Evolution and Development of Social and Technical Intelligence

Dr Kate Cross
e-mail: cpc2

Fridays 11 - 1
Old Library

Assessment:
25% Continuous Assessment: 1 2000-word essay due 7th November (see page 5)
75% Take-home exam: date TBC
Evolution and Development of Social and Technical Intelligence 2016-2017:
“Social Learning and the Evolution of Culture”

The overall aim of this module is to give final year Honours and MSc students an advanced understanding of a topic in the evolution and development of mind (perhaps more accurately, a cluster of closely inter-related topics) that is currently exciting interest in several branches of psychology (particularly evolutionary, comparative, developmental, and neuro-psychology), and indeed also in such ‘sister’ disciplines as ethology, anthropology, and philosophy. The current focus will be on “Social Learning and the Evolution of Culture”.

Our human ‘capacity for culture’ is arguably one of the main features that has evolved in a form that makes us distinct from the rest of the animal world. In this course we will ask such questions as: ‘How is culture transmitted and acquired 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 shall be trying to discriminate between several 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 apes to dolphins to parrots. The content of what we will assess includes both social and technical aspects of behaviour, extending to tool use and other forms of culture relating to physical objects, as well as cultural transmission of behaviour (for example, ‘games’ and ‘morality’ in non-human primates).

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), as SH students, 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 that interest you, 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 around 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 written down 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: don’t just jot down summary notes, but at several points while going through the paper, pause and write down what you think about what is being said. 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. cited in core readings) which may be interesting to follow up with. These could be listed in the further readings, or you may discover them yourself.
- Practice the skill of looking at a question and thinking what is really needed to answer that question (not the one you might have prepared for!).

Although this advice is broadly about ‘assessment technique’, it is primarily an attempt to identify specific objectives for your studies which should not only make the enterprise more stimulating and enjoyable for you, but also make you a better psychologist, helping you to develop habits of analysis which 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 (core readings), but also need to be prepared to communicate with others about things they 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.)

READINGS

The greater part of this course, like other SH modules, will be taken up by guided private study. For the readings we shall use several 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 core articles each week.

GIVING YOUR PRESENTATIONS

Each week, the majority of the session will be given over to discussion of the readings set the previous week. 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 – 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, together with supplementary images if you want to use them - e.g. key diagrams or figures reproduced from the paper, or your own. 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: What did you think was the most important contribution(s) in the paper? What were your major criticisms? What do you
still 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 board while we talk.

See the Powerpoint template available in Moodle.

[Note on font size: use a size legible at the back of the lecture room! I suggest no less than 20 pt 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

### Assessment Questions

**Coursework Essay**
Critically evaluate the claim made by Laland & Hoppitt (2003) that there is “better evidence for culture in fish than in primates”

*This essay must be no more than 2000 words long and must be uploaded as a Word document to MMS by 5 p.m. on Monday 7th November.*

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.

**Seen Exam**
During the exam week, on a date to be confirmed, three essay titles will become available on Moodle at 9am. *You are to upload 1,000-word essays for two of these to MMS by 5pm 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.

**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 and references can be cited in abbreviated form, counting as one word each, as in the following examples: - (Allenetal2013; CaldwellandMillen2008).

NB for references with 5 or more authors, just use the name of the 1st author with 'et al'. e.g., for the benefit of all concerned, (PerryBakerFediganJackMacKinnonMansonPyle&Rose2003) would just be (Perryetal2003).

**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 please 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.

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**THE COURSE**

**Week 1: Introductory Overview**
The 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.

**Reading**
Your priority between weeks 1 and 2 should be the preparatory reading for the **next** session (i.e. week 2 – see further below). However, according to your needs and interests, the following sources used for the overview I give in week 1 will prove helpful, either now or in coming weeks.

  (Introductory chapter)
Week 2: Investigating animal culture: Primates
For all seminars you should come with notes prepared on each reading, corresponding to what the presenter is to cover (see page 5). Be prepared to answer the following each week:

- What do you regard as the key aspects (theories, hypotheses, data, conclusions) of the paper?
- What do you consider the most valuable scientific contribution?
- What are your major criticisms?
- What do you find most incomprehensible or confusing? (and, can we, as a class, sort it out?)
- 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.

Target readings for seminar

Further reading
Whiten, A. et al. (2004). How do apes ape? Learning and Behaviour 32, 36-52 (special issue with several other papers on this topic).
Week 3: Human culture and cumulative cultural evolution

Target Readings for seminar

Further reading/ updates
See readings for Week 1, and:

Week 4: The question of animal culture: Non-primates (Dr Mike Webster)
**Target readings for seminar**


**Further reading/updates**


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**Week 5: Social learning in non-primates (Dr Mike Webster)**

**Target readings for seminar**


**Further reading/updates**


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**Week 6: Independent Learning Week:**
I would strongly recommend using this week to read this target paper and work on your continuous assessment, which is as follows.

**Critically evaluate the claim made by Laland & Hoppitt (2003) that there is “better evidence for culture in fish than in primates”**

This essay must be no more than 2000 words long and must be uploaded as a Word document to MMS by 5 p.m. on Monday 7th November. Write the essay title and your ID number clearly on the top, make sure to number the pages, and conform to the formatting requirements specified for Honours Continuous Assessment Essays in the Honours Handbook.

Please see the appendix of this document for notes on how to approach this essay.


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**Week 7: Rational imitation and theory of mind**

**Target readings for seminar**


**Further Reading/updates**


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**Week 8: Over-imitation and selective imitation**

**Target readings for seminar**


**Further reading/updates**

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**Week 9: Strategic social learning**

**Target readings for seminar:**


**Further reading/updates**


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**Week 10: Animal teaching**
**Target readings for seminar**


**Further reading**


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**Week 11: Evolution and development of cultural norms**

**Target readings for seminar**


**Further reading**


**WRITING YOUR ESSAY**

**Essay question:**
Critically evaluate the claim made by Laland & Hoppitt (2003) that there is “better evidence for culture in fish than in primates” (2000 words)

**Some things to think about:**
(NB This does not read: ‘List of instructions’! You have already written essays so this is just a brief set of reminders.)

1) Are there any key terms you will use? If so you will need to define them (especially if they are technical; and/or their meaning is contested)
2) It’s helpful to give the reader a hint at the outset as to what you’ll be arguing. (e.g. are you going to conclude that Laland & Hoppitt’s point of view is exactly right? Terrible? Useful but limited?)
3) At the end of each paragraph you’ve written, it should be clear to the reader:
   a. What the important point 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.
6) Remember you should use APA style throughout. 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. It 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’m 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 offered by “other species”, while options c) and d) narrow down the scope offered by “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 some distance!
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.
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Target Reading</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>1</td>
<td>16 Sept</td>
<td>Overview</td>
<td>See list</td>
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<td>2</td>
<td>23 Sept</td>
<td>Animal culture: primates</td>
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<td>30 Sept</td>
<td>Human culture and cumulative cultural evolution</td>
<td>Caldwell</td>
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<td>Mesoudi</td>
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<td>4</td>
<td>7 Oct</td>
<td>Animal culture: non-primates</td>
<td>Allen</td>
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<td>Madden</td>
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<td>5</td>
<td>14 Oct</td>
<td>Social learning in non-primates</td>
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<td>Moore</td>
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<td>6</td>
<td>21 Oct</td>
<td>Independent Learning Week</td>
<td>Laland &amp; Hoppitt</td>
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<td>7</td>
<td>28 Oct</td>
<td>Rational imitation and theory of mind</td>
<td>Buchsbaum</td>
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<td>Social learning strategies</td>
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<td>Schmidt</td>
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<td>12</td>
<td>2 Dec</td>
<td>Revision Week</td>
<td>n/a</td>
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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)
School of Psychology and Neuroscience

Module code: PS4085

Critically evaluate the claim made by Laland & Hoppitt (2003) that there is “better evidence for culture in fish than in primates”

Module controller: Kate Cross

Title

Student ID: XXXXXXXX
Word Count: XXXX (Limit=2000)
Date submitted: XX/XX/2016

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 reported in this submission is all my own and that the stated word count is accurate (the word count includes the abstract, any headings & sub-headings as well as “in text” citations; it does NOT include figure legends, tables, references 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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</thead>
<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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<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>
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<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 triviality or illogical reasoning</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>
<thead>
<tr>
<th><strong>PS4085 essay feedback sheet</strong></th>
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<tr>
<td><strong>Content</strong>&lt;br&gt;(including use of sources)</td>
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<td><strong>Critical Evaluation</strong></td>
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<td><strong>Overall comments and how to improve</strong></td>
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Please see comments on the work for specific guidance. If you wish to receive further feedback or further discuss this feedback, please contact your lecturer/supervisor who will be happy to do so.
Title

Please start your work here.