

STS Perspectives on Big Problems

(HPSC0011)

Course Syllabus

2023-24 session (T1) | STS Staff, Course Coordinator Dr. Noémi Tousignant | n.tousignant@ucl.ac.uk

Course Information

This module introduces students to the uses of STS in solving big problems in the contemporary world. Each year staff from across the spectrum of STS disciplines – History, Philosophy, Sociology and Politics of Science – come together to teach students how different perspectives can shed light on issues ranging from climate change to nuclear war, private healthcare to plastic pollution. Students will develop research and writing skills.

This year's topic is **Chatbots**

Basic course information

Moodle Web site:	https://moodle.ucl.ac.uk/course/view.php?id=37525
Assessment:	Essay plan (1000 words) and final essay (2500 words), due 29 Nov and 10 Jan
Timetable:	Thursdays, 2-4 pm, Roberts Building 421.
Prerequisites:	None
Required texts:	See readings section below, and Readinglists@UCL
Course tutor:	STS Staff, course coordinator Dr. Noemi Tousignant
Contact:	n.tousignant@ucl.ac.uk
Web:	https://www.ucl.ac.uk/sts/people/dr-noemi-tousignant
Office location:	22 Gordon Square, room 2.1
Office hours:	Thursdays 12-1pm and Fridays, 1-2pm These are on-campus, walk-in (no appointment required) hours <i>except</i> during the period 18-27 Oct and 1-19 Nov. Please email me for an online appointment on those weeks or if you cannot make in-person meeting times.

How is the course organised?

This module is delivered through weekly, two-hour face-to-face sessions. Guest lecturers from the STS staff will combine lecturing with seminar-style discussions and activities.

Come to class prepared! Locate, read, and take notes on the essential (required) readings that are listed for each session. These are also posted and linked (via UCL library services, or directly to an open access resource) on the module's Moodle page. On Moodle, you will find further information and instructions – such as watching a short video, searching for examples, or reflecting on a set of questions – to help you get ready for class. Check Moodle **at least weekly** for updates.

Overview of sessions

Date	UCL Week	Topic	Lecturer	Essential preparation
5 Oct	6	Will chatbots change your life? Intro to STS perspectives on chatbots	Cain Tousignant	Bridle (2023) – available in text and podcast
12 Oct	7	History of computing Hype and the definition of AI	Agar Sleigh	Play with an Eliza simulator Watch Timnit Gebru video
19 Oct	8	LLMs: risks and responsibility	Stilgoe & guest	Stilgoe (2023)
26 Oct	9	Are chatbots (philosophically) dangerous?	Illari & Jubber	Watch BBC video
2 Nov	10	Mechanical consciousness in <i>Erewhon</i>	Turbil	Butler (1872) Cole (2014)
9 Nov	11	READING WEEK		
16 Nov	12	<i>Klara and the Sun</i>	Sleigh and students	Ishiguro (2021)
23 Nov	13	Why chatbots suck at human tasks	Hugues	Dejours (2007)
30 Nov	14	Infrastructures of extraction	Bulstrode Datta Burton	News items: Rowe (2023); Perrigo (2023) Amrute et al (2022) Cieslik and Margócsy (2022) Chagnon et al. (2021)
7 Dec	15	Embedding bots in care	O'Donovan	Singh (2020) Slaughter and Cottam (2021)
14 Dec	16	Are chatbots too human? Making connections across STS	Tousignant	Cave and Dihal (2020)

Assessments

Summary

	Description	Deadline	Word limit	Weight
Summative coursework	Essay plan (template)	29 November 2023, 5pm (UK time)	1,000	0%
Summative coursework	Essay	10 January 2023, 5pm (UK time)	2,500	100%

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

The first assignment for this module is an **essay plan**. This assessment, and the template you will be asked to use, are designed to take you through essential steps to prepare your final essay. It is also an opportunity to obtain feedback to guide you in writing your final essay. The essay plan should be **1000 words** long and is due on **29 November 2023**. Check the Moodle page for detailed instructions on how to complete and submit your essay plan.

The second and final assignment is a **2500-word essay** and is due on **10 January 2023**. It is worth 100% of your final grade. In the assignment brief (posted on Moodle) you will be provided with detailed guidance on what you must and can include in your essay.

Consult the [STS Student Handbook](#) for further information: particularly the sections on assessment, extenuating circumstances and reasonable adjustment (for procedures on requesting extensions), academic integrity (what constitutes plagiarism and how to avoid it), and the appendix on undergraduate criteria for assessment.

In addition to general, department-wide criteria for assessment, this module uses a more detailed marking grid as assessment criteria for the 2,500-word essay. This grid is included as an appendix to this syllabus and on Moodle.

You should also read the [UCL Library Guide on References, citations and avoiding plagiarism](#).

Statement on the use of AI in assessments for this module

The assessments for this module fall into **UCL Category 1: AI tools cannot be used in this assessment**. The purpose of this assessment is to develop and demonstrate research, analysis, communication, and argumentation skills for which the use of AI tools in an assistive role is inappropriate, with exceptions noted below. AI tools cannot be used to **generate** any part of the assessed content for this module. However, given the topic of the module, students are permitted to describe and analyse experiences and outcomes of their own or others' use of AI tools such as ChatGPT. Further instructions will be provided as part of the detailed essay plan and essay instructions.

Exceptions are covered by the UCL Academic Manual (9.2.2b), which states that it is permissible for a third party to "*check areas of academic writing such as structure, fluency, presentation, grammar, spelling, punctuation, and language translation.*" However, "*this may be considered Academic Misconduct if substantive changes to content have been made by the reviewer or software or at their recommendation.*"

Students with a Summary of Reasonable Adjustments (SORA) may be permitted further use of assistive technology.

If you have any doubt or questions about what constitutes permissible use of software in the assessments, please contact the module convenor (n.tousignant@ucl.ac.uk).

Aims & objectives

Aims:

To demonstrate and explore the ways that STS provides perspective that contribute to the understanding of major problems facing humanity.

Objectives:

- The possession of empirical and theoretical knowledge of big problems from interdisciplinary STS perspectives, and the written communication skills to account for such knowledge
- The skills to analyse such knowledge in order to propose persuasive cases for potential contributions to solutions to such problems
- A deeper grasp of the varied character of STS and its interdisciplinary relevance to a wider world

Teaching team

To provide an overview of different approaches in STS, the module is taught by guest lecturers from across the Department of STS.

You should contact the course coordinator, Dr. Noemi Tousignant (n.tousignant@ucl.ac.uk) for any general information including about assignments.

If you have specific questions about an individual session (content, readings, application to essay), please contact the lecturer responsible for it.

You can find out more about guest lecturers, including their contact information, on the STS webpage: <https://www.ucl.ac.uk/sts/people/sts-academic-staff>.

Description of sessions and essential reading

Essential readings are required.

There are two sets of essential readings for this module:

- 1) A set of **general** core readings which will help you reflect on specific aspects of “chatbots” as an STS topic, make broader connections across STS, and plan your essay. You should read these in the first half of term. You will be provided opportunities to ask questions about and discuss these readings.
- 2) A set of **session-specific** readings, which are listed in weekly session descriptions. Please

come to class prepared to discuss these texts. Note any concepts or arguments you do not understand. Reflect on how the reading is relevant to the module theme. Ask yourself if you agree or disagree with the authors' main statements and arguments.

You will find essential readings in 3 locations:

- References listed below (you can search for these in the [UCL Library Catalogue](#))
- All links will be on the HPSC0011 reading list (search on [ReadingLists@UCL](#))
- Open access and library resources will be linked on the module [Moodle page](#)

On the Moodle page, you will also find additional (recommended) readings and resources, which you should draw on to deepen your understanding of specific topics, concepts, case studies, and approaches, particularly to research your essay. You are also encouraged to search for further resources to support your essay and learning. Use UCL library resources!

General essential readings:

Evgeny Morozov. *To Save Everything, Click Here: Technology, Solutionism, and the Urge to Fix Problems That Don't Exist*. London: Penguin Books, 2014. "Introduction" and "Chapter 1: Solutionism and its discontents"

Alvin M. Weinberg. "Can Technology Replace Social Engineering?" *American Behavioral Scientist*, 10 (1967): 7-10.

Emily Bender, et al. "On the Dangers of Stochastic Parrots: Can Language Models be too Big?" *FAccT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (2021): 610-623.

Available open access here: <https://doi.org/10.1145/3442188.3445922>

Divya Siddarth, et al. "How AI Fails Us," *Technology & Democracy Discussion Paper*. Justice, Health and Democracy Impact Initiative & Carr Center for Human Rights Policy, December 2021. Available open access here: <https://ethics.harvard.edu/how-ai-fails-us>

Michael Kwet (2019). [Digital colonialism: US empire and the new imperialism in the Global South](#). *Race & Class* 60(4), pp3-26.

Gemma Milne. *Smoke & Mirrors : How Hype Obscures the Future and How to See Past It / Gemma Milne*. London: Robinson, 2020. "Decision-making on tap: taking responsibility for artificial intelligence."

Cieslik, K., & Margócsy, D. (2022). 'Datafication, Power and Control in Development: A Historical Perspective on the Perils and Longevity of Data'. *Progress in Development Studies*, 22(4), 352–373. <https://doi.org/10.1177/14649934221076580>

Jack Stilgoe and David Guston, "[Responsible research and innovation](#)," in the MIT Handbook of Science and Technology Studies, Fourth Edition (pp.853-880). MIT Press: Cambridge, 2016.

Jaegwon Kim, *Philosophy of Mind*. Third Edition, Routledge. 2011. "[Chapter 9: What is Consciousness](#)"

1. Introduction to the Module – 5 October

Joe Cain will consider: Will chatbots change your life? How is conversational and generative AI already changing society? What is their promise and threat for the future? What exactly are chatbots?

Noémi Tousignant will discuss: How are chatbots a "Big Problem"? How can STS help us understand what kind of problem chatbots are? How does this module work?

Read or listen to:

James Bridle (2023), "The Stupidity of AI," *The Guardian*, 16 March

<https://www.theguardian.com/technology/2023/mar/16/the-stupidity-of-ai-artificial-intelligence-dall-e-chatgpt>

For an audio version (or search wherever you get your podcasts):

<https://www.theguardian.com/technology/audio/2023/apr/07/the-stupidity-of-ai-podcast>

2. History and Hype – 12 October

Jon Agar's lecture will trace the long history of computing and thinking machines.

I will discuss the history of the stored-program computer, including the work of Alan Turing and his response in 1950 to the question 'Can machines think?'. We will cover the emergence of a new field of 'artificial intelligence' in the 1950s, and how it developed since. I will discuss and contextualise the apparent precursor to chatbots, Joseph Weizenbaum's ELIZA program, developed in the 1960s.

The STS perspective here is 'History', specifically history of computing

Charlotte Sleigh will lead a discussion on *Quote unquote AI: Definitions and hype*

This will be a discussion-based hour. We will start watching an early clip from [Timnit Gebru: Is AI racist and antidemocratic? | Talk to AI Jazeera](#) in which she repeatedly refers to "quote unquote AI." We will puzzle over some grey area examples of AI, and then move towards the possibility that in fact many people (including powerful people) are just as uncertain as us, and that what in fact defines AI in practice is hype. Students will make a small foray into science communication research by finding and classifying media hype stories about AI.

STS concepts and approaches: social construction of scientific definitions, hype, science communication

Essential tasks: To prepare for the part I of the session, have a quick play with an ELIZA simulator, such as [Eliza, a chatbot therapist \(njit.edu\)](#). For part II, watch the whole Timnit Gebru video linked above.

3. LLMs: Risks and Responsibility – 19 October

In this lecture, **Jack Stilgoe** will explain the difficulties in thinking about and assessing the risks of emerging technologies.

We'll think about early motor cars as a comparison. We'll look at the odd debate about existential risk. Jackie Kay from Deepmind will join to explain what LLMs are and how AI developers make and think about models.

STS concepts will include risk, governance and the politics of technology

Essential reading: Jack Stilgoe (2023) We need a Weizenbaum test for AI, *Science*
<https://www.science.org/doi/10.1126/science.adk0176>

4. Are chatbots (philosophically) dangerous? – 26 October

In this lecture **Rory Jubber** and **Phyllis Illari** will look at whether we should understand AI to be philosophically dangerous, requiring radical changes to how we conceive of what it is to be sentient and conscious.

We will approach this from two sides, the philosophy of mind and the ethical. We will look at whether AI requires a radical rethink about what we understand sentience and consciousness to be. In effect, could AI entities be sentient just like us. Or is there something special about organic sentience that means no AI entities could in fact be sentient. If they could be sentient this would have some interesting and dangerous ethical consequences. Could we assign blame to such entities? Would such entities have rights? Even if AI entities are not conscious, we still need to be able to think about the ethics of their use.

Keywords: AI entities, mind, consciousness/sentience, responsibility, rights

STS perspectives: philosophy of mind and ethics

Essential Task: To get your own mind firing on this week's topic watch this BBC video on "[Will artificial intelligence ever become sentient?](#)"

5. Butler among the machines: evolution, utopia and mechanical consciousness – 2 November

Will machines acquire consciousness and the ability to think and act independently in the near future? Are machines going to take over the world? Are we too dependent on our technology to the point of

being unable to live without it? Those and many other questions are central to our debate about AI and chatbots, but they are not new.

During this lecture, **Cristiano Turbil** will look into how a nineteenth-century writer and amateur scientist explored the relationship between humans and machines.

*In class, we will critically read part of a nineteenth-century utopian novel, *Erewhon* (1872). In the three chapters entitled 'The Book of the Machines', the author Samuel Butler presents a philosophical experiment questioning the possibility of machines acquiring consciousness and the ability to evolve in order to challenge humans, their freedom and their very existence. Together, we will deconstruct Butler's argument by critically exploring how the human-machines relationship can be framed against the following:*

1. *Darwin's theory of evolution and Spencer's idea of 'survival of the fittest' and how they influenced public imagination.*
2. *Hegel's Master-Slave dialectic and how it is deployed in Butler's anthropological discussion of machines as 'artificial limbs'.*

STS perspectives from the history and philosophy of technology, and the study of literature.

Essential readings:

Samuel Butler, *Erewhon*, London (1872), read chapters 23-25 available here: <https://gutenberg.org/cache/epub/1906/pg1906-images.html>

Cole, Andrew. "The Lord and the Bondsman." In *The Birth of Theory* University of Chicago Press, 2014. Chicago Scholarship Online, 2014. <https://doi.org/10.7208/chicago/9780226135564.003.0003>

READING WEEK – No class! Catch up on readings! Plan your essay!

6. Klara and the Sun – 23 November

This session will discuss this year's STS OneBook, Kazuo Ishiguro's *Klara and the Sun*, in relation to the module theme. More details to follow.

Essential reading: [Klara and the Sun!](#)

7. Following all the rules: Why chatbots suck at human tasks – 23 November

In this lecture, **Stephen Hugues** will explore how rules and emotions shape the ways that humans and chatbots approach work.

Drawing from work in the field of psychoanalysis, we will consider how our minds and bodies prevent us from following rules and what kind of impact this has on our ability to work and communicate with each other. We will contrast this with AI chatbots who are excellent at following rules, questioning whether this makes them better at communicating and interacting with humans.

Essential task:

engage in a five-minute interaction with a chatbot of your choice and take detailed notes about the experience for discussion in-class. These notes can include details of how you felt during the interaction, how effective the chatbot was at carrying out its task, and whether you feel a human would have been better at doing its job. You will also need to read the essential reading (below) and be ready to discuss it during the class.

Essential Reading:

Dejours, C. (2007). "Chapter Four. Subjectivity, Work, And Action". In *Recognition, Work, Politics*. Leiden, The Netherlands: Brill. <https://doi.org/10.1163/ej.9789004157880.i-316.19>

8. Infrastructures of extraction... and neo-colonialism? – 30 November

The vast amounts of data on which the survival of chatbots (or GPT4) depend come from somewhere and often from someone with little (if any) awareness of their data being used. Who extracts this data? From whom ...and for what purpose? Whose labour is used to mine the data needed to run and maintain large language models? At what cost? Who benefits from the unprecedented wealth generated? In this session, **Jenny Bulstrode** and **Saheli Burton Datta** will explore these questions underlying the vast global data infrastructures that enable large language models (chatbots), increasingly resembling the oppressive structural barriers of old.

Students will learn about the:

- structural issues of the expansive data infrastructures that enable LLMs
- continuities in new and old patterns of extractive capitalism at the global level

Part II of this session, led by Jenny Bulstrode, explores: ‘Invisible’ colonialism and ChatGPT

*This session is concerned with the ‘invisible’ and exploitative infrastructures that enable AI, in particular language models such as ChatGPT (see **Recent investigative journalism**). In preparation for the session, **please read the specified sections of the SET READINGS**. In the session we will look at different examples and consider them in terms of the categories outlined in Cieslik, K., & Margócsy, D. (2022), Table 1, p.359. e.g. what kind of data is this?; how is this data processed?; who produced this data?; how was it captured?*

STS perspectives from history and politics

Key words: Digital colonialism; extractivism, datafication, ‘invisible’ labour.

Essential reading:

Recent investigative journalism:

- Niamh Rowe, “‘It’s destroyed me completely’”: Kenyan moderators decry toll of training of AI models,’ *The Guardian*, (August 2023) <https://www.theguardian.com/technology/2023/aug/02/ai-chatbot-training-human-toll-content-moderator-meta-openai>
- Billy Perrigo, ‘Exclusive: OpenAI Used Kenyan Workers on Less Than \$2 Per Hour to Make ChatGPT Less Toxic’, *Time*, (January 2023), <https://time.com/6247678/openai-chatgpt-kenya-workers/>

READ CHAPTER 9 (pages 176 to 188) ONLY!

Chagnon, C. W., Hagolani-Albov, S. E., & Hokkanen, S. (2021). Extractivism at your fingertips. In *Our extractive age* (pp. 176-188). Routledge.

Amrute, Sareeta; Singh, Ranjit; Guzmán, Rigoberto Lara, *A Primer on AI in/from the Majority World: an empirical site and a standpoint*, (New York: Data & Society Research Institute: September 2022), DOI: <http://dx.doi.org/10.2139/ssrn.4199467>,

- ‘Section 0: The Majority World: A Site and A Standpoint’, pages 6-8.
- ‘Section 5: Development Legacies’, pages 20-22.
- ‘Section 6: Labor’, pages 23-25.
- ‘Section 9: Surveillance’, pages 31-33.
- ‘Section 10: Extraction’, pages 34-36.

N.B you do not need to read these sections in any particular order.

Cieslik, K., & Margócsy, D. (2022). ‘Datafication, Power and Control in Development: A Historical Perspective on the Perils and Longevity of Data’. *Progress in Development Studies*, 22(4), 352–373. <https://doi.org/10.1177/14649934221076580>

- ‘Section IV: Data Processes Through History’, pages 358-365.

9. Embedding bots in care – 7 December

Infrastructure works behind the scenes to keep the digital world working. It's the fibre optic cables, satellites and server farms that speed data around the planet. But it's also the standards, human values and rules of the game that influence how technology benefits some people and not others.

In this session, **Cian O’Donovan** will discuss the role infrastructures play in embedding chatbots, robots and ai in the real world. And how these technologies might be configured to improve the lives of people who depend on public services like social care - or make them worse.

Essential reading:

Anne-Marie Slaughter and Hilary Cottam, “We need a new economic category,” *The Atlantic*, September 2021.

Singh, R. (2020). [Study the Imbrication: A Methodological Maxim to Follow the Multiple Lives of Data](#). In S. Mertia (Ed.), *Lives of data: Essays on Computational Cultures from India* (pp. 51–59). The Institute of Network Cultures.

10. Human norms and bias + review session – 14 December

This session, led by **Dr. Noemi Tousignant**, will first examine how human norms, bias and hierarchies shape how we design, represent and imagine chatbots and AI technologies.

The second part will consist of discussion and activities designed to *consolidate* what you have learned in this module; find *connections* across sessions and the topics, concepts, and approaches they introduced; and put what you have learned into *practice*. You can also ask questions about the final essay.

Essential reading: Stephen Cave and Kanta Dihal, The Whiteness of AI. *Philos. Technol.* **33**, 685–703 (2020). <https://doi.org/10.1007/s13347-020-00415-6>

Essential task: look back over module materials (including lecture slides) and the notes you will have taken throughout the term.

Appendix: Marking Criteria for HPSC0011 – Assignment 2 (final essay)

Criteria	85-100% FIRST	70-79% FIRST	60-69% U. SECOND	50-59% L. SECOND	40-49% THIRD	20-39% FAIL	0-19% FAIL
Targeting the question / issue	Very Precise; targeting could only be improved slightly	Precise; targeting of a high standard throughout	Close; lacks effective targeting in some places	Adequate; notable lapses in targeting:	Imprecise; numerous failures to target question	Inadequate; continuous failures to target question	Poor; largely fails to target question
Quality of argument	Highly Skilled; quality of argument could only be improved slightly	Skilled; quality of argument of a high standard throughout	Largely Appropriate; quality of argument generally good	Adequate; notable lapses in quality of argument	Limited; numerous shortcomings in quality of argument	Inadequate; continuous shortcomings in quality of argument	Poor; largely fails to development effective argument
Essay structure	Highly Skilled; structure could only be improved slightly	Skilled; structure of a high standard throughout	Largely Appropriate; structure generally good	Adequate; notable lapses in structure	Limited; numerous shortcomings in structure	Inadequate; continuous shortcomings in structure	Poor; largely fails to development effective structure
Conceptual awareness	Highly Skilled; conceptual awareness could only be improved slightly	Skilled; conceptual awareness of a high standard throughout	Largely Appropriate; some gaps in conceptual awareness	Adequate; notable gaps in conceptual awareness	Limited; numerous and notable gaps and errors of conceptual interpretation	Inadequate; limited conceptual awareness with continuous failures of interpretation	Poor; largely fails to demonstrate any conceptual awareness
Use of material from academic literature	Highly Skilled; discriminating and original use of relevant literature	Skilled; extensive use of relevant literature	Largely Appropriate; extensive, but not especially skilled, use of relevant literature	Adequate; adequate, but uncritical use of largely-relevant literature	Limited; use of largely-relevant literature with evidence of significant gaps	Inadequate; superficial use of largely-relevant literature with evidence of significance gaps	Poor; superficial use of largely-irrelevant literature
Use of lecture/tutorial material	Highly Discriminating; limited, critical and appropriate	Discriminating; limited and appropriate	Largely Appropriate; selective and appropriate use of lecture material	Adequate; significant & indiscriminating use of lecture material	Inappropriate; some inaccurate use of lecture material	Inadequate; little evident knowledge of lecture content	Poor; largely fails to demonstrate use of lecture material
Critical evaluation of evidence	Highly Skilled; evaluation of evidence could only be improved slightly	Skilled; evaluation of evidence of a high standard throughout	Largely Appropriate; evaluation of evidence generally good	Adequate; notable lapses in evaluation of evidence	Limited; numerous shortcomings in evaluation of evidence	Inadequate; continuous shortcomings in evaluation of evidence	Poor; largely fails to evaluate evidence
Accuracy of factual content	Highly Skilled; could only be improved slightly	Skilled; of a high standard throughout	Largely Appropriate; some factual errors	Adequate; some notable errors	Limited; some major errors	Inadequate; many major errors	Poor; many fundamental errors
Use of examples	Highly Skilled; highly appropriate and detailed	Skilled; appropriate and detailed	Largely Appropriate; appropriate but lacking in aspects of detail	Adequate; examples of varying appropriateness and more limited detail	Limited; limited number of appropriate examples lacking in detail	Inadequate; some examples, not appropriate, lacking in detail	Poor; very few appropriate examples with little detail provided
Literacy and appropriateness of writing style	Highly Skilled; writing could only be improved slightly	Skilled; writing of high standard throughout	Largely Appropriate; writing may have lapses in style	Adequate; notable lapses in writing style	Limited; numerous lapses in writing style	Inadequate; extensive evidence of low quality writing	Poor; largely inappropriate writing style
Correctness of in-text citation and reference list construction	Highly Skilled; contains only a few insignificant errors	Skilled; accurate and consistent referencing	Largely Appropriate; largely accurate and consistent referencing, but with minor to moderate errors	Adequate; competent referencing but some moderate inconsistencies and/or errors	Limited; inconsistent referencing or numerous major errors	Inadequate; inconsistent referencing and numerous major errors	Poor; highly inconsistent and error-strewn referencing
Overall presentation	Highly Skilled; publishable with some minor modifications	Skilled; clear, appropriate presentation; very few inadequacies	Largely Appropriate; good standard of presentation but with some inadequacies	Adequate; Competent but with notable presentational inadequacies	Limited; many presentational inadequacies	Inadequate; numerous presentational inadequacies	Poor; untidy or disorganized presentation