Welcome back. We are really getting down to the end of our second to last for the regular lecture. We will have one final class next Wednesday, where I will give, as I said before, a very brief wrapup lecture and then I will be available to consult with you about your projects or answer any questions that you have about your project work at that time. So minor announcements before we get into the material for today. Your last reflection essay is due on Friday evening. Some reflection essay number three. On Friday evening, the grades for your second essays went up on Monday night. So you should have your grade and feedback for that essay. If you have questions about that, feel free to let me know. The sooner you do that, the better your chances are of me getting back to you in time for that to have an effect on the essay that you submit this time around? I also posted yesterday evening or yesterday afternoon that the detailed guidelines and the rubric for your project which are there, which is that the last assignment that I will be asking you to do for this class in lieu of a final exam. So I wanted to go through this first slide is just a reiteration of what I already said on Monday. So this is all stuff that you've seen before and this is all stuff that is explained in the guidelines as well. But I've posted the basic idea for this project is for you to make a short five minute video or a presentation that describes an aspect of a of an existing information and communication technology. Your choice that you would like to change in some way in order to try and render that technology more ethical, more equitable, or more just in some way. So in the video, I want you to decide the aspect of the technology that you would change, your reasoning for why and how you would change it, and some discussion or description of factors. Aside from the technological design, it's also external to the absolute technology that are important to realize in this change. So this could be things like regulatory mechanisms, it can be things like existing laws, could be things like the intended user base or the way in which this technologies currently advertise anything that goes beyond the design of the actual technology itself. And I would like you to refer to both coarse material and external sources in justifying your argument. So I do want you to do a small amount of research for this and you are welcome to work by ourselves or as a group of two. So again, this is all stuff that I said before and it's laid out in slightly more detail in the guidelines that I posted. I also listed the rubric for the assignment. So I've posted, just like I gave you for the reflection essay, that table that explains the different categories that I will be evaluating you on for this project. Please please take a look at that will document that's posted as one document. It has the guidelines and the rubric in it. It's posted on the top of the Moodle Page. The criteria that I'm looking for in particular are as follows. And all these categories have equal waves, so you'll get a 10-point score for each of these categories. I'm looking for the quality of research that you've done. Have you consulted appropriate sources? And are you basing the arguments that you're making in evidence? Are you engaging with at least integrate engaging in a, in a real way with at least one concept or argument from class. I recognize these are very short videos, so I don't need you to discuss course material in detail, but I am asking you to take at least one concept, one idea, one argument from class, and to integrate it into what you are staying in a meaningful way. I'm grading the quality of your discussion and the analysis that you present basically is the argument that you're presenting thoughtful and logical. Are you taking into account the social, political, and economic contexts that the technology you've chosen exists in communication is really about how well your video gets. It gets the point across. So this doesn't mean I need not greeting the likeness of the production quality for this things. You can still get an excellent grade if you make a very kind of low tech sort of video, if you do have video editing stills and you want to engage those project, you're absolutely more than welcome to do that, but you don't need to be doing that. However, you do need to communicate your point clearly. You need to have a good combination of images and texts. I don't want to do justice that of bullet points on every single slide. And I want you to demonstrate some original thinking. I want you to try and make this engaging to watch regardless of the specific format that you choose. Benjamin, I saw you raise your hands if you have a question or have I audience? Yeah.  
  
I was wondering about a health feasible. The changes of laws in order to make your foot or your new technology work should not be doing need to be feasible? Yeah, I'm really glad that you asked that actually does something I mentioned mentioned but forgot. This does not have to none of this has to be feasible. If not really, I mean, you're certainly welcome to propose realistic changes. But if you want to get sort of more fanciful or more creative or more into the realm of science fiction or some sort of alternative imagined reality. With this, you're welcome to do that. You know, you don't have to propose things that you actually think could happen in the near future. You're welcome to get a little goofy with this if you want, as long as the connections that your argument is making are so clear. So your, your, your, your argument has to make sense and be logical. But you can propose a change that you don't think is actually realistic if that's what you want to do. Okay? And the question in the chat about resource, that's, yeah, that's also a great question. So what kinds of resources do I want you to be using that? And that's a tough question to answer in a sort of just a couple of words, but it's an important thing to be thinking about about. I am going to talk about that in a little more detail during Monday's class. But I realized that's only a few days away from this time. It didn't do. So. We can talk some about it now. Yep. So there I have included a couple of sort of short resources on the assignment guidelines that are meant to help you with this. One of the resources that I've given you is a list questions that might make helpful starting points for you. If you're not sure about what kind of information about the technology you ought to be looking up. These are just questions that I've come up with that I think would be appropriate starting points. Another resource that's listed on the assignment guidelines, there's a link to something that exists on the Concordia library website, which I'm going to forget exactly what it's called now. But they have basically, I think it's a research skills tutorial that talks about sort of defining a research question. That part is less important for this particular assignment. What is helpful for this places to look for different kinds of information. So there are multiple types of sources that are appropriate things to use for this assignment. Academic sources are definitely appropriate, but they're not the only stating that it's okay for you to use. It really depends on what kind of information you are looking for. If you're looking for some sort of statistical evidence about, about usage or sort of user base or something like that. You may be able to find some kind of marketing survey or democratic demographic statistics that aren't necessarily published in an academic article, but are still sort of reliable information and could be sort of a useful way to make your point. Depending on the argument that you're making, it may be very appropriate to refer to the website of the company that produces the product that you're looking at, or some sort of product specification, or even an advertisement for the product, or some sort of infants of the product in the US, or description of how it works, even like a technical document that explains something about it. These are all reliable sources. Reliable journalism about, about the technology that you've chosen is also a type of source that you can go through. What I don't want to see are the you know, all of your sources being Things that pop up in the first two or three pages of a Google search or whatever your technology is, that's not, that's not sort of the type. I expect your research to be more in-depth than that. So, you know, they don't all have to be academic sources to be appropriate, but they do have to be reliable sources and they do have to sort of fit well with the kinds of questions or the type of issue that you were interested in looking at that was maybe not a complete answer to your question, but I hope it was helpful. Other questions about your projects at this plane or about anything else related to the course? No, I'm good for now. Alright.  
  
Alright. As always, if you have more questions at the end of class and happy to chat then as well. But for now, let's get to the material for today. So our class today is about ICT use, colonialism, post-colonialism, and globalization. So there's obviously, has, perhaps not obviously, but it definitely has a connection to the material and algorithmic justice that we discussed on Monday. In the sense that a lot of the issues that these people who were writing and thinking about, other than the justice are concerned with. We can look at those issues as being legacies of colonialism or instances of technological colonialism. It has connected, this unit has connections to discussions that we've been having about way back to the beginning of the course to Paul Nightingale texts for Langdon Winner texts, the Lawrence Lessig texts. Discussions about how technologies are not created in a vacuum. Technologies are sort of created an iterated through a series of design choices. And those choices are often value laden. The fact that technologies can be political, that they can have sometimes inherent politics, that they can very often have political effects. That the sort of designed those design choices and redesign cycles that go into making that technology can affect the way that it can be used or that sort of power that exerts over groups of people in the world. These are all conversations that this unit of the course is taking up and sort of attempting to expand on. And certainly I think it connects most, most closely to the discussion that we've just had recently on Monday, since we are talking about colonialism. Before I get to talking about the texts are talking about any spirit. I want to take a moment to acknowledge our own colonial contexts than our own connection to colonialism. As people who attend a university that's in the city of Montreal. In convection in Canada, all places that have a long history of indigenous knowledges and long histories and continued legacies of colonialism. So as you have probably all heard some sort of University Events through Concordia as territorial acknowledgement. Concordia and the city of Montreal exists on unseated indigenous lands. This is something that the university has recognized, which many of you have probably seen or heard around campus in various forms. The University exists in a place where they're going to hug a nation. Had been the custodians of the lands and waters for generations. Montreal, or job j, is historically known as a gathering place for many First Nations that we're in a place that has a legacy of colonialism as a past and present of colonialism weren't a place for colonialism is evident in many aspects of our society and our technologies and landing knowledge. And then select this one and the one that the university has officially adopted are one very small part of China to acknowledge and reckon with that history and presence of colonial activities. So the second thing that I want to do is to do some definitional work. I want us to think about some terms that came up in one or both of the readings that you did today, terms that are relevant to the discussion that we're having. In particular, I want us to think about the meanings of these ideas. Imperialism, colonialism, globalization, decolonization, or we could also talk about post-colonialism and indigenous knowledge. So these are terms that were used by one or more of the authors, some of them like indigenous knowledge. And the cauda goes to great pains to try and define for us or sort of give us different descriptions of what that means. Others of these terms, we're sort of used without a description of what exactly the author is meant by them. So I want to take a little bit of time to this. These are very basic, broad definitions. Just sort of, I'm trying to get the general sense across these ideas. So in a general sense, Imperialism is the process where the policy of extending power and influence, but often thinking about extending power and influence from one country or one region out towards other countries or regions, often through diplomacy or military forces. So in historical context, we would think about one nation's sort of doing this to other nations are other cultures. In a modern context, we might think about imperialism on behalf of corporations, extending power and influence. In addition to continue sort of nationalized processes of imperialism. Imperialism and colonialism are very similar ideas. So they're both about power or influence or control being sort of extended out from one place, one concentrated centre to other places. Colonialism, again, in very broad terms, is the practice or the policy of exerting control again, over another region or a country, often through occupation or economic exploitation. So we tend to think about imperialism in a political sense, often, especially in historical context. In a military sense, I'm sending in a military to occupy a region. We often think about colonialism and again, especially in a historical context. In terms of occupation of settling of resource extractions, so some kind of economic exploitation. But these are very similar and very connected ideas. And both around the idea of sort of power being power and influence and control being extended from a central place out over other regions and very often involving exploitation of various kinds. Globalization is again a very broad sense, is the interaction and integration between people, between companies and between governments on a massive global scale. Or we can also talk about globalization as the process through which this interaction occurs. So basically when things become globalized, they expand is scale. They involve different people in different organizations, in different parts of the world, communicating or working together in lots of different senses, and social sciences and economics senses, in cultural senses. So this can be, and very often is thought of as an economic process, but it can also be a social process, a cultural process, of political process. We generally today think and talk about imperialism and colonialism with negative connotations, right? These are terms that we tend to think about in a negative sense. Globalization is not quite the same. Certainly there are negative senses in which people can and do talk about globalization. There are also significant positive connotations that globalization holds. We can think of one effective globalization being the fact that so many international students are able to come and study at Concordia, and particularly in the Faculty of Engineering and Computer Science. The fact that I can talk to you all right now, even though some of you were not in Montreal, where I am, you can think of as an aspect of globalization. When we talked about globalization, however, we can also talk still about economic and political exploitation. We can talk about other negative consequences like fears about cultural homogeneity. Fears that some kind of dominant culture through a process of globalization, will come to sort of overtake or dominate cultures of other places. So there are different, different senses in which we can think about globalization. Decolonization is again defined her very generally as a long-term process of divesting of colonial power. So this means moving away from a system of colonization, addressing and reckoning with the process of one country or power haven't exerted control over another region. And trying to sort of change that power structure. And then trying to deal with the consequences of that power structure having been inflates. So the most obvious sense in which we can think about decolonization isn't that, isn't that political change. That sort of Previously colonised regions or previously colonized nations regaining their own political power. We getting their own nationhood, their own statehood, their own control over their constitution and their, their, their countries. Decolonization, however, is a longer term process than that. This is the sort of formal transfer of power is one part, and obviously a very important part, but a much longer term process of thinking about the consequences of that period of colonialism that existed in the past. And legacies of colonialism that express themselves in different aspects of politics, society. And as we'll talk about today, Technologies is a much more complicated and longer-term effort. So when rho hens have, Roy talks about decolonizing science or when people within academia talk about decolonizing stem or decolonizing the academy. This is what they're talking about is sort of process of thinking about and recognizing what the long-term effects of existing within a system of colonization had been. And then trying to consider sort of what to do about that. And this, of course, is a main idea, that role and that Roy is concerned with explicitly in his jesus. And it also, I think the main idea that Martin Dakota is talking about it in his article, although he doesn't name it in quite the same direct terms that grow does in his, Oh yeah, this was just sort of to provided us sort of illustration of imperialism and colonialism. Of course, often when we talk about imperialism and colonialism, we think about this period of time between roughly seeking the 15th and the 19th centuries that's associated with European exploration and exploitation. So we can look at the map on the left, which is showing that sort of political state of the world in 1914, just before the First World War, which is the color code showing sort of which regions were colonized in an official sense at the time by different European countries. The map on the right shows in green, countries that have been at 1 under some form of European control. So a good chunk of the world we should know here that maps in themselves are, of course, political statements. That making is a, is a political enterprise. There are lots of sort of quibbles or discussions that we can have about these maps, so on, on the right in particular, what does it mean to have been under partial European control or influence? Is it right to colour the entire of this one entire country with a particular shade, if only parts of it are sort of under different kinds of influence in different ways. What's the difference between the partial European control and being, having been in a European sphere of influence. What about other kinds of colonization that we're not sort of didn't result in European controlled but work, for example, Japanese colonization of other parts of Asia. So there's, these maps are not telling the complete story. No, no map will ever tell you a complete story. But they do give you some idea of the scale of colonization and imperialism that existed during the span of several centuries. So the last term that I had up on the definition side was the idea of indigenous knowledge. This is a complicated idea. And he kinda shows us that it's a complicated idea by giving us, I think, more than a page of different ways in which different people and scholars have tried to understand this term. He resists giving us a simple definition, just like Pomona and guilt resisted giving us this simple idea of what he thought technology was. Mikado resists giving us one sentence that explains this, what indigenous knowledge means. He says, you know, an easy way to think about indigenous knowledge is knowledge that indigenous people have. But he says this doesn't really even, that doesn't accurately so that the scale of what the term means or what the term has come to mean. So when he does instead is give us kind of a literature review rundown of all kinds of different ways that different scholars have described indigenous knowledge. So the first thing that he tells us is that indigenous knowledge, it means different things to different people, which is his rationale for them presenting us with all these different understandings of the term. He says a common way to think about indigenous knowledge is in terms of its distance from scientific knowledge. So in terms of it as sort of being on the opposite end of the spectrum or somehow differentiated from a scientific way of understanding the world. He says it's common to think about indigenous knowledge. Is knowledge that belongs to a certain culture or is unique to a certain dieting knowledge that is collectively held by a community of people. He said someone else could describe indigenous knowledge with side five adjectives, pure, aural, rural, holistic, powerless, and culturally embedded. Each of those things. That's obviously its own ideas to oral The idea of the CMNH knowledge that's not written down somewhere, that's passed down through verbal exchange. Rural, so not being sort of city based, but being connected to wilderness or sort of more remote communities. Knowledge that's holistic and met. It tries to take into account the interconnectedness that exists in the world between different things. And not looking at sort of little segments of the world, but trying to consider a system or an ecosystem as a whole, knowledge that's powerless. So knowledge that's not generally granted a lot of power or status in the world. Knowledge that can be looked down upon and culturally embedded. So again, this is the same idea as the idea became unique to a certain culture or the site. And he, he does want to point out that indigenous knowledge is something that can change. It's not sort of a static knowledge base. It's not just didn't knowledge that comes from the past. And his night develops and he wants to point out that although the ways in which indigenous knowledge changes may be informal and not systematic, there's still a kind of dynamic innovation process that exists within this knowledge feasts. He wants to point out that it has Indigenous knowledge systems interact with other kinds of knowledge systems. They are completely isolated. But there's sort of information exchange going on. He says The indigenous knowledge has a role in community life. Then it involves both material and spiritual aspects. And finally, and this is going to be important to the point that he makes it the end of this paper. There's a different sort of system of ownership within indigenous knowledge systems than there is in sort of Western scientific institutions. He writes about indigenous knowledge as something that belongs collectively to indigenous people. Rather than thinking about things in, in a Western academic sense of sort of this idea was developed by this person and it belongs to them and their knowledge. Again, this idea that you have knowledge, a culturally embedded knowledge gained holistic knowledge being collectively held. So he gives us all of these descriptors for how indigenous knowledge systems work and what they are. And he then gives us some sort of warnings or he wants to, he wants us to be careful, even given all of this stuff has just said about making simplified. The distinction is between what indigenous knowledges and what Western knowledge or scientific knowledge is art. Because he says there are actually some important things that these two knowledge systems have in common. Both indigenous knowledge and scientific knowledge are culturally embedded. So Nakota argues that while it's relatively common for us to think about indigenous knowledges as being embedded within a particular culture. We don't often think about scientific knowledge or technological knowledge or Western knowledge in culturally embedded. But it is as well is one of the arguments that he makes. Both of these types of knowledge can change. So again, this gets to his, his, his suggestion or his directive that we don't think about indigenous knowledge as something that static or based in the past few minutes an unchanging. But that we recognize that there's some kind of dynamic innovation process at work here. That knowledge, indigenous knowledge, just as scientific knowledge changes, can also evolve. And he wants us to recognize that both of these knowledge systems involved contact and exchange with influences that are outside of and dense belts. So if this seems a bit overwhelming, don't panic right now. What we're going to, what I wanna do today is not just discussed the pieces one by one as I often do. I want to instead hit us through some questions that both of the pieces addressed in their own ways and then sort of talk about them in, in that way. So if after now having gone through this kind of definitional stuff, I want to talk about the context of both of these texts. I then want to discuss the arguments that they're making about colonialism. And I finally, we'll discuss the arguments that they're making it about decolonization. So we'll sort of talk through first sort of the The places where these authors and these arguments are coming from. We'll talk about the bulk of what they're saying about technology and science and colonialism. And then we'll talk about the ways forward that they both proposed that we will come back to this idea of indigenous knowledge. And two Dakotas definitional work that he does in his piece. When we get to sort of addressing the argument that he's making him the waste for when the key is proposing. That means that you have questions right now about any of this definitional stuff where any of this kind of setup before we go on to talking about the arguments in more detail. Okay, I'm gonna move on for now. So as I said, we're gonna try and compare and contrast these texts in three different ways. The first one and the shortest one, we'll be comparing, contrasting their contexts. So I'm going to take us back to those who, what, when, where, why, questions about where, how these how these 22 texts are situated and whether others are coming from and what they're trying to do. So I'm gonna go through the contents of B, each of them, who their authors are, who their intended audiences aren't, what types of texts they are. Just quite quickly, we'll start with the roll him, Deb Roy piece. So this was the, the online article called decolonized Science. Time to end. Another imperial era. Romans have royal visits him up on the side. He is a lecturer in South Asian History at the University of Reading in England, which is just outside of London. You can see the little pin on that Google map there. He is trained as a historian, so his research and his teaching isn't history, history of technology, and medicine in particular. And he's particularly focused on South Asia and especially India. And so he writes a lot about science, technology, and medicine in India. He raised most specifically about the colonial relationship that has existed and exists between Great Britain and India. And he writes about science, technology, and medicine in that context. So this is where his work is based. This is what he does. He use that Cuba historian, she's predominantly interested in describing changes over time. And indeed, in the piece that you rent today, he gives us a couple of different historical narratives, or he gives us an argument that's based in the path, followed up with an argument that's about the present, rooted in this kind of history that he's, and he's talking about. In 2017, he published a book called malarial subjects, empire medicine and non-humans in British India 1820 to 1909. This article that you read came out the year after that, and to some extent is based in the work and the research that he did for that book. Everything that he writes about sort of medicine in a British colonial contexts in India is related to the work that he covers in his sort of longer published text. However, this is in addition to obviously be much shorter if intended for a much more general audience, right? This was published on a website called The Conversation, which hosts sort of essays of about this length than about this Complexity. So he is an academic, he is a historian, but he's writing this one for everyone to read basically. And you can tell that from the language he uses. We can tell that from the fact that he doesn't fill it up with footnotes, he's not particularly interested in convincing us in this piece of the sort of academic rigor behind his claims. Who's interested in storytelling and he's interested in using the past to make an argument about ways that we can move forward in science, technology, and medicine today. So again, based on historical academic work, but very much intended for anyone to read and think about. Martin, the cutoff piece is a bit of a different story. I hope that you didn't find this one too dense. I know there are parts of it that are a bit difficult. So Martin the cauda himself is currently the vice chancellor for indigenous education and strategy at James Cook University in Queensland, Australia, which is in sort of northwestern Australia as you see on the map here. He is originally from the Torres Strait Islands, so a small group of islands off the north part of Queensland. So off that kind of sharp tip of Queensland that you see on the map. To the north of that are the Torres Strait Islands. He that indigenous is from a member of it indigenous culture and indigenous community-based in those islands. That's where he was born. He does research on certainly indigenous knowledge and indigenous education. He's very interested in this sort of pedagogical strategies. So teaching strategies for indigenous youth and indigenous people. One really important thing to note about this article in particular is the venue that it was published. And so it was published in something called the IF LA journal. This is the journal that is for people who do research on information science and librarian shapes. So people who are concerned with knowledge categories, information sort of processing and storage. People who are not only the kind of librarians who work at public libraries, but more specifically academic librarians. People, people, people who work in university libraries, people who are, who do research on information access and on sort of ways to categorize information. And this is an important part of understanding this text because Martin macaca himself is bringing this expertise and experience in indigenous knowledge and indigenous education. And I'm sort of thinking through teaching methods for indigenous people. However, the audience that he's writing to, the audience that he's writing for is very, has expertise in sort of in knowledge categorization, information processing, information storage, information science. So what he's doing in this piece or part of what he's doing in the future is bringing together his expertise and sort of trying to tailor that to the audience that he's writing for. And this is not always apparent throughout the entire piece, but I think it helps explain where he gets to at the end. And part of his sort of reasoning for explaining his terms in such great detail. For the first part of them of the paper And the other thing to note about this one is that it's quite a bit older than Roy's at, say. This one was published in 2002, whereas Roman different ways pieces from 2018. So Martin Kata is dealing with sort of different technological context than the one that we are living in now on in particular, considering the fact that it's to the arguments that he makes. It the end of his teeth are ultimately about online education and about sort of use of the World Wide Web for learning and for sort of thinking about our knowledge systems that are strategies of information categorization important to consider that Olivia humans living in writing and a different technological context than the one that we are reading his, his work in. Now, questions about the context or the background, that situatedness of these pieces before we get into their actual arguments, move on for now. So we've talked about the context. I now want to talk about the sort of the first part of the arguments that both of these authors are making. What arguments to the two others make about colonization and colonialism? How did each one of them describe the effects of colonialism in the context of beta. So again, I'm going to start with the ROI articles here. Like I said before, he's making a historical argument about colonialism and finance, colonialism in technology. And then using that to suggest kind of modern strategy work. And just start by kind of analyzing what his historical arguments. So he opens the piece with a quote from ronald Roth, who used the, a picture of a British doctor who had been leading research on dealing with malaria, a disease that was often chewing English colonists in India in the 19th century. And the quote that he uses indicates that Ross believes that sort of link there. But there's a connection between the success of British imperialism and the success of British science. And that sort of better British science will lead to a more successful imperialist project. So Roy characterizes this as quite a common attitude among nineteenth-century British people, are among the kind of nineteenth-century imperialist ideology that he's done explaining here, he identifies this idea of the gracious gift of science. Since the idea of, again, nineteenth-century imperialists ideologies, viewing things like science, technology, and medicine as gifts that the West tab that you're a pad that Britain had in this case, things that only they possess, which they could. And indeed we're sort of duty bound to give, to share, to bestow on supposedly inferior Inferior people in other parts of the world. In other parts of the world, so steam science, technology, and medicine and things that were Western possessions or British possessions that British people or European people had a duty to sort of share with people elsewhere. This is the attitude that he characterizes from Ronald Ross. This was not at all an uncommon attitudes. And this was a very sort of common thing for western people are European people, especially people who were engaged and imperialism and colonialism directly at the time to believe, he mentioned this poem, The White Man's Burden by Rudyard Kipling, which I just have one stanza from. I'm here at the much longer poem, the Medicins, just one part. But this poem, I think better than, better than many other things, indicates this kind of attitude of this idea of the gracious gift of science that Roy is describing as being dominant at the time. So this particular part of the poem reads, tick up the White Man's Burden. The savage wars of peace fill full the mouth of feminine. Bid the sickness cease. And when your goal is nearest the end, for others sought watch sloth and heathen folly. Bring all your hopes to not. So this is describing the White Man's Burden, the duty, the job of Europeans at the time to fight war in order to bring peace, to heal people, to give people food if they're sick. To try and pursue these goals sort of ostensibly for the benefit of other people. And the whole time that they're doing this to be sort of fought against or challenged by these people who indeed they were just trying to help the business. What's going on at the end of when your goal is nearest the end. For others sought that when you get close to train to bestow this gracious gift when you approach. So you're sort of goal of making things better for other people. The laziness and misbehavior of those people that you're trying to help will destroy your efforts. This is the kind of attitudes that Roy is characterizing here as being quite common at the time. Rudyard Kipling, of course not only the author of this tone, but a very popular author and poetry and prose to time heals, who wrote The Jungle Book? Incidentally, he also wrote beyond that iron ring ceremony that's used still to this day in Canada by graduating engineers when they sort of make their obligation to their profession into just say no. So Roy mostly making his argument about science, right? This piece is generally about science. It's called decolonized science. This is sort of his name's subject matter, but he does also talk about technology. And we kind of think about technology in the same banks that were very similar. Colonialist attitudes towards technology via the idea of technology being something that sort of belongs to a certain part of the world's population that could be gifted or bestowed to other people for their own benefit. And we feed historically this kind of language or this kind of attitude about communication technologies. So I telephones, telegraph wires. On the left here you see an image that really uses in his piece of Thessaly roads, this sort of, oh, a vowed white supremacists owned a lot of land, in particular a lot of diamond mines in the southern part of Africa. It's sort of deeply engaged in the practice of colonialism. This illustration shows him holding the telegraph line that extends from Cairo to South Africa, symbolizing the power of His power, the power of the British empire to connect the continents. We think very similar arguments made about the railroad and colonial context, not only, but particularly in North America. Say if you have being able to connect people to sort of be used technology to, to sort of expand cultural progress, to sort of bring benefits to a greater number of people. So we think a lot of these arguments expressed in a technological sense as well. Of course, rho does not agree with these attitudes. The argument that he's making is that this colonial point of view, the point of view of expressing the gracious gift of science and technology fails to acknowledge many things. This is a sort of first and most obvious point that he's making. That it fails to acknowledge local knowledge and expertise of indigenous and colonized peoples. That it fails to acknowledge the actual historical development of scientific work, mathematics, and medicine, and other parts of the world. So it incorrectly attributes scientific and technological progress to Europe alone, when in fact this was not the case. He says, the point of view fails to acknowledge the fact that colonial powers were of course, benefiting from their practice of colonialism and benefiting in the sense that their own technological progress as well. That in fact, sort of raw materials that they were extracting from colonised places. We're helping those colonizing countries and turned to further develop their own scientific expertise and technological progress. And in addition to extracting raw materials, of course, they were exploiting people and exploiting environments. And that exploitation was often necessary in order for colonize and countries to maintain that degree of scientific and technological superiority that they had at the time. So in other words, this is going to be a lot of sort of repetition in a slightly different, differently organized way of the material. Under previous life. He thing that this view of science, technology, and medicine as a gracious gift that the West head is still on. The rest of the world fails to acknowledge sort of the real ways in which technology was acting as part of the colonizing process. So first of all, he shows how technology and science could be used as a tool for colonialism. Or the ways in which technology and science were used by colonial powers to expand and consolidate their empires. He gives several examples of this. In a scientific context as well as technological one. I've listed some of them more technological ones here. He tells us about use of steamboats to allow for European exploration of Africa. Use of aircraft to enable surveillance and sometimes bombing of territory is use the photographic techniques that helped to create or to reinforce racial stereotypes about Kaunas people uses telegraph lines that facilitated communication between colonies are between settlements. So all of these are examples of ways in which colonial powers could use technology to either expand their empire. There's no to consolidate a power they had already built. Secondly, he talks about ways in which technology or technological development benefited from colonialism. So not only were technologies used to sort of expand the colonial process, but it is sort of also work the other way around. Or there were, there were things that happened through, through colonialism, but actually sort of ated in the development of new technologies, including the development of new medicines and the development of things like new techniques for Geological Survey. And the third on here is really sort of a stronger statement of the second, that sometimes not only to technology benefit from sort of new, new techniques or new materials that were found through a process of colonialism, sometimes technological process progress really relied on colonial system that was really, really fundamentally dependent on it doesn't processes of colonialism for their raw materials, for their sort of new natural and technological knowledge, for the new labor forces that could be found through the exploitation of colonized people. So Freud wants to point out, of course, the degree to which technologies were used by colonial powers, but also the degree to which colonial powers benefited in a technological and scientific sense from their colonial enterprises. This is the sort of main historical argument that he's making about colonialism. The main thing that he wants to tell us about the past. So I'm now going to move a little bit. We are going to get to Chicago, of course, but I want to go a little bit beyond what we were saying. Give us a couple of other examples of technological colonialism that are either a little bit closer to home or a little bit more related to ICT specifically or to modernize because there are lots of, lots of examples that we can turn to. Modern examples, ICT related examples that express sort of one of these ideas that Roy is arguing for here that show technology either being used as a tool for colonialism or as sort of a beneficiary of it. One case is a base case, so that kids of the James Bay hydro project, the James Bay Project is a series of steep, owns, a province owned hydroelectric power stations that have been built since 1974 in northern Quebec, in the Lagrangian watershed region, which is primarily inhabited by indigenous people, by the Cree and me and us in the early 19 seventies in particular. So break before this project started. And as it was getting started, The project became a site of conflict in a legal sense. There were court battles about this, and certainly in a political and cultural conflict in the context of the quiet revolution in Quebec and in the context of expect nationalism and Canadian federal politics. But also very much in the context of indigenous rights and status in the province and in the country as a whole. There's a really good documentary film about this, that when I, when I teach the version of this class that's for engineering students, I have them watch it because the technology in question is not an ICT. I don't show it in discourse, but I still think it's an example that's worth talking about. And there's a documentary film called Together we stand firm that you can watch online if you're interested, which tells the story of the James Bay Project from the point of view of several indigenous leaders who opposed the initial version of the project. And through the film, you can see several different roles that technology played throughout this whole process. You can see firstly, and most obviously, the importance of this hydroelectric project as a nation-building tool in, in a, in a practical sense, in terms of the technical capacity that these hydro stations would afford to the province. And in a symbolic sense that the status of this hydro project as a symbol of CAPEX national self-sufficiency and self determination. We can see the power stations as a tool of colonialism in the sense that they were sort of being used to exert control over an indigenous population that wasn't necessarily on board with the way that credit was developing. We could see the project as reliance on colonialism in the sense that the sort of legal and governmental processes that were in place that allow the project to eventually, eventually move forward or eventually succeed. Had us sort of, sort of cultural and historical colonialism built into them that made it difficult for the indigenous people too. I opposed this project in a, in a, in a, in a serious way. And you can see the power also. And this is sort of less, more specific to the film and less specific to the overall argument that's being made. But we can see other kinds of political senses of technology in this story as well. Beyond that Hydroelectric Project, or the power stations or the dams themselves. We can see how domestic technologies were important to this process as a signifier of cultural identity as lawyers throughout the court process that's explained in the in the film or in that history. Questions, things like where the crystal Chri, if they use modern technologies like CDOs and guns or even toasters. And we can see how for the indigenous people who were interviewed in the film, technology was, yes, a signifier of modernity. But also they thought, they thought technologies like guns and, and students as ways to maintain their connection with their past and their culture through sort of allowing them to engage in the same kinds of activities that their ancestors had engaged in. So one sort of context of technological colonialism. Second, very different contexts of technological Colonialism is the story of the One Laptop Per Child project. Some of you may have heard of this before, although it's sort of an older example at this point. This was an initiative that started in 2005. It was a joint project of the MIT Media Lab and the UN. Yeah, yeah, so this is sort of, this image of this laptop is quite widespread. So the goal of this project originally was to produce a laptop that could be sold for about a $100 per unit. So a $100 per laptop, which in 2005 was extremely, extremely cheap for a laptop. The idea was that these laptops would be sold to governments or to NGOs, and that they would then be distributed in lots of developing countries or in lots of countries throughout the global South where people didn't have laptops, where people didn't have access to this kind of technology. The motivation behind this project was that if children the world over and had access to laptops, or to this laptop particularly, they would be able to learn in different ways. They would be able to connect to other people in different ways. And this would ultimately benefit not only the children themselves, but the societies and the economies in which they live. So there was a lot of power and influence behind this project, a lot of money behind it, and a lot of public fanfare, a lot of awareness. It was ultimately, however, a failure. So the projections that the hopes of the people behind this project was that they were going to sell it. But a 150 million of these laptops within two years. In reality, they only sold a couple of 100 thousand. And most of the ones that they did sell or did distribute, we're sort of not really used by the people that they distributed them to after them, after, after the first year or so. So a lot of the criticism of this project, or a lot of the attempts to explain why it failed, had been rooted in describing this project as an exercise in technological colonialism. There were some very practical reasons why it failed. Also, for instance, they didn't manage to achieve their target cost of a $100 per unit. The best they could get it to was about a $188, which pushes sort of outside the realistic purchasing realm for a lot of the sort of target audiences. There were also infrastructure problems. They were originally hoping with the black cups could be powered by a hand crank. So you might have seen a version of this image with a little crank on the side that you could turn to power it. That didn't end up working out either. So there were sort of issues with power infrastructure and a lot of the places that the laptops were being distributed to, some of the people who received them didn't have sort of regular or consistent places where they could charge them beyond just charging. And that kind of infrastructural issues that were maintenance issues with them as well. The laptops didn't come with any sort of real instructions about how to fix them if they broke. We're about how to use them in a sort of, in a sort of more, more complex sense. They came with instructions about which buttons to press and how to interact with preinstalled software, but not with any kind of deeper explanation of how they function. So if they did break down, it was very difficult for them to be fixed or maintains locally. The larger criticism though, and one that kind of underlies these other problems was that this project was created with little to no consultation with the people who were the intended users of these things. And the basically the people who were creating the laptops were not trying to address the real needs of the audiences that they were targeting, and they were addressing what they, the creators perceived. There needs to be. So theta, a lot of the people who ultimately received these laptops didn't see a reason really why they were important on didn't feel that there was a connection between them and this technology. Felt that they were even technologically speaking, that bay or they or their communities had much more important priorities. There were other types of technologies that they would have much rather received as opposed to these laptops, things that they would get much more used data or that they saw as being much more important to them. They had other technological priorities. There was some cultural mistrust here, which is something that I'm Roy talks about towards the end of his piece. Also the kind of idea that like, why would I believe this promise that seeing sort of coming to me through these people and countries and organizations that don't know me and who I don't know. And there were some sort of more basic issues of cultural irrelevant. So all of the keyboards on his laptops had an English language keyboard layouts. This was obviously not the primary language of most of the people to whom they were being distributed. Even things like Fayol came preinstalled with a music program. And it was intended to sort of allow kids to make their own user can, to sort of learn about music through play. And this included the kinds of musical sounds that would've been very familiar to Western audiences or Western children. But the children to whom this laptop was distributed founded very foreign or unfamiliar or very unlike the types of music that they were more used to string. So sort of the ways in which this project has been criticised. It's been criticized obviously from my kind of logistical standpoint, but it's been criticized in a deeper sense of having been an exercise in technological colonialism and exercising sort of western powers, trying to view this gracious gift of a laptop in this sense to communities that didn't necessarily have a reason to integrate this technology into their lives, especially when it was something that hadn't been designed very well for them. The last kind of context of colonialism that I want to talk very briefly about. Is that not, not one story in particular like these previous two, but it's the idea of digital colonialism, or sometimes called data colonialism. Scholars and activists have criticized, do criticize. Now Large globalized tech companies for engaging in this kind of what they considered to be a colonial practice. So rather than in the historical sense of colonialism that really talks about extracting raw materials or extracting labor from one place to benefit people in it in a different place. Digital colonialism, or data colonialism, extracts data from sources worldwide whilst concentrating power and resources in one place elsewhere, or keeping power and resources concentrated in one place elsewhere. So programs like Facebook's Free Basics program that offers a very restricted amount of free internet access from certain sources to people in developing countries. Various initiatives from Google and other large tech companies have been criticized in this sense for again, is sort of trying to give this gracious gift of technology, gracious gift of Internet access, gracious gift of something on to people around the world, while at the same time restricting the way in which they can use that technology and relying on the users themselves to supply data that can be used by the companies themselves in a very different geographical contexts for other purposes. Questions so far. Okay. Going to press on. So I don't I don't have as much there. I said we don't have as many slides about sort of the main argument of colonization because he doesn't make this argument. And the same kind of direct way that Roy is making it, the kinda strange incident. How colonialism and post-colonial it affects reactions to what understandings of indigenous knowledge. So this is why he talks at such great length at the beginning of his article about what indigenous knowledge is. It's why he defines it in this kind of very broad sense. Because part of what he's been interested in talking about the ways in which people, and in particular people who were not themselves indigenous, who were doing science, who are sort of existing in a non-indigenous Western contexts. How people talk about and think about indigenous knowledge. So he says there has in some sense been a kind of positive shift in the way people think and talk about indigenous knowledge. Because they've gone in a lot of scientific contexts, big, moved from ignoring it altogether or dismissing it to sort of trying to use it to further scientific or technological enterprises. And he says at 1, I now, quoting from his piece, indigenous knowledge now surfaces in academic and scientific circles. Whilst indigenous peoples may welcome the elevation of status that comes with increased recognition of their knowledge systems after centuries of dismissal and disintegration, mothering, sorry, nothing come without a cost. This interest is overwhelmingly driven by research into sustainable development practices. And the scientific community is concerned about loss of biodiversity, of CCS and egos. In other words, scientific concerns with biodiversity, scientific concerns with sustainable development have a lead a lot of scientists and a lot of technologists in different places to try to sort of adapt and use indigenous knowledge about food or medicine or animals or resource management in particular to assist in scientific processes are just sort of further the development of scientific knowledge. Now the cut of nothing that this in itself is a bad thing on. He's certainly not saying that Indigenous knowledge shouldn't contribute to the scientific enterprise. But he's very concerned with the idea of indigenous knowledge being discussed as a commodity, as a thing that can be used or sold as something that can be sort of value added or can be exchanged. He's concerned that Indigenous knowledge or indigenous people's concerns are not being taken seriously in this exchange. That instead there's still this kind of colonialists exploitative relationship between their knowledge and expertise and a scientific system. But it's just being framed in different terms now. So this article in particular, but I have the screenshot of a peer, is not something that the kind of discusses in detail. It's much more reasonable, but it's an example of what he's talking about. The practice of bio piracy went sort of Indigenous peoples knowledge about local food or plants is patented by large external companies. And that sometimes the consequences of this can be that the people themselves have more restricted access to the types of planets and the types of agriculture or the types of economic activities associated with those plants than they had before. So the cut is not opposed to knowledge exchange whatsoever, but he's concerned about the way in which indigenous knowledge and indigenous people's expertise is framed or considered during these interactions. So the third way in which I want to now compare or contrast these pieces or summarize what they're both saying. It's with respect to their attitudes and their prescriptions about decolonization. So what did each of these two authors say about decolonizing science and technology? Why did they say that this is important? Why is it hard to do by as it is a challenge? And most importantly, how do each of them suggests that we should attempt to decolonize science or technology. Again, we'll start with Roy. Why does the continued legacy of scientific and technological colonialism exist after he gives us this historical argument about the negative consequences of sort of past colonial systems. He explains that although we now sort of tend to be a lot better at being less explicitly racist or less on colonialists in a structural sense. There's still this continued hierarchy of science and technology that's to let legacy of colonialism in other ways that, that has proved very difficult to dismantle. He's interested in exploring why that's the case. And I firstly, and most obviously his his his answer to this is that Of colonialism that persisted over centuries has created a scientific and technological hierarchy that's just very difficult to disrupt. The spin become imbedded in scientific and technological systems and institutions. So the idea that university ranking systems are created and dominated by Western institutions, the best universities where the best research is being conducted nearly all in North America or Europe. Academic journals and academic professional organizations are based mostly in the US, even if they're international organizations, some in Europe or in other places, western Europe in particular. So there's a sort of set of institutions and beyond that, kind of a set of ideas and images that are very difficult for us to change because they exist in our manifest in very material ways. That's, you know, the big points obviously hits smaller points or his sort of related points are that there are a lot of research collaborations between countries that were formerly colonised and the nations that were formerly colonizing them. And there's a tendency for these kind of collaborations to be imbalanced or unfair. There's a tendency for there to be mistrust between foreign and local personnel in formerly colonized nations. And that sort of behind all of this, behind the kind of structural, institutional, material hierarchies that we can see. We have continued colonial images of science and technology. So we think about science and technology in certain ways that have been influenced by its past. And that can lead to the exclusion and under representation of people and ways of thinking, what do I know? I'm not sure what's happening to my voice today. I think one of the most interesting parts of Royce article are his arguments about why it's important to decolonize science? Because he would, I think, agree that it's important to decolonize science and technology because it's the right thing to do from a justice and equity standpoint. But that's not really the argument that he makes in this case. He's not saying that we should decolonize science because it's more fair to people. Although I think he would agree with that statement. He makes a couple of other arguments that I think are interesting things to think about. When we talk about decolonizing. He says that this is an important thing to do, partly because if we decolonize science, that will lead us to have a more accurate understanding of what science and technology actually are and how they have previously already been developed. So he's saying that in reality, science and technology are not only Western products. They don't only come from Western thought and labor. There has been significant scientific expertise that technological development in different parts of the world, and more importantly, science and technology are created by complex networks of people, right? They don't just come from one really smart person behind any scientific idea or behind any technology. There's lots of different kinds of expertise. And those networks of people and resources have already been internationally, but already come from lots of different places and lots of different communities. Even if some of those relationships within those networks have been colonial or had been exploitative some of the time. So this is one thing he says is that decolonizing isn't part, just a way of recognizing the fact that science and technology already have this very distributed networks is 3. Second thing he says is that decolonize and science and technology can actually make science and technology better rate. They can improve the scientific and technological expertise, in part by helping us address real urgent problems, things like climate change from a more holistic standpoint, Ahmed, by sort of bringing more people on board in the scientific and technological effort against world, world problems like this by building, in other words, a more accurate understanding of the world. He also argues that decolonization has the potential to reduce sort of jingoistic or like ultra, ultra nationalistic arguments that tried to either discredit science and technology or take credit for scientific and technological expertise in a kind of false way. So lots of important reasons for science and technology to be decolonized, and not only sort of the ones that you might accept. So finally, how does Roy thinks that we ought to go about doing that? Again, he has some sort of more minor, but sort of more small-scale practical things like repatriating scientific specimens. Though scientific specimens that have come from former colonies had been, had been moved to Europe or North America, either moving them back or pursuing some kind of co-ownership policy that will allow people in other countries to use the specimens for research. This is his sort of most, most immediate, practical step. And then he had some sort of theoretical deaths are some approaches that he would like to see. He suggests that we should insist on an understanding of science and technology that recognizes how networks of people and institutions work together. Which is a very similar argument to not only nightingale, but also many of the other authors that we have read and discussed in this course. He thinks that people ought to be taught about non-Western science and technology. And about this relationship that he has detailing here between colonization and science, technology and medicine. And finally, you think that people who work with science and technology should critically reflect on their own professions and on the political context of their own work. Okay, back to the cauda again, and we have to reckon with some of his theoretical discussion here. So his main argument, I think, for achieving decolonized teaching or sort of decolonized educational practices. Because that's really what he's focusing on in this piece is by integrating in a just way and in a way that represents true integration and not exploitation indigenous and scientific knowledge. So he wants to bodies of knowledge to be integrated into work together. This is suggestive WayForward for pursuing the decolonization or for changing education To explain that he uses this term that he calls the cultural interface. And he devotes them space to sort of explaining what he means by this. Again, I think resisting like a really clear one or two sentence definition. These are three quotes from his piece that addressed in different ways what he means by the cultural interface. In basic terms though, I think what he's saying, what he means when he says the cultural interface is the idea that modern indigenous people already exists at the interface between indigenous cultures and Western or scientific cultures. Furthermore, they don't just sort of feeds, are not two separate circles that they move between. If it's a Venn diagram, it's an, it's an overlapping thing. And they live at the center of that. So they don't just sort of go to school and enter the Western domain and then go home and enter their indigenous domain again. They rather sort of exist at the intersection of those identities or at the intersection of those different kinds of knowledge all the time. And he wants to, I think, take advantage of that space or sort of used this idea of the cultural interface to describe the kinds of changes that he wants to see in knowledge systems and education. So he wants to pursue a kind of education or a way of organizing knowledge that will replicate this kind of cultural interface that he sees in the world. Is this maybe a bit of a complicated idea to get around. But then the actual sort of practical ways forward that he talks about at the end of the piece, I think are a lot easier to grasp for a lot of sort of simpler to get our heads around. Basically cute thing that there are new technologies, new ICTs. And he means knew from 2 thousand to sense. These are no longer things that are new. They don't even particularly new in 2002, but they were perhaps new to bit educational realm. Certain sort of ways of doing online teaching or ways of organizing information on the web, he thinks have the potential to reflect this kind of cultural interface, to reflect this kind of meeting of different knowledge culture. He says, first of all, that online teaching can be sort of helpful to distributed communities or to indigenous communities because it can help overcome defense. There's a certain irony to me saying this to you as I'm sitting in my house and we're all on Zoom together. But so if you think there's like a practical opportunity with new ICTs because they can be used to overcome the distance between people. More importantly though, in more to his point about the culture, cultural interface, he says that web-based technologies or new knew what new ICTs can sort of changed the way we perceive information and changed the way that we communicate information and change them in a way that will acknowledge this sort of intersection of knowledge culture in an interesting, more and more appropriate way. Because first of all, that new ICTs can, once this reconstitute the balance between visual, aural, and textual modes of presenting information. What he means by this is that instead of receiving information just in the form of a lecture or just in the form of a book. When we receive information online. When we've received Information through the web. We see as sort of a mix of different media. And that the combination of this sort of oral mode of communicating knowledge, that idea of using visuals to communicate things can help bring together a kind of indigenous knowledge centric way of communicating with them. More sort of westernized scientific way of kind of hierarchical knowledge ownership and knowledge transmission. Similarly, he talks about the power of web protocols or web standards like hypertext that demonstrate the interdependence of documents and ideas. So the idea of understanding the world in a holistic way, in which he says is important to a kind of indigenous knowledge framework. He says things like hypertext representative and may bring together sort of modern westernized technologies with this way of understanding how knowledge is interconnected. So again, instead of receiving knowledge in the form of a lecture where one person is talking at you instead of receiving knowledge in the form of a book that's been written by one person. You can now receive knowledge in the form of interlinked webpages that will explicitly demonstrate how they are connected to one another through hyperlinks. Though, he sees something as simple as, as widespread as Hypertext, as being demonstrative of a sort of coming together of different ways of understanding the world or different, different intersection of different knowledge systems. Questions about this or questions about anything so far, we're nearing the end now. Okay. I think I will just press on now, just a couple more slides. So the last thing that I wanted to do before I introduce the mini assignment and our last set of reading him was to present a couple of other possibilities are a couple of other ideas about what decolonization or what post-colonialism in technology or, or any finds the technology or in ICTs in particular might look like. So the cod has given us a couple of ideas. Romantic Roy has given us a couple of ideas. These are, of course, not the only ways in which we might pursue a decolonized or a post-colonial technology. Other ways of thinking about decolonization might look like on what is often called technological leap frogging. So this is the idea of formerly colonized nations in the global self adopting to the modern technologies that are best suited to them without having to follow the same kind of path of technological development that countries in the global north have gone through. So this is maybe a somewhat complex chart to just glance that, but this is basically showing how mobile phone use. The countries that are listed here has exploded without there being the necessity of people first having landlines. So basically in a lot of countries in the global health, people went from not having a phone at all to have a mobile phone without having this intermediate step of landline technology. So the idea of technological leapfrogging is maybe, probably most commonly talked about in this mobile phone context. It's also very commonly discussed in terms of sustainable energy and other kinds of sort of sustainable development related technologies. But the idea that countries in the developing world or countries in the global self may not have to necessarily follow the same path of technological development that has taken place elsewhere. But can it instead choose to adopt the technologies that will work for them? And the technologies that will allow them to work towards a more sustainable future is one way of thinking about sort of post-colonial ICTs or post-colonial tip, technological world. Another way in which these ideas might manifest is in particular products and services like this one that I've just chosen as a more or less random example called Freedom Box, which is an open-source hardware neutral, private server systems. So it's intended to be used by individuals who themselves have minimal technical knowledge and expertise. The idea is that this will lower barriers to server hosting. So to allow lots of different people in lots of different parts of the world to use this technology, which in turn will allow for increased data privacy. And ultimately in the sort of ultimate goal of the founders of this thing is to provide the foundation for an alternative web that is free or more free of the kinds of data colonialism practices that I described earlier. Finally, you kinda ideas might look like this project that's being described in this article, which is a collaborative research effort where residents and Tuktoyaktuk in the Northwest Territories are gathering data on climate change as part of a sort of community-led initiatives. This is in a predominantly indigenous community that's dealing with massive sort of consequences of climate change right now. A soil erosion, the ocean advancing inland. And they are pursuing a community-based data gathering IT initiative where they worked from the work with climate scientists from other parts of Canada and other parts of the world to help to sort of use their knowledge of the local ecosystem combined with the scientific knowledge that these outside experts are bringing to try to develop solutions and mitigation techniques that will work for their community in particular. So there are lots of different ways in which the truth of decolonisation are postcolonial. Strategies for ICTs are for technologies in general or for science and technology can come. Develop. So what I'm asking you to do for your mini assignment today, your second-to-last mini assignment is to find an example of your own that is related in some way to the topics that we've talked about, this. So essentially I called this technology and colonialism in the news. That doesn't mean it has to be like a really recent events. I'm just asking you to look for some sort of examples, some sort of past or present that you can find a link about somewhere online that relates to the content that we've been talking about this week. So I want you to find some kind of examples that kind of case that relates to the content. And then rate description of how the case relates. So it could be any kind of example that you want really that's connected in some way. It could be an example of a technology that reinforces colonialism or benefits or relies on colonialism. It could be a case in which the technology has a sort of encoded racial or cultural bias that is a legacy of colonialism systems. Or it can be a story about attempted decolonization of a technology or a sort of postcolonial ICT or postcolonial scientific process. It's up to you. All you have to do is find an example, post the link to the example, and then write a paragraph or so that describes how this case relates to to the course material. So in which of these ways, or perhaps in some different way that I haven't listed here. Your case is connected to the kinds of theory or the kinds of sort of historical arguments that we've read about today or this week. That's what I'm asking you to do. So all, all you have to do is post a link to something it doesn't have to be an academic source that can be unused source of blog posts, a tweet, really anything you want that will give us and give us a sense of what this story is. And then write your own description of the relationship between the example that you found and of course that this and then so this is going to be on my final set of reading hints. Because your last set of readings is for next Monday's class, we're gonna be talking about governing ICT. And so you have two more things to read. They are both academic articles this time, but they're quite different in tone. So the first one that's on here is by David Guston and Daniel Sarah width is called real-time technology assessments. The point of this article is that the authors are describing a technology assessment strategy or technology assessment technique that they have come up with that is called no surprise, real-time technology assessment. There's some history and contexts for technology assessment that you will need to really understand their idea that they don't give you in this piece. So I'm going to talk to you about that now when we meet on Monday. But what I would like you to focus on is understanding what the author's name by their term, real-time technology assessment. And thinking about what the different parts of that process would look like in practice. The second one is quite a different piece. The second one is an essay called governing the internet, written by Calibre osteology of legal scholar. He's a law expert and he's writing in a law journal. So this is a very different piece because he's writing in a very different academic contexts. And the others that we've read. Lauren's Leslie is also a legal scholar, but his book is intended for acquitted general audience. This has been an epidemic log journals, so it's structured a bit differently. And I would just like you to get a general sense of what his argument is here and just think about how his argument might relate to some of the other authors that we read. Final reminder that you're less essay is due this Friday. Let me know if you have any urgent questions about it beforehand. We're done for today. That's all that I have. If you have questions like only them, happy to stick around and answer them. But if you don't, you're free to go and I will see you on Monday.