PS4079  
Sex differences and gender development

Fridays, 11am - 1pm, Old Library, Semester 2, 2016-17
Module controller: Dr Gillian Brown (grb4@st-andrews.ac.uk)

Overview of content
This module will critically evaluate the empirical evidence for sex differences in psychological traits, such as spatial skills and social cognition, and examine how gender develops across the lifespan. We will consider the distinction between the terms ‘sex’ and ‘gender’, and we will examine how ‘nature’ and ‘nurture’ jointly contribute to behaviour and cognition. While studies non-human animals can contribute to our understanding of sex differences, this module will focus specifically on human research, including empirical studies of individuals with disorders of sexual development. We will examine how sex differences in susceptibility to mental health disorders could arise, focusing, as an example, on the hypothesis that prenatal exposure to testosterone increases liability for autism spectrum disorders. We will additionally consider what inferences can be drawn from studies that report sex differences in brain structure and function. By the end of the module, students will hopefully feel better placed to evaluate reports of sex differences in human psychological traits and have a fuller understanding of the factors that potentially underpin sex differences in behaviour and cognition.

Structure and reading material
This module will consist of short lectures, class discussions and student group presentations. A full timetable is provided at the end of this handbook. The powerpoint slides for each lecture will be made available on the day before the class via Moodle, and each lecture will have specific learning objectives. We will critically evaluate empirical journal articles and gain information from review articles. The list of reading material for the first six sessions is provided in this handbook (pdfs are available on Moodle), and the reading material for the student presentation will be made available in Week 5, along with a sign-up sheet. All students will be encouraged to take part in the class discussions and to share their individual views and perspectives. My intention is to provide an inclusive, equitable and respectful learning environment, and I hope that you enjoy the module.

The following books are recommended for general background reading:


Hines, M. 2004. *Brain Gender*. Oxford University Press. [This book summarizes the evidence that early hormone exposure are involved in the development of sex differences in the brain and behavior, including evidence from disorders of sexual development.]

**Assessments**

The assessments for this module will consist of two parts:

i) One ‘continuous assessment’ essay (25% of the final grade). 1000 word limit. *The essay title will be provided in the first session in Week 1*, and the deadline for the essay is **5pm on Friday 3rd March, 2017**. Essays must be uploaded to MMS (a coversheet not required, but please use at least 1.5 line spacing). Students are expected to use relevant material from the sessions and also provide evidence of independent reading. Suggested number of references = around 10-12.

ii) Two ‘continuous assessment’ essays (75% of the final grade). 1000 word limit per essay. *Students will be given four essay titles on Monday 10th April 2017 and must write two out of the four essays*. The deadline for both essays is **5pm, Friday 21st April, 2017**. Essays must be uploaded to MMS (a coversheet not required, but please use at least 1.5 line spacing). Students are expected to use relevant material from the sessions and also provide evidence of independent reading. Suggested number of references per essay = around 12-20.

**Feedback on essays and student presentations**

Feedback on the first essay will be provided within 21 days of the submission deadline, and feedback from the first essay is intended to be useful for the subsequent assignments. Students are expected to work together in groups for the presentations. The student presentations are not assessed, but informal feedback will be provided to each group. If any student has concerns about
presenting in front of the class, please feel free speak with me in advance.

**Transferable skills/graduate attributes**

The type of skills that will be developed include: constructing a coherent argument; applying critical evaluation; engaging with the views and opinions of others; demonstrating original thought; and communicating with clarity and accuracy, both orally and in writing.

**COURSE MATERIAL**

**Week 1**


You don’t need to carry out any reading in advance of this session. Instead, think about what aspects of human behaviour and cognition you think exhibit sex differences, based on your own experiences of the world, and think about which questions on this topic interest you most.

*Before next week’s class (Week 2)*

Watch the debate by Prof. Steven Pinker and Prof. Elizabeth Spelke (2005, Harvard University) on ‘The science of gender and science’ (*links to the video and transcript versions are on Moodle*). Also, please read the two articles listed under ‘Further reading’ below before the Week 2 session.

*Further reading:*


**Week 2**


*Before next week’s class (Week 3), please read the following three articles (which will form the basis of next week’s class discussion) and carry out the Further Reading below:*


**Further reading:**


**Week 3**

*Lecture:* Hormones and the brain. *Class discussion:* Sex differences in maths ability.

**Before next week’s class (Week 4), read the following three articles:**


**Further reading:**


**Week 4**

*Lecture:* Sex differences in susceptibility to mental health disorders. *Class discussion:* Prenatal
hormones and gender development

Before next week’s class (Week 5), read the following three articles:


Further reading:


Week 5

*Lecture*: The nature-nurture debate. *Class discussion*: Sex differences in systemising/empathising

Further reading:


Week 6


Further reading:


**Weeks 7 to 10**

*The list of papers for student presentations, and the sign-up sheet, will be provided in Week 5.*

**Timetable**

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture</th>
<th>Discussion topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>27th Jan</td>
<td>Introduction</td>
<td>Sex differences in human behaviour and cognition</td>
</tr>
<tr>
<td>2</td>
<td>3rd Feb</td>
<td>Sexual differentiation</td>
<td>The Pinker/Spelke debate</td>
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<tr>
<td>3</td>
<td>10th Feb</td>
<td>Hormones and the brain</td>
<td>Sex differences in maths ability</td>
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<tr>
<td>4</td>
<td>17th Feb</td>
<td>Sex differences in mental health</td>
<td>Prenatal hormones and gender development</td>
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<td>5</td>
<td>24th Feb</td>
<td>The nature/nurture debate</td>
<td>Sex differences in systemising/empathising</td>
</tr>
<tr>
<td>6</td>
<td>3rd Mar</td>
<td>Sex differences in the brain</td>
<td>Resolving the nature-nurture debate ESSAY DEADLINE</td>
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<tr>
<td>7</td>
<td>10th Mar</td>
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<td>Student presentations</td>
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<tr>
<td>8</td>
<td>31st Mar</td>
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<td>Student presentations</td>
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<tr>
<td>9</td>
<td>7th Apr</td>
<td></td>
<td>No session – personal study time</td>
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<tr>
<td>10</td>
<td>14th Apr</td>
<td></td>
<td>Student presentations</td>
</tr>
<tr>
<td>11</td>
<td>21st Apr</td>
<td></td>
<td>No session - ESSAY DEADLINE</td>
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