

The University of Edinburgh
SCHOOL *of* PHILOSOPHY, PSYCHOLOGY
***and* LANGUAGE SCIENCES**



Psychology 3 Group Project
2011-2012

Supervisors

Prof Tim Bates
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PSYCHOLOGY GROUP PROJECT (PSYL10082)

Module Organiser: Prof Martin Pickering

The project provides students with experience of group-based collaborative research work. Students will design and conduct a psychological study in an area relevant to the research interests of the staff member who supervises the project. Project results are submitted in the form of An APA-style journal article.

Projects provide an opportunity for students to engage in discussion with a staff member for approximately one hour each week (time, place and frequency of meetings are arranged with the project supervisor). These meetings are intended to function as a tutorial equivalent. Students will be required to spend approximately three hours per week across the semester for successful completion of data collection, analysis and write-up of the work.

Learning outcomes:

- 1) Gain experience of collaborative team research.
- 2) Further develop existing skills in designing and conducting psychological research.
- 3) Further develop existing skills in analysis and writing up of research results.
- 4) Gain experience of working with electronic bibliographic databases.

Project assignment and choice

In week 8, the project list link will be sent to students via email and posted online at

http://www.psy.ed.ac.uk/psy_students/undergraduate/index.php

You will be asked to sign to **ONE** group project of your choice via WebCT. Please note that this requires prior matriculation, registration for Psychology 3 and logging in via MyEd Portal. The class will be notified in week 10 when the sign-up becomes live.

(note: visiting undergraduates who are attending in semester 2 only will be assigned to projects on an availability basis). Group sizes are approximately 5-6 students per project.

The Group Project experience will differ from supervisor to supervisor. Some will require more work to develop the materials, others will require more work to collect the data, and still others will require the use of more sophisticated statistical techniques. This is what makes research interesting, and is not something that can be compared or controlled between different projects

Resources

The Psychology Library, University Main Library and Teaching Learning Assessment Centre in Moray House all have study skill materials available to give you guidance on conducting and writing up projects. The following references might be useful:

Collins, S.C., & Kneale, P.E. (2001). *Study skills for psychology students: a practical guide*. London: Arnold.

Bell, J. (2005). *Doing your research project*. Buckingham: Open University Press. (4th ed).

Dunn, D. (2011). *A short guide to writing about psychology* (3rd ed). London: Longman. [Main Library

Field, A., & Hole, G. (2003). *How to design and report experiments*. Thousand Oaks: Sage.

Forshaw, M. (2004). *Your undergraduate psychology project: a BPS guide*. Oxford: Blackwell.

Heffernan, T.M. (2000). *A Student's guide to studying psychology*. Hove: Psychology Press

Landrum, R. E. (2008). *Undergraduate Writing in Psychology: Learning to Tell the Scientific Story*. Washington, DC: APA. [Main Library]

Sternberg, R.J. (2003). *The Psychologist's companion: a guide to scientific writing for students and researchers* (4th ed). Cambridge: CUP (especially Chapter 3, 7 & 8).

Time management and group communication

Supervisors schedule regular meetings with their group. It is however also important that groups communicate with each other e.g. by email, and meet at other times in order to progress the project rather than simply relying on meetings arranged with the project supervisor. There are bookable group study rooms available in the Main Library. It is important that the data-gathering phase of the project is completed well in advance of the hand-in deadline, allowing sufficient time for data entry, analysis, and writing the report.

Project report

Each student writes up an individual APA-style report of no more than 3000 words (excluding title page, references, figure/table legends, excerpts and abstract, the latter of which should be no more than 150 words), which should be typed or word-processed and should be in the form of a journal article. A stated word count should be included on the front cover.

Supervisors can provide help with general issues of report structure, but do not read drafts of student's work.

Each student MUST produce their own independently written report. In particular, although project groups will generally wish to discuss data-analytic strategies, with guidance from the supervisor, all data analyses presented in a student's project report must be performed independently.

Submission deadline and extensions

All projects must be submitted by 4pm on Thursday 15 March. Failure to comply with the deadline without special circumstances will incur marks penalties as follows:

- Up to 5 working days, 5 marks per day will be deducted.
- More than 5 working days late, a mark of zero will be given.

Where special circumstances are responsible for a loss of study time see p6. For an extension see pp 5/6.

Submission

The Group Project should be submitted in **TWO FORMATS**.

1. Two hard copies (type-written, double spaced, using 12 point fonts) should be submitted to the course secretaries via the 3rd year essay box in the concourse.
2. An electronic copy must also be submitted via Turnitin*. A link to Turnitin will be available via the Group Project course on WebCT.

*Turnitin is plagiarism detection software. We may submit a random sample of the project write-ups to the software and we will use the software where the marker has a suspicion regarding plagiarism.

Marking guidelines for Projects

<p>Student exam number:</p> <p>Supervisor:</p> <p>The overall mark is the sum of the section marks.</p>	<p>Mark per section (out of 20)</p>
<p>1. Background and literature review Does this section give an appropriate background to the study? Is it critically argued, presenting important information about methodology and implications of previous studies? How compelling is the rationale for the present study: do the research questions and/or hypotheses follow logically from the literature reviewed?</p>	
<p>2. Methods Are the methods clearly justified? Are the methods original and/or an improvement on the norm? Is the section clearly laid out? Does it describe the selection and recruitment of subjects, the procedures and measures of the investigation, and the strategy for analysis (if the analysis strategy is not here, is it explained in the results section)? Are the planned analyses appropriate to the topic (i.e., will the analyses test the chosen hypotheses or research questions)?</p>	
<p>3. Results Does the presentation of results follow the analysis strategy? Are the results relevant to the hypotheses/research questions? Are the analyses conducted and presented competently, and are the results clearly and logically presented? Do the results strike a good balance between explaining and showing all the necessary and important findings (qualitative or quantitative) with the help of clear tables or figures, without including excess text, unnecessary analyses, or redundant tables or figures?</p>	
<p>4. Discussion Is the section more than just a re-statement of the results section? Is it clear that the implications of the findings are understood? Are the results discussed with reference to other studies in the field? Are the present study's strengths and weaknesses insightfully discussed? Are the conclusions justified, and any recommendations for future research sensible?</p>	
<p>5. Overall assessment: style of writing; independence of student Is the thesis well laid out? Are claims in the text supported by citations? Is the writing grammatical, with correct paragraph structure, complete sentences, proper spelling and punctuation? How well does the text flow? How original and insightful was the project and the write-up? How independent was this student? Is there one standard style of referencing followed, and is it applied consistently throughout? Is the reference section complete?</p>	
<p>Total Mark out of 100</p>	
<p>Marker's signature.....</p>	

1. Prof Tim Bates

Why are quick people fast?

Scores on IQ tests are correlated with reaction time, and faster reaction time appears to be linked to better health, less disease and even longer lifespan. Interestingly brighter subjects are able to report briefly-presented stimuli more accurately. In this project we will try to find out whether quicker perception times share the same link to intelligence as RT, or if it adds new information about the mind.

References

- I. J. Deary, G. Der and G. Ford (2001). Reaction times and intelligence differences: A population-based cohort study. *Intelligence*, 29(5), 389-399. doi:10.1016/S0160-2896(01)00062-9.
- W. E. Hick (1952). On the rate of gain of information. *Quarterly Journal of Experimental Psychology*, 4(1) 11-26. doi:10.1080/17470215208416600.
- T. C. Bates, C. Stough (1998). Improved reaction time method, information processing speed, and intelligence. *Intelligence*, 26(1), 53-62. doi:10.1016/S0160-2896(99)80052-X.
- Deary, Ian J.; Stough, Con (1996). Intelligence and inspection time: Achievements, prospects, and problems. *American Psychologist*, 51, 599-608. doi: 10.1037/0003-066X.51.6.599

2. Dr Martin Corley

What type of person "um"s or "uh"s?

Spontaneous speech is very disfluent: around 6% of the words we utter are affected by hesitations, false starts, or repetitions. But do these disfluencies serve a purpose, or are they just side-effects of flaws in the speech production system? In this project we will either follow up a suggestion that more empathic people "um" more, or determine what listeners think of disfluency, or (ideally) both.

Reference

- Clark, H. H., & Fox Tree, J. E. (2002). Using uh and um in spontaneous speaking. *Cognition*, 84, 73-111.

3. Dr Jennifer Foley

What are the cognitive variables underlying our social abilities?

A few studies have shown that those who demonstrate greater deficits in psychosocial functioning after brain injury also demonstrate greater difficulties performing two tasks at once, or 'dual tasking'. This relationship does not seem to be explained by more general factors such as level of cognitive impairment or severity of brain injury, suggesting that dual tasking may be mediated by the same cognitive mechanisms as socio-behavioural functioning. This project will investigate the relationship between dual tasking, executive functioning and socio-behavioural functioning in healthy young adults.

References

- Baddeley, A. (1996). Exploring the central executive. *The Quarterly Journal of Experimental Psychology*, 49, 5-28.
- Baddeley, A., Della Sala, S., Papagno, C. & Spinnler, H. (1997). Dual-task performance in dysexecutive and nondysexecutive patients with a frontal lesion. *Neuropsychology*, 11, 187-194.
- Foley, J.A., Cantagallo, A., Della Sala, S. & Logie, R.H. (2010). Dual task performance and post traumatic brain injury. *Brain Injury*, 24, 851-858.

4. Dr Maria Garraffa

Individual differences in sentence comprehension: Does literacy play a role?

Sentences are structured to integrate meanings together in a coherent way but not necessarily in a simple and universally accessible way. Speakers of the same linguistic community can show large individual differences in vocabulary size and knowledge of highly literary constructions. To improve comprehension of complex sentences some studies have focused on the impact of linguistic experience, expressed in terms of expositions of written texts. Other studies have shown the contribution of cognitive factors (such as working memory) to the enhancement of sentence comprehension.

In this project we will deal with individual variability in sentences comprehension manipulating the exposure of different written texts.

Students will be involved in the creation of the experimental materials and in running a pilot study testing sentence comprehension in different populations (high memory-span vs. low memory-span speakers).

References

- Caplan D., Dede G., Waters G, Michaud J., & Tripodis Y. (2011) Effects of age, speed of processing, and working memory on comprehension of sentences with relative clauses. *Psychology and Aging*, 439-50.
- Dabrowska, E. (2008). Questions with long-distance dependencies: A usage-based perspective. *Cognitive Linguistics*, 19, 391 – 425.
- Gordon, P., Randall, H., & Levine, W. (2002). Memory-load interference in syntactic processing. *Psychological Science*, 13, 425 – 430.

5. Mr Steve Kirkwood

The England 'riots' of 2011: A discursive approach to the role of identity

The riots in several parts of England in August 2011 shocked people across the UK and beyond. They also led to wide-ranging speculation on the causes of riots, including the loss of individual identity or 'mob mentality'. However some research suggests that such behaviour may be related to emerging group identities rather than a loss of identity and that explanations based on 'mindlessness' function to dismiss important aspects that are crucial for understanding 'rioting' (Reicher, 1984; Reicher & Stott, 2011). This project will draw on interviews with students who were present in the cities and towns where the riots took place and apply discourse analysis to investigate how their interview talk and the notions of identity they employ function in terms of explanations for the riots.

References

- Reicher, S. (1984). The St. Pauls' riot: An explanation of the limits of crowd action in terms of a social identity model? *European Journal of Social Psychology*, 14, 1-21.
- Reicher, S. & Stott, C. (2011, August 19). You won't prevent future riots by disregarding the psychology of crowds. *The Guardian*.
[Retrieve <http://www.guardian.co.uk/commentisfree/2011/aug/19/riots-psychology-crowds>]
- Vargas, J. H. C (2004). The Los Angeles Times' coverage of the 1992 rebellion. *Ethnicities*, 4, 209-236.

6. Dr Pete Lamont

Constructing Psychology as a science

Philosophers of science have struggled to identify criteria to distinguish science from non-science. Nevertheless, academic psychologists have always described themselves as scientific. Given the problematic scientific status of psychology (compared to the 'hard' sciences), how have they done this? This project will use discourse analysis to examine how psychologists have constructed psychology's scientificity.

References

- Derksen, M. (1997). Are we not experimenting then? The rhetorical demarcation of psychology and common sense. *Theory & Psychology*, 7(4), 435-456.
- Lamont, P. (2007). Discourse analysis as a method in the history of psychology. *History and Philosophy of Psychology*, 9(2), 34-44.
- Lamont, P. (2010). Debunking and the psychology of error: a historical analysis of psychological matters. *Qualitative Research in Psychology*, 7(1), 34-44.

7. Dr Billy Lee

Exploring Lived Experience

The aim of the project will be to explore and to understand a particular lived experience chosen by the group. You will use Interpretative Phenomenological Analysis (IPA), a qualitative method that attempts to get close to what it is like to live through, or have lived through, a particular experience. As part of the project, you will learn to interview participants, transcribe audio recordings, analyse transcripts, and write up the themes. This method has been used to study experiences of health, sexuality, gender, and identity. IPA is inductive, rather than hypothesis driven. It avoids prior assumptions and illuminates human experiences as they are lived by people and the meanings they assign to their experiences.

References

- Reid, K., Flowers, P., & Larkin, M. (2005). Exploring lived experience. *The Psychologist*, 18(1), 20-23.
- Smith, A., Flowers, P., & Larkin, M. (2009). *Interpretative Phenomenological Analysis*. Sage Publications.

8. Dr. Alison Lenton (assisted by Dr Letitia Slabu)

Triggers of state authenticity

Although authenticity is a much-discussed topic among clinical and counselling psychologists, as well as some social and personality psychologists, there is relatively little empirical evidence regarding one manifestation of it: *state* authenticity. This is because theorists and researchers alike have focussed primarily upon the idea that authenticity is a personality trait or a developmental achievement. My programme of research adds to the discussion by proposing that individuals may feel more or less authentic depending on the situation in which they find themselves. While this idea is implicit in some of the theorising and findings to date, it has yet to be examined directly, let alone systematically and comprehensively. In this project, we will try to experimentally isolate at least one of the "triggers" of state authenticity.

References

- Heppner, W. L., Kernis, M. H., Nezlek, J. B., Foster, J. D., Lakey, C. E., & Goldman, B. M. (2008). Within-person relationships between daily self-esteem, need satisfaction, and authenticity. *Psychological Science*, 19, 1140-1145.
- Wood, A. M., Linley, P. A., Maltby, J., Baliouis, M. & Joseph, S. (2008). The authentic personality: A theoretical and empirical conceptualization, and the development of the Authenticity Scale. *Journal of Counseling Psychology*, 55, 385-399.
- [Retrieve: http://www.le.ac.uk/pc/jm148/pdfs/authenticity_scale.pdf]

9. Prof Robert Logie

Doing two things at once

Most people can walk and talk at the same time, but would have problems trying to hold a conversation while reading. One theoretical assumption (e.g. Barrouillet et al., 2004; Cowan, 2005) is that we have available a single, general purpose attention system that is of limited capacity, and that doing two things at once involves switching rapidly between them. According to this assumption, increasing the difficulty of each of the tasks should stretch this capacity to its limits and result in a breakdown in performance. An alternative view (Baddeley & Logie, 1999; Logie, 2011) is that we have different capacities available for different kinds of tasks, and so if two tasks each use different cognitive abilities, then doing two tasks at once should be no more difficult than doing only one task at a time. This project will focus on the question of what limits the human ability to carry out more than one task at a time.

References

- Baddeley, A.D. & Logie, R.H. (1999). Working memory: The multiple component model. In A. Miyake & P. Shah (Eds.) *Models of Working Memory* (pp. 28-61). New York: Cambridge University Press.
- Barrouillet, P., Bernardin, S. & Camos, V. (2004) Time constraints and resource sharing in adult's working memory spans. *Journal of Experimental Psychology: General*, 133(1), 83-100.
- Barrouillet, P. & Camos, V. (2007) The time-based resource-sharing model of working memory. In N. Osaka, R. H. Logie & M. D'Esposito (Eds.) *The Cognitive Neuroscience of Working Memory* (pp. 59-80). New York: Oxford University Press Inc.
- Cocchini, G., Logie, R.H., Della Sala, S, MacPherson, S.E. (2002). Concurrent performance of two memory tasks: evidence for domain specific working memory systems. *Memory & Cognition*, 30, 1086-1095.
- Logie, R.H. (2011). The functional organisation and the capacity limits of working memory. *Current Directions in Psychological Science*, 20(4), 240-245.
- Logie, R.H., Cocchini, G., Della Sala, S. & Baddeley, A.D. (2004). Is there a specific executive capacity for dual task co-ordination? Evidence from Alzheimer's Disease. *Neuropsychology*, 18, 504-513.

10. Dr Michelle Luciano

Exploration of the narrative collective-assimilation hypothesis.

A recent hypothesis known as the *narrative collective-assimilation hypothesis* proposes that the experience of a narrative makes a person psychologically identify with the collective described within the narrative. To demonstrate this, the proponents of this hypothesis showed that participants who read from the novel, *Harry Potter*, 'became' wizards, whereas those who read from the novel, *Twilight*, 'became' vampires. Importantly, it was shown that this narrative collective assimilation influenced life satisfaction and positive mood, two aspects of belonging. A number of further explorations of this hypothesis are warranted, for instance, can this narrative effect be generalised to the film medium, and does personality mediate the extent of collective assimilation and/or its effects on life satisfaction and mood? As a group, you might be able to generate further research questions, choosing one to focus on for your project.

References

- Gabriel, S., & Young, A.F. (2011) Becoming a vampire without being bitten: The narrative collective-assimilation hypothesis. *Psychological Science*, 22(8), 990-994.
- Sestir, M., & Green, M. C. (2010). You are who you watch: Identification and transportation effects on temporary self-concept. *Social Influence*, 5, 272–288.
- Schimmack, U., Oishi, S., Furr, F. M., & Funder, D. C. (2004). Personality and life satisfaction: A facet level analysis. *Personality and Social Psychology Bulletin*, 30, 1062-1075.

11. Dr Graham MacKenzie

Facial representations and person identification

Valentine's (1991) face-space model predicts that more distinctive faces can be recognised more easily than more average-looking faces because they lie further away from the origin of a multi-dimensional *face-space* in memory. Faces can be morphed away from average to yield caricatures that should in theory be easier to recognise than veridical photographs. Recently, however, it has been shown that averaging together several different photographs of the same person results in an image that is easier to identify than any individual photograph. This project will investigate whether caricatures or average images are easier to identify.

References

- Jenkins, R., & Burton, A.M. (2008). 100% accuracy in automatic face recognition. *Science*, 319, 435.
- Lee, K.J., & Perrett, D.I. (2000). Manipulation of colour and shape information and its consequence upon recognition and best-likeness judgments. *Perception*, 29, 1291-1312.

12. Dr Lars Penke

Where do temperament dimensions based on neurochemistry fall in the Five Factor Model of Personality?

Can we measure individual differences in neurotransmitter and hormone levels via self-report questionnaires? A recent study by Helen Fisher and her colleagues suggests so. This group developed a four dimensional temperament questionnaire based on those cognitions and behavioural tendencies that have been most reliably related to Dopamine/Norepinephrine, Serotonin, Testosterone, and Estrogen/Oxytocin. But where do these newly proposed dimensions fall in the more comprehensive and much better established framework of the Five Factor Model of Personality? This project will evaluate the factor-analytic structure and psychometric quality of the Fisher-Rich-Island Neurochemical Questionnaire (FRI-NQ) and relate it to the dimensions and facets of the Five Factor Model.

Reference

- Fisher, H.E., Rich, J., Island, H. D., & Marchalik, D. (2010). The Second to Fourth Digit Ratio: A Measure of Two Hormonally-based Temperament Dimensions. *Personality and Individual Differences*, 49 (7), 773-777

13. Prof Martin Pickering

Naming as joint action

Most studies of the psychology of language investigate a single person in isolation. But people of course use language to communicate with each other. To what extent do they construct shared representations? To investigate this, we shall conduct a picture-naming task in which people name pictures and ignore a distractor word that is written on the picture. Such words are particularly distracting if they are related in meaning to the picture. We investigate three conditions: a SOLO condition in which one person alternates between naming the pictures and naming the words; a NO condition, in which that person names the pictures and ignores the words; and a JOINT condition, in which one person names the pictures and another person names the words. We predict that naming related pictures will be difficult in the SOLO condition. If naming the pictures is also difficult in the JOINT condition, it suggests that speakers represent what they believe their partners to be doing as well as what they themselves are doing. We would use this as an argument to explain why people are so good at holding conversations. The project will involve conducting a straightforward laboratory experiment and analysing the results using ANOVA.

References

- Garrod, S. & Pickering, M.J. (2009) Joint action, interactive alignment and dialogue. *Topics in Cognitive Science* 1, 292-304.
- Sebanz, N., Knoblich, G., and Prinz, W. (2003). Representing others' actions: Just like one's own? *Cognition*, 88, B11-B21.

14. Dr Louise Ritchie

Encouraging pro-environmental behaviour

The field of environmental psychology has focused in recent years on understanding and promoting pro-environmental behaviour in response to problems such as global warming, pollution and resource depletion. Research has highlighted the role environmental psychology can play in tackling environmental problems by drawing on psychological knowledge to design behaviour interventions. The field uses social psychology theories to understand and encourage pro-environmental behaviours. However, research has focused mainly on individual motivations for these behaviours but it is unclear how these motivations interact with contextual factors which may constrain pro-environmental behaviours (such as proximity of recycling facilities).

This project aims to provide a further understanding of pro-environmental behaviours such as recycling, conservation and sustainability. Drawing on theories from social psychology, the project will examine the interaction between individual motivations for pro-environmental behaviour with contextual factors which may constrain or facilitate these behaviours.

References

- Steg, L. & Viek, C (2009) Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, 29, 309-317.
- Hunecke, M., Blobaum, A., Matthies, E. & Hoyer, R. (2001) Responsibility and environment: ecological norm orientation and external factors in the domain of travel mode choice behaviour. *Environment and Behavior*, 33, 830-852.

15. Dr Alex Weiss

Measuring human personality using the Hominoid Personality Questionnaire

The Hominoid Personality Questionnaire (HPQ) is a personality rating instrument initially derived from a list of adjectives used to rate human personality. The HPQ and related instruments have been used to assess personality in several nonhuman primate species, including chimpanzees, orangutans, and rhesus macaques. Moreover, variants of the HPQ have been used to assess the personalities of other nonhuman primates (e.g., Hanuman langurs) and mammals (e.g., fallow deer). While there is good evidence that the various forms of the HPQ assess real characteristics of these species in that they predict behavior, it is not known how the HPQ dimensions found in these species map onto human personality dimensions. For this project we will therefore compare responses on the HPQ to those of Costa and McCrae's NEO-PI-R. We will also compare the structure derived from the human version of the HPQ to previous studies of nonhuman primate personality using this same instrument.

References

- Freeman, H. D., & Gosling, S. D. (2010). Personality in nonhuman primates: a review and evaluation of past research. *American Journal of Primatology, 72*, 653-671.
- Gosling, S. D., & Graybeal, A. (2007). Tree thinking: A new paradigm for integrating comparative data in psychology. *The Journal of General Psychology, 134*, 259-277.
- Gosling, S. D., & John, O. P. (1999). Personality dimensions in nonhuman animals: A cross-species review. *Current Directions in Psychological Science, 8*, 69-75.
- King, J. E., & Figueredo, A. J. (1997). The Five-Factor Model plus Dominance in chimpanzee personality. *Journal of Research in Personality, 31*, 257-271.
- Uher, J. (2008a). Comparative personality research: Methodological approaches. *European Journal of Personality, 22*, 475-496.
- Weiss, A., Adams, M. J., Widdig, A., & Gerald, M. S. (2011). Rhesus macaques (*Macaca mulatta*) as living fossils of hominoid personality and subjective well-being. *Journal of Comparative Psychology, 125*, 72-83.
- Weiss, A., Inoue-Murayama, M., Hong, K.-W., Inoue, E., Usono, S., Ochiai, T., King, J. E. (2009). Assessing chimpanzee personality and subjective well-being in Japan. *American Journal of Primatology, 71*, 283-292.
- Weiss, A., King, J. E., & Perkins, L. (2006). Personality and subjective well-being in orangutans (*Pongo pygmaeus* and *Pongo abelii*). *Journal of Personality and Social Psychology, 90*, 501-511.