printing Questionnaires and Surveys
Survey and questionnaire printing costs are deducted from the research budget which the Research School of Psychology allocates to you for your Honours research. To have questionnaires printed at the ANU Print office, please contact the Enquiries Office. No action can be taken until you have received approval from your Supervisor. Completed print jobs will be returned to the Psychology Enquiries Office for you to collect. You must allow at least two working days for work to be returned. Some jobs will take 3 – 4 days and appropriate time should be allowed.

Research Funds
Research funds are available for each Honours student of up to $350 per year, subject to change, and can be used for recognised research-related expenditure (e.g., if required to pay participants, buy equipment, or pay for specialised technical advice).

Statistical Advice
If you need statistical advice, you should seek it from the statistical advisors listed earlier in this Handbook. It is also wise to think closely about how you will analyse your data at the time that you design your study (rather than after you have collected the data!), so do not leave it too late to seek advice if you and your Supervisor think you need to do so.
**Academic Skills and Learning Centre**
The people at this Centre can help you with studying and can also read drafts of your work.
Administration: (02) 6125 2972  
Fax: (02) 6125 3399  
E-mail: academicskills@anu.edu.au

Academic Skills and Learning Centre  
Level 2, John Yencken Building 45  
Sullivans Creek Road  
[http://www.anu.edu.au/students/contacts/academic-skills-learning-centre](http://www.anu.edu.au/students/contacts/academic-skills-learning-centre)

**University Counselling Service**  
This service is free for students, and is located immediately above the Health Service on North Road (near the Coffee Grounds Cafe). Telephone on 6125 2442 (Ext 52442).  

**University Health Service**  
The ANU Health Service is a fully accredited Primary Health Care Facility. It has both male and female General Practitioners and Registered Nurses.  
Ground floor, Sports Union Building, North Road, ANU Campus Building 18  

**Opening Hours**  
9:00 am to 5:00 pm Monday to Thursday  
9:00 am to 4:00 pm on Friday  
(Closed 12:30 - 1:25 & Public holidays)

Contact: Front Desk (+61) 02 - 6125 3598 (internal extension 53598)  
Nurse (+61) 02 - 6125 9695 (internal extension 59695) (between 2pm and 4pm weekdays)  
Facsimile: (+61) 02 - 6125 0069
# APPENDIX A: AVAILABLE SUPERVISORS, THEIR RESEARCH INTERESTS, AND THEIR SUPERVISORY STYLES

## Potential Psychology Honours Research Supervisors for 2017

<table>
<thead>
<tr>
<th>Supervisor</th>
<th>ANU School/Centre/Unit</th>
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<tbody>
<tr>
<td>Anne Aimola Davies</td>
<td>Research School of Psychology</td>
</tr>
<tr>
<td>Deborah Apthorp</td>
<td>Research School of Psychology</td>
</tr>
<tr>
<td>Emma Axelsson</td>
<td>Research School of Psychology</td>
</tr>
<tr>
<td>Phil Batterham</td>
<td>Centre for Mental Health Research</td>
</tr>
<tr>
<td>Boris Bizumic</td>
<td>Research School of Psychology</td>
</tr>
<tr>
<td>Rhonda Brown</td>
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<td>Richard Burns</td>
<td>Centre for Research on Ageing, Health &amp; Wellbeing</td>
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<td>Alison Calear</td>
<td>Centre for Mental Health Research</td>
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<td>Dirk Van Rooy</td>
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Note that Richard O’Kearney (Research School of Psychology) is only available to supervise projects from Semester 2 of 2017.
Anne Aimola Davies

My research projects are described clearly on my web page. The information is under the heading ‘Research’, and the subheading is called 'Research Supervision’;

Deborah Apthorp

Anticipated 2017 Honours projects

1. Postural control in older compared to younger adults: We will be looking at how postural control/postural sway differs in older healthy adults (60+) compared to younger adults, and comparing measures collected using a traditional force plate with measures collected using accelerometers (either using a mobile phone device or body-worn accelerometers). This project may involve pairing up with a Computer Science/Engineering Honours student, who will be looking at some more complex machine learning analyses of the data.

2. EEG and motion perception. We will be looking at what the neural correlates of perceiving coherent visual motion (as compared to random noise) are in healthy young adults, and possibly in older adults as well, and whether these differ in timing and magnitude for simple compared to complex motion.

3. EEG and face perception. We recently began using Bruno Rossion’s FPVS (Fast Periodic Visual Stimulation) paradigm in our EEG lab with good results. This paradigm is adaptable to a number of interesting questions in face perception but also, potentially, in language perception and other areas.

4. Topic yet to be determined, but this will be a joint project between Psychology and the Research School of Computer Science, encompassing topics such as human/computer interaction and machine learning. I have a joint appointment with RSCS and am keen to involve students from both schools in joint projects.

Supervisory style.

My supervisory style is very egalitarian and participatory. I regard my students as fellow scientists. While this means you will have considerable autonomy in your project, this also means you will be expected to work hard and come up with your own ideas and solutions for problems you encounter (with my support, of course). I try to cultivate a collaborative atmosphere in my lab, and we have regular weekly lab meetings in which we discuss ongoing projects in a relatively informal atmosphere (OK, often in Fellows Bar). You are also free to meet with me one-on-one during the week when the need arises. I expect students to meet deadlines, though I prefer that they set them themselves where possible. The projects available in my lab offer you the invaluable opportunity to learn skills such as EEG data collection and analysis, MATLAB programming, postural sway data analysis, and visual psychophysics. You are not required to know any of these starting off, but the more you participate, the more you will learn.
Emma Axelsson

Potential Projects

- The effect of napping on word learning in toddlers: role of the strength of memory (will work together with another student)
- Looking patterns associated with child word learning (will work with student involved in nap study)
- Individual differences in infant face recognition across development (possibly with another student)
- Infant face scanning patterns and face recognition (possibly with another student)
- Infant body inversion effect: the role of posture and body size
- Adult body inversion effect: identity vs posture discrimination

Supervisory Style

As the studies involve testing infants and toddlers and equipment that requires training (eye-tracking, actigraphy), I have a fairly involved supervisory style. When it comes to writing etc., aside from providing due dates for drafts I think that it is more motivating for students to take an autonomous role. However, I do provide fairly comprehensive feedback. I’m flexible when it comes to meetings.
Philip Batterham

Style: I am a research-intensive academic at the Centre for Mental Health Research, with a focus on suicide prevention, risk factors for mental illness, assessment, methodology and online interventions. My model of supervision treats research students as collaborators, nurturing their individual strengths and providing them with the support to grow into independent researchers. I view my role as a supervisor to be very similar to how I approach other collaborations, although acknowledging that different students have different strengths and need different types of support. I expect students to publish their findings. I aim to meet with students fortnightly or as needed.

Potential topics: outcomes of disclosing suicidal ideation; relationship between obsessive and suicidal behaviour; ethical considerations in conducting mental health research
Boris Bizumic

Anticipated 2017 Honours Projects

In 2017, I am open to supervising a variety of projects focusing on personality, such as narcissism, Machiavellianism, and the Five Factor Model, and on individual differences, such as social attitudes, ethnocentrism, nationalism, right-wing authoritarianism, and prejudice (e.g., against people with mental illness). My methodological expertise is primarily in psychometrics and the assessment of individual differences, but I also have expertise in experimental social psychology. Two example projects that I could supervise follow.

1. Narcissism and parenting. Narcissism is a widely studied construct in psychology, but there is little empirical research into the causes of narcissism. This research project would follow several other studies (e.g., Huxley & Bizumic, In Press), where we investigated parental influences on narcissism – and one of the central aims of the project would be to investigate indirect effects of parental narcissism on adult children’s narcissism. Students would be expected to collect their own data, but they can also collect data for the project together with other Honours students. In the case of group data collection, each student would be expected to shape and work on a unique topic in this project.

2. Machiavellian views and tactics. The personality construct of Machiavellianism (Christie & Geis, 1970) captures cynicism towards humanity, along with willingness to embrace exploitative interpersonal behaviours to achieve a worthwhile goal. Until recently, Machiavellianism was seen as a single dimension. However, we (Monaghan, Bizumic, & Sellbom, 2016) demonstrated that there are two distinct dimensions: views and tactics. Throughout 2015-2016, we developed a new measure to accurately capture both dimensions using three datasets with over 2,000 participants. The third dataset will be collected at the beginning of 2017. These datasets include measures of subjective happiness, political ideology, social desirable responding, psychopathology, broader personality domains (the Big Five, the Dark Triad), and approaches to morality (categorical vs. utilitarian). An interested student will be able to shape their own study based on these datasets and investigate a plethora of possible theories. Accordingly, students are not expected to collect their own data, but to work on the existing datasets.

Supervisory Style

I am open to both individual meetings with students and to group meetings with other Honours, Masters, and Post-Graduate students that I supervise. I tend to have weekly times for meetings or as required by a student. I expect students to act as collaborators who will significantly contribute to their research. I also expect students to attempt to publish their research findings in journal articles or book chapters after finishing their Honours thesis.
Rhonda Brown

(1) Anticipated Honours projects
- Preferred topic: Interoception (i.e. awareness of internal bodily sensations, e.g. autonomic arousal symptoms, gut symptoms etc.) and mental health (e.g. anxiety, depression)

(2) Supervisory style and expectations
- Supportive. Maintains regular contact with students, either face-to-face or via email during the proposal and recruitment phases and as required during the analysis and thesis writing phases
- Will help students to develop a research timeline, and supervisor expectations will be based on this timeline
- Can help students to choose a research topic but would prefer them to develop their own research project, with guidance and support
Alison Calear

My broad areas of research interest are youth mental health, e-health and the prevention of anxiety, depression and suicide (including stigma and mental health literacy). I would be happy to support a project in one of these areas.

Generally, I like to work collaboratively with my students on the development of a research project and throughout the research process. I tend to meet with my students on a fortnightly basis and am contactable via email as needed. I expect students to drive their own research, with support, and to complete all discussed tasks between meetings.

I currently supervise 6 PhD students (2 expected to complete by mid-2017) and a clinical psychology Masters student, and have supervised to completion 2 PhD students, an Honours student and 6 medical students. I'm happy to talk to students who may have questions via email (Alison.Calear@anu.edu.au) or phone (61258406).
Bruce Christensen

Research Area Overview:
I often describe my research area as “cognitive psychopathology”. In broad terms, I am interested in the cognitive and neurobiological mechanisms of mental illness, with an emphasis on psychotic and affective disorders. However, my lab has also studied participants with anxiety disorders, traumatic brain injuries, eating disorders and forensic histories. Several of our studies rely on evolutionary models of functional brain organization to generate neurocognitive hypotheses and, when possible, neuroimaging techniques (including MRI, PET, EEG/ERP, TMS) to investigate hypothesized neural correlates. We have studied the impact of mental illness on visual-perception, attention, memory/meta-memory, face processing, judgment/decision making, and cognition-emotion interactions and whether these abnormalities underwrite the clinical symptoms or functional disability associated with mental illness. I am also an active clinician (clinical psychology and neuropsychology) and devote some of my time to studying psychometric and pragmatic issues relating to clinical assessment. More recently, I have used a set of multivariate statistical tools (borrowed from market research) to better understand the needs and preferences of mental health clients in relation to service delivery. We have also used these same techniques to study what characteristics students prefer in supervisors and which aspects of mental illness most influence prejudice from others. Below are some more specific examples of previous honours projects completed under my supervision.

1. Testing a dynamic model of biased attention to threat in anxiety
2. Reasoning, delusion proneness and data gathering biases
3. The effect shifting criterion has on affect: Its reduction and exacerbation
4. The Impact of Confidence on Memorial Decisions Amongst Individuals High on Negative Affectivity
5. Great expectations: The influence of prior information on hallucinations
6. Attentional bias variability in anxiety: Is contextual processing a missing piece of the puzzle?

Supervisory Style:

While honour’s projects demand a certain degree of independent thinking and work, I would describe myself as a hands-on supervisor. I believe that research supervision is a best conceived of as a kind of apprenticeship where part of your learning is formal but much if it is informal and comes through contact with experts and actually engaging in the task. In this way, I believe it is important to stay in close contact with students (e.g., weekly meetings), develop a positive learning environment that is both challenging and supportive, and get to know students as “people” who come with unique skills and abilities as well as distinct challenges. I expect to work collaboratively with students in ways that provide adequate guidance and communication. In this context, I aim to simultaneously encourage independent thinking/input and openness to feedback/supervision. I find that developing tools for honest, forthright communication in a respectful and supportive manner is one of the best prescriptions for a positive, stimulating and rewarding supervisor-supervisee relationship. I believe that if you spoke to my former and current students they would describe me as a supervisor who encouraged them to think hard and went the extra distance to support them.
Mark Edwards

Research topics

Vision is fundamental to our ability to interact with the world. Additionally, a great deal of our understanding of how the brain works is based on our knowledge of how it processes visual information. The fundamental aim of my research is to further our understanding of how the brain processes visual information, from low to high (i.e. visual cognition) levels. This includes understanding how it is affected in clinical settings, e.g. depression. My research and interests cover all aspects of visual perception and cognition and how they apply to real-world settings and clinical situations.

While I am happy to supervise students in most areas of visual perception and cognition, some of my active topics that are suitable for honours research are:

- Binding problem in perception. We have multiple cortical areas that process different aspects of the visual scene, and so a question that results from that is how are these visual attributes recombined to form a coherence percept? One possible mechanism is temporal synchrony, and I have developed a motion stimulus that allows us to investigate this issue.
- Altered visual processing in near-hand space. A number of studies have shown that our perception of objects is altered when our hands are placed near them, compared to when our hands are placed away from the objects. This altered perception appears to be due to differential activation of Magnocellular and Parvocellular pathways under these two conditions. The exact why this occurs and the extent to which how we can interact with the objects can affect this process still needs to be determined.
- Along with Michael Platow and Stephanie Goodhew, we are developing studies that will investigate how visual attention allocation can be affected by membership of social groups. These studies could provide one of the mechanisms that maintain group membership and identity.

Supervisory style and expectations

I fully appreciate how demanding the honours year is, and also how important it is to students. Consequently, I am focused on helping my students obtain the best outcome they can achieve. In order to do that, I provide a structured and supportive environment. I don’t expect students to have a fully formed idea of what research they want to do in honours. If you do have ideas that will lead to an excellent honours thesis, that is great, but in most cases students do topics that I guide them towards. In return, I expect students to be highly motivated and work hard to achieve their goals. They also need to be able to take on board constructive feedback. Finally, to further encourage a supportive and intellectually active environment, Stephanie Goodhew and myself run lab meetings with PhD, clinical and honours students.
Stephanie Goodhew

Research Topics.
At any given moment, our brain could be overwhelmed with the sheer volume of visual information available from the world around us. This is why visual attention plays an essential filtering role, triaging relevant information for processing to the level of awareness, while ignoring or discarding other information. This means that visual attention can play a pivotal role in shaping our sense of the world, because what we select determines what becomes the contents of our mind and guides our behaviour.

One of my research themes is examining how selective attentional mechanisms are instantiated, and another is the factors that influence the content of selection. In particular:

- How can switching between different attentional breadths for different task be facilitated? Can this process be trained? Are certain individuals better or worse at this?

- Size of the attended region. How does changing it influence different aspects of visual perception? This line of work is challenging the assumption that visual attention is always beneficial, and instead investigate whether enhancing some aspects of processing necessarily comes at the cost of other aspects of perception (This area I often collaborate with A/Prof Mark Edwards on)

- Anxiety & selective attention. There is a burgeoning literature examining the purported attentional bias toward emotional and threatening content on the dot-probe task. But there are major conceptual & methodological problems with this task. E.g., conceptually it assumes that attentional selection is static, but by its nature attentional selection is dynamic. How do contextual variables like emotion and thoughts influence attention, and is this influence different for those with anxiety? What does biased attention to threat really mean? Is emotional really processed preattentively in the way of a simple feature like colour or orientation? Or does it only have later influences, e.g. on attentional disengagement post-engagement? (For this line of work, I often collaborate with A/Prof Bruce Christensen).

- Embodied Cognition & selective attention. There is a fascinating literature on how having our hands near an object can alter our visual perception of that object. Initially it was thought that visual-attentional mechanisms were responsible for these changes in performance, but more recently it has been shown that the evidence is best explained by a modulation in the relative contribution of the two major visual pathways to perception. However, in the last couple of years, evidence suggests that it may be an interaction of these two factors, with the contribution of the two pathways being qualitatively altered under different attentional conditions. Going forward, research in this area is examining exactly how attention and perception interact near the hands.

Supervisory Style and Expectations

I think that my supervisory style is best characterised as contractual according to Gatfield’s (2005) framework. This entails the provision of high structure and high support – which the evidence suggests is the most effective style (Gatfield, 2005).

This means that I will provide guidance and scaffold your learning through every step of the research process. I do not believe in leaving students to flounder on their own. I will not set you a task that I don’t know how to do myself and therefore I will always set you realistic expectations,
and I will always be able to provide you with clear guidance. To clarify – this does not mean I will do it for you – it means I will be actively involved in helping you to do it.

I challenge my students intellectually – my aim is for you to produce the best research, the best thesis, and become the most skilled researcher that you can time in the timeframe of honours. But I always ensure that this occurs in a context that is interpersonally supportive.

I encourage an active, vibrant, and supportive culture within my lab. We have fortnightly lab meetings where PhD students and Honours students come together to discuss research.

I think that the best and most honest testament to my supervisory style is past Honours students. I am therefore willing to put you in touch with mine, many of whom are now my PhD students.

**My expectations of students:**

I expect you to be motivated to produce high-quality research
I expect you to be willing to accept constructive feedback
I expect you to engage in the broader intellectual environment of the lab

I do not expect you to commence Honours with a fully-formed research idea. Selecting and refining high-quality research questions that are theoretically substantive, impactful, and practical to execute within an Honours year is a skill that takes experience that I don’t expect someone to have at the end of just three years of undergraduate psychology. If you have an interest area, I expect you to become familiar with the literature. I will then help guide your thinking toward an interesting research question, and we can collaboratively develop an experiment designed to answer that research question.

**What students can expect from me as supervisor:**

The provision high structure and high support, and a willingness to moderate this according to students’ desire and needs (e.g., some students want me to set firm deadlines, whereas others prefer recommendations with greater flexibility)

Regular (typically weekly) meetings throughout the year

Guidance and support for all stages of the research process

Prompt & comprehensive feedback on all your work

In-area knowledge (I won’t supervise a project that I don’t feel I have the skill or knowledge to meaningfully contribute to).

**Reference:**

Diane Hosking

Areas of research interest
Cognition and age-related cognitive change.
Lifestyle behaviours, cognitive health and dementia risk reduction.
Food memory and the utility of lifetime dietary recall.
Characterising lifestyle activity engagement and change during ageing.

Potential honours projects
i. One of my continuing research interests is the potential impact of long-term dietary intake on cognitive health. The recall of long-term diet is generally considered unreliable, however, utilising psychological understandings of food memory can guide the assessment of long-term dietary recall and capture dietary information that may be both reliable and relevant to cognitive function in adulthood and older-age. The current project aims to build on previous work using a lifetime diet questionnaire. Currently this questionnaire has only been tested and validated in a sample of older adults. The project aim is to develop an online version of the questionnaire and test its associations with risk factors for later cognitive decline in middle-aged adults.

ii. Engagement in physical, mental and social activities has been widely promoted as promoting cognitive health and reducing dementia risk. However, ageing may be associated with decreased activity engagement, possibly due to decreased physical and cognitive resources. Very few studies have examined this question from the perspective of older adults themselves, however. A possible honours project would be to conduct a qualitative pilot study of older adults’ perceptions regarding their engagement in life activities and the psycho, social and biological drivers of change. This would be a useful first step in the development of an activity change questionnaire designed for older adults.

Supervisory style
My primary goal as a supervisor is to provide the mentorship and support that will enable you to achieve the best honours result possible.
I believe the following are essential to a good student-supervisor relationship
- mutual respect
- clear communication of expectations by us both
- addressing problems or concerns promptly in an open and transparent manner.

Your success in gaining entrance to the honours program demonstrates you are a highly capable, motivated, and most importantly have a passion for psychology. Having said that, Honours is a demanding course and producing a research project within the strictly limited time available is challenging. I consider an important part of my role as a supervisor is to help ensure that the scope and design of your project is appropriate and to guide the development of your project’s task timeline. The two honours projects I have listed are embedded within my areas of research focus, however, I am also happy to collaborate with you to develop your own project within the parameters of what’s doable in an honours year.

Regular face to face or skype student/supervisor meetings are key to ensuring a productive and successful year. I expect these would occur at least fortnightly with regular email contact in between. At busy times (such as when the study is being set up or during data collection) more frequent weekly meetings may be appropriate.
In terms of the thesis, I will provide clear guidance on its necessary components and thorough feedback on the individual sections. However, there is a clear expectation that you take ownership of the project by demonstrating autonomy in the research process and the thesis write-up.

All the best for your Honour’s year!
Sarang Kim

My areas of research are dementia risk reduction, stigma around dementia and ageing, culturally and linguistically diverse communities and ageing, and cross cultural studies among elders.

I understand that an honours project is a student’s first research project, which can be an exciting yet daunting experience. As such, I will be there to provide an overall direction, help shape the context of the research and facilitate any necessary discussions. I would expect students to maintain a keen interest and ultimately have ownership of their project. It would be preferable for students to develop their own research topic, but I will be happy to provide any feedback should it be required. Be curious and think of questions you want to seek answers for. Obviously, the questions will realistically need to be on something, which will be able to be answered within a year. To supervise students competently, their research project should be aligned to my subject matter expertise.

I value independent learning with consistent feedback rather than spoon-feeding learning. I would ask that students bring what they have done or plan to do for the project to our meetings. We will meet regularly at the start of the project to ensure that the direction and structure of the research meets the requirements. Once this is established, there will be less frequent face to face meetings and more of a shift to online discussions.

My main supervisory aim is to help guide, support and impart my knowledge and skills to students in order to enable them to conduct independent research in the future. I would also ensure that students are performing to the best of their ability resulting in a good grade for their honours thesis.
Michael Kyrios and Danial Fassnacht

Our Laboratories

- Internet & Technology-based Treatment Laboratory (ittLab; now incorporating ANU eHub and eCouch), Research School of Psychology, College of Medicine, Biology and Environment, The Australian National University.

We are interested in the dissemination of evidence-based psychological treatments via the use of technology, such as use of the Internet, mobile applications, and virtual reality.

- Obsessive Compulsive and Related Disorders (OCARD) Lab, Research School of Psychology, College of Medicine, Biology and Environment, The Australian National University.

We have specific interests in theoretical models of psychological disorder, but are also particularly interested in the applications of such theoretical knowledge to assessment, treatment and policy. Our research focuses on obsessive-compulsive spectrum disorders (inclusive of OCD, Hoarding & Body Dysmorphic Disorder), behavioural addictions (inclusive of compulsive buying, gambling, and internet addictions), body image & eating disorders, chronic medical illness, the self in psychological disorders, and the dissemination of evidence-based psychological treatments. We use survey, experimental and neuropsychological methods to understand disorders from cognitive-behavioural, developmental, phenomenological and neurocognitive perspectives.

Our lab is on the 1st floor of the Peter Baume Building (across the lawn from the Psychology Building).

As we have numerous students contact us for supervision, with only limited places, we like to know where their interests lie. We also like to have some indication of their academic record, relevant experience, and career aspirations. As Mike is away a great deal due to his multiple responsibilities, Dan will often be the first port of call. Hence, we need our students to be able to work fairly independently. However, we also have regular lab meetings where all our PhD, Masters & Honours students can interact, where senior lab members provide mentoring for more junior researchers. The labs are a place where Mike & Dan provide detailed educational materials and resources, where students can exchange and try out their ideas, and where students prepare and present in a supportive environment.

In 2017, our Honours projects will focus on the self in obsessive-compulsive spectrum disorders, mental health stigma specifically in eating disorders.

Honours Project 2017

Moral identity in Obsessive Compulsive Phenomenology

Obsessive-Compulsive Disorder (OCD) is a severe and incapacitating mental disorder associated with anxiety, frustration, doubt and shame. OCD is characterized by the experience of intrusive and persistent thoughts, images or urges (obsessions) which cause distress and lead to repetitive and often ritualistic behaviours (compulsions) intended to reduce threat and/or discomfort (APA, 2013).

A growing number of theoretical accounts note that cognitive models incorporating self-constructs may enhance our understanding of OCD phenomena. Intrusions thought to be interpreted as revealing hidden aspects of the self, cause distress and anxiety for the individual and are more likely to develop into obsessions. Ego-dystonic intrusions are likely to turn into obsessions because they represent a threat to the individual’s self-view. There is also empirical evidence which supports that individuals with OCD view unwanted intrusions as alien to one’s sense of self, and that the level of distress associated with obsessions is explained by the degree to which obsessions contradicted their sense of self. Likewise, self-themes perceived as being "dangerous" and "feared" have been implicated in understanding OCD phenomena. Finally, people with OCD place great importance on and feel more incompetent in domains are associated with morality and achievement. Of note, and
in line with a hierarchical view of self, a self-worth contingent upon meeting high moral standards is considered to have a notable association with OCD. However, recent evidence suggests that self-worth contingent on meeting high moral standards is important in OCD only in the context of an ambivalent sense of self, particularly in the moral domain. In fact, self ambivalence has been shown in survey-based, experimental and treatment research to have particular relevance to OCD. Hence, issues relating to moral processing within the individual may play a particular role in the development and maintenance of OCD.

Recently, researchers have studied moral identity, defined as the importance people give both to their moral principles and to acting accordingly, independently of religious or political views. The Moral Identity Questionnaire (MIQ) has been designed to assess two facets of moral identity, namely moral self and moral integrity. To date, there has been no research specifically examining morality identity in OCD. It remains to be seen how moral self and moral integrity related to self constructs already known to be associated with OCD.

This study proposed to redress this gap in the literature using an analogue cohort. Various measures will be utilized, including measures of OCD severity, OCD cognitions, self, and mood.

e.g., Obsessive Compulsive Inventory - Revised, the Depression Anxiety & Stress Scale, Obsessional Beliefs Questionnaire - 20, Self Ambivalence Measure (Bhar & Kyrios, 2007), Moral Attentiveness Scale (Reynolds, 2008), Obsessional Self Sensitivity Inventory: Moral Index (Doron et al., 2010); Fear of Self Questionnaire (Aardema et al., 2013)
Kristen Pammer

Honours Projects 2017
My honours projects over the next year or so will revolve around applied psychology, specifically attention and driving. In general, we are interested in attentional allocation when we drive; how do we attend to multiple complex scenes at high speed when we drive? What information do we filter out and why? How do we code and detect hazards? Is all distraction a bad thing – could a small amount of distraction (such as listening to the radio) actually make your attention better? We are interested in novice drivers who have the highest crash rate on the road – novice drivers are 5-times more likely to experience a crash compared to experienced driver, as well as expert drivers – we have access to ambulance officers who have the highest crash safety record. All the research that we do is aimed at developing better driver training protocols for young drivers, as well as informing peak industry and government positions about the cognition of road safety. Much of the ‘research’ in the government and public domain is about that something happens (i.e., motorcyclists in Australia have one of the highest crash risks in the world), but not why it happens. Our research is designed to understand the psychology behind driver behaviour.

Honours students in this field have gone on to work in areas such as: Road safety analyst, Road safety auditor, designing traffic infrastructure, pedestrian safety, bike-track design and safety, crash analysis specialist, development of safety programs. As an example, at the time of writing this the following Road Safety Analyst job came with a salary of $114,430-125,052 + superannuation https://www.seek.com.au/job/31895443.

Projects can also easily lead to masters and PhD projects in this or related fields. Please refer to the expanded version of this document for more ideas.

Supervisory style:
My general style is governed by the understanding that this is your project, am there to guide you through the project. As far as possible I will be there when you need me to provide as much guidance as you need. I prefer if you come up with your own project (with my help), because that way you have more investment and ownership over the project. However if you are struggling to come up with a project, we have plenty that you can slot into. You will work as part of our team, and be co-author on any papers that are produced from your research. I tend to be guided by what you need in a supervisor – if you like the structure of weekly meetings, then we can do that, but if you like the flexibility of seeing me when you need to – then that’s OK as well. My experience is that the reality is somewhere in between i.e, we will meet regularly, and in addition then, as often as necessary, particularly around high-stress times through the year. In general I am pretty flexible. This is your journey and I will be there to guide you through as necessary.

Version 2
STUDENT RESEARCH PROJECTS
Longer version
(this will be updated as I think of new things to add, so keep note of which version you have)

The following are the areas in which I would be happy to supervise research projects. They are necessarily vague because the aim of a research project is that it is YOUR project, not mine. I have specific expertise and/or interest in these areas. I have not broken them down into honours/masters or PhD because these areas can lend themselves to both, we would just need to think about the type of project and make sure it fits into your program requirements.

I am also happy to discuss an area that might be peripheral to one of these areas, as long as it overlaps with something that I am familiar with. For example I have worked with different students on projects looking at gaming addiction, ADHD, pain – I am not familiar with any of these areas,
but the context was attention or attentional orienting, where I was able to give the most amount of
guidance.
If you are interested in any of these areas, I encourage you to first google the area you are interested
in, to get some sort of background. Then we can talk more specifically about the science and
specific projects.

Driving
This is one of our largest research areas with projects available for undergraduate special topics,
honours through PhD, in almost all areas of driving. We currently have an ARC Linkage project
looking at the differences between expert and non-expert drivers particularly in terms of their visual
processing, ability to detect hazards and decision making. We have a 3D Head Mounted display,
real-time portable eye-tracking glasses, and a full-capability driving simulator. If there is something
that you might be interested in regarding driving, we can do it. From simple computer-based tasks
with a ‘normal’ driving population, through to clinical populations. Clinical projects can involve
using older adults, novice drivers (the drivers at the highest risk), personality factors, road rage,
substance use (e.g., alcohol, legal stimulant drinks etc), fatigue. We have many projects ready-to-
go, and are open to all possibilities.

Dyslexia
Here I am mainly interested in the role of the visuo-attentional system in reading and dyslexia. We
have demonstrated that dyslexic readers are impaired in processing visual information carried by
the dorsal visual pathway. This can have enormous implications regarding the way in which we
教 reading. Some current projects include looking at whether we can take the very basic
psychophysics tasks that we use in the lab, and ‘gamify’ them to make them more engaging for
kids. Can we then use these ‘dorsal-games’ to identify dyslexic readers? Can we use this technology
to train the dorsal pathway to work more effectively in a way that facilitates reading acquisition and
ameliorates reading impairment? (probably better as a postgraduate project and would fit either a
clinical or research PhD). We have recently had some interest from private industry in developing
this as a commercial enterprise, but we need to do some more research to see if it is viable.
Related areas: ADHD, Dysgraphia, Dyscalculia

tDCS
Transcranial Direct Current Stimulation is a technique that is used to change brain behaviour. It
uses cathodal and anodal stimulation to either impair brain activity or facilitate brain activity in
particular parts of the brain. It is a painless and very benign process (I have been a subject many
times) and we have used it most recently to look at whether the PPC in the brain is responsible for
spatial encoding of text, and whether the right PPC is involved in visual search independently of
memory. Basically, it allows us to investigate the functioning of a particular part of the brain, by
increasing or increasing activity in that area. It is a technique that has also been used to understand
the neural correlates of memory, decision making, driving, attention and motor activity. It has also
been used extensively in the clinical area as a potential treatment for depression, anxiety,
Parkinson’s disease, post-stroke deficits and addiction (amongst other things). This would be
appropriate for an honours or postgrad project, depending on the question.
Related areas: neuroplasticity, TMS, tACS, brain imaging

Attention
This is my primary research area, and whether I am researching reading, dyslexia, driving or using
tDCS, it usually comes back to some sort of attentional processing. The applications here are too
many to list, but include techniques such as Inattentional Blindness, Attentional Blink, Visual
Search, Metaconstrat Masking, Attentional Cuing. For many of these there are interesting
theoretical questions about attention or a specific technique, or have clinical applications:
• IB changes with age – kids almost always see an unexpected object? Why is this the case? Do we develop attentional templates as we get older?
• Distraction can be a good thing and increase attention
• I have a developing model of attention that is similar to the Yerkes-Dodson law of arousal. In this case I am developing a framework of attention/distraction that suggest an individual must have a certain level of distraction in order to perform optimally on a task that requires attention.

In regards to clinical postgraduate projects, this is really only limited by your imagination, but will generally fit into using attention as an index of attentional capture, or as a biomarker for attentional state. For example, addictive gaming had not been included in the DSM because the experimental evidence was lacking demonstrating that there was a change in physiological arousal or attentional allocation. One of my PhD students subsequently conducted this research using AB, IB and other tasks such as the Stroop Task. Another of my students has demonstrated that ADHD children will perform better on attention tasks if they are exposed to a low level of distraction (but only if they are also medicated – this does not seem to be viable as a medication alternative). There are a large number of ways in which attention tasks can be used to inform clinical state (e.g., autistic children should be less likely to detect face-like stimuli in an IB or AB task). I am happy to discuss how your interests might fit within an attentional framework.

**Brain Imaging**

This would typically be only viable for a research PhD, and possibly a clinical PhD if you already have access to a clinical population or can generalise from a normal to a clinical population. The reason for this is that the MEG system is housed in Melbourne, so the data needs to be collected in Melbourne. This is not usually a huge problem if you are looking at a ‘normal’ population because there are often enough people around the lab to participate. This is very cool technology that allows us to look at brain activation in both time and space – i.e., we are able to look at the time course of activation to investigate re-entrant activity, feed-forward and feedback loops. Cognitive processing is highly dependent on both where the brain is active, but also when. MEG allows us to investigate both these. With MEG we are also able to look at how different cortical areas might be communicating. Projects would not be exclusively MEG projects, but would be part of a behavioural project as a way of – for example, confirming predictions regarding cortical sources or interactions.

Related areas: oscillatory connectivity, fMRI, EEG

**Alzheimer’s Disease**

I actually know very little about this area, but it appears that brain imaging shows deficits in the posterior parietal cortex that are very similar to dyslexia. Can we develop visuo-spatial diagnostic test similar to dyslexia that can be used for identifying AD? Probably more clinical PhD/masters level
Dave Pasalich

1) Research interests and potential topics for Honours projects: My research focuses on the roles of parenting and the parent-child relationship in the development, prevention, and treatment of child conduct problems. I have investigated these topics in two at-risk groups: children with callous-unemotional traits (e.g., lack of guilt and empathy) and children in out-of-home care. In general, I am open to supervising Honours projects that relate to child and adolescent psychopathology, parenting, attachment across the lifespan, and psychopathy in youth or adults.

2) Supervisory style: My main goals as a supervisor are to equip my students with the necessary skills for conducting quality, ethical, and collaborative research, and to develop their confidence in their own scholarly abilities. To these ends, I provide a style of supervision that is flexible and tailored to a student’s needs, and involves a blend of regular feedback and encouragement of student initiative.
Michael Platow

Supervision Style

I work under the assumption that honours students are smart and capable by definition; students
would not be honours students if they had not performed at superior levels in the first three years
of their undergraduate degrees. At the same time, I neither expect nor want students to come to me
at the beginning of the academic year with a study in hand. Simply put, I do not believe that students
have background knowledge or ability to start their honours year with a complete study.

Given recent changes in the ANU Research School of Psychology in an attempt to accommodate
more honours applicants, I will be holding weekly collective honours laboratory meetings with all
of my honours students together. I anticipate that students will jointly contribute to a larger project
(see below for descriptions of the projects). Although the projects are broadly specified, details
have not been determined. I will expect students to work on these details during their own time, and
then propose them to the honours laboratory group for broader discussion and consideration. In this
manner, there will be specific tasks and intellectual contributions that individual students are to
make; at the same time, the laboratory meetings will allow us to collaboratively craft the final
studies, ensuring that each student has appropriate supervision by me and supportive feedback from
his or her fellow honours students.

In my supervision, I have four goals in the following order. I recognize that these may not be
students’ goals nor may my rank-ordering be that of students. However, it remains important for
students to know my goals (and my priorities) so that they best understand how and why I supervise
the way I do.

Goal 1: My first goal is to ensure students learn something from their honours research project. This
is the absolute primary goal.

Goal 2: My second goal is to work with students to ensure that they can submit an honours research
project that is likely to pass. I do not mark my own students’ theses, so I can not guarantee a
passing mark. However, in the past 25 years, all of my students have passed.

Goal 3: My third goal is to work with students to ensure that they can pass well. This may well be
students’ first goal. Again, I can not guarantee a first-class honours thesis mark, but I will work
hard with students to help them earn the best mark that they can. Not all students will earn first-
class honours (and not all of my past students have done so). In the end, the thesis is a product of
students’ own work, and the final mark is determined by the quality of the thesis that students
produce.

Goal 4: My fourth goal is to work with students to produce a piece of research that can ultimately
be published. Again, I can not guarantee publication of honours theses. However, publication
requires work at a professional level, and striving for publishable work will help achieve aspects of
the first three goals above. It is important to note that students can earn a first-class honours mark
for their thesis on a completely unpublishable piece of research (e.g., if all of examined effects are
non-significant); and it is possible for students to produce a publishable piece of research that does
not earn a first-class honours mark (e.g., if the student writes the thesis poorly). Honours students
who write up their honours theses for publication (with me guiding them) will be first author and I
will be second author. If I write up the honours thesis for publication, I will be first author; students
will remain as co-authors, but their position will be determined by their contribution and the
number of other co-authors. Note that the co-contributors on the ARC Discovery grant listed below
are likely to be authors on publications as well.
My Level of Help

I will work with students throughout the year, striving to achieve the above four goals. I will meet with students collectively for at least an hour per week. I will help students design their studies. I will ensure that students have a means to collect their data. I will help students analyse and interpret their results. I will read rough drafts of students’ theses (note, however, that I am allowed to provide written feedback only on one rough draft). By working on the Australian Research Council-funded projects below, I will be able to make some funds available to students for participant payment and materials development (e.g., programming).

My Expectations of Students

Students who have successfully completed social-psychology courses at both their second-year and third-year will be most appropriate for these projects. I expect students to be mature and self-motivated. If I do not see students for several months, I will assume they are in the library working; I will not chase after students, and will allow them to fail if they put no effort into their thesis. Students must come to the weekly meetings prepared (e.g., having done literature searches, having read journal articles, having thought through possible designs, having questions to ask me). Students are responsible for their own data collection. Students must code and enter their data into appropriate data analytic software (e.g., SPSS). Students must conduct data analyses on their own. Students must write their own theses.

Topic: Examining Lay Beliefs about Prejudice

In 2017, I will be supervising honours projects associated with a new Discovery Grant from the Australian Research Council. This grant was awarded to me (Michael Platow), Professor Martha Augoustinos (U. Adelaide), Professor Russell Spears (U. Groningen, The Netherlands), Professor Daniel Bar-Tal (Tel Aviv University, Israel), and Dr. Dirk Van Rooy (ANU Research School of Psychology). At various times throughout the year, I am likely to hold joint meetings with honours students and one or more of the investigators above (mostly through Skype) to discuss aspects and progress of the research. A brief introduction to the project goals, as well as broad descriptions of the 2016 honours studies are provided below.

The honours research projects I will be supervising aim to expand social-psychological knowledge of prejudice by examining lay beliefs about what prejudice is, as well as the social and psychological factors affecting these beliefs. If people believe their own intergroup attitudes (even negative ones) to be correct and normative, anti-prejudice appeals will likely be rejected. What is needed, then, is an analysis of what people believe to be prejudice or not in the first place, and how these beliefs are changed.

The first group of studies all have a similar paradigm to each other. Following standard methods measuring lay beliefs, Anglo-Australian participants will write in a free-response format what they believe to be the meaning of prejudice. These data will be content coded by two independent coders, and common attributes (and their frequencies) recorded. To examine variability in the attributes provided, we will vary the comparative context in which we elicit responses by making salient or not: (a) the fact that some people do experience negative intergroup attitudes, by informing participants that we are measuring understandings held by “Australians” or by “Anglo-Australians and Indigenous Australians”, (b) the fact that some people express negative intergroup attitudes, by informing participants that we are measuring understandings held by “people in general” or by “prejudiced and non-prejudiced people,” and (c) the divide between lay and scientific beliefs, by informing participants that we are measuring understandings held by “people in general” or by “the general populace relative to the scientific community.”
The second series of studies manipulates the presence or absence of material threat (e.g., spread of disease) or symbolic threat (e.g., change to cultural values) to an Australian in-group from out-group immigrants from either Europe or the Middle East (between participants) (thus making a 2 x 2 x 2 factorial design). These manipulations will be presented to participants as facts in a newspaper article. Following the article, a single newspaper opinion piece will be presented to all participants; this piece will express potentially prejudicial attitudes in regards to the newspaper-presented facts. Participants will then rate the opinion piece on dimensions of prejudice, free-speech, and simple “truth.” These studies will allow us to observe variability in the ascription of the label prejudice to identical attitudes as a function of variability in the intergroup context.

The third series of studies examines the impact of direct social-influence attempts on variability in content, structure, discursive usage and degree of sharedness of lay understandings of prejudice. One study will examine normative influence attempts concerning broad definitions of prejudice. Participants will first be provided with supposed data on in-group members (e.g., Australians’) or out-group members’ (e.g., Americans’) own understandings of what constitutes prejudice. These normative data will indicate that: (a) either the target must be a group or could be either a group or a single individual, and (b) the attitude expressed must be negative or can be either negative or positive (as some formal social-psychological definitions suggest). Participants’ own views of the definition of prejudice along the manipulated dimensions will be measured via ratings scales. The design will thus be a 2 x 2 x 2 between participants factorial. Another study will replicate the one above, changing the psychological in-group to “non-prejudiced people” and the psychological out-group to “prejudiced people.” In a final study, a psychological in-group member or a psychological out-group member will interpret anti-Muslim text as either an example of prejudice or free speech. This interpretation will represent the influence attempt, and participants’ own judgements of the text along these dimensions will be measured. The influence attempts will be made in an intergroup context in which a threat or a non-threat from Muslims is made salient. The design will thus be a 2 x 2 x 2 between participants factorial.
Kate Reynolds

(1) 2017 Honours projects
In 2017 I will be supervising 4 Honours students, 2 co-supervised with the Department of Defence (Dr Jodie Vaile, Andrew Frain) using data from Defence people management surveys to advise on improving organisational performance (for example Organisational change: What drives resistance and support?; Leadership Effectiveness: Investigating current models in a Defence context). The details of these projects and their significance/innovation needs to be developed in consultation with the students and Defence. A wide range of constructs are assessed and there are a large number of responses. The use of secondary data is allowed in Honours (and encouraged) and the thesis is assessed in the same way as student-collected data.

Other projects relate to our multi-year School climate and school identification project with the ACT Department of Education. We have found perceptions of positive school climate and school identification are important in explaining school outcomes (academic achievement, well-being bullying). We have also examined predictors of staff outcomes such as job satisfaction and stress. There are a range of new projects that can be developed with Honours students in areas of health, social, and educational psychology. It is also possible to develop laboratory based studies that explore some areas in more detail (e.g., learning, ways to build social identity).

I also lead a project on Strengthening social cohesion. We have found using a controlled design that community-lead programs can be effective in reducing prejudice and increasing willingness to stand up against instances of racism. Furthermore, it is the program norms related to acceptance of diversity and identification with the program and its leadership that explains these changes in attitudes and behaviour. There are additional projects that flow from these core findings that can be developed with Honours students.

Relevant references (happy to discuss further)

(2) Supervisory style
Students learn differently and benefit from different supervisory styles. I have supervised over 30 students and the style has varied from high structured weekly meetings to less structured approaches. I encourage students to write early to build familiarity with the material and to structuring of arguments in the context of existing theory and research. I think it is important to have a good working relationship with students where both parties feel they can raise issues and can benefit from open discussion.
Liz Rieger

Supervision Style

My work with Honours students is flexible in terms of accommodating a range of student styles. Some students commence their work with me having already developed ideas and designs for their research projects, which I am happy to help them refine provided they are feasible and within my area of expertise. Most students, however, commence their work with me needing guidance in terms of topics to explore, so I provide readings in areas that are of interest to them to help stimulate their thinking in developing a research focus. Through discussions with myself, and with colleagues with relevant expertise, I work to ensure that finalising the design of the research project occurs in a timely manner. Also to ensure timely progress, I meet with students on a weekly basis. I supervise students either alone or in pairs (for those students with overlapping projects). The latter has the benefit of students being able to support each other during the conduct of their research and to share in the process of data collection.

Our weekly meetings are designed to provide close supervision as students learn to master each phase of the research process – absorbing the relevant literature, research design, preparing relevant ethics applications, data collection, statistical analysis, and write-up of the project. My aim is to have students take the lead (with my guidance) in each of these phases so that they complete their ‘research apprenticeship’ with a level of readiness to undertake independent research. As well as developing competence in research, my close supervision aims to help students achieve the best mark that they can and to complete a piece of work that is worthy of publication. If the latter is achieved, I support those students who are interested in publishing their research to take the lead in submitting their manuscript for publication within six months after completing Honours. In these cases, the student is first author and I am second author. If students do not submit the manuscript by six months, I take the lead in submitting the manuscript for publication and the role of first author, with the student as second author.

Research Topics:
I supervise diverse research topics at the Honours level within the overarching category of ‘eating disorders and obesity’. Since most Honours students do not have clinical training, and due to the time constraints of data collection during the Honours year, my Honours students do not use clinical samples. Instead, they conduct research on topics relevant to eating disorders and obesity in community (usually university) samples. These studies typically utilise an experimental design (i.e., random allocation of participants to the experimental conditions with manipulation of the independent variables) in order to obtain information regarding causal mechanisms. Examples of topic areas and titles of studies that I have supervised in recent years are as follows:

Understanding the Causes of Stigma Towards Individuals with Eating Disorders and Obesity and Developing Interventions to Reduce Stigma

- The effectiveness of a social consensus intervention for reducing stigmatising attitudes towards individuals with anorexia nervosa in Australian and Chinese young women.

- The effect of blameworthy attributions and gender on stigmatising attitudes towards individuals with anorexia nervosa.
• An investigation of the effectiveness of a social consensus versus a cognitive dissonance intervention for the reduction of obesity stigma: The moderating roles of blameworthiness and empathy.

• An investigation of attribution theory and social identity theory as causal accounts of obesity stigma.

**Understanding the Interpersonal Factors that Trigger Eating Disorder Symptoms and in Which Vulnerable Groups**

• The effect of interpersonal rejection on selective attention to shape/weight images, body dissatisfaction, and dieting intentions in females with high and low levels of shape/weight-based self-worth.

• The effect of interpersonal rejection on body dissatisfaction, dietary restriction, mood, and self esteem in individuals with high or low levels of shape/weight based self evaluation.

**Understanding the Nature of the Cognitive Dysfunctions Associated with Eating and Body Image Concerns**

• The effect of an attentional bias towards body shape- and weight-related information on body image dissatisfaction.

• An investigation of the factors associated with selective attention to food-related images: The role of hunger, mood, salience and arousal.

• The effect of reduced self-efficacy on the importance of shape/weight and dieting intentions.

**Understanding the Factors Associated with Motivation to Change Eating and Body Image Concerns**

• The effect of gain- and loss-framed anti-dieting educational interventions on dieting motivation, dieting behaviour, body dissatisfaction, and self-esteem of young women
Yiyun Shou

1. Supervision
My goals of supervision are transmitting essential research skills, extending students’ thoughts and helping students become independent in research. As a supervisor, I aim to help my students develop appropriate research projects and develop their skills of managing research projects. Throughout the research project, I provide the level of support appropriate to each student – depending on the student’s skills and abilities. Students are highly encouraged to come up with their own research ideas/projects, to learn new skills during the project, and to take lead on every part of the research project.

Communication: I expect regular communication with each of my Honours students. I reserve a weekly time-slot (one hour) for each student for a face-to-face, structured meeting. It is, however, up to the students whether they would use the time-slot for meeting or not. Students are welcome to email me when they have new ideas or need help, and I try to reply emails in a timely manner. I expect to have communication from the student in any forms at least once a fortnight to ensure that the student maintains the research progress.

Research management: I will help the student develop appropriate programs and timeline of research at the beginning of the project. I expect the student to be self-motivated and to follow the proposed timeline. Students are expected to read the Honours program guideline to be familiar with the course structure and required milestones. In addition, students are encouraged to start writing different sections of the thesis gradually throughout the project.

2. Choice of Topics
I am interested in supervising projects of which the topics, theoretical framework or methodology are in my expertise. Students are welcome to join my research projects (see below) or propose their own interest.
My research interest/areas:
- Judgment and decision making under uncertainty
- Causal reasoning under ambiguity
- Decision making in moral dilemmas
- Cross-cultural measurement issues in psychopathology (especially personality disorders) assessments
- Statistical modelling of doubly bounded responses in psychology

3. Available Projects

1). Decision making in moral dilemmas under uncertainty
The well-known trolley dilemma is a classic example of moral dilemmas, which requires one to choose between killing an individual (harming) and allowing five people to die (allowing harm). Moral dilemmas commonly engender conflict between two major approaches to moral reasoning: consequentialist and deontological approaches. The consequentialist approach concerns the outcome of each possible action and aims to choose the one with the best outcome. By contrast, the deontological approach concerns whether an act is consistent with a moral principle or duty. Many studies have shown that people’s decisions about harming or allowing harm vary across different types of dilemmas. Greene et al [2, 3] integrated the two-system framework of cognitive processing and proposed a dual-process theory of moral reasoning. Greene et al argued that choosing to harm is a result of the consequentialist approach that involves a controlled reasoning process through System 2 processing (slow & rational). By contrast, allowing harm is associated with the tendency to avoid negative emotions caused by the violation of deontological principles, and is a product of System 1 processing (fast, intuitive & emotion driven). The shift of decisions
across dilemmas may reflect the shift of reasoning approaches and the level of processing. However, recent studies revealed that, the alteration of people's decisions may be explained by the change of perceived outcome probabilities. People may not alter their reasoning approaches across different dilemmas. It is still unclear (1) how people make moral decision under uncertainty (i.e., when the outcomes of the moral decisions are unclear), and (2) how that is associated with the two-system processing.

**Project 1. (a)** This project aims to investigate the relationships between the application of reasoning approaches (consequentialist vs. deontologist), the moral decisions and the two-system processing. The study will employ the driving simulator that simulates a real-time moral dilemma. The study is also well connected to the debate around the automatous vehicles [4]: how the automatous vehicles should be programmed when facing with situations where all available actions will result in negative consequences. Laboratory experimental studies will be used in this project.

**Project 1. (b)** This project aims to investigate the relationships between the application of reasoning approaches and subjective beliefs on the outcome probabilities. Experimental (lab/survey-based) based studies will be used in this project.

**Suggested readings:**


2). Cross-cultural differences in response styles

Studies in psychology commonly employ self-report measures to assess a target psychological construct such as personality, emotions, social attitudes and mental disorders (depression and anxiety). The issue of measurement invariance is one main concern when using self-report measures in cross-cultural contexts. Measurement invariance is a property that indicates whether the same construct is being measured across different groups. It is the prerequisite before any meaningful comparison can be made between different groups. Most self-report measures are developed in Western and English speaking countries and have been validated mainly on samples from Caucasian populations. The generalizability of these scales to other ethnic and cultural groups has received limited investigation. Besides the cultural differences in expressing certain traits, one notable factor that distorts the measurement equivalence is the cultural specific response style. Response style refers to a systematical way of responding questionnaires regardless their contents. Common response styles include extreme response style (i.e., only choose the extreme values on the rating scales), middle response style (only choose the middle category on the ratings scales), acquiescence response style (tend to agree everything), and social desirability response style (choose option to meet social norms). Extensive evidence has shown that certain response styles can be more notable in some cultural groups than others. For example, East Asian participants are less likely to have extreme response style, but more likely to have social desirability response style than Euro-American participants.

Yet, little is known about what causes the cultural differences in response styles. This project will focus on the measurements of personality and relevant psychopathology (e.g., personality disorders), and aims to investigate (1) why certain response styles are more pronounced in one cultural groups than others and (2) how that different would influence the psychometric properties of a measure.
3. Causal reasoning under ambiguity

Suppose you are determining whether smoking causes lung cancer by observing your friends. You know whether those friends are smokers or not and ideally you should also know whether they have or have not been diagnosed with lung cancer. You may reason about the causal link between smoking and lung cancer from their co-occurrence. However, you may also lose contact with some friends, or the results of some friends’ cancer diagnoses may be unclear. These unknown cases convey two possible outcomes: the individual does or does not have cancer. These observations result in ambiguity in that one may infer multiple possible states or values on the basis of the absence of information. How you treat the ambiguous observations influences your judgment on the causation between smoking (the cause) and the lung cancer (the effect).

Previous studies indicated that people become more cautious about causation when being presented with ambiguous information. People are sensitive to the information available in the unambiguous evidence. Moreover, evaluating ambiguous observations may require extra cognitive resources. Processing ambiguous information may be a deliberate process that is relatively independent from causal reasoning. This project aims to understand how people select strategies to deal with ambiguous information in causal reasoning, and how the selection of strategies might be influenced by factors such as prior beliefs (e.g., your prior knowledge about the causal link between smoking and lung cancer) and cognitive abilities (e.g., intelligence). Experimental (lab/survey-based) studies will be used in this project.

Suggested readings:

4. Differentiating boldness and disinhibition in psychopathy: attitudes towards uncertainty

The psychopathic personality is characterized by a range of interpersonal (e.g., egocentric and manipulative), affective (e.g., shallow affect, lack of remorse, and empathy) and behavioral (e.g., irresponsibility, excitement seeking, and impulsivity) features. The triarchic model of psychopathy proposed by Patrick, Fowles and Krueger (2009) conceptualizes psychopathy with respect to three domains: boldness, meanness, and disinhibition. Boldness is characterized by a low level of trait fear, thrill and goal-oriented risk seeking, and immunity to negative affect such as stress and anxiety. Disinhibition is a phenotypic disposition manifested by low impulse control and reflects traits of hostility, antisociality, and having difficulties in regulating anger-related emotions. Both boldness and disinhibition are positively predicting risk-taking behaviours. It seems that individuals high in boldness are more likely to take an optimistic view of uncertainty (e.g., underestimate the likelihood of the negative outcome or overestimate the likelihood of the positive outcome) and are more likely to resist negative emotions associated with uncertainty. On the other hand, individuals high in disinhibition have delay in error detection and may take risky actions as a
result of failing to monitor their behaviours. This project aims to understand the underlying mechanisms of how these two traits are different in being associated with risk-taking behaviours. **Suggested readings:**


Michael Smithson

Supervisory Style
I regard an Honours thesis project as primarily the student’s project, not mine. It is their opportunity to demonstrate that they can do research (versus writing an essay or sitting an exam). So, my main goal as a thesis supervisor is to give the student the best chance that I can, of fully demonstrating their capabilities, skills, and creativity in a research project of their choosing. To achieve this goal, I try to enable each student to work as independently as is feasible for them. I don’t “hand out a project” to the student; instead I suggest topics for project that I’m able to supervise (see the list below) and then help the student find a project that inspires them but also is within their capabilities (and mine!).

I reserve an hour-long weekly time-slot for each Honours student, so that they have at least one guaranteed meeting with me per week, but of course this does not mean they’re required to meet with me every week if they don’t need to. I help out mainly where the student is stuck or is having to work on parts of the thesis that don’t correspond to their strengths. For instance, some students may need most help with their data analysis; others may need most assistance in writing up. I find that many need a boost in their confidence that they can complete a high-quality thesis.

There are many valid reasons for doing Honours in Psychology. Some students find research intrinsically interesting and rewarding, whereas others are doing Honours because they want to become clinicians or to pursue other careers that don’t involve research. So, where possible I orient my supervisory style and expectations according to the student’s interests and career goals.

Project Topics
Project 1: Uncertainty Arising from Conflict and/or Ambiguity

1. Both sources lose credibility and trust from recipients, and
2. Recipients prefer ambiguous (or vague) but agreeing sources even if the informative content is identical to the conflictive messages.

No framework has been developed to guide the decision making of rational recipients of multiple ambiguous and conflicting estimates. Gajdos and Vergnaud (2012) have made one such attempt, but theirs is not the only defensible way of evaluating tradeoffs between conflict and ambiguity. I have made another (in my view, better) attempt but have not yet published it.

Little is known about how people make decisions when faced with uncertainties arising from information that is both ambiguous and conflicting, despite the fact that ambiguity and conflict frequently arise in real decision-making situations. There is a considerable body of research on decision making when uncertainty is solely due to precisely known probabilities of relevant outcomes, and a substantial empirical literature on decision making when those probabilities are imprecisely known (i.e., “ambiguous” in psychology and behavioural economics, although “vague” is a better term). However, few investigations have been conducted into decision making where there are conflicting estimates or when estimates are both conflicting and ambiguous. In fact, almost nothing is known about the joint impact of conflict and ambiguity on judgements of risk and uncertainty or on decisional preferences.

I obtained an ARC Discovery Project grant for a project along these lines, with funding starting in 2015. The primary aims of this project are as follows:

1. Investigate how perceptions of uncertainty are jointly affected by conflict and ambiguity in information;
2. Develop and test models of judgement and decision making under conflict and ambiguity;
3. Examine the separate and joint effects of ambiguity and conflict aversion on decision making; and
4. Investigate the effects of positive versus negative framing of events and probabilities on perceptions of ambiguity and conflict.

I conducted a study in which participants were asked to evaluate the degrees of disagreement, ambiguity and overall uncertainty in pairs of fictitious estimates of change in two quantities (Smithson 2013). Among the more interesting findings was that people are sensitive not only to disagreements about the location of an estimate but also to disagreements about how uncertain the estimate is.

An Honours project on this topic could involve extensions of current models and further empirical tests of how people judge the extent of conflict and ambiguity in estimates such as these, and how they combine those judgements in assessing overall uncertainty in such estimates. Moreover, the ways in which people make decisions under ambiguity versus conflict have not been studied, so a project could focus on that topic instead.

Defence Technology and Science Group team leader Glen Smith is currently directing a project on “trusted autonomy” which, loosely speaking, refers to establishing sufficient trust by a user in an autonomous unit (a robot, say, or a drone) to use it effectively, but not “blind” trust so that the user fails to be appropriately cautious about the unit malfunctioning. Suppose the unit provides two or more tests of how well it is functioning. According to the “conflict aversion” hypothesis, users should be more willing to abort the unit if one test says it’s malfunctioning and the other says it isn’t, than if both tests are ambiguous and say that the unit may or may not be malfunctioning. A worthwhile Honours project with clear applications could be based around this idea.

Another important kind of project would be to investigate people’s responses to conflict and ambiguity when they get to sample from an environment, rather than having estimates described to them (as in Smithson, 2013). Three papers have been published on this topic, and in my view all of them are mistaken in a crucial way. Briefly, Dutt, et al. (2013), Ert and Trautmann (2014), and Guney and Newell (2014) all studied ambiguity attitudes when participants sampled from an “ambiguous” environment. They reported that ambiguity aversion decreased or vanished, and concluded that “experienced” ambiguity is less aversive to people than “described” ambiguity. However, the information and stimuli being sampled by participants in all three experimental setups were not ambiguous at all. So, the participants weren’t actually experiencing ambiguity. Instead, they were sampling unambiguous stimuli and learning about their properties just as one would from an unambiguous environment. I raised this critique and outlined a new program of research (Smithson, 2015).

I’ve just completed a couple of studies demonstrating that when the stimuli themselves are ambiguous ambiguity aversion does not disappear, and one of my Honours students in 2015 completed a more extensive study along these lines. We have also done this for conflict (which was not investigated in the three papers).

Still another area for research on this topic is perceptions and the communication of scientific uncertainty (e.g. regarding climate change). See also Project 3 below. The IPCC 5th report had guidelines for expressing not only “ambiguity” or imprecision regarding scientific findings and theories, but also levels of (dis)agreement among scientific experts. A recent paper by Broomell et al. (2016) found evidence that people may evaluate uncertainty in scientific fields or domains on the basis of these two dimensions (precision and expert consensus). One of the chief areas of interest here is how political ideology and educational levels influence lay perceptions of the status of various sciences on these two dimensions.

References


61
Project 2: The role of uncertainty in positive emotional states

This is a project that is just starting, although two of my Honours students in 2015 have completed projects in this domain. A dominant view in psychology is that uncertainty is a negative thing, and that negative emotions are induced by it. For instance, Gudykunst and Nishida (2001) propose that anxiety is the affective equivalent of uncertainty. This view clearly is nonsense. Several positive kinds of emotional experience, such as hope, thrill, anticipation, and aspiration, not only are induced by uncertainty, they require uncertainty. If there are no uncertainties in the future, then there is no basis for hope. You can’t have an adventure without uncertainty: No risk, no thrill. If attaining one’s goal is a sure thing, then aspiring to it makes no sense. Note that this does not require objective uncertainty; of course, uncertainty can be subjective.

There is room for numerous projects in this topic. I’ll focus on hope as an illustration. The dominant approach to hope in recent times is Snyder’s so-called “Hope Theory” (HT). Snyder, (2000: 8) defines hope as “a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy) and (b) pathways (planning to meet goals)”. According to Snyder, et al. (1991), hope comprises two facets, pathways and agency. Pathways represent the capacity of individuals to formulate plans to pursue their goals, uncovering alternative avenues and opportunities if obstacles arise. Agency represents the excitement, energy, determination, and commitment required to maintain these pathways. The main contribution of HT to older views about hope in psychology was to add the agency component to the already extant concept of pathways.

HT proponents are not unaware that uncertainty is linked with hope, specifically via pathways: “Likewise, goals must be attainable, but they also typically contain some degree of uncertainty.” (Snyder, Rand, & Sigmon 2002: 258). Likewise, Irving, Snyder, and Crowson (1998) propose that it is important for people to believe that they have (or can generate) multiple alternative pathways to attaining their goals, and they suggest that “high-hope” people believe they are adept at doing this. One paper also suggests that hope is sensitive to perceived probabilities of intermediate goal attainment (Averill, Catlin, & Chon, 1990), but otherwise very little work seems to have been done on the link between uncertainty and hope.

What HT is missing is that the construct of hope has uncertainty implicitly built in, and that hope, like thrill, anticipation, and aspiration, requires uncertainty to be realistic. Hope is realistic, by the perceiver’s own lights, only if she or he perceives the future as containing relevant uncertainties. Moreover, there are two source of uncertainty: The existence and effectiveness of pathways, and the
person’s own capability to utilize those pathways. We should expect the effects of these two sources of uncertainty to have distinguishable effects on hope, but also to have a conditional relationship with one another. Furthermore, pathway uncertainty also will have two kinds: Number of alternative pathways and the probability of a given pathway leading to success. These may have opposite effects on hope: The greater the number of alternatives, the higher our hopes of succeeding, but the lower the probability of each pathway leading to success, the lower our hopes.

There are plenty of research questions that could form the basis for an Honours project on the topic of the connection between uncertainty and hope. Here’s a brief sample:

1. What effects do number of alternative pathways and the probability of a given pathway leading to success have on hope? Do these effects depend on whether the goal is the attainment or prevention of an outcome (or getting a gain versus a avoiding a loss)?
2. Are there individual differences variables related to attitudes about uncertainty that are correlated with trait-scores on hopefulness? Examples include need for closure, tolerance of ambiguity, openness, and risk orientation.
3. How does hope covary with the magnitude and probability of an expected gain or loss? Do these independently influence hope, or is there a moderator effect?
4. What impacts do specific kinds of uncertainty (e.g., ambiguity, conflicting information) have on hope? Is one kind more debilitating than another?
5. When and why do people have hope even though they believe there is no uncertainty? Is this linked to a sense of trust or faith?

References

Project 3: Interpretations of Positive and Negative Verbal Uncertainty Expressions
The Intergovernmental Panel on Climate Change (IPCC) fourth report (2007) recommended verbal probability and confidence scales (see Table 1), to communicate uncertainty. On the one hand, these verbal phrases are flexible and vague and therefore can absorb some disagreements among experts or sources. On the other, it is inadvisable to assume that everyone interprets these phrases consistently or in consensus. A substantial literature documents considerable differences among individuals’ interpretations of probability phrases. Patt and Schrag (2003), for instance, demonstrated that interpretations also vary as a function of the severity of the event concerned, and speculated that this variability may induce the public to underestimate some probabilities conveyed in IPCC reports.
Budescu, Broomell, and Por (2009, 2012) presented experimental evidence confirming that laypeople’s interpretations of the IPCC probability phrases in sentences from the 2007 report tended to regress towards the middle of the [0%, 100%] range and also that numerical intuitions about the meanings of the phrases differed considerably across individuals. Budescu et al. proposed a partial remedy for both of these shortcomings (including a numerical range along with each verbal phrase) and demonstrated some success thereby.
This project was extended into a 24-nation, 17-language study (for which I had charge of the Australian component) funded by the National Science Foundation (USA) under Budescu’s leadership. Data-collection took place in 2012 and several papers have been published and are being written up on this project (e.g., Budescu et al., 2014).

Table 1. Verbal Probability and Confidence Phrases of the IPCC

<table>
<thead>
<tr>
<th>Probability Phrase</th>
<th>Intended Numerical Range</th>
<th>Confidence Phrase</th>
<th>Intended Numerical Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtually certain</td>
<td>&gt; 99%</td>
<td>Very high confidence</td>
<td>at least 9 out of 10</td>
</tr>
<tr>
<td>Extremely likely</td>
<td>&gt; 95%</td>
<td>High confidence</td>
<td>about 8 out of 10</td>
</tr>
<tr>
<td>Very likely</td>
<td>&gt; 90%</td>
<td>Medium confidence</td>
<td>about 5 out of 10</td>
</tr>
<tr>
<td>Likely</td>
<td>&gt; 66%</td>
<td>Low Confidence</td>
<td>about 2 out of 10</td>
</tr>
<tr>
<td>More likely than not</td>
<td>&gt; 50%</td>
<td>Very low confidence</td>
<td>less than 1 out of 10</td>
</tr>
<tr>
<td>About as likely as not</td>
<td>33%-66%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlikely</td>
<td>&lt; 33%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very unlikely</td>
<td>&lt; 10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extremely unlikely</td>
<td>&lt; 5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exceptionally unlikely</td>
<td>&lt; 1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Smithson’s reanalyses of the Budescu et al. data revealed several issues not investigated by Budescu et al. (Smithson et al. 2012). Chief among these are considerably greater interindividual variability and poorer accuracy in interpretations of negative phrases (e.g., “very unlikely”). A suitable Honours project could evaluate the advisability of using negative phrases by comparing judgements about them with judgements about their reverse-worded equivalents. An obvious experimental design would cross negative-positive wording of the probability phrase with negative-positive wording of an event. However, it is unclear whether the type of event, numeracy, or some other contextual factor, could influence the effect of negative versus positive wording. So the project could incorporate one or more such factors as well.

References


Project 4: Zero-Sum Thinking

The key idea is that some resources, characteristics and quantities are zero-sum by definition, i.e., if more is allocated to one recipient then less is available for others. A resource to be divided among a finite number of recipients is zero-sum if increasing the allocation to one recipient by amount S, say, decreases the sum of the amounts available to the others by S. Examples are fixed quantities of food or proportions of any quantity. In probability theory, for example, the probability of the union of mutually exclusive events must equal the sum of the probabilities of those events, and this requirement often is called “additivity.” I shall use “additivity” and “zero sum” interchangeably here. On the other hand, other kinds of resource, such as wealth, membership in or belonging to a group, endorsement of a political attitude, liking, respect, and love are not
necessarily zero-sum, although people can perceive them as zero-sum. Zero-sum thinking is of psychological interest in regard to such resources.

Zero-sum thinking is topical, has been given book-length popular treatments (e.g., Wright, 2000) and has featured in prominent forums for current affairs. In 2006, Forbes online columnist Rich Kalgaard called it the “worst disease” and laid its genesis at the feet of politicians and their advisors who “occupy a zero-sum world… in which one person’s gain is another’s loss.” A recent (2010) online commentary in The Economist cautioned that “It's dangerous to fall into the resentful-peasant belief that whatever makes rich guys richer must make everybody else poorer. But it's also dangerous to fall into the genial-sucker belief that whatever makes rich guys richer must make everybody else richer, too.” The resource whose zero-sum nature was debated in both of these columns is wealth, and indeed a key dividing-point between illiberal and liberal politics is whether wealth is zero-sum.

Zero-sum thinking is important for two reasons. First, the perception of a resource as zero-sum is likely to result in a competitive orientation towards other potential possessors. The presence or absence of zero-sum thinking can make the difference between a relationship or negotiation process driven by rivalry and one enhanced by affordances. Conversely, perceptions of a situation as competitive or rivalrous may result in a relevant resource being perceived and treated as additive. Thus, additivity is of psychological interest either when it is required but people make judgements violating it, or when it is not required but people impose it via their judgements. For example, Meegan (2010) reports three experiments whose participants were undergraduates at a university that does not “grade on the curve,” i.e., that awards grades on the basis of fixed criteria. Thus, grades are not zero-sum. Nevertheless, when participants were asked to predict the grade of a student after they had been shown a negatively skewed distribution of grades already assigned in the same class, they predicted a lower grade than participants who had been shown a symmetric distribution. Thus, they displayed a bias towards zero-sum thinking.

A more striking example comes from a study by Sopena (2009), under my supervision, which investigated the relationship between perceived threat, social identity, ethnicity and marginalizing racism. Participants were presented with descriptions of migrants and were asked to make judgments regarding the degree to which they considered these targets as prototypically Australian and non-Australian, on a rating scale from 0 to 20 for each judgement. Targets were described as either highly threatening or non-threatening on a variety of issues (e.g., fundamentalist religious orientation). Respondents were assigned to either a condition in which a superordinate version of Australian identity was invoked or a version that portrayed Australia as a “patchwork quilt” of various cultures and groups.

We hypothesised that lower ratings on Australianness would be observed when threat level was high and when a superordinate prime was invoked, and that Syrians, the ethnic outgroup, would be more excluded than Canadians, the ethnic ingroup. Multi-level model analyses revealed that Syrians were more excluded compared to Canadians in the high threat condition only. The superordinate prime had no effect.

Degrees of membership in the set of Australians and Syrians or Canadians need not sum to 20. For instance, a target could be given a 15 on the degree to which they are Australian and likewise 15 on the degree to which they are Canadian. My reanalysis of Sopena’s data (Smithson, et al. 2015) revealed that respondents’ ratings summed exactly to 20 more often for high-threat and Syrian targets. Forcing the two membership ratings to sum to 20 (i.e., additivity) is equivalent to regarding membership in the two sets as a zero-sum tradeoff and therefore a form of categorical exclusiveness. These findings suggest that additivity increases under perceived threat or when the target is an outgroup member.

While additivity has been studied in probability judgements, it has not been a common focus of investigation. Instead, much attention has been devoted to probability over- or underweighting (e.g., Tversky & Kahneman, 1992; Gonzales & Wu, 1999) and anchoring and adjustment (e.g., Tversky & Kahneman, 1974; Epley & Gilovich, 2006). Support Theory is the major exception (Tversky & Koehler, 1994 and Rottenstreich & Tversky, 1997), in which additivity has been shown to be
routinely violated such that the judged probability of an event is less than the sum of the judged probabilities of its sub-events. However, Support Theory does not provide an explanatory framework for when resources will be treated as additive and when not.

The lack of attention to zero-sum thinking constitutes a significant gap in our understanding of human cognition. Additivity is not directly captured in studies of probability judgements, resource allocations or decisions under uncertainty. Likewise, zero-sum thinking is not measured by attitudinal constructs such as social dominance orientation, right- or left-wing authoritarianism, or racism; nor is it captured by extant measures of cognitive style such as openmindedness, tolerance of ambiguity or need for closure.

Some popular treatments of the topic (Wright, 2000; Rubin, 2002) have claimed that a human tendency toward zero-sum thinking is a legacy of intra-group resource and status competition among hunter-gatherers in small groups. Even if true, this view falls far short of explicating the psychological levers and predictors of additivity. Instead, the psychological and social science literatures have treated zero-sum thinking as a predictor or cause, usually without any rigorous attention to it as a construct in its own right.

Social scientists argue that zero-sum thinking contributes to inter-personal and inter-group conflict. For example, outsourcing jobs to another country may be resisted because of a belief that a gain of jobs by the other country yields a corresponding loss of jobs in one’s own. Likewise, economists blame zero-sum intuitions for public resistance to free trade because people find it hard to comprehend how both trading partners could gain, even though win–win scenarios are a common consequence of trade (Rubin, 2002). Zero-sum perceptions have also been claimed to contribute to inter-group prejudice (Bobo and Hutchings, 1996; Esses et al., 2005) and public resistance to immigration (Esses et al., 2003).

My project has taken three directions, investigating:

1. Individual-difference predictors of the tendency toward zero-sum thinking
2. The connections between zero-sum thinking and causal reasoning
3. Priming effects on zero-sum thinking

A tendency to zero-sum thinking may well be predicted by specific attitudes, cognitive styles or even personality traits, but this possibility has not been systematically explored. In one of the few relevant studies, Esses et al. (2003) report that individuals high in Social Dominance Orientation (Pratto et al., 1994) are more likely to show zero-sum tendencies when expressing attitudes about immigration. I have just completed four studies (USA, UK, India, and China) testing whether measures of psychopathy, interpersonal aggression, and cold-heartedness will predict a tendency to zero-sum thinking. Another study is being analysed (USA, UK, India samples), assessing whether social dominance orientation, competitive world-view, social values orientation, and the big-5 personality factors are related to zero-sum thinking tendencies. Preliminary results indicate that social dominance orientation and competitive world view both are positively related to the endorsement of zero-sum ideas.

Findings indicate that the psychopathy and interpersonal aggression measures are positively associated with endorsement of zero-sum statements such as “when the rich get richer, the poor get poorer”. This relationship does not appear to depend on nationality. There also is a priming effect, such that if the covariate items are presented before the zero-sum statements, that decreases endorsement of the zero-sum statements. Again, this effect does not depend on nationality. There are several possibilities here for future projects, and I list several ideas here.

1. Różycka-Tran, et al. (2015) published a scale that they claim measures belief in a zero-sum world as a “social axiom”. I’ve found, however, that people’s belief in a zero-sum-like statement often depends on how it is phrased. What is the relationship between the Różycka-Tran scale and the degree to which people actually endorse zero-sum statements?
2. If an ingroup and outgroup are in competition with each other for a resource, does that increase zero-sum beliefs about the relations between these groups in general, or just in relation to that resource?
3. A recent paper (Wilkins, et al. 2015) provides evidence for the following patterns that relate zero-sum beliefs to inter-group inequality and competition (these would make the basis for a social identity theory-based project):
   a. High-status groups endorse zero-sum beliefs (ZSBs) more than low-status groups.
   b. High-status groups' ZSBs increase when they perceive increasing bias.
   c. ZSBs correspond with efforts to improve high-status groups' outcomes.
   d. ZSBs correspond with efforts to worsen low-status groups' outcomes.

4. An important distinction that has yet to be investigated is whether the relationship with psychopathy and interpersonal aggression is amplified when the zero-sum statement refers to the self (e.g., “if my best friend is paying attention to someone else, s/he will be paying less attention to me”, vs “if a person’s best friend … less attention to that person”).

5. Other individual difference variables may also predict greater endorsement of zero-sum attitudes. Machiavellianism, for instance, has not been examined.

6. The 3-nation study indicated that there is no priming effect from SDO, SVO, and competitive world view. Is it the case that a priming effect only occurs when the prime makes a strongly unacceptable identity salient that is linked with zero-sum beliefs? The results from the 4-nation study also suggested that the priming effect dissipates as scores on psychopathy increase. This moderator effect merits further exploration.

References


**Project 5: Quantile regression models for doubly-bounded dependent variables**

Smithson and Verkuilen (2006) introduced a regression model to psychological researchers that can handle continuous doubly-bounded dependent variables, such as proportions, percentages, and rates—any scale that has two bounds. Instead of using the normal distribution to model such variables, they used the beta distribution. Their work and that of others (e.g., the R package provided by Grün, Kosmidis & Zeileis, 2012) firmly established a place for beta regression in the researcher’s toolbox.

The beta distribution is well known for its flexibility. Nevertheless, the beta distribution has some important limitations. One of them is that it is unsuited for modelling quantiles (e.g., the median). Current quantile regression models, likewise, are unsuited to modelling doubly-bounded variables. There is a family of distributions that is suitable for quantile regression with doubly-bounded variables, but little is known about it. Smithson and Shou (2016) have investigated this family, developed estimation methods for it, demonstrated that in some applications it out-performs the beta and other distributions, and have launched an R package to implement it.

Possible projects range from applying the new distributions to real-world data-sets to exploring their properties and extending the varieties of models that use them.

1. Modelling real data with these distributions: When do they outperform the beta and other distributions, and why? There are data-sets “out there” that could be reanalysed using these new distributions, and the prospect of new insights gained from such analyses.

2. Which members of this family of distributions are the most flexible? The “mathematical” part of this project already has been done, so what remains is primarily simulations to explore its small-sample behaviour, extending it to deal with multi-level data.

3. Are there measurement or theoretical justifications for these distributions? For instance, could they be viewed as similar to probability weighting functions that are used in models of human decision making under uncertainty?

4. Extending the GLMs for these distributions to random-effects models. Some progress has been made on this, but much work remains to be done. This would be a combination of developing some multi-level GLMs and testing them on simulated and real data.

5. Multivariate distributions in this family. This project is just being started. I have a couple of promising avenues to pursue. This would involve some maths, some programming, and testing on simulated and real data.

**References**

Lillian Smyth

(1) Anticipated 2017 honours projects:

My research interests focus on social and educational psychology. In the social psychological domain, I work mainly on social influence and perceived norms. In the education domain, my work involves applications of social psychological theory to teaching and learning. Projects explore tertiary learning approaches, academic discipline differences, research-led education, medical education, socialised learning, socially distributed teaching in music education and the relationship between social identification and learning behaviour.

In 2017, I have two key areas of research in which students could be involved:

- The influence and interaction of norms for student learning. This work focuses, in particular, on the ways norms are communicated and possible outcomes when these norms are in conflict, from multiple sources or ambiguous.
- An ongoing project examining research-led education in science teaching. This work largely focuses on the social identity and group membership aspects of research-led-education experiences and the possible impact on academic outcomes, career decisions and self-perceptions.

I am also open to student project ideas, in the social influence or education domains, but students will need to be flexible and rational about the need to whittle down big ideas to an honours-project scale.

(2) Supervisory style:

My supervisory style is largely a support role, rather than leadership role. At this level, I expect students to be able to take the lead on their own project, pursue ideas and actions independently and proactively seek help when they need it. I am happy to provide as much conceptual, methodological, research design, statistical, time management and write-up guidance as necessary, but expect students to take charge of their own project and progress.
APPENDIX B: WRITING AND HANDING IN YOUR THESIS

Writing Your Thesis

Your thesis should be written as a psychology research report. The major headings and what goes under them are outlined below. We do not expect you to adhere to any particular font size, but there are certain basic rules to follow associated with the content, broad structure and detail of the thesis. You should adhere to the stylistic conventions set out in the APA manual (6th edition).

Content

Your thesis must tell a story, in the sense that it must have a beginning, middle and an end. The information you present must be logically structured and give the reader the sense that he or she is progressing towards a greater understanding of the topic in general and of your own research in particular. Your thesis must be analytical and critical in nature - not just descriptive. The reader is looking for evidence that you understand your field, but also that you can identify strengths and weaknesses and gaps in knowledge or explanation or theory, and come up with a meaningful research project based on this understanding and analysis. Your study (hypotheses, design and method) must follow logically from your Introduction. The questions you are asking in your research and the measures you are using must make sense in the context of what has gone before in the Introduction. In general, your report should start out at a broad level, become narrower and focused in the presentation of your research, and then broaden out again by the end of your discussion.

Structure

Your section titles should look something like this:

   Title page

   Table of Contents

   Abstract

   Method

   Participants and Design

   Procedure

   Results

   Discussion

   References

   Appendix A (if necessary)

   Appendix B (if necessary)
Table of Contents
This should list major and minor headings, with page numbers.

Title Page
The title page must be formatted in line with the example attached at the end of this Handbook.

Abstract
Your abstract should be presented as one paragraph of about 200 words (or less) and should allow the reader to quickly gain an overview of the contents of your report. Refer to the nature of the problem, the method you used, the results you found and the conclusions you came to. The abstract represents a micro-summary of the entire thesis.

Introduction
You should begin by introducing your topic - set the scene so that what follows is placed in context. Give the reader some idea of why this area is worthwhile pursuing. Then move fairly quickly to your review of the literature. Your Introduction should set out the relevant literature in enough detail so that the reader gains a clear and critical overview of past research (leading up to your own study). You may use sub-headings if it helps you to structure your intro. Make sure that your Introduction is divided up appropriately at both the paragraph and subheading level. Do not put a paragraph break in just because it looks nice – make sure it presents a new thought/concept/perspective/issue.

After reviewing the literature, your own work will take centre stage. At the end of your Introduction, you should have a section that orients the reader to your own research. Here you will outline your research aims/question(s), where these fit into the literature you have just critiqued, and any specific hypotheses. By this time, however, the focus you are taking in your research should be obvious to the reader, given that you have oriented them successfully in the rest of your intro. Your own work should appear to be a logical extension of what has gone before. This does not mean that you need to agree with what has gone before. Perhaps your research is going to provide us with a new insight into the shortcomings of past work and the direction we should be taking.

Method
This section tells the reader how the study was done. It contains subheadings. In general, they will look like this:

Participants and Design
Tell the reader how many participants you had and from where you got them. If relevant, tell the reader how many males and females you had (or any other relevant subgrouping). Outline the design of your experiment (participant selection, IVs and DVs) or the logical structure of your survey. What did you manipulate (if anything)? What did you measure?
**Procedure**
Here, you tell the reader what you did in sufficient detail so that the reader could repeat it fairly faithfully. Include brief instructions to participants (if they are long just summarise then put the rest in an Appendix). Other headings may be relevant to you (e.g., *Apparatus, Stimuli*).

**Results**
In this section you tell the reader what happened in your study. First, restate your hypotheses or the purpose of your study. Then describe your analysis of the data and the results of your analysis. Include tables and figures to the extent that they help the reader understand the data. Do not use figures indiscriminately, and *never* use a table or figure without discussing its contents in the text. Make sure that interpretation is easy. There will often be more than one way to describe your data – give plenty of thought to how best to get the message across. Be clear in your mind what the message actually is.

**Discussion**
In this section, tell the reader about why your results turned out the way they did. Tell the reader of the fate of your hypotheses or research question. Were they confirmed or disconfirmed? Why is this? Did you find support for one model or theory over another? Why is your interpretation the best one? How do the theories you told us about in the intro now stand up in the light of your own work? If your results have something to do with serious flaws, methodological problems, sampling error etc., tell us about it – but do not go to great lengths to discredit your own research if this is not warranted. Concentrate on (a) explaining your results and (b) explaining what they mean (if anything). Be careful not to actually go beyond your data (i.e., Do not suggest that your results tell us something when in fact there is no evidence for this). Do not introduce startling new theoretical approaches here – make sure that what you say makes sense in the light of the Introduction. Your discussion should move to a consideration of future research (your recommendations, etc.). End with a conclusion that wraps it all up. Again, you may use subheadings in this section if you wish.

**References**
Give details of all sources you cite. Have a look at any published articles to see how references should be presented. Italicise journal and book titles. There is a short guide to this in your course guide. Do not include refs that you have not cited in the main body of your thesis. And make sure that anything you have cited is included here.

**Appendices**
These contain details of instructions to participants, survey items you could not fit in your results, and statistical tables (details of analyses). Include a new appendix for each kind of info, on a new page.

---

**Finally –**

MAKE SURE YOUR PROOF-READ YOUR THESIS VERY CLOSELY
Format, Layout, Binding and Submitting Your Thesis

- Double or 1.5 space your work. Make sure that the font is big enough to read comfortably (e.g., 12 point Times with 1.5 spacing). Leave a margin on the left for binding (e.g., 3.5 on the left, 2.4 on other sides). The formatting and layout of your title page must follow the example given below.

- Your thesis should be submitted to the office as follows:
  - A thesis submission form (available from the Enquiries Office).
  - One unbound copy.
  - The thesis should be doubled sided.
    Do this by going to File, Page Setup, In Margins, go to Multiple pages and select Mirror margins, then set the size of the margins (Left & Right).

- A copy of your thesis will be available from the Enquiries Office after end of semester results are released
Predictors of community responses to the Bondi Beach Olympic Volleyball Stadium:
Self- interest, social identity and collective action.

Chris Smith

Supervisor: Dr Robin Nguyen

Submitted in partial fulfilment of the requirements for the Honours program in Psychology in the Research School of Psychology, the Australian National University.

October, 2015

Word length: 11,650 words
**APPENDIX C: EXAMPLES OF APA FORMAT**

**Quotations and In-text Citation:**

After extensive field observation, Cousteau (1996) concluded that the close social bonds evident within whale pods were “instrumental in driving the development of an extraordinary capacity for complex communication” (p. 158). However, Cutlass, Silver and Parrot (1999) dispute this point, arguing that the “whales’ capacity for complex communication unarguably facilitated the emergence of strong social bonds, and not vice versa as Cousteau (1996) claims” (p. 524). Contributing to the controversy, others dispute both Cousteau (1996) and Cutlass et al. (1999) and envisage a more interactive process (Robinson & Family, 1998).

**Tables**

Table 1

*Judgements of Fairness of Dismissal Procedure by Job Level*

<table>
<thead>
<tr>
<th>Dismissal Procedure</th>
<th>Managers</th>
<th>Checkout staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notification by mail</td>
<td>7.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Personal interview</td>
<td>4.8</td>
<td>8.7</td>
</tr>
</tbody>
</table>

*Note. Judgements were made on 10-point scales (1 = completely unfair, 10 = completely fair)*
Figures

![Chart showing perceived fairness by job level.](image)

Figure 1. Judgements of fairness of dismissal procedure by job level.

Note. Judgements were made on 10-point scales (1 = completely unfair, 10 = completely fair)

References

