This is just a draft of this handbook. It is possible that some readings might be added or changed, and that the deadline and topic of the continuous assessment might be changed as well. If you’d like to start preparing for the course early, though, all of these readings will be useful to you, so you could go ahead and start reading them.

Module PS4085
Semester 1, 2019-2020

Evolution and Development of Social and Technical Intelligence

Prof Malinda Carpenter
e-mail: mc213
office: 2.62, School of Psychology & Neuroscience

Fridays 11:00-1:00
(i.e., 11:10-12:55, with a short break in the middle)
Old Library

Assessment:
25% Continuous Assessment: one 2000-word essay due November 11th
75% Take-home exam: date TBC
Evolution and Development of Social and Technical Intelligence 2019-2020:  
“Social Learning and the Evolution of Culture”

**The Aims of the Course**

The overall aim of this module is to give final year Honours and MSc students an advanced understanding of a topic in the development and evolution of mind that is currently exciting interest in several branches of psychology (particularly evolutionary, comparative, developmental), and related disciplines (such as biology, anthropology and robotics). The current focus will be on “Social Learning and the Evolution of Culture.”

Our human ‘capacity for culture’ is arguably one of the main things that makes us distinct from the rest of the animal world. In this course we will ask such questions as: ‘How is culture acquired and transmitted in humans?’, ‘Which, if any, aspects of culture occur amongst other animals?’ and ‘What can we reconstruct of the evolutionary history of culture?’

Broadly, the psychological processes underlying cultural transmission are described as ‘social learning’ – learning from, or through, others. In this course we will learn about different kinds of social learning, from the simplest to the more complex forms of imitation and teaching. We will assess what is known about social learning not only in humans, but also in other species from fish to apes. We will review both classic and newer studies, and focus on current debates within the field.

The aims of the course are: 1) To make students familiar with some of the principal theoretical issues in this rapidly-developing field, together with examples of the kinds of empirical results which underlie them; 2) to encourage the student’s ability to summarise this information and critically appraise it; and 3), to think about how these issues relate to the overall subject matter of Psychology. So much has been published in this area, even in the last few years, that we shall have to be highly selective in what we cover in class. However, this approach will give you the basis to further explore various topics of interest, some of which are listed in the additional readings.

These aims are in addition to the general educational goals set forth in the design of senior modules as a whole, details of which can be found in the honours handbook.

**How to Succeed – Your Objectives**

Of course, what we would all like is for you to enjoy the course immensely, read about the topic for sheer pleasure, and get a fantastic grade as a happy by-product. However, some of you might be seeking a ‘how-to’ for getting a good grade in this particular module. Here it is:

To get a good grade, you need to be able to give well-informed, well-structured and well-argued answers to the kinds of questions which make up the assessments.

- To be ‘well informed,’ you need to read widely. Start with the target and further readings given for each week.
To be ‘well structured,’ your answers need to be arranged in a manner that makes it easy for the reader to follow you from one point to the next. This takes practice.

To have ‘well argued’ answers, you need to select from your bank of knowledge those pieces of information which specifically address the question asked and demonstrate to the reader why the piece of information you have provided is relevant. This also takes practice.

With this in mind, here is a list of weekly objectives:

- To get the most out of both readings and discussions, you must read the weekly assignments before the sessions in which we discuss them. This is essential. It’s best to come with a printed copy of the readings with your written comments on it and/or with a sheet of notes to guide your verbal contribution.
- Read the papers actively and critically: Don’t just highlight important parts of the paper. Instead, while reading, pause and write down what you think about what is being said. There are many controversial claims in these readings. Don’t just blindly accept what you read, question it! Upon finishing your reading, also pause and write down a few notes about what you think are the key points to learn from the paper.
- Consider whether there are additional papers (e.g. as cited in the target readings) which may be interesting to follow up with (for example if the authors make a strong or controversial claim while citing a paper but don’t explain it). These might already be listed in the further readings, or you may discover them yourself.
- During discussions, ask questions. If you have a question, it’s likely that others might have the same question, and they (and I) will appreciate you asking it. Also, our discussions will be more engaging and fun if a diversity of opinions is expressed, so don’t hold back if you disagree about something being discussed or wish to add a different perspective. Let’s be sure to always do this constructively and respectfully so that everyone’s contributions are included and valued.

Working towards these objectives will make the module more stimulating and enjoyable for you, and also make you a better psychologist, helping you to develop habits of analysis and participation that will stand you in good stead in a whole range of careers in future.

**COURSE FORMAT**

This level of module is intended to take final-year honours students to the leading edge of current research and encourage a sophisticated grasp of one particular area. The format is seminar style, in which students will be expected to have read, thought about, and be prepared to discuss the weekly assigned material prior to that week’s meeting.

Core reading is set each week, and students are also encouraged to read additional course-related material. When we meet at each session to analyse the issues, students will need to be prepared to discuss material everyone has read (target readings), but also may need to be prepared to communicate with others about things the others might not have read. The abilities to analyse and discuss shared information, and communicate new information to others, are among the most important “transferable skills” in which we train our students.
Attendance recording
Classes are not compulsory, but you are advised to attend all of them, even when you’re not presenting. The University requires an attendance record to be taken for this module. Attendance will be recorded in weeks 1, 5, 7, and 11.

Readings
The greater part of this course, like other SH modules, will be taken up by guided private study. For the readings we will use many different sources, including journal articles and chapters in various books. Core readings are available through the Library’s Online Reading List service (RefWorks), or downloadable as pdfs from the journal via SAULCAT (and often through Google Scholar), or on short loan as hard copies in the South Street Library. Often all these options are available, especially for the target articles each week.

Giving Your Presentations
Each week (except Week 1), the majority of the session will be given over to discussion of the readings assigned. This discussion will be initiated through brief presentations by members of the class. You will make your presentation using PowerPoint. (You can use Prezi if you prefer – but please try not to make anyone motion-sick!)

Students often tend to spend too long on their presentation and give too much detail. Rather, you should:
1. Summarise the key aspects of the paper you read, using no more than a couple of PowerPoint slides to highlight these points. Feel free to also include supplementary images or videos if you want to, for example, key diagrams or figures reproduced from the paper, or made by you, or videos you may find online of the behaviours discussed in the paper. Remember, all members of the class are required to read the paper, so you are only reminding them of the most important points.
2. It is important to spend another few minutes raising points for class discussion. For example, tell the class: What did you think were the most important contribution(s) in the paper? What were your main criticisms? What do you find incomprehensible or puzzling? What do you think would be the best research line to take next? (a new experiment? further observations?)
3. Finish with a single slide that lists your points for discussion which we can keep up on the screen while we talk.

Please see the PowerPoint template available in Moodle.

Note on font size: Please use a font size that will be legible at the back of the lecture room! I suggest no less than 20 pt font as an appropriate size for the smallest text.

Assessment Structure
Assessment is made up as follows:
25% Single essay submitted as coursework
75% Seen exam
Coursework Essay

Here is the question for the essay:

**Critically evaluate the main explanations for children’s ‘over-imitation’: What are the pros and/or cons of each one?**

*This essay must be no more than 2000 words long and must be uploaded as a Word document to MMS by 5:00 pm on Monday 11th November.*

Please be sure to use the template Word document for your assessment – this has acceptable formatting and a mark sheet already attached. Submitting without using the template will indicate that you do not want feedback on your essay (not advisable – this feedback can help you with future assignments!). Please see p. 9 and p. 12 for more information about this essay.

**Seen Exam**

During the exam week, on a date to be confirmed, three essay titles will become available on Moodle at 9:00 am. You are to upload 1,000-word essays for two of these to MMS by 5:00 pm on the same day. This approach will allow you more time than a standard exam in which to think, consult reference works, and submit a legible, typed essay. Please see p. 13 for more information about this exam.

**Content**

Each question will relate to the material in one or more of the classes this semester.

There's no reason why you can't draw on some of the same literature that you cited in your previous essay (if it is relevant), but you must not copy and paste blocks of text from previous assignments (see below).

**Formatting**

Please use font size set at 12 and 1.5 line spacing.

No reference list is required, but please still cite references in the text according to APA style, with one exception (because of the word limit): If there are 3 or more authors, you can just use the name of the first author with “et al.,” even the first time you cite them.

**Late penalties**

Late submission will result in an immediate penalty of 3 marks, plus a further 1 mark per additional 8-hour period, or part thereof. Please do not submit late!

**Academic misconduct**

Please note that all essay submissions will be checked for similarity to other essays or published works using Turnitin. Cutting and pasting of text from any source constitutes academic misconduct.
Turnitin will also show any text duplicated between your submissions for different assignments. Resubmitting the same material twice (‘autoplagiarism’) is also academic misconduct.

**Academic Alerts**
The Academic Alerts policy can be found here: [https://www.st-andrews.ac.uk/media/teaching-and-learning/policies/Academic%20Alerts.pdf](https://www.st-andrews.ac.uk/media/teaching-and-learning/policies/Academic%20Alerts.pdf)

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**THE COURSE**

**Week 1: Introductory Overview**

During this session I will provide an overview of the course – no advance reading is required. This introductory session has two main objectives: 1) To outline how the course is structured, and 2) to give an overview of the topics included, in part revising introductory JH material. This overview will help you choose which reading you would like to present.

**Optional readings**

Your priority between Weeks 1 and 2 should be the preparatory reading for the next session (i.e. Week 2 – see below). However, according to your needs and interests, the following introductory sources may prove helpful, either now or in coming weeks.

*For a brief but helpful history of the field of animal culture, and an introduction to the major players:*

*For a brief introduction to social learning mechanisms, and why we should study social learning:*

For all further seminars you should come with notes prepared on each reading, corresponding to what the presenter is to cover (see page 4). That is, everyone should be prepared to answer the following each week:
- What do you regard as the key aspects (theories, data, conclusions) of the paper?
- What do you consider the most valuable scientific contributions?
- What are your major criticisms?
- What do you find most incomprehensible or confusing?
- What do you think would be the best research line to take next?
- Any other thoughts or questions you would like to raise for class discussion.

I suggest reading the target readings in the order in which they are listed below. Especially if you are presenting the paper, please be sure to read any **Supplemental Materials** and/or **commentaries and responses** that are associated with the paper too.
It would be helpful to at least read the abstracts of all the Further readings, and to read or skim through any that are interesting and/or relevant to you (especially if you are presenting a related article).

**THE DEVELOPMENT OF HUMAN SOCIAL LEARNING AND CULTURE**

**Week 2: Neonatal imitation (?)**

**Target readings for seminar**


**Further reading/updates**


*For Meltzoff’s interpretation of neonatal imitation and his response to critics:*

  
  You can skip the People as Perceivers and People as Intenders sections, i.e., pp. 15-21.

*For studies of neonatal imitation in chimpanzees and monkeys:*


**Week 3: Selective & rational imitation**

**Target readings for seminar**

  
  This is a very short paper so the presenter should also read [another Gergely paper that goes into more depth about their claims: still to be determined which].
Further reading


Week 4: ‘Over-imitation’

Target readings for seminar


Further reading/updates

For further explanations of over-imitation:


See in particular section 7.


See also the sections on ‘The Evolution and Ontogeny of Imitation’ and ‘Adjudicating between Learning Instrumental Skills and Social Conventions’ in the Legare and Nielsen (2015) reading in Week 11.
For a recent review that could be helpful when writing your essay:


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Week 5: Pressures to imitate: Teaching, normativity, conformity

**Target readings for seminar**


**Further reading**


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Week 6: Independent Learning Week

I recommend using this week to start working on your continuous assessment, which is:

**Critically evaluate the main explanations for children’s ‘over-imitation’: What are the pros and/or cons of each one?**

This essay must be no more than 2000 words long and must be uploaded as a Word document to MMS by 5:00 pm on Monday 11th November. Please use the template provided at the end of this handbook (starting on p. 17). Write the essay title and your ID number at the top, number the pages, and conform to the formatting requirements specified for Honours Continuous Assessment Essays in the Honours Handbook.

Please see p. 12 for some notes on how to approach this essay.

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**Nonhuman Social Learning and Traditions/Culture**

Week 7: Experimental studies of captive chimpanzees and other apes

**Target readings for seminar**


If you are not presenting this paper you can skip or just skim through Experiments 2 and 3.


**Further reading**

*Imitation vs. emulation:*


*Enculturated vs. non-enculturated chimpanzees and bonobos:*


**Week 8: Observational studies of wild nonhuman primates**

**Target readings for seminar**


**Further reading/updates**


**Week 9: Other animals, & teaching**

**Target readings for seminar**


It could also be helpful to refresh your memory of Csibra and Gergely’s discussion of animal teaching (see their section 2) from Week 5.
Further reading


And any other papers mentioned in the Galef review above that interest you.

Week 10: Other animals continued

Target readings for seminar


You can skip the section on Self-imitation (section 3.4, pp. 89-97).


Further reading/updates


Week 11: Cumulative culture & summary of the module

Target readings for seminar


Further reading


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**WRITING YOUR ESSAY**

Essay question (2000 words):

Critically evaluate the main explanations for children’s ‘over-imitation’: What are the pros and/or cons of each one?

Some tips:

1) Are there any key terms you will use? If so you will need to define them very briefly (especially if they are technical and/or their meaning is contested). However, don’t waste words on this, or on long introductions to each explanation. Instead briefly introduce the explanation and then focus on the critical evaluation part, citing evidence from relevant studies whenever possible. For example, which types of findings can the explanation explain well? Which, if any, types of findings can’t it explain? Are there any other problems with it? Which explanation(s) seem to explain the findings best?

2) It’s often helpful to give the reader an indication at the outset as to what you’ll be concluding (e.g. in a brief outlining section at the end of the introduction). For example, are you going to conclude that one explanation is better than the rest? Or that none of them fully explains over-imitation and that something else (what?) is needed?

3) At the end of each paragraph you’ve written, it should be clear to the reader:
   a. What the important point was that that paragraph was meant to make
   b. What the evidence was for that point
   c. Why it’s relevant to the question

If that’s not clear – re-write! Or, to put it another way, after each thing you write, ask yourself: “So what?”

4) You will have learned some techniques for identifying relevant literature in your time here. Don’t forget to use them.

5) Remember that critical evaluation is essential. You may note that my colleagues and I have weighed in on this issue too. Please do not hesitate to criticise our view if you want to – it won’t count against you at all to do that, I promise! Every view has pros and cons and can be improved, and constructive criticism is the way in which science advances.

6) Remember to use APA style throughout (for the references too). Everything you could possibly want to know about APA style is available at [http://www.apastyle.org/](http://www.apastyle.org/)

7) **Please use the template with cover sheet etc. It’s on Moodle.**

8) Please submit your essay as a **Word document** and **not** a pdf or any other sort of document. That makes it much easier for me to give feedback.
First, use the guidelines and feedback from your Continuous Assessment.

Second, the question I get asked most often is “How can we answer a broad question in 1000 words?” Here’s my answer:

Consider this very broad question (NB: I am saying nothing about whether or not you’ll get a question like this on your exam!):

“How is human culture different from that of other species?”

This is huge. How would you approach it in 1000 words? One approach would be to cover lots of points, very briefly. While this is perfectly legitimate and some of you might opt to do this, an alternative is to start with a (preferably paraphrased!) statement to the effect of:

“Because this is a broad question and I only have 1000 words, I am going to focus on answering it with regard to [X],”

where X might be, for example:
   a) a cetacean vs. human comparison
   b) a nonhuman primate vs. human comparison
   c) a comparison focused on transmission mechanisms
   d) a comparison focused on cumulative culture

Note that options a) and b) narrow down the scope of “other species,” while options c) and d) narrow down the scope of “human culture.”

In doing this, you narrow your focus and enable yourself to go into more depth. This is a perfectly valid and potentially very useful tactic if you use it well. I consider ‘using it well’ to mean:
   a) The resulting essay still coherently addresses the question. This is the most important thing by far!
   b) The resulting essay genuinely does go into depth because of the narrower focus (no padding out with material of dubious relevance, please).
   c) The narrowing of focus makes some sort of logical sense and is not simply used as a means to shy away from topic material you don’t like/understand.
   d) You announce the narrowing of focus clearly at the start; acknowledge some of the things you are necessarily leaving out, and stick to your proposed scope.
Sign-up sheet for student presentations

NOTE: Everyone should read all of these papers, so we can discuss them in class. Depending on how many students we have, it is possible that not every paper will be formally presented, but that’s okay, we will still discuss them. The purpose of the presentations is to develop your presentation skills rather than to be the route by which you all get your information about the target papers.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Target Readings</th>
<th>Time slots and presenters</th>
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GRADUATE ATTRIBUTES IN THIS COURSE

Graduate Attributes
1. Demonstrate original thought
2. Construct a coherent argument or debate by demonstrating logical processing of (complex) information and deductive reasoning
3. Apply critical analysis, evaluation and synthesis to solve complex problems

5. Reason from the particular to the general
6. Identify relevant techniques and concepts to solve advanced and complex problems
7. Demonstrate use of an appropriate range of resources to the task at hand

9. Engage directly with current research, developments and skills in the discipline
10. Engage with primary and secondary material and differentiate between them
11. Demonstrate active learning
12. Demonstrate reflective learning, including the ability to engage with and learn from feedback
13. Demonstrate creativity and curiosity
14. Demonstrate independence of thought and reasoning
15. Demonstrate skills in time management, self-discipline and self-motivation

17. Demonstrate skills in close analysis of visual material
18. Demonstrate advanced IT skills

21. Convey statistical results & methods in a manner understandable to the lay-person via written or oral reports
22. Work independently

24. Communicate with clarity and accuracy, orally (including presentation) and in writing
25. Engage with the views and opinions of others
26. Present work and findings in a professional manner, with attention to detail
27. Learn and use research skills
TEMPLATE AND MARK SHEET FOR YOUR CONTINUOUS ASSESSMENT

(begins on next page)
Critically evaluate the main explanations for children’s ‘over-imitation’: What are the pros and/or cons of each one?

Module code: PS4085

Module controller: Malinda Carpenter

Title

Student ID: XXXXXXXX

Word Count: XXXX (Limit=2000)

Date submitted: XX/XX/2019

Submission of work without the inclusion of this cover sheet, grade criteria sheet and feedback form indicates I will not require feedback on this submission.

In submitting this work, I declare that the work in this submission is all my own and that the stated word count is accurate (the word count includes any headings & sub-headings as well as “in text” citations; it does NOT include the title or reference list or any figure legends, tables or appendices).
<table>
<thead>
<tr>
<th>Grade ……</th>
<th>0-6.9</th>
<th>7</th>
<th>8-10</th>
<th>11-13</th>
<th>14-16</th>
<th>17-20</th>
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<tbody>
<tr>
<td><strong>Content</strong> (Turnitin will be used to help evaluate originality)</td>
<td>Little evidence of using appropriate sources OR copying* from other sources.</td>
<td>Minimal reference to appropriate sources OR over-reliance on other work (e.g. close paraphrasing*).</td>
<td>Major omissions. Use of a narrow range of sources. General reliance on secondary or out-of-date material.</td>
<td>Major theories/ideas presented, but use of a narrow range of sources, particularly secondary sources.</td>
<td>Covers all the major issues using wide range of appropriate and up-to-date primary sources. Some independent use of sources.</td>
<td>Thorough and detailed grasp of the issues with widespread use of primary sources and widespread evidence of independent reading.</td>
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<tr>
<td><strong>Referencing</strong></td>
<td>Missing references/in-text citations.</td>
<td>Minimal/inaccurate use of referencing.</td>
<td>Frequent errors in the content and/or style of references.</td>
<td>Reference list broadly comprehensive/some errors.</td>
<td>Minor errors in reference list or in in-text citations.</td>
<td>Thorough and proper referencing throughout.</td>
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<td><strong>Factual accuracy</strong></td>
<td>Widespread substantive errors.</td>
<td>Many substantive errors.</td>
<td>Some substantive errors.</td>
<td>One or two substantive errors or several minor errors.</td>
<td>No substantive errors, only minor errors.</td>
<td>No substantive errors, no minor errors.</td>
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<tr>
<td><strong>Relevance</strong></td>
<td>Most material irrelevant to the question.</td>
<td>Much of the material irrelevant to the question.</td>
<td>Some material irrelevant to the question.</td>
<td>Little material irrelevant to the question.</td>
<td>Very little material irrelevant to the question.</td>
<td>No material irrelevant to the question.</td>
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<td><strong>Organisation and coherence</strong></td>
<td>No organisation of material.</td>
<td>Some development of an argument, but somewhat disjointed and list-like.</td>
<td>A discernible argument, but somewhat disjointed and list-like.</td>
<td>For the most part, clear and well-structured with the argument or central thesis well developed.</td>
<td>Argument or central thesis well structured, developed leading to well-argued conclusion.</td>
<td>Argument or central thesis well-structured and sustained throughout, leading to well-argued conclusions.</td>
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<tr>
<td><strong>Precision of expression</strong></td>
<td>General failure to use terms and define concepts precisely.</td>
<td>Some instances of scientific precision, but predominant sloppiness and redundancy.</td>
<td>Adequate precision in overall terms, but still widespread instances of sloppiness and redundancy.</td>
<td>General use of precise scientific language with few instances of sloppiness or redundancy.</td>
<td>Clear analytic use of language, with precise use of concepts and negligible redundancy of expression.</td>
<td>Clear analytic use of language, with exact use of concepts using precise and concise expression.</td>
</tr>
<tr>
<td><strong>Critical evaluation</strong></td>
<td>No valid evaluation of evidence.</td>
<td>Trivial or underspecified criticisms (e.g. ‘need more research’) and illogical reasoning.</td>
<td>Demonstrates awareness of the issues, but also some illogical reasoning or triviality.</td>
<td>Identifies most issues but displays some triviality or illogical reasoning.</td>
<td>Identifies all the main issues relating to topic. Shows evidence of original thought.</td>
<td>Sound and thorough data evaluation. Widespread evidence of original thought.</td>
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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.
<table>
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<th>PS4085 essay feedback sheet</th>
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<tr>
<td>Content (including use of sources)</td>
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<td>Critical Evaluation</td>
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<td>Overall comments and how to improve</td>
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</tbody>
</table>

Please see comments in the work for specific guidance. If you wish to receive further feedback or further discuss this feedback, please contact your lecturer who will be happy to do this.
Title

Please start your work here.