HPSC2002

Science and Popular Culture

Syllabus

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<th>Session</th>
<th>2015-2016</th>
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<td>Web site</td>
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Description

An introduction to media and cultural studies for those interested in relations between science, the media and culture. What science gets covered in print, on TV and online? How and why is that material selected? How can we investigate the effects of media coverage on public knowledge of or attitudes towards science? The module gives a short survey of relevant empirical and theoretical work in media studies, and public engagement with science.

Key Information

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<tr>
<th>Assessment</th>
<th>% 50</th>
<th>Media Analysis Project – 2500 words</th>
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<tr>
<td></td>
<td>% 50</td>
<td>3-hour Exam</td>
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<tr>
<td>Prerequisites</td>
<td>None</td>
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<tr>
<td>Required texts</td>
<td>readings listed below</td>
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Module tutor

<table>
<thead>
<tr>
<th>Module tutor</th>
<th>Dr Jean-Baptiste Gouyon</th>
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<tbody>
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<td>Office hours:</td>
<td>• Tuesdays 11-12;</td>
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<td></td>
<td>• Wednesdays 15-16;</td>
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<td></td>
<td>By appointment: <a href="mailto:j.gouyon@ucl.ac.uk">j.gouyon@ucl.ac.uk</a></td>
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Aims and objectives

Aims

The aim of the module is to recognize and reflect on the key role mass media play in the production of knowledge and in linking science with culture. Science in the media is important because it is what links the sciences to society. In this view media are crucial for reaching agreement about what counts as valid and valuable knowledge. They also play an important role regarding the way people can relate to the sciences.

Media texts are the foundation material for this course. Students will be encouraged to critically engage with different media such as newspaper articles, radio broadcasting, film and television documentaries, museum displays, and websites. In each case we will reflect on which scientific knowledge is communicated, how, by whom, and to which audience. This critical analytical work will be supported by an overview of relevant secondary literature.

The teaching method for this course will be through seminars. Each session will focus on one medium. It will start with a review of the relevant secondary literature. Practical activities, students’ presentations, and class discussions will follow.

Objectives

By the end of this module students should be able to:

• critically engage with a range of scientific media texts;
• demonstrate knowledge of the relevant literature for the module;
• demonstrate skills in qualitative discourse analysis;
• appreciate the problems involved in the presentation of science in the media;
• reflect on the role of popular science in the evolution of scientific debate;
• appreciate the part played by the sociology of science in challenging traditional definitions of both ‘science’ and ‘the public’.
Module plan

Students’ responsibilities in this module will revolve around four components: seminar sessions, practical activities, an essay, and a final exam.

Seminar sessions

Each session will be devoted to discussing aspects of the communication of science in the mass media in relation to one medium.

Two hours weekly.

⇒ First hour: introduction of the topic and small group work focusing on media contents and discourse analyses.

Break

⇒ Second hour starts with small groups reporting and class discussion, followed with a lecture-like wrap-up to convey the main points and concepts of the session.

PLEASE NOTE: It is vital that students conduct the requested preparatory activities, as well as engage intellectually with the assigned readings prior to each class, as these will be necessary for participating meaningfully in the discussions.

Session 1: Introduction – Science in public (04 October 2016).

Essential readings:


The session will introduce the course, and the main topics to be addressed in the coming weeks. We will also discuss your final course work, through an example.

As part of the session, we will look at the newspapers for the day and what science is in them. So please bring in two newspapers each, one tabloid and one broadsheet.

In pairs, you will search the papers for content that refers in some way to science and technology. You will use the following points for guidance as you go through the articles:

• What kind of science is under discussion? Is it biology, medicine, physics, psychology, chemistry?

• What position does it occupy in the paper? Is it on the front page, in a special science section, an opinion piece, an editorial, an advertisement?

• What audience is being addressed? Is the paper a broadsheet or a tabloid? If it’s in a special science section, is it targeted to those with a specific interest in science?

• Who is the author? Can you tell if the author is a journalist, science journalist, scientist or pundit?

• How would you describe the language of the article? What kinds of adjectives are being used? Can you identify any metaphors? Does the headline contrast with the main text?
• How would you describe the illustrations? Can you tell why they've been chosen?
• What about the people? Who is being quoted in the article? The researchers? Commentators from a rival institution? If it’s a health article, are patients’ groups represented? Does the article mention critics? If so, what weight are the critical voices given in relation to the rest of the article?

**Session 2 : How, Why and What Science makes the news? (11 October 2016).**

**Essential reading:**


Science journalists make science relevant to non-scientists. This is the notion we will examine in this session. During the session you will write and perform your own newscast.

**Prepare** for this week’s seminar, first by completing the reading, and second by spending some time listening to the BBC radio science programme *Science in Action* (on BBC World Service). Podcasts for the programme are available here: [http://www.bbc.co.uk/programmes/p002vsnb/episodes/player](http://www.bbc.co.uk/programmes/p002vsnb/episodes/player).

Whilst listening try to pay attention to the way science news and stories are told. Consider the following questions:

• For any given story, what is brought forward? Try to recognize the ‘essential message’. What is the information the speaker starts with?

• How are subsequent information prioritized?

• What elements are listeners provided with in order to relate to the story?

• How would you characterize the delivery?

**Session 3 : Media, Science and culture, and STS (18 October 2016).**

**Essential readings:**


Science and Technology studies demonstrate that science in the mass media is more than a simplified version of scientific knowledge.

Prepare for this week’s session by completing the readings and going back through your notes from the previous weeks.

This third session will be devoted to considering the contribution of Science and Technology Studies, and especially of the sociology of scientific knowledge, to our understanding of science in popular culture. It will be based on the history of the Wildlife MOD genre.

Essential readings:


Television science producers ascribe meanings to science and technology that enable audiences to become familiar with unfamiliar knowledge. In this session we will look at how science is put on TV.

Prepare for this session by completing the readings.

If you wish to explore the topic further you may want to read the following book chapter, which proposes an original interpretation of the way audiences actively receive the knowledge produced by television.


Session 5: Science in the Museum (01 November 2016).

Essential readings:


Museum workers do not only communicate knowledge about science to visitors. Through their displays they create versions and understandings of scientific knowledge for their audiences.

The session will involve a tour of the gallery Making the Modern World at the Science Museum, as well as some practical activities.

Session 6: Science in Fiction (15 November 2016).

Essential readings:


Scientific literacy is not the only category that enables us to make sense of science in the mass media. Fictional accounts of science suggest that it is also about conveying an image of science.

Prepare for this session by completing the readings and by reading at least the two first chapters of *Solaris*. You will have to collect your copy in class, as it cannot be uploaded on Moodle because of Intellectual Property issues.

You can obtain background information on the film and the novel from the two webpages below:

http://bibliography.english.lem.pl/arround-lem/adaptations/soderbergh
Whilst reading the novel keep the following points in mind, as they will serve to focus our class discussion. You can also make notes in relation to these points and bring them with you.

- How is science suggested in the text? And in the film? What elements convey to the reader the scientific nature of the story?
- What kind of science is it? How does it relate to the world we live in?
- How are scientists portrayed? What do you think of the way science and scientists are represented?
- Thinking of the documentary we watched last time, *Man in Space*, how would you relate the novel written in 1961, to the historical scientific context? What about the 2002 film?
- What is the representation of science you get from reading this chapter?
- What role is scientific knowledge made to play in the story? What does science add to the entertainment value of the story?
- How imagination relates to science in the story?

If you wish to pursue your reflection on the topic further, you may find the paper by Ron Curtis (1994) useful. It examines how the genre detective stories, which serves to structure science stories in popular science magazines, conveys an image of science as providing unquestioned answers.


**Session 7: Wildlife film-making (22 November 2016).**

**Essential reading:**


As the case of wildlife film-making indicates, sometimes, science communicators make claims that they participate in the scientific enterprise.

In this session we will consider the special case of wildlife films, which stand at the confluence between science and entertainment.

Prepare for the session by completing the reading. You will also collect, through newspapers’ websites, stories related to the accusations of fakery made against BBC nature documentaries (most recently in relation to the 2011 BBC series *The Frozen Planet*). Reading these stories you will pay attention to the way the BBC (mostly through the voice of David Attenborough) defended itself.

**Session 8: Science on the Web. Is the Internet really democratizing science? (29 November 2016).**

**Essential reading:**

Science in the mass media has the capacity of blurring the boundary between scientists and non-scientists.

In this session we will consider the presentation of science on the Internet. It has been claimed that one of the characteristics of the Internet is its capacity to blur the distinction between producers and consumers of knowledge. This will be the departure point of a reflection on the notion of the boundaries of science.

PREPARATION:
1 - You will prepare for this session by completing the readings.
2 - Working in pairs you will also track a science story on the Web as it moves from a press release to online newspapers, through to blogs and tweets. A good starting point is the website http://www.alphagalileo.org/AllContent.aspx?ContentType=NewsRelease. This is a European web-based news agency specialising in scientific news. You should try and find at least three iterations of the same story in different contexts.

As you track down your story you will need to pay attention to the nature and kind of the changes that are, or are not, being introduced to scientific accounts as they are presented to different audiences, and in different settings. Why are these changes being introduced? Are they changing the nature of the information offered, or are they just simplifying it?

Each pair should come prepared to talk to the class on their chosen topic.
3 – We will also reflect on the notion of Citizen Science. Please take some time to familiarize yourself with the website http://www.zooniverse.org.

Session 9: Scientists and the Mass Media (06 December 2016).

Essential readings:

In this session we will move away from science and towards scientists in order to explore their relationship with the mass media. We will consider how scientists appear in mass media science stories, and how they get involved in the making of these stories. This will lead us to reassess the notion that science in the mass media is something happening to science, and wonder instead whether science in the mass media is not simply another facet of science.

Working in pairs you will prepare for this session by going back through your notes and the material you have accumulated along the past weeks in order to perform two tasks.

1- Please try to build a “photo-fit” of the scientist as they appear in the mass media (is it a male, a female? What is their ethnic background? Are they old, or young? Are they mad, bad and dangerous or benevolent? What is their field of expertise?).
2- Please look for evidence of scientists’ involvement in the making of science mass media stories and reflect on scientists’ use of mass media.

Each pair should come prepared to share their findings with the class. These will serve as a basis for our discussion.

Session 10: And the public? (13 December 2015).

Essential readings:


Prepare for this session by completing the readings and making sure that you bring your notes from the previous weeks.

This final session will turn to the absent of studies of science in the mass media, audiences. We will consider issues of reception, effect, mediation. After reviewing the relevant literature, we will have a concluding discussion in order to bring the course to a close.

We will also make time to discuss how you should prepare for the closed examination in term 3.
### Schedule

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<tr>
<th>UCL Wk</th>
<th>Date</th>
<th>Topic</th>
<th>Activity</th>
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| 6      | 04/10| Introduction – Science in public | Newspapers examination.  
| 7      | 11/10| Science in the News | Writing a newscast.  
| 8      | 18/10| Science in the Mass Media and STS | Small group work and class discussion.  
| 10     | 01/11| Science in the Museum | Visit at the Science Museum  
|        |      | **Reading Week** | **no seminar** |
| 14     | 29/11| Science on the Web | Small groups presentations.  
| 15     | 06/12| Scientists and the Mass Media | Class discussion.  
| 16     | 13/12| And the Public? | Class discussion.  
Reading list

Reference Books:


Essential Readings:

Reconstruction of Science and Technology. Cambridge: Cambridge University Press, pp. 152-171


Assessment

summary

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<tr>
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<th>Description</th>
<th>Deadline</th>
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<tr>
<td>CW</td>
<td>Media Analysis Project</td>
<td>15/12, at 10:00 am</td>
<td>2500</td>
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<tr>
<td>CE</td>
<td>3h Closed Examination</td>
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Coursework

Media Display Analysis

For this assignment, you will have to select **ONE** piece of media science and you will need to critically analyse it in an argumentative fashion. This can be:

- A feature published in a newspaper
- A popular science book
- A Novel
- A Museum Display
- An image (photograph, painting, portrait)
- A film (fiction or documentary)
- A TV programme
- A website
- A theater play
- An advertisement

Depending on your choice, different methods of analysis will be at your disposal. But, whatever your method, your analysis should try and answer the following questions:

- What is the piece under scrutiny about?
- Why did you choose it?
- How does it relate to the topic of the course (science in popular culture)? And what makes it interesting in relation to that topic?
- What does analyzing this piece of science in the media enable you to claim about science in popular culture?
  - What kind of relationship between science and popular culture does your object of analysis foster?
  - How is it situated in relation to the production of knowledge?
  - What kind of participation in science does it encourage?
  - What is its contribution in defining the cultural boundaries of science?

You are strongly advised to start thinking of what you want to write about
early in the term. You will then arrange an appointment with me, or make use of my office hours (see first page of this syllabus), so that I can give you some guidance tailored for your topic.

The deadline for submitting your work via Turnit-In is 15 December 2016, 10 am.

Assessment criteria are those found in the students’ handbook page 15 (http://www.ucl.ac.uk/sts/study/sts-student-handbook/sts-student-handbook), and reproduced below:

**STS BSc criteria for assessment (general)**

<table>
<thead>
<tr>
<th>Mark</th>
<th>Grade</th>
<th>Description</th>
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| >70  | A (1<sup>st</sup>) | Distinction. Because this covers a range of thirty points, the following breakdown has been introduced as a guideline:

  A** (85-100): Marks awarded to truly exceptional pieces of work. Marks of 90 and above are reserved for research deemed to represent full mastery of the subject, likely publishable in high-quality journal.

  A’ (80-84): Satisfies all of the requirements for an ‘A’ grade (see below), with additional originality, sophistication, or skill going beyond what is expected.

  A (75-79): Satisfies all of the requirements for an ‘A’ grade (see below), but also demonstrates originality, impressive original research, higher critical ability, and a higher degree of analytic/synthetic skill. Goes significantly beyond lecture materials and course readings.

  A’ (70-74): Performs the assigned task to an excellent standard, with accuracy and sufficient detail, without significant errors, no major shortcomings. In an essay, a work in this range should use a good number of appropriate sources, go beyond the material covered in lectures, and demonstrate critical ability, analytic/synthetic skills, and impressive research skills. |
| 60-69 | B (2i) | Good. Some critical thinking or reflection demonstrated. Many relevant points made, clearly argued, accurate and coherent. Includes major points in the course material and shows appreciation of their importance. |
| 50-59 | C (2ii) | Satisfactory. A solid piece of work but with gaps, errors or minor misconceptions. |
| 40-49 | D (3<sup>rd</sup>) | Poor. Inadequately argued and poorly documented. Provides some relevant information but omits many important points and contains a substantial number of errors or misconceptions. Little tie to relevant sources. 40 – This is the minimum passing mark. Barely sufficient evidence to avoid failure, with only a rudimentary knowledge of the subject; contains irrelevant material or significant errors and misconceptions. |
| 0-39 | F* (fail) | Failure. Inadequate in conception, substance or argument. F+ (35-39): A failing item, but one which could be brought to pass standard if either more information was provided, or better use was made of the information. When applied to whole courses, the student may be eligible for referred (supplemental) assessment. F (20-34): Contains some correct items of information not centrally relevant to the topic. F- (0-19): Completely inadequate in conception, substance and argument. No understanding of the course material demonstrated. |
Important policy information

Details of college and departmental policies relating to modules and assessments can be found in the STS Student Handbook [www.ucl.ac.uk/sts/handbook](http://www.ucl.ac.uk/sts/handbook)

All students taking modules in the STS department are expected to read these policies.