HPSCGA44
Science, Media and Culture

Syllabus

<table>
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<th>Session</th>
<th>2016-2017</th>
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Description

As much as culture is part of technoscience, science and technology are part of culture. They are even, arguably, one of the main determinant of contemporary culture in industrialised societies. Similarly, media are cultural products, but they also participate in the production of culture. Studying how technoscience and the media interact enables us to understand the place of science and technology in culture and how it is constructed.

This module is intended to explore the theoretical foundations of science communication through the work of scholars in science studies. We will apply this scholarship to examples taken from various media from the Museum through television, through to the Internet. Additionally, two external interventions are planned, with people whose job it is to make science public.

The assessment for the module will consist in one short oral presentation and an essay.

Key Information

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Oral Presentation</th>
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<td>%70</td>
<td>Essay</td>
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Prerequisites

None

Required texts

readings listed below
Module tutor

<table>
<thead>
<tr>
<th>Module tutor</th>
<th>Dr Jean-Baptiste Gouyon</th>
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<tbody>
<tr>
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<td>Office hours:</td>
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<td>• Tuesdays 11-12;</td>
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<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

• To understand the role of media in placing science in culture but also as indicators of science’s place in culture;
• to understand how media participate in the scientific enterprise and appreciate that media are a resource for scientists;
• to understand what kind of resource science is for the media;
• to understand how producers of media content work;
• to reflect on the intersection between science, media and culture on the one hand, and globalization on the other.

Objectives

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

• will be familiar with the history of science in the media;
• will be familiar with the different theoretical approaches and methods to studying science in the media;
• will be able to deploy STS concepts, in particular those coming from the field of the Public Understanding of Science (PUS), in order to study science in the media in relation to culture and politics.
Module plan

The course is divided into three parts. Sessions 1 to 3 are devoted to examining concepts and theory in relation to Science, media and culture. Sessions 4 to 7 each revolve around one medium, and will each contain a “methodological toolbox”. The medium under scrutiny will serve as a basis to introduce one methodological approach to studying science in the media. Sessions 8 & 9 both involve a talk followed by a Q&A with an external speaker, who is a practitioner of Science in the Media. The last session of the course will be devoted to students’ presentations.

2 Compulsory readings are usually assigned for each session. They will form the basis for the class discussions. Optional additional readings are also suggested for each session. A full list of readings is given at the end of the syllabus. All essential readings are available via the course’s page on Moodle.

Each session will last two hours. A typical session will involve a 45-minute lecture on the topic for the day, and a class discussion based on the readings. Some sessions may also include some small group work. Students are expected to come prepared (this includes completing the readings and completing any preparatory activity as required), and to participate in the class discussion for each session.

Additional information

A visit to the Science Museum will be coupled with Session 8. Details will be discussed in class.

Session plan

Session 1: Introduction (Wednesday 05 October 2016)

Concepts and theory. History of Science in the Media

Essential Readings:


Additional Readings:

Science belongs in culture. Media are at the same time instrumental in the fashioning of culture and a reflection of that culture. Examining the interplay of science with the media is a means of understanding ‘Science’s place and placing in culture’ (Cooter and Pumfrey, 1994), or what we might call the public culture of science.

Session 2: Science, Media and Culture, and STS (Wednesday 12 October 2016)


Essential Readings:


A COMPLEMENT TO THE 1995 PAPER IS THE FOLLOWING SHORT PIECE. It develops the ‘Web of science communication’ concept into the ‘Sphere of Science communication’:


Additional Readings:


In the preceding session, we should have reached to the conclusion that science in the media is a part of science. And therefore, that science and the media should not be seen as in opposition, but rather as complementary to each other. Scholars in Science and Technology Studies (STS) have been arguing for a while now that the production of knowledge does not stop at the laboratory doorstep, but continues in public contexts, like the media. According to STS scholarship, science in the media is an essential part of the production of knowledge, as it is what enables agreement to be reached at the social level on what counts as valid knowledge. In this session we will consider what Science and Technology Studies can bring to our understanding of the Media, Science and Culture nexus. We will look at the scholarship published in relation to the Public Understanding of Science, and the STS criticism of the two-stage model of science communication, and reflect on whether this is adequate theoretical grounds to think of the relationship between the media and science in relation to culture. We will then reflect on the value of looking at media as technologies.
**Session 3: Science in Context.** (Wednesday 19 October 2016)

*Concepts and Theory. Knowledge and social order.*

**Essential Readings:**


**Additional Readings:**


In order to make sense of the relationship between science, media and culture, the notion of “Context” is key. Audiences’ encounter with science through the media does not occur in a vacuum. It happens in a cultural, social and political context. Each and everyone of us brings to bear on any piece of science in the media when we encounter it the sum total of our life experience, personal history, social circumstances. But the social, political, cultural context, in other words the social order in which a piece of science in the media is produced is also relevant here, as it will have an impact on what is said, shown, and how this is done.

Scholars in STS have argued that knowledge and social order are co-produced. This means that social order is determined by the knowledge produced in a given society, but it also means that the knowledge produced in a given society depends on the social order that prevails in that society. Similarly, media are one of the main means by which social order is enforced on a large scale, but they are also produced by the prevailing social order.

In this session we will consider the role of the social and cultural context on the way science appears in the media, and how it is received. Class discussion will focus on a concrete example of scholarship (the case study by Balmer et al.) which demonstrates what can be done by looking at science in the media using STS tools, and what the contribution of such an approach to the history of science can be.

Some general questions to ponder in relation to this topic may include:

- How different audiences engage with different media?
- What is done to different audiences by different media?
- Could some audiences be resisting the dominant social order by refusing to engage with science?
Session 4: Case Study 1: Audiences’ agency in a globalized cultural context: Science on the Internet (Wednesday 26 October 2016)

Methodological Toolbox: Ethnographical approach to media studies

Essential Readings:

Additional Readings:

With this week’s session we enter the second part of the course, dedicated to case studies. This session will be about new media in relation to audiences’ involvement with science.

The internet in general, and social media in particular, it is often asserted, blurs the boundary between knowledge producers and knowledge consumers, as internet users can contribute knowledge of their own which then becomes part of the general stock of knowledge. Examples would be the comments section of a blog, or such websites as Wikipedia.

In this session we will question this assertion, especially as it tends to reify the boundary it pretends to dissolve, thus reasserting the two stages model of science communication. First we will look at some of the scholarship published on the topic. Second we will examine a website, and try to come up with some reflection about it, in the light of the readings for the week.

In order to come prepared to this session, you will spend some time familiarising yourselves with the website [http://www.arkive.org](http://www.arkive.org), which deals with wildlife conservation. When browsing the website, you may want to keep the following questions in mind:

1. Who produces the website?
2. Is it made evident, or do you need to look for it?
3. Does the website privilege a specific perspective?
4. What do you think are the producers of the website trying to achieve with it?
5. Can you reflect on the role ascribed to visual media (photographs and films) in relation to the website objectives?
6. What kind of knowledge does it purports to convey?
7. Are there any claims to knowledge associated with this website?
8. How are they supported?
9. How would you characterise the intended audiences for the website?
10. Based on what was said in the preceding weeks of this course, how would you...
characterise the dynamic of science communication at work here?
- How are these audiences invited to participate?
- How would you characterise the balance of power in relation to the website’s content? What space is left to people’s own knowledge?
- What can people do with the website, with its content? What uses of the website are encouraged?

The following short piece can be useful as background reading when reflecting on arkive.org:

**Session 5: Case Study 2: Advertisement** (Wednesday 02 November 2016)

**Methodological Toolbox:** Semiotics

**Essential Reading:**

**Additional Readings:**

The deep embedding of science and technology in late modern post-industrial cultures is evidenced by the quasi ubiquitous use of science and technology as referent in advertisements, be it to sell food stuff, cosmetics, cars, etc. This would suggest that like any other medium, advertisement is an instrument for placing science in culture, as much as it reveals this placing.

In this session we will first look at some of the scholarship engaging with advertisement as a form of science communication, and review the semiotic approach as a way of analysing advertisement.

The second part of the session will be devoted to examining, in the light of the readings, some examples of advertisements that make use of science and which you will have collected during the week.

**Session 6: Case Study 3: Science in Fiction** (Wednesday 16 November 2016)

**Methodological Toolbox:** Discourse Analysis

**Essential Readings:**
Novels and fiction films, as part of entertainment media, enjoy widespread currency. As such they can be said to play as important a role as information and educational media, and perhaps even more so, when it comes to fashioning the public culture of science. In this session we will focus on one case, comparing a novel with one of its film adaptations. The novel is H.G. Wells' *The Island of Dr Moreau*, published in 1896. We will compare it with a film adaptation released a century after the book was published, in 1996. By comparing the film with the novel, we will try and isolate what both can tell us of the public culture of science of their time, and try to reflect on the effect each may have had on the public culture of science.

In order to prepare for this session, you will need to familiarise yourself with H.G. Wells's text. It can be borrowed from the library, alternatively cheap paperback copies are available on Abebooks. Photocopies of the relevant chapters will also be available.

**Session 7: Case Study 4: The intertextuality of climate change** (Wednesday 23 November 2016)

**Essential Readings:**


**Additional Readings:**

presented in different media.

In order to prepare for this session you will complete the readings. ADDITIONALLY, you will co-
ordinate in order to find a representation of climate change in different media, preparing a
short description of the way climate change is pictured in your chosen representation. These
will be shared in class.

**Session 8: Displaying Science in the Museum** (Wednesday 30 November 2016)

*Meet a practitioner 1*

**Essential Readings:**

  museums’, in *Misunderstanding Science?* Edited by Irwin, A. & Wynne, B., Cambridge:
  Cambridge University Press, pp. 152-171

**Additional Readings:**

  Display’. In *Science for the Nation. Perspectives on the History of the Science Museum*,
edited by Peter J. T. Morris, Basingstoke: Palgrave Macmillan, pp. 176-193
  London: Reaktion books, pp.22-40
- Silverstone, R. (1992). ‘The medium is the museum: on objects and logics in times and
  spaces’, in Durant, J. (ed.) *Museums and the Public Understanding of Science*, London:
  Science Museum and COPUS, pp. 34-42

This session will be devoted to reflecting on how people working in a science museum work in
order to put science and technology on display. It will particularly focus on understanding how
audiences are taken into account when a display is assembled.

This session will be coupled with a visit of the new interactive display Wonderlab, at the
Science Museum, in London, with a talk by one of the curators responsible for the gallery.

**Session 9: Putting science on TV** (Wednesday 07 December 2016)

*Meet a practitioner 2*

**Essential Readings:**

- Boon, T., & Gouyon, J. B. (2014). ‘The origins and practice of science on British
  television’. In M. Conboy and J. Steel (Eds), *The Routledge Companion to British Media

**Additional Readings:**
This session is devoted to science on television. It will involve a talk by Steve Crabtree (Editor of the BBC Flagship science programme Horizon - tbc). The talk will be followed by a Q & A. With this talk, we will try to understand how audiences participate in the process of production.

In order to prepare for this session, in addition to completing the readings, you will look at the clips available on the following URL: http://www.bbc.co.uk/historyofthebbc/resources/horizon50

Each student should come to class with at least one question written down.

**Session 10: Students presentations** (Wednesday 14 December 2016)

Presentations should be timed to last **07 minutes**, and should include a Power Point presentation.

Possible topics for presentation may include:

- Critically analyse a website/webpage, **OR** a science documentary, **OR** a Science Museum display.

  *The presentation should notably bring forward the kind of knowledge that is presented, how it is presented, what understanding of science underlies the object of study. The presentation should also reflect on the kind of audience engagement the chosen object (webpage, documentary, museum display) authorises, as well as formulating hypothesis about the way it is encountered by audiences.*

- Following a science story as it moves from one media to the other and examining how it is transformed along the way.

  *The presentation should reflect on the causes and possible consequences of such transformations. Questions to ponder whilst preparing the presentation may include: are different audiences addressed by different media forms? Do all media form have the same objective? What role each media form play in the social construction of scientific facts?*

- Investigating how different audiences encounter a given piece of science in the media.

  *Amongst the points to be examined are the ways in which different audiences encounter a given display, tv programme, newspaper article, blog post.... A related point is the variety of personal knowledge and experiences people bring to bear on their encounter with a piece of science in the media.*

**PLEASE NOTE:** This list is non-limitative. You may wish to do your presentation on another topic. If you have an idea, we can discuss it together beforehand.
## Schedule

<table>
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<tr>
<th>Session</th>
<th>UCL Week</th>
<th>Topic</th>
<th>Date</th>
<th>Essential readings</th>
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UCL Week 11 Reading Week
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<tr>
<th>Session</th>
<th>UCL Week</th>
<th>Topic</th>
<th>Date</th>
<th>Essential readings</th>
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| 8       | 14       | **Displaying Science in the Museum**  
| 9       | 15       | **Putting science on TV**  
| 10      | 16       | **Students presentations** | 14 December     | No Readings!                                                                        |
Reading list


Assessment

Summary

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<tr>
<th>Description</th>
<th>Deadline</th>
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<tr>
<td>CW Oral Presentation</td>
<td>14 December 2016</td>
<td>N/A</td>
</tr>
<tr>
<td>CW Essay</td>
<td>16 December 2016 @10:00 am</td>
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Coursework

**Student presentations** (Friday 18 December 2014)

Presentations should be timed to last **07 minutes**, and should include a Power Point presentation.

Possible topics for presentation may include:

- Critically analysing a website/webpage, **OR** a science documentary, **OR** a Science Museum display.
  
  *The presentation should bring forward the kind of knowledge that is presented, how it is presented, what understanding of science underlies the object of study. The presentation should also reflect on the kind of audience engagement the chosen object (webpage, documentary, museum display) authorises, as well as formulating hypothesis about the way it is encountered by audiences.*

- Following a science story as it moves from one media to the other and examining how it is transformed along the way.
  
  *The presentation should reflect on the causes and possible consequences of such transformations. Questions to ponder whilst preparing the presentation may include: are different audiences addressed by different media forms? Do all media form have the same objective? What role each media form play in the social construction of scientific facts?*

- Investigating how different audiences encounter a given piece of science in the media.
  
  *Amongst the points to be examined are the way different audiences encounter a given display, tv programme, newspaper article, blog post.... A related point is the variety of personal knowledge and experiences people bring to bear on their encounter with a piece of science in the media.*

*PLEASE NOTE: This list is non-limitative. You may wish to do your presentation on another topic. If you have an idea, we can discuss it together beforehand.*

Essay questions

Choose one question in the list:

1. Bruno Latour wrote:
‘The construction of facts, like a game of rugby, is thus a collective process.’


Discuss this quote in relation to the role of the media in linking science with culture.

2. Given that scientific knowledge is claimed to be universal, to what extent can it be said that the presentation of science in the media is instrumental for the establishment of a global social order?

3. Should ignorance of science always be seen as a deficit to be remedied? Why would people choose to remain ignorant?

4. Identify and discuss three functions of science in the mass media. In your answer you should make use of specific examples.

5. How does the presentation of science in the media relate to the definition of the cultural boundaries of science?

6. Scientific knowledge is a resource for the media. But the media are also a resource for scientists. Discuss this assertion with specific reference to cases discussed in class.

7. Is the notion of accuracy at all relevant when discussing science fiction movies in relation to media, science and culture? Why?

PLEASE NOTE: You may want to write on another topic. If it were to be the case, please arrange an appointment, so that we can discuss it beforehand.

CLOSING DATE FOR SUBMISSION: The closing date for uploading your essay on Turnit-in is December, 16th 2016, 10 am. I’m happy to discuss your essay before submission.

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

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