The School of Psychology
University of St Andrews

PS 3033
Developmental Psychology

Student Module Booklet

PS3033 Developmental Psychology
Student Module Booklet 2017

School of Psychology
University of St. Andrews

Index

PS3033 Developmental Psychology
Student Module Booklet Spring 2017

Jan 26th-Feb 23rd

9am-11am School 3, United College (St Salvator's Quad)
2:30-5pm Afternoon lab practicum: Psychology Seminar room
(surname A-L attend 2:30-4pm, M-Z attend 4-5:30pm)

You are expected to attend both the lecture and the afternoon lab!

INTRODUCTION

'The baby, assailed by eye, ear, nose, skin and entrails at once, feels it all as one great blooming, buzzing confusion' --- James. 1890. I. 488

How do we come to parse the 'blooming buzzing confusion' of our physical and social environments into meaningful representations? This course examines current experimental research and theoretical debates regarding the development of children from infancy to pre-adolescence, with a particular emphasis on the emergence of social cognition. Topics include perception, physical knowledge, language acquisition, memory, categorization, moral reasoning, theory of mind, and the role of culture in human development. A central focus of the course is how scientific theory can inform our understanding of these capacities as they emerge in the first years of life, and how this knowledge enhances what we understand about psychology more broadly.

Instructor Information

Dr Erin Robbins (er70)
Room 1.21
Office Hours: Wednesday 2-4p and by appointment

Required Reading

- **Developmental Psychology: The Growth of Mind and Behaviour, Frank Keil. 2013, WW Norton. ISBN 978-0-393-97885.**
  Please note: It is much, much cheaper to purchase the eBook. Check out:
  http://www.ebooks.com/1514070/developmental-psychology/keil-frank/

- **All journal articles available online and via our Moodle page (see Course Topics & Readings at end of booklet for details)**

Highly Recommended Text

Exploring Developmental Psychology: Understanding Theory and Methods, Margaret Harris, 2012, SAGE Publications Ltd. ISBN: 9781412903356.

This is an excellent resource for anyone who wants practice understanding and writing empirical research reports. The book contains several articles on a variety of developmental topics, all accompanied by commentary designed to help students understand the study rationale, design strategy, assessment measures and key variables, statistical analyses, and interpretation of results. A variety of methodologies are represented, with a diverse sample of infant, child, and adolescent studies. BEST OF ALL, IT IS AVAILABLE AT THE ST ANDREWS LIBRARY AS AN E-BOOK.

Course Objectives:

You will learn about the development of human cognition; how to design and analyse empirical studies to answer outstanding questions in developmental psychology; and how to communicate material succinctly in written and oral form.

Upon completion of this module, students should be able to achieve the following objectives:

- Characterize and differentiate between major theories of human cognitive development
- Describe the impact of culture and environment on cognitive development
- Explain how experimental methods can be used to test theoretically driven hypotheses regarding behaviour in young and pre-verbal populations
- Interpret scientific data generated from a study
- Evaluate research findings, evaluate their rigor, and pose the next set of research questions
- Demonstrate comprehension of APA style, and apply it a written research proposal

Schedule of Topics and Timetable

Specific details about readings & assignments detailed at end of booklet

WEEK	Lectures 9am-11am Thursdays, UCO: School 3, North Street	Lab 2:30-4pm (A-L), 4-5:30pm (M-Z) Seminar Rm, Psychology & Neuroscience
1 **26/01/17**	Neurobiological development & Theories of Developmen	**Lab 1** Designing experiments in developmental psychology (emphasis on methods appropriate for very young infants)
2 **02/02/17**	Core Knowledge & Action Perception	**Lab 2** Action experience and object exploration (habituation and reaching paradigms)
3 **09/02/17**	Cognitive Development	**Lab 3** Face perception (using a looking paradigm, we will assess how evidence supports different theoretical accounts)
4 **16/02/17**	Theory of Mind	**Lab 4** Self-consciousness (coding behavioural data. We will discuss how to extract data from rich but messy behavioural input)
5 **23/02/17**	Prosocial Behavior & Moral Reasoning	**Lab 5** Distributive justice (how does the child's role in a study change the outcome?)

CONTINUOUS ASSESSMENT ASSIGNMENT

The grade for this class is based on a single piece of continuous assessment, a research proposal (1500 words) in which you explore a topic appropriate to developmental psychology. The exact research question is of your own choosing. You may opt to explore in depth a topic raised in lab/ lecture, or you may elect to address a topic outside the immediate scope of the course, provided you can clearly demonstrate how it pertains to infant/child development. In either case, the proposal should describe a novel, critical approach to your topic. A proposal that boils down to a replication and mild extension of an extant study will simply not cut it.

Assignment Guideline: Research proposal (provisional deadline, Monday March 6th at 5pm). Detailed guidelines will be posted on moodle, but in brief your proposal will need to include the following elements:

- **Background:** This section should concisely summarise the literature and major findings that inform your research question. It is expected that you will incorporate at least one source outside those covered in class/lecture
- **Rationale and hypotheses**: Here you should specify what gaps, unanswered questions, or theoretical tensions necessitate your research. In other words, you are explaining what problem exists and why you wish to investigate it. You should then clearly state your hypotheses.
- **Methodology:** This section should detail how you will tackle your research question. Who are your participants, and why have you chosen this group? Paradigms, assessments, apparatuses, etc. should be clearly described. A reader should be able to understand why these methods are the best way to address your topic. It should also be clear to a reader how these measures will generate your data, and what your dependent/independent variables are. Finally, you should offer a plan for how you would analyse your data—what statistical test(s) would be most appropriate and why? What pattern of results would you expect to see, given your hypotheses?
- **Impact and implications:** The last section of your proposal should explain the importance of your findings. Would your findings be able to resolve a theoretical debate? Are their implications for education or health? Make a case for why your results would be meaningful.
- **Style (Including References and Clarity of Expression)**: Don't forget to cite things in APA style, and be sure to write concisely and with scholarly tone

Feedback on this work will be provided on or before Monday, April 17rd.

Assignment Formatting: The proposal should be presented as follows: a title page stating the title of the work, student's matriculation number, the module number, the word count, and the date. There must be at least a 1" margin all round (top, bottom, right and left). Text must be in Arial or Times New Roman font at 12 point, 1.0 line spaced. The reference list does not count towards the word limit, nor do brief, appropriate labels for optional figures/diagrams.

Length Limitations (Word Count Restrictions)

Word limit: 1500 words (does not include reference list). Per School guidelines, an accurate word count must be noted on the front sheet for each piece of submitted work. Word Counts do not include the title, tables, figure legends, reference lists, or appendices (e.g., diagrams, example stimuli). All other words, including sub-headings (e.g. Methods, Results etc.) count towards the overall work length. Marks will be deducted if the word count is anything above the word limit and will be penalized with 1 point for any over-length up to 5%, then 1 further mark for every 5% over-

length. The School of Psychology & Neuroscience uses option C for penalising over-length (follow this link for details).

How to submit coursework: Coursework should be submitted electronically via MMS on or before the due date. If you experience difficulties with coursework submission contact me or someone in the main Psychology Office ***before*** the deadline— the inconveniences of the digital age ("computer ate my homework") are not valid excuses for late or missing assignments.

Important note on plagiarism and Turnitin

Please note that all submissions are automatically checked for similarity to other essays or published works using the software *Turnitin*. Cutting and pasting of text from journals or internet resources (which Turnitin cleverly and thoroughly picks out and highlights) is not allowed. Turnitin also shows up any text duplicated between candidates' submissions, including your own in different years! Given the penalties for copying, including cutting and pasting, the lesson is simple and clear:
Always write in your own words!

Late Submissions:

Late submissions of coursework should be submitted via MMS. If you have good reasons you may ask for extension ***in advance of the deadline*** by using the Notification of Student Problems form. No extensions are permitted for assessments without University approval. In the event of an emergency or otherwise unforeseen complication, it is your responsibility to initiate this process via the online form, or through your Advisor of Studies, who can start this process on your behalf.

Marking and examination procedures follow a tight timetable that is set by the University. Although I am willing to accommodate late coursework when the student has a valid reason, assessment formalities must proceed according to University timetables, as specified below:

- Late submission prior to return of work to other students in course: 1 point (of 0-20 scale) deducted per day or part thereof. Note that every day will be considered as counting toward a late penalty; this rule will apply to holidays (public and University) and includes weekends, with Sunday and Saturday each counting as one day.
- Work submitted so late that corrected copies of the exercise have been returned to other students will be awarded a mark of zero
- All assessed written assignments must be submitted, even after the return of exercises to other students, by the end of the semester (4pm on the last Friday of the exam period) in which they were due. Failure to do so may lead to the automatic failure of the module.

Marking scheme

The document that follows outlines the provisional marking schemes used for the lab report – this may vary slightly depending how the term progresses. Further guidelines on the writing and marking of the proposal will be provided in Week 2.

Grade criteria sheet

Provisional

Grade……		FAIL	7	8-10	11-13	14-16	17-20
Introduction	**Background**	No valid presentation of content or material	Widespread deficiencies in presentation.	Unsatisfactory depth of literature review; over- reliance and uncritical acceptance of other sources. No clear organisation.	Frequent use of secondary or out-of-date material with some substantive errors; little evidence of critical analysis. Unorganized structure or progression of ideas.	Some use of secondary sources or out-of-date material; some minor errors; some evidence of critical thought. Mostly clear and logical structure.	Scholarly depth of literature review plus extensive critica analysis of material. Well-structured and clear, logical organisation
	Rationale & Hypotheses	No rationale or hypotheses specified	One element missing (either aims and relevance of research to psychology omitted, or no hypotheses)	Poor linkage between research and psychology; no clear distinction between rationale & hypotheses	Poor linkage between proposed research and psychology; poor description of research hypotheses or goals.	Rationale presented in context of psychological theories; research hypotheses and goals clearly described.	novel, creative thought; addresses how study advanc psychology; hypotheses stat clearly & follow from rationa
Methodology	**Paradigm & measures**	No methodology described	Description insufficient to understand protocol, may contain inaccuracies. Not feasible or ethical.	Inappropriate methodology or poor description. Errors or contradictions. Poorly justified, not clearly linked to hypotheses	Major aspects of the method are missing or ambiguous. Link between methods and hypotheses is present but unclear.	Appropriate, methodology and generally clear, but some details of method may be missing or ambiguous.	Careful and clear reasoning selection of methodology. It clear how these methods te the hypotheses specified.
	Participants	No description of participants or sampling method provided	Major elements missing; sampling strategy is unethical	Participants & sampling strategy in appropriate for research question	Description of participants and sampling strategy generic; not enough detail provided	Participants identified, but some details about sampling strategy unclear	Participants identified, wit clear justification for sampl strategy
	Analysis	No description of data analysis or statistical tests	Data analysis inappropriate for research question; no statistical tests mentioned	Analysis plan too broad and generic; proposed analysis inappropriate based on data or research question	Analysis plan contains inaccuracies in description/choice of statistical tests	Mostly clear description & justification of analysis strategy; some description of statistical tests may be unclear	Clear and precise of analys strategy. Appropriate choice statistical tests
Impact & Implications		No contextualisation of findings or relevance provided	Importance of findings directly copied and pasted from introduction	Description of findings inconsistent with study rationale; importance may be overstaed/underjustified	Provides statement about importance of results, but interpretation seems inconsistent with hypotheses/rationale	Mostly clear description of theoretical/practical importance of findings	Clear description of how res will relate to larger literature reference to larger impact o work (e.g., for other researchers, for educators, e
Precision of Expression & Refs (Appendices)		Missing and irrelevant material	Major omissions; major problems in clarity and syntax	Some important references provided but also widespread omissions; writing unclear	Most relevant materials provided; problems with precision of expression or style	Generally thorough but with some weaknesses of presentation	Thorough, precise and corr use of style. Comprehensiv references and appropriat APA style

This sheet is for guidance for markers to enhance consistency in evaluations. It is not intended to indicate an overall grade by application of weighted averages – sections will be weighted differently in the final determination of the overall grade, and furthermore this weighting might vary according to the nature of the specific assignment.

*All instances of possible plagiarism will be referred to the Academic Misconduct Officer and may result in a grade of 0 being awarded.

RESOURCES

Your consistent attendance in both lecture and lab is designed to reinforce what you have learned and help you stay up to date with the course material and deadlines. Although there will be opportunities for feedback along the way, it is strongly advised that you to come to class on time, prepared to participate and ready to ask questions. The resources below may also be of use.

- Office Hours: Wednesday 2-4p and by appointment (Psychology 1.21)

- Preliminary slides will be posted in advance of the lecture; on occasion, these slides may be revised and re-posted to include content from in-class exercises and discussion

- Academic skills support: You should acknowledge that previous academic preparation (e.g., writing skills) may affect your performance in this course. If you find yourself struggling with the written component of the course, I encourage you to utilize the resources of CAPOD (www.st-andrews.ac.uk/students/academic/advice/studyskillsandadvice/academicskills/)

- You can familiarise yourself with the basics of APA style using this guide https://owl.english.purdue.edu/owl/resource/560/1/.

- The Institute for Digital Research and Education at UCLA has an excellent stats tutorial that includes a wealth of information on choosing analyses running tests in SPSS: http://www.ats.ucla.edu/stat/spss/

- StatSoft is a free online text for statistics—see the Basic Stats section if you need a refresher on the purpose & assumptions of several different tests

Don't suffer in silence—if you are having trouble with the material, please explore these resources, or utilize my office hours! Don't allow yourself to fall behind!

My Manifesto
(Teaching Philosophy)

Here is what I expect from students:

You will treat everyone in the class—including your peers, the lecturer, and visiting guests—with the respect due to all human beings. Some of these topics may be sensitive, and you may not agree with all of the points raised, but I expect everybody to act with maturity when we engage in discussion. I expect you to attend every class and give your full attention to the material. This means no playing with mobile devices or computers during lecture/discussion. **I reserve the right to ban electronic devices from the lecture hall if they prove distracting.**

Be an active consumer of knowledge! This means approaching what you read and hear with a critical mind and asking questions rather than just sitting in your seat soaking up knowledge. You will be in the best position to learn and to ask questions when you complete the assigned readings *before* class and lab. We cannot possibly discuss everything from the readings in exhaustive detail. You are responsible for familiarizing yourself with the content in our readings; lecture is intended to supplement this information and will focus on selective topics from the readings.

Please note that slides will be available in advance of the lecture; these materials may be revised and reposted to reflect content from in-class activities and discussion. Taking good notes from both reading and lecture is a skill that you can develop and refine, and which will serve you well during the tenure of your time at St Andrews. A few recommendations from someone who has been there: Avoid copying verbatim (either from the lecture or the book). Try to actively digest the material and find ways to explain the ideas and concepts in your own words. This will greatly increase the chance that you remember new content, and it will aid in your ability to integrate this new knowledge with what you already know.

Here is what students can expect from me:

I will treat you with the respect due all human beings. I will not discriminate against you because of your identity or your well-informed viewpoints. I will manage the class in a professional manner; that may include educating you in appropriate and professional behaviour. I will prepare carefully for every class, and I will begin and end class on time. I will make myself available to you for advising, and I am willing to work with you and the University Disability Team as needed. Please note that I endeavour to respond to emails within 24 hours during the regular week and 48 hours during the weekend. I will maintain confidentiality concerning your performance. Your mark will reflect the quality of your work and nothing else. I am interested in your feedback about the class, and above all I am most interested in what you learned.

Like learning, teaching requires a tremendous amount of time and energy. I do not expect everyone to become a research psychologist, but what I do expect is for you to do your reading, participate in class discussion, and show up for class. This class is meant to make you think critically and to challenge how you interpret knowledge that you generate and that people share with you. It is also an opportunity to explore your own ideas and beliefs about human behaviour and how we study it. Ultimately, this class is not about memorization—it is an application course.

COURSE TOPICS & SELECTED READINGS

The following schedule details the topics and corresponding readings we will cover each week. Readings under the Lecture and Practicum headings are compulsory. ***It is highly encouraged that you read these materials in advance of the lecture and lab.*** The materials under Additional Resources are optional but highly recommended—they supplement the required course readings, often in further depth than we have time for in class, and may be of particular interest to those of you considering psychology as a career.

Finally, you should note that the lecture and lab will introduce material not covered in the readings; by not attending class, you risk missing this content along with instructions, information, and guidelines about assignments. ***Your attendance in both sessions is therefore crucial to your success in the module.*** The lecture and corresponding lab are times to review content but also to practice the skillsets included in your assessment for the course. Historically, I have found that students who regularly attend class score several points higher than their peers who do not.

Week 1: Introduction & Theoretical Debates

How has the view of the infant changed over historical time? Is human development a legitimate topic of scientific inquiry? This week, we discuss perennial theoretical tensions in the study of infant and child research. We also discuss the challenges of empirically studying pre-verbal infants and young children.

Lecture

- Keil Chapter 1 (pp. 3-31)
- Keil Chapter 3 (pp. 56-70 **only**)
- Keil Chapter 5 (pp. 147-166 **only**)
-

Lab:

- Bendersky, M., & Sullivan, M. W. (2007). Basic methods in infant research. In A. Slater & M. Lewis (Eds.), *Introduction to Infant Development* (pp. 16-36). Oxford: Oxford University Press.

Additional resources:

- Nurrenbern, S. C. (2001). Piaget's theory of intellectual development revisited. *Journal of Chemical Education, 78*(8), 1107-1110.
- Spelke, E. S. (1998). Nativism, empiricism, and the origins of knowledge. *Infant Behavior and Development, 21*(2), 181-200.
- Fogel, A. (2010). Historical Reflections on Infancy. *The Wiley-Blackwell Handbook of Infant Development, Basic Research*, *1*, 1-31.

Week 2: Core Knowledge & Action Perception

We discuss the possibility of a core knowledge system for representing objects and actions. In lab we will discuss motor development, and how this relates to children's burgeoning understanding of action and intention.

Lecture:

- Keil Chapter 3 (pp. 78-95)
- Keil Chapter 5 (pp. 166-175 **only**)
- Spelke, E., & Kinzler, K.(2007). Core knowledge. *Developmental Science, 10*(1), 89-96.

Lab:

- Keil Chapter 4 (pp. 116-143)

Additional Resources:

- Wynn,K.(1992). Addition and subtraction by human infants. *Nature*,*358*,749-50
- Baillargeon, R. (2004). Infants' reasoning about hidden objects: evidence for event-general and event-specific expectations. *Developmental science*, *7*(4), 391-414.
- Hood, B. M. (2004). Is looking good enough or does it beggar belief? *Developmental Science*, 7(4), 415-417.

  ***Note: This is a response to the Baillargeon (2004) article above. Good example of scientific dialogue in action!

Week 3: Cognitive development

How do infants parse the world into meaningful chunks? How do infants form categories? What is the role of language in abstract thought?

Lecture:

- Keil Chapter 3 (pp. 95-56 **only**)
- Keil Chapter 8 (pp. 260-295)
- Keil Chapter 9 (pp. 320-337 **only**)
- Gordon, P. (2004). Numerical cognition without words: Evidence from Amazonia. *Science*, *306*(5695), 496-499.

Lab:

- Kelly, D. J., Quinn, P. C., Slater, A. M., Lee, K., Ge, L., & Pascalis, O. (2007). The other-race effect develops during infancy evidence of perceptual narrowing. *Psychological Science*, *18*(12), 1084-1089.
- Sugita, Y. (2009). Innate face processing. *Current Opinion in Neurobiology*, 19, 39-44.

Week 4: Theory of mind & self-consciousness

What does it mean to be a "mind reader"? We discuss what kinds of mental attributions infants and children make about others, and relate this topic to recent theories of autism spectrum disorder. What does it mean to have a sense of self, and what implications does this have for social cognitive development? Is self-consciousness a uniquely human phenomenon?

Lecture:

- Keil Chapter 13 (pp. 482-499 on theory of mind **only**)
- Kiel Chapter 16 (pp. 588- 592 on Autism **only**)
- Baillargeon, R., Scott, R.M., & He, Z. (2010). False-belief understanding in infants. *Trends in Cognitive Sciences,* 14, 110-118.
- Bloom, P., & German, T.P. (2000). Two reasons to abandon the false belief task as a theory of mind. *Cognition,* 77, B25-31.

Lab:

- Keil Chapter 10 (pp. 344-358 on Memory **only**)
- Amsterdam, B. (1972). Mirror self-image reactions before age two. *Developmental psychobiology*, *5*(4), 297-305.

Additional Resources:

- Onishi, K. H., & Baillargeon, R. (2005). Do 15-month-old infants understand false beliefs? *Science*, *308* (5719), 255-258.
- Wellman, H.M., Cross, D., & Watson, J. (2001). Meta-analysis of theory-of-mind development: The truth about false belief. *Child Development*, 72, 655-684.
- Callaghan, T., Rochat, P., Lillard, A., Claux, M. L., Odden, H., Itakura, S., ... & Singh, S. (2005). Synchrony in the onset of mental-state reasoning evidence from five cultures. *Psychological Science*, *16*(5), 378-384.
- Rajendran, G., & Mitchell, P. (2007). Cognitive theories of autism. *Developmental Review, 27*(2), 224-260.
- Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a "theory of mind"? *Cognition*, *21*(1), 37-46.
- Suddendorf, T., & Whiten, A. (2001). Mental evaluation and development: Evidence for secondary representation in children, great apes, and other animals. *Psychological Bulletin, 127*(5), 629-650.
- Wakefield, A. J., Murch, S. H., Anthony, A., Linnell, J., Casson, D. M., Malik, M., ... & Valentine, A. (1998). RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. *The Lancet*, *351*(9103), 637-641.
  ***Note: If you've ever wanted to know where the idea that autism & vaccines are related (THEY ARE NOT), here's the original study, which has been retracted
- Gerber, J. S., & Offit, P. A. (2009). Vaccines and autism: a tale of shifting hypotheses. *Clinical Infectious Diseases*, *48*(4), 456-461.
  ***Note: This is a response to the Wakefield paper—good review!

Week 4: Moral Reasoning

*How do children develop into moral agents with beliefs about how things **ought** to be done? Is there a difference between being helpful and prosocial versus moral? This week we discuss what might constitute the blocks of moral reasoning in our species.*

Lecture:

- Keil Chapter 12 (pp. 427-465 **only**)
- Hamlin, J. K., Wynn, K., & Bloom, P. (2007). Social evaluation by preverbal infants. *Nature, 450*, 557-560.

Lab:

- Fehr, E., Bernhard, H., & Rockenbach, B. (2008). Egalitarianism in young children. *Nature*, *454*(7208), 1079-1083.

Additional background:

- Blake, P.R., McAuliffe, K., Corbit, J., Callaghan, T. C., Barry, O., Bowie, A., Kleutsch, L., Kramer, K. L., Ross, E., Vongsachang, H., Wrangham, R., & Warneken, F. (2015). The ontogeny of fairness in seven societies. *Nature, 528(*7581), 258-261.