

Science Communication in a Global Perspective

(HPSC0153)

Course Syllabus

2022-23 session (T1) | Dr Jean-Baptiste Gouyon | j.gouyon@ucl.ac.uk

Course Information

Taking a global perspective, this module introduces students to key episodes and themes in Science Communication Studies and the methodological and critical perspectives required for their full understanding. Looking at science communication from a global perspective makes us re-assess our conception of science.

This module is open for registration only to students in the MSc in Science communication, for which it is compulsory.

Basic course information

Course website:	See Moodle
Moodle Web site:	Search "HPSC0153"
Assessment:	Coursework
Timetable:	See portico
Prerequisites:	None
Required texts:	See reading list
Course tutor:	Dr Jean-Baptiste Gouyon
Contact:	j.gouyon@ucl.ac.uk
Web:	https://iris.ucl.ac.uk/iris/browse/profile?upi=JGOUY80
Office location:	22 Gordon Square, room 3.2
Office hours:	Thursdays 12-1pm, or by appointment, or online

How is the course organised?

Teaching for this course takes the form of weekly face-to-face two-hour sessions. Lecture material is posted online in the shape of videos for students to watch and take notes on, prior to their weekly session. The face-to-face sessions will be discussion-based, with the class critically engaging with items from the reading list for the module under the guidance of the course tutor. Students need to come prepared to these weekly seminars.

The table below provides you with an *indicative* list of the weekly themes for the lecture material and for the seminar discussions. Course tutors reserve the right to change part of this list, or the order of topics, at short notice.

Synoptic Schedule

UCL Week	Topics	Convenor
6 06.10. 22	Narratives of science and science communication <i>Science communication is a means to create scientific imaginaries and establish power relationships in relation to science.</i>	Professor Charlotte Sleigh
7 13.10. 22	What is science communication? <i>Different models of science communication / where does science communication sit in relation to science? / science communication as a set of practices</i>	Doctor Jean-Baptiste Gouyon
8 20.10. 22	Politics of Science communication – who should benefit from science communication?	Doctor Melanie Smallman
9 27.10. 22	Who are the publics for science communication? <i>The multiple audiences for science communication / the active audience / practices of “audiencing” / concept of assimilation</i>	Doctor Jean-Baptiste Gouyon
10 03.11. 22	Science communication and expertise <i>Fake news; dis-information; conspiracy theories, etc. Are social media enabling a distribution of expertise?</i>	Professor Charlotte Sleigh
11	READING WEEK	
12 17.11. 22	Open access publishing/open data and online delivery of education	Professor Charlotte Sleigh
13 24.11. 22	Science communication and visual media <i>Visual media enjoy a privileged status as tools for science communication. Film /TV/Museums</i>	Doctor Jean-Baptiste Gouyon
14 01.12. 22	Decolonising science communication <i>Moving away from a North centric understanding of science communication to acknowledge and understand other systems of relation to science/knowledge production and the role of communication in relation to it.</i>	Doctor Michel Wahome
15 08.12. 22	Assessment session: <i>students present the abstract for their essay. (3-minute presentation for a 500 words abstract + 2 minutes for Qs)</i>	Dr J.-B. Gouyon & Prof C. Sleigh
16 15.12. 22	Conclusion: what does a global perspective add to our understanding of science communication? <i>A conclusive lecture around the challenges posed by historical legacies of health education -- colonial, racist, classist -- to thinking and practicing communication (or “communicative justice”) in global health, and particularly across inequalities in access to resources and general education. Focused on case studies in Africa over time, from colonial sleeping sickness or malaria to childhood vaccination and HIV/AIDS over the years.</i>	Doctor Noemi Tousignant

Assessments

Summary

	Description	Deadline	Word limit	Weight
CW	Abstract + Presentation	Abstract: 7 December 2022, 5pm (UK time) Presentation: 8 December 2022, 2-4pm.	500	10%
CW	Essay	4 January 2023, 5pm (UK time)	2,500	90%

Please Note: All deadlines for submission are at 05:00 PM (London Time)

Detail of assessments

Description, Assessment Brief:

The assessment for this course is in three parts. First an abstract and an oral presentation, then finally an essay. These three pieces of course work relate to each other. For the three of them, students should work from **one** of the essay prompts below:

Essay Prompts:

1. Describe key features of dominant western narratives of science. Why or in what ways might science communicators want to challenge these?
2. Building on case studies, discuss why it is vital for science communication to 'critically revise the ancient idea of science as universal light' (Meyer, 2016: 444).
3. Bucchi and Trench wrote:

"A strong focus on publics is almost standard now in the training of scientists for public communication; short courses offered to researchers by research

councils, universities, professional organisations and others very often start by asking: who are the publics you want to communicate with, and why?" (Bucchi and Trench, 2014: 6).

Is there a risk, for science communicators, of essentialising publics? If so, what is this risk and why?

4. In the context of climate change, why and how can you tailor science communication to a global audience? What strategies can you use to incorporate your awareness of multiple gazes into a piece of science communication?
5. Examine **either** Open Access in science **or** virtualised education. What claims are made for its value, and what criticisms can be made of these?
6. Why should we trust scientific experts? Evaluate different answers that people (including STS scholars) give to this question.
7. Reflect on the pros and cons of the visual medium of your choice (e.g. photo, drawing, film, display, etc.) from a science communication perspective.

1. Abstract and presentation

As part of the assessment for this course, students will first write a **500-word abstract** for their essay, in which they will announce what their essay will cover, what the main point of the argument will be and how they intend to support it, and what the essay might contribute to the understanding of science communication in a global perspective. . Abstracts should be handed in on Moodle on **7 December 2022** before or at 5pm (UK time).

Students will then be invited to present their abstract in a **2-minute assessed presentation**. Presentations will take place in class during the session scheduled on **8 December 2022, from 2 to 4**. The order of appearance will be communicated the week prior to the presentation session. When preparing your presentation, you should time it so that there time left in your 2 minutes for one question. And you will be expected to make use of a slide show to augment your delivery.

Assessment Criteria for the Abstract

- structure
- quality of argument
- clarity of writing
- copy editing

Assessment Criteria for the Presentation:

- Skills in description (summary, who, what, where, when, how)
- Skills in synthesis (connecting to broad themes, emergent thinking)
- Skills in analysis (explanation, comparison, criticism)
- Presentation skills (Overall coherency; clarity of structure and organisation; pace,

clarity of speech, keeping to time)

- visual aids (Visuals used effectively to augment delivery, avoiding saturation or competition)
- Answers to questions (knowledge, clarity, composure)
- Overall impression (is there a convincing essay here?)

2. Essay

Based on their work for the abstract and building on the feedback they will have received for both the abstract and the presentation, students will write a **2,500 words essay (working from the same essay prompt)**. The deadline for handing in this essay is **Wednesday 4 January 2023**, at 5pm (UK time).

Assessment Criteria:

Your work will be assessed against the STS marking criteria as detailed in the STS Student handbook.

Aims & objectives

Aims:

The aims of the modules are to introduce students to the theories and concepts of science communication studies scholarship, to reflect on the global dimension of science and technology and their communication. It is to equip them with the conceptual toolbox which will enable them to become reflexive science communicators.

Objectives:

By the end of the module students

- will be familiar with the main theories and concepts in science communication studies;
- will be able to critically reflect on the political dimension of science communication in an increasingly globalized context
- will know how to adopt a decolonised perspective on science communication
- will be aware of the diversity of audiences for science communication
- will be knowledgeable about the various channels through which science can be communicated.

Teaching team

Module Convenor	Dr Jean-Baptiste Gouyon j.gouyon@ucl.ac.uk <u>Office hours</u> : Thursdays 12-1pm
Course tutors	Prof. Charlotte Sleigh c.sleigh@ucl.ac.uk
	Dr Melanie Smallman m.smallman@ucl.ac.uk
	Dr Michel Wahome m.wahome@ucl.ac.uk
	Dr Noemi Tousignant n.tousignant@ucl.ac.uk

Session summaries

1. Narratives of science and science communication (CS)

Stories about science are very powerful, telling us what science *is* and what (and whom) it *is for*. These stories vary from place to place, and even within a single society one can often find more than one of these narratives at work. Successful science communication begins by *noticing* what dominant narratives are at work, and by *thinking critically* about whose interests they serve (i.e. what power they inscribe). Eventually, science communicators aim to *improve or change* these narratives. In this session we will identify and critique some key narratives of science and open up a window on global variety.

Essential Readings:

The Martian (Ridley Scott, 2015)

Background Readings:

Slocombe, Will. "Playing Games with Technology: Fictions of Science in the *Civilization Series*." *Osiris* 34.1 (2019): 158-174.

Stearns, J. (2021). Introduction: Narratives of Science, Old and New. In *Revealed Sciences: The Natural Sciences in Islam in Seventeenth-Century Morocco* (Cambridge Studies in Islamic Civilization, pp. 1-33). Cambridge: Cambridge University Press.
doi:10.1017/9781107588523.002

Chatterjee, Animesh. 'Problems with "Colonial Science" and "Technology Transfer"', *Idols of the Theatre*, July 6, 2014 by <https://idolsofthetheatre.wordpress.com/2014/07/06/problems-with-colonial-science-and-technology-transfer/>

Anderson, Warwick. "Remembering the spread of Western science." *Historical Records of Australian Science* 29.2 (2018): 73-81.

The Consilience Project, 'The Case Against Naive Technocapitalist Optimism' (2021), <https://consilienceproject.org/the-case-against-naive-technocapitalist-optimism/>

2. What is science communication? (JBG)

Science communication can be understood in different ways and several models trying to account for the phenomena grouped under this heading have been proposed over the years. This session is about reflecting on these different models, and the different aspects of science communication they reveal.

Essential Readings:

Falade, B. A., & Bauer, M. W. (2018). 'I have faith in science and in God': Common sense, cognitive polyphasia and attitudes to science in Nigeria. *Public Understanding of Science*, 27(1),

29-46.

Meyer, G. (2016). In science communication, why does the idea of a public deficit always return? *Public Understanding of Science*, 25(4), 433-446.

Background Readings:

Bauer, M. W. (2009). The evolution of public understanding of science—discourse and comparative evidence. *Science, technology and society*, 14(2), 221-240.

Bauer, M.W. and J. Gregory (2007), 'From Journalism to Corporate Communication in Post-war Britain', in M. W. Bauer and M. Bucchi (eds), *Science, Journalism and Society: Science Communication Between News and Public Relations*. London: Routledge , pp. 33–52.

Davies, S. R. (2019). Science communication is not an end in itself:(dis) assembling the science festival. *International Journal of Science Education, Part B*, 9(1), 40-53.

Nielsen, K. H. (2013). Scientific communication and the nature of science. *Science & Education*, 22(9), 2067-2086.

3. Politics of Science communication – who should benefit from science communication? (MS)

Just as there are many different ways of doing science, there are many different motivations which benefit different groups. In this session we will look at the recent history of science communication (in the UK and beyond), and consider who is and could be served by our approaches to science communication.

Essential readings

Thomas, Geoffrey;, and John Durant. 1987. 'Issues and Perspectives Why Should We Promote the Public Understanding of Science ?' *Scientific Literacy Papers: A Journal of Research in Science, Education and Research*.

Smallman, M; Lock SJ; Miller, S (2021) Chapter 39. United Kingdom: The developing relationship between science and society. In Riedlinger, Michelle, Peter Broks, Toss Gascoigne, Luisa Massarani, Joan Leach, Bernard Schiele, and Bruce V. Lewenstein. 2021. *Communicating Science*. ANU Press. <https://doi.org/10.22459/CS.2020>.

Trench, Brian, and Massimiano Bucchi. 2021. 'Global Spread of Science Communication: Institutions and Practices across Continents'. In *Routledge Handbook of Public Communication of Science and Technology, 3rd ed.* Routledge.

Background readings

Bucchi, Massimiano, and Brian Trench. 2021. 'Introduction: Science Communication as the Social Conversation around Science'. In *Routledge Handbook of Public Communication of Science and Technology, 3rd ed.* Routledge.

Schiele, B and Gascoigne, T. Chapter 2 "The Timelines- A broad-brush analysis" In Riedlinger,

Michelle, Peter Broks, Toss Gascoigne, Luisa Massarani, Joan Leach, Bernard Schiele, and Bruce V. Lewenstein. 2021. *Communicating Science*. ANU Press. <https://doi.org/10.22459/CS.2020>.

Irwin, Alan. 2021. 'Risk, Science and Public Communication: Third-Order Thinking about Scientific Culture'. In *Routledge Handbook of Public Communication of Science and Technology*, 3rd ed. Routledge.

4. Who are the publics for science communication? (JBG)

This session looks at science communication from the perspective of the people to whom science communication is addressed. We find that they do not form an undifferentiated passive mass but constitute multiple publics who actively produce meaning out of science communication contents, depending on how they situate themselves in relation to science and its communication. Through these practices of “audiencing”, the publics for science communication can be said to participate in the sciences.

Essential Readings:

Burns, M., & Medvecky, F. (2018). The disengaged in science communication: How not to count audiences and publics. *Public Understanding of Science*, 27(2), 118-130.

Guenther, L., Weingart, P., & Meyer, C. (2018). “Science is everywhere, but no one knows it”: assessing the cultural distance to science of rural South African publics. *Environmental Communication*, 12(8), 1046-1061.

Background Readings:

Bucchi, M. (1996). When scientists turn to the public: Alternative routes in science communication. *Public Understanding of Science*, 5(4), 375.

Cloître, M., & Shinn, T. (1985). Expository practice. In Shinn, T., & Whitley, R. P. (Eds.). *Expository science: Forms and functions of popularisation*. Springer, 31-60.

Hall, S. (2001). Encoding/decoding. In M. G. Durham and D. M. Kellner (Eds). *Media and cultural studies Key Works*. Blackwell Publishing, 163-173.

Lewenstein, B. V. (1995). From fax to facts: Communication in the cold fusion saga. *Social Studies of Science*, 25(3), 403-436.

McKechnie, R. (1996). Insiders and outsiders: identifying experts on home ground. In A. Irwin and B. Wynne (Eds) *Misunderstanding science*, Cambridge University Press, 126-151.

5. Decolonising science communication (MW)

How can we communicate with everyone? This class develops an understanding of science communication that acknowledges and understands multiple systems of relation to science/knowledge production and how by shifting from Western-centric modalities, communication can be made truly universal.

Essential Readings:

Aksoy, A., & Robins, K., (2000), Banal transnationalism. The difference that television makes, in eds. Marris, Paul, and Sue Thornton, *Media Studies : a Reader*, New York, N.Y: New York UP.

Tsing, A. L. (2011), Chapter 3. Natural universals and the global scale, *Friction : An Ethnography of Global Connection*, Princeton, NJ: Princeton University Press.

Arturo, E., (2018), Chapter 3. In the background of our culture: rationalism, ontological dualism, and relationality, *Designs for the Pluriverse : Radical Interdependence, Autonomy, and the Making of Worlds*, Durham: Duke University Press.

6. Open access publishing/open data and online delivery of education (CS)

The arrival of the Internet has vastly accelerated the potential for the dissemination of scientific information. In this session we examine two related, highly optimistic claims made in this context: that Open Access and virtual learning will enhance the communication of science.

Essential Readings:

Fyfe, Aileen, et al. "Untangling academic publishing: A history of the relationship between commercial interests, academic prestige and the circulation of research." (2017).

<https://eprints.bbk.ac.uk/id/eprint/19148/1/UntanglingAcPub.pdf>

Swartz, Aaron. "Guerilla open access manifesto." *Aaron Swartz [Internet]* (2008).

http://openscience.ens.fr/ABOUT_OPEN_ACCESS/DECLARATIONS/2008_07_01_Aaron_Swartz_Open_Access_Manifesto.pdf

Background Readings:

Ames, Morgan G. *The charisma machine: The life, death, and legacy of One Laptop per Child*. Mit Press, 2019.

Lawson, Stuart. *Open Access policy in the UK: From neoliberalism to the commons*. PhD dissertation, Birkbeck University, 2019. <https://mla.hcommons.org/deposits/item/hc:23661/>

Mirrlees, Tanner, and Shahid Alvi. *EdTech Inc.: selling, automating and globalizing higher education in the digital age*. Routledge, 2019.

Pourret, Olivier, et al. "International disparities in open access practices in the Earth Sciences." *European Science Editing* (2021).

Rodrigues, Rosângela Schwarz, Ernest Abadal, and Breno Kricheldorf Hermes de Araújo. "Open access publishers: The new players." *PLoS one* 15.6 (2020): e0233432.

Teräs, Marko, et al. "Post-Covid-19 education and education technology 'solutionism': A seller's market." *Postdigital Science and Education* 2.3 (2020): 863-878.

7. Science communication and expertise (CS)

In this session we dive into the surprisingly long history of fake science news and misinformation. What makes an expert an expert, and why should we trust them? The answer turns out not to be quite so easy to provide as one might expect – there is nothing in the so-called ‘scientific method’ that guarantees reliability, only human consensus. And consensus is only as strong as its values of inclusivity.

Essential Readings:

Naomi Oreskes: Why we should trust scientists | TED Talk (2014), [https://www.ted.com/talks/naomi_oreskes_why_we_should_trust_scientists?referrer=playlist-a love letter to science](https://www.ted.com/talks/naomi_oreskes_why_we_should_trust_scientists?referrer=playlist-a%20love%20letter%20to%20science)

Background Readings:

Royal Society, The online information environment (2022), <https://royalsociety.org/topics-policy/projects/online-information-environment/>

Collins, H. We cannot live by scepticism alone. *Nature* 458, 30 (2009). <https://doi.org/10.1038/458030a>

Collins, H. & Evans, R. *Rethinking Expertise* (Chicago Univ. Press, 2007).

Oreskes, N., *Why Trust Science?* (Princeton, 2019)

Prasad, A. (2022). Anti-science misinformation and conspiracies: COVID–19, post-truth, and science & technology studies (STS). *Science, Technology and Society*, 27(1), 88-112.

Radin, J. Alternative Facts and States of Fear: Reality and STS in an Age of Climate Fictions. *Minerva* 57, 411–431 (2019). <https://doi.org/10.1007/s11024-019-09374-5>

Sleigh, C. ‘The Abuses of Popper’, *Aeon* (2020), <https://aeon.co/essays/how-popperian-falsification-enabled-the-rise-of-neoliberalism>

8. Science communication and visual media (JBG)

Visual media enjoy a privileged status as tools for science communication. This has partly to do with the belief, widespread since the 15th century, that an image places much more clearly before the eyes what a thousand words could not describe. However, visual representations are far from being unproblematic. Who produces them? what do they show? what they don’t, who can see them, who can’t... these are some of the questions we consider in this lecture as we examine visual representations as tools for science communication.

Essential readings:

Bucchi, M., & Saracino, B. (2016). “Visual Science Literacy” Images and Public Understanding of Science in the Digital Age. *Science Communication*, 38(6), 812-819.

Mellor, F. (2018). Configuring Epistemic Authority: The Significance of Film Style in Documentaries about Science. *Science in Context*, 31(1), 39-59.
doi:10.1017/S0269889718000042

Background readings:

Gouyon, J. B. (2016). Science and film-making. *Public Understanding of Science*, 25(1), 17-30.

Halpern, M. K., & Rogers, H. S. (2021). Art–science collaborations, complexities and challenges. In M. Bucchi and B. Trench (Eds) *Routledge Handbook of Public Communication of Science and Technology*, Routledge, 214-237.

Pauwels, L. (Ed.). (2006). *Visual cultures of science: rethinking representational practices in knowledge building and science communication*. University Press of New England. (especially chps: 1,2 & 10)

Rose, C. (2003). How to teach biology using the movie science of cloning people, resurrecting the dead, and combining flies and humans. *Public Understanding of Science*, 12(3), 289-296.

9. Assessment session: students present their abstract. (3-minute presentation for a 500-word abstract + 2 minutes for Qs) (CS + JBG)

For this session you will prepare and present a 500-word abstract for your essay. You will be given 3 minutes to present this abstract in front of the class. 2 additional minutes will be allocated to questions.

Your abstract should first reformulate your chosen essay prompt. You need then to elaborate on the argument you want to develop in your essay. Finally, you can touch upon the case study(ies), and the body of literature upon which you intend to base your argument.

10. Conclusion: what does a global perspective add to our understanding of science communication? (NT)

Health is one of the earliest areas in which efforts were made to convey scientific knowledge to broad lay publics. The history of these efforts reveals how ‘education’ was mobilized to reinforce knowledge hierarchies as well as social and political ones. Differences in power and cultural meaning were particularly stark in colonial and ‘non-Western’ settings. In this concluding session, we will reflect on the legacy of colonialism in global health education/communication. This will be entry-point for discussing, more broadly, what global perspectives can bring to the study of science communication. We will also look at some recent critiques and concepts in justice-oriented health communication.

Essential readings:

Stein, E. A. (2006). Colonial theatres of proof: representation and laughter in 1930s Rockefeller Foundation Hygiene Cinema in Java. *Health and History*, 14-44.

Mohan J. Dutta-Bergman (2005) Theory and Practice in Health Communication Campaigns: A Critical Interrogation. *Health Communication*, 18:2, 103-122, DOI: 10.1207/s15327027hc1802_1

Background readings:

Briggs, C. L. (2017). Uncovering a tragic flaw in revolutionary health policies: From health and communicative inequities to communicative justice in health. *Salud Colectiva*, 13, 411-427. <https://www.scielosp.org/article/scol/2017.v13n3/411-427/en/>

Dutta, M. J. (2010). The critical cultural turn in health communication: Reflexivity, solidarity, and praxis. *Health communication*, 25(6-7), 534-539.

Newell, S. (2020). 'Screening Dirt: Public Health Movies in Colonial Nigeria and Rural Spectatorship in the 1930s and 1940s' in *Histories of Dirt: Media and Urban Life in Colonial and Postcolonial Lagos*, Duke University Press.

Reading list for HPSC0153

(available online at <https://ucl.rl.talis.com/lists/3634095D-AF41-80CD-4002-358AB11A45BE.html>)

Aksoy, A., & Robins, K., (2000), Banal transnationalism. The difference that television makes, in eds. Marris, Paul, and Sue Thornton, *Media Studies : a Reader*, New York, N.Y: New York UP.

Ames, Morgan G. *The charisma machine: The life, death, and legacy of One Laptop per Child*. Mit Press, 2019.

Anderson, Warwick. "Remembering the spread of Western science." *Historical Records of Australian Science* 29.2 (2018): 73-81.

Arturo, E., (2018), Chapter 3. In the background of our culture: rationalism, ontological dualism, and relationality, *Designs for the Pluriverse : Radical Interdependence, Autonomy, and the Making of Worlds*, Durham: Duke University Press.

Bauer, M. W. (2009). The evolution of public understanding of science—discourse and comparative evidence. *Science, technology and society*, 14(2), 221-240.

Bauer, M.W. and J. Gregory (2007), 'From Journalism to Corporate Communication in Post-war Britain', in M. W. Bauer and M. Bucchi (eds), *Science, Journalism and Society: Science Communication Between News and Public Relations*. London: Routledge , pp. 33–52.

Briggs, C. L. (2017). Uncovering a tragic flaw in revolutionary health policies: From health and communicative inequities to communicative justice in health. *Salud Colectiva*, 13, 411-427. <https://www.scielosp.org/article/scol/2017.v13n3/411-427/en/>

Bucchi, M. (1996). When scientists turn to the public: Alternative routes in science communication. *Public Understanding of Science*, 5(4), 375.

Bucchi, M., & Saracino, B. (2016). "Visual Science Literacy" Images and Public Understanding of Science in the Digital Age. *Science Communication*, 38(6), 812-819.

Bucchi, Massimiano, and Brian Trench. 2021. 'Introduction: Science Communication as the Social Conversation around Science'. In *Routledge Handbook of Public Communication of Science and Technology*, 3rd ed. Routledge.

Burns, M., & Medvecky, F. (2018). The disengaged in science communication: How not to count audiences and publics. *Public Understanding of Science*, 27(2), 118-130.

Chatterjee, Animesh. 'Problems with "Colonial Science" and "Technology Transfer"', *Idols of the Theatre*, July 6, 2014 by <https://idolsofthetheatre.wordpress.com/2014/07/06/problems-with-colonial-science-and-technology-transfer/>

Cloître, M., & Shinn, T. (1985). Expository practice. In Shinn, T., & Whitley, R. P. (Eds.). *Expository science: Forms and functions of popularisation*. Springer, 31-60.

Collins, H. & Evans, R. *Rethinking Expertise* (Chicago Univ. Press, 2007).

Collins, H. We cannot live by scepticism alone. *Nature* 458, 30 (2009).
<https://doi.org/10.1038/458030a>

Davies, S. R. (2019). Science communication is not an end in itself:(dis) assembling the science festival. *International Journal of Science Education, Part B*, 9(1), 40-53.

Dutta, M. J. (2010). The critical cultural turn in health communication: Reflexivity, solidarity, and praxis. *Health communication*, 25(6-7), 534-539.

Falade, B. A., & Bauer, M. W. (2018). 'I have faith in science and in God': Common sense, cognitive polyphasia and attitudes to science in Nigeria. *Public Understanding of Science*, 27(1), 29-46.

Fyfe, Aileen, et al. "Untangling academic publishing: A history of the relationship between commercial interests, academic prestige and the circulation of research." (2017).
<https://eprints.bbk.ac.uk/id/eprint/19148/1/UntanglingAcPub.pdf>

Gouyon, J. B. (2016). Science and film-making. *Public Understanding of Science*, 25(1), 17-30.

Guenther, L., Weingart, P., & Meyer, C. (2018). "Science is everywhere, but no one knows it": assessing the cultural distance to science of rural South African publics. *Environmental Communication*, 12(8), 1046-1061.

Hall, S. (2001). Encoding/decoding. In M. G. Durham and D. M. Kellner (Eds). *Media and cultural studies Key Works*. Blackwell Publishing, 163-173.

Halpern, M. K., & Rogers, H. S. (2021). Art–science collaborations, complexities and challenges. In M. Bucchi and B. Trench (Eds) *Routledge Handbook of Public Communication of Science and Technology*, Routledge, 214-237.

Irwin, Alan. 2021. 'Risk, Science and Public Communication: Third-Order Thinking about Scientific Culture'. In *Routledge Handbook of Public Communication of Science and Technology*, 3rd ed. Routledge.

Lawson, Stuart. *Open Access policy in the UK: From neoliberalism to the commons*. PhD dissertation, Birkbeck University, 2019. <https://mla.hcommons.org/deposits/item/hc:23661/>

Lewenstein, B. V. (1995). From fax to facts: Communication in the cold fusion saga. *Social Studies of Science*, 25(3), 403-436.

McKechnie, R. (1996). Insiders and outsiders: identifying experts on home ground. In A. Irwin and B. Wynne (Eds) *Misunderstanding science*, Cambridge University Press, 126-151.

Mellor, F. (2018). Configuring Epistemic Authority: The Significance of Film Style in Documentaries about Science. *Science in Context*, 31(1), 39-59.
doi:10.1017/S0269889718000042

Meyer, G. (2016). In science communication, why does the idea of a public deficit always return? *Public Understanding of Science*, 25(4), 433-446.

Mirrlees, Tanner, and Shahid Alvi. *EdTech Inc.: selling, automating and globalizing higher education in the digital age*. Routledge, 2019.

Mohan J. Dutta-Bergman (2005) Theory and Practice in Health Communication Campaigns: A Critical Interrogation. *Health Communication*, 18:2, 103-122, DOI: 10.1207/s15327027hc1802_1

Naomi Oreskes: Why we should trust scientists | TED Talk (2014), https://www.ted.com/talks/naomi_oreskes_why_we_should_trust_scientists?referrer=playlist-a_love_letter_to_science

Newell, S. (2020). 'Screening Dirt: Public Health Movies in Colonial Nigeria and Rural Spectatorship in the 1930s and 1940s' in *Histories of Dirt: Media and Urban Life in Colonial and Postcolonial Lagos*, Duke University Press.

Nielsen, K. H. (2013). Scientific communication and the nature of science. *Science & Education*, 22(9), 2067-2086.

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