

ICTs, (Post)Colonialism, and Globalization

ENCS 393 – Social and Ethical Dimensions of ICTs

Day 11 – June 10, 2020

Final Project: Critical Technology Assessment/Re-Design

- Choose an ICT as the basis for your project: this might be one specific technology (e.g. the iPhone 11) or a category of technologies (e.g. smartphones)
- Through research, identify a way to improve this technology that would make it more ethical, more equitable, or more just.
- Create a 5-minute video or presentation that describes:
 - Which aspect of the technology you would change
 - Why and how you would change it
 - What factors aside from the technological design itself are important to realizing this change (e.g. laws, regulations, advertising, intended users etc.)
- Refer to both course material and external sources to justify your arguments
- Work alone or as a team of two

Final Project: Critical Technology Assessment/Re-Design

- Please read the detailed assignment guidelines and rubric (posted on Moodle)!
- Your projects will be evaluated according to the following criteria:
 - **Research and Evidence:** Have you consulted appropriate sources and based your arguments in evidence?
 - **Connection to Course Material:** Do you use at least one concept or argument from class in your argument? Do you connect course material with external sources?
 - **Discussion and Analysis:** Have you presented a thoughtful and logical discussion of the existing technology and its social, political, or economic context?
 - **Communication:** How well does your video get its point across? Are your images and text clear?
 - **Originality and Engagement:** Does your video demonstrate creative, original thinking? Is it engaging to watch?



Terms to Consider

Imperialism

Colonialism

Globalization

Decolonization

Indigenous Knowledge

土著

Terms to Consider

帝国主义

So in historical context, we would think about one nation's sort of doing this to other nations or other cultures. In a modern context, we might think about imperialism on behalf of corporations, extending power and influence

Imperialism: the process or policy of extending power and influence, often through diplomacy or military force

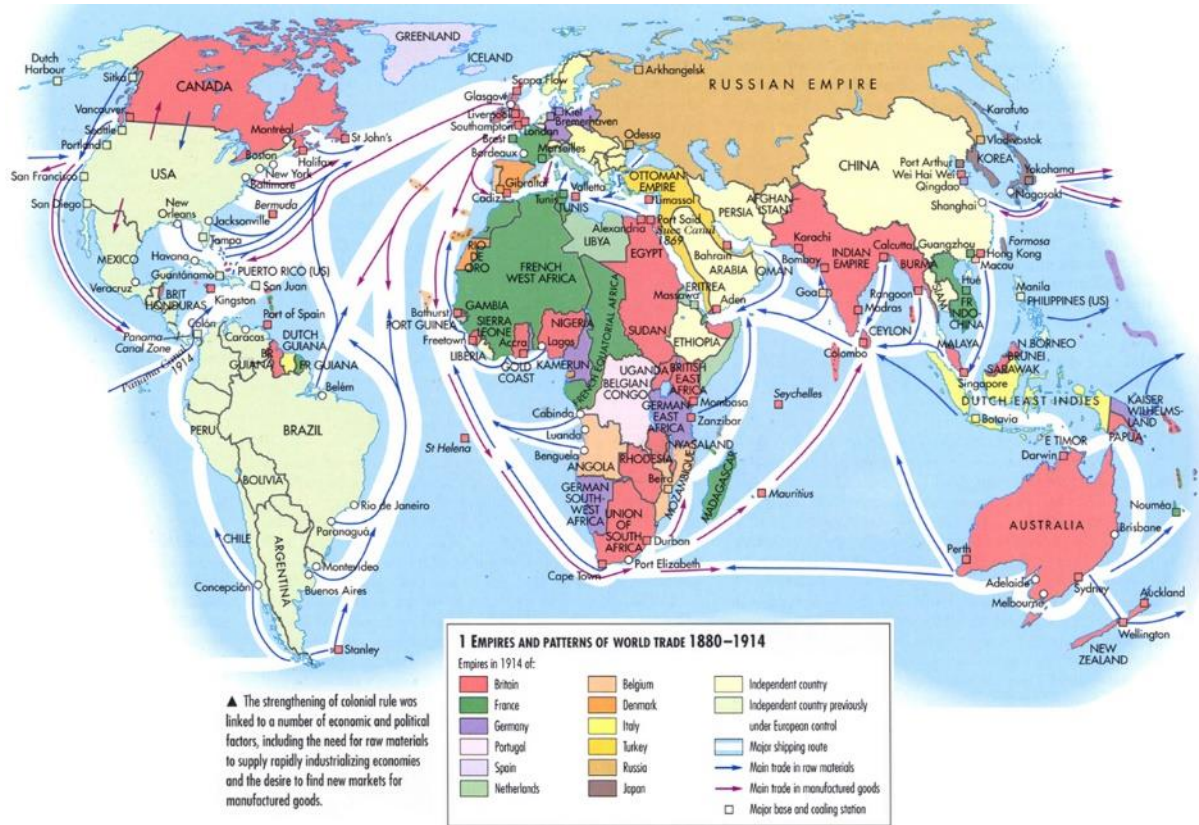
they're both about power or influence or control being sort of extended out from one place, one concentrated centre to other places. Colonialism, again, in very broad terms, is the practice or the policy of exerting control again, over another region or a country, often through occupation or economic 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 or settling of resource extractions, so some kind of economic exploitation.

Colonialism: the practice or policy of exerting control over another region or country, often through occupation and/or economic exploitation

Globalization: interaction and integration between individuals, companies, and governments on a global scale, or the process by which this occurs

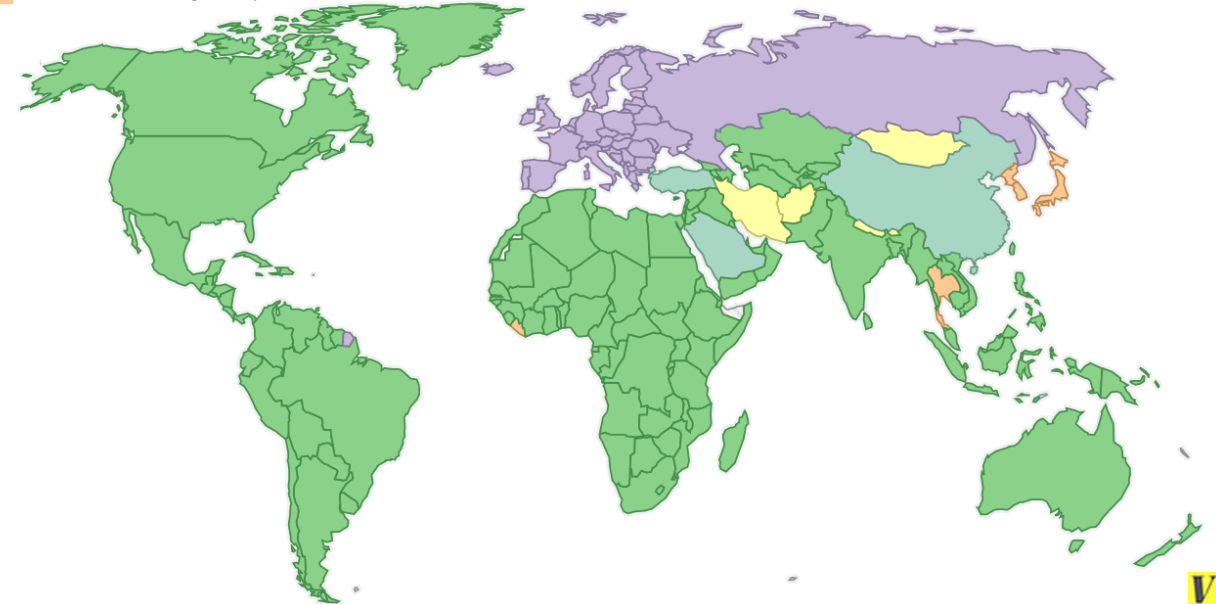
Decolonization: the long-term process of divesting of colonial power

非殖民地化



Countries that have been under European control

■ Europe
 ■ Colonized or controlled by Europe
 ■ Partial European control or influence
 ■ European sphere of influence
 ■ Never colonized by Europe



Nakata on Indigenous Knowledge

How to understand Indigenous knowledge?

- As “different things to different people”
- In terms of its distance from “scientific knowledge”
- As knowledge unique to a certain culture or society
- As “oral, rural, holistic, powerless, and culturally-embedded”
- As the result of informal, unsystematised “dynamic innovation”
- As influenced by internal development as well as external systems
- In terms of its role in community life
- As including both material and spiritual aspects
- As collectively belonging to Indigenous people, i.e. with a different system of ownership than most Western institutions use

Nakata on Indigenous Knowledge

Be careful about making simplified distinctions between “Indigenous” and “scientific” knowledges.

- Both are culturally embedded 根植于文化中
- Both can change
- Both involve contact and exchange with outside influences

Compare and Contrast: Contexts

What do we know about the context of the two pieces? Who are their authors? Who are their intended audiences? Why type of texts are they?

Roy, “Decolonise Science”



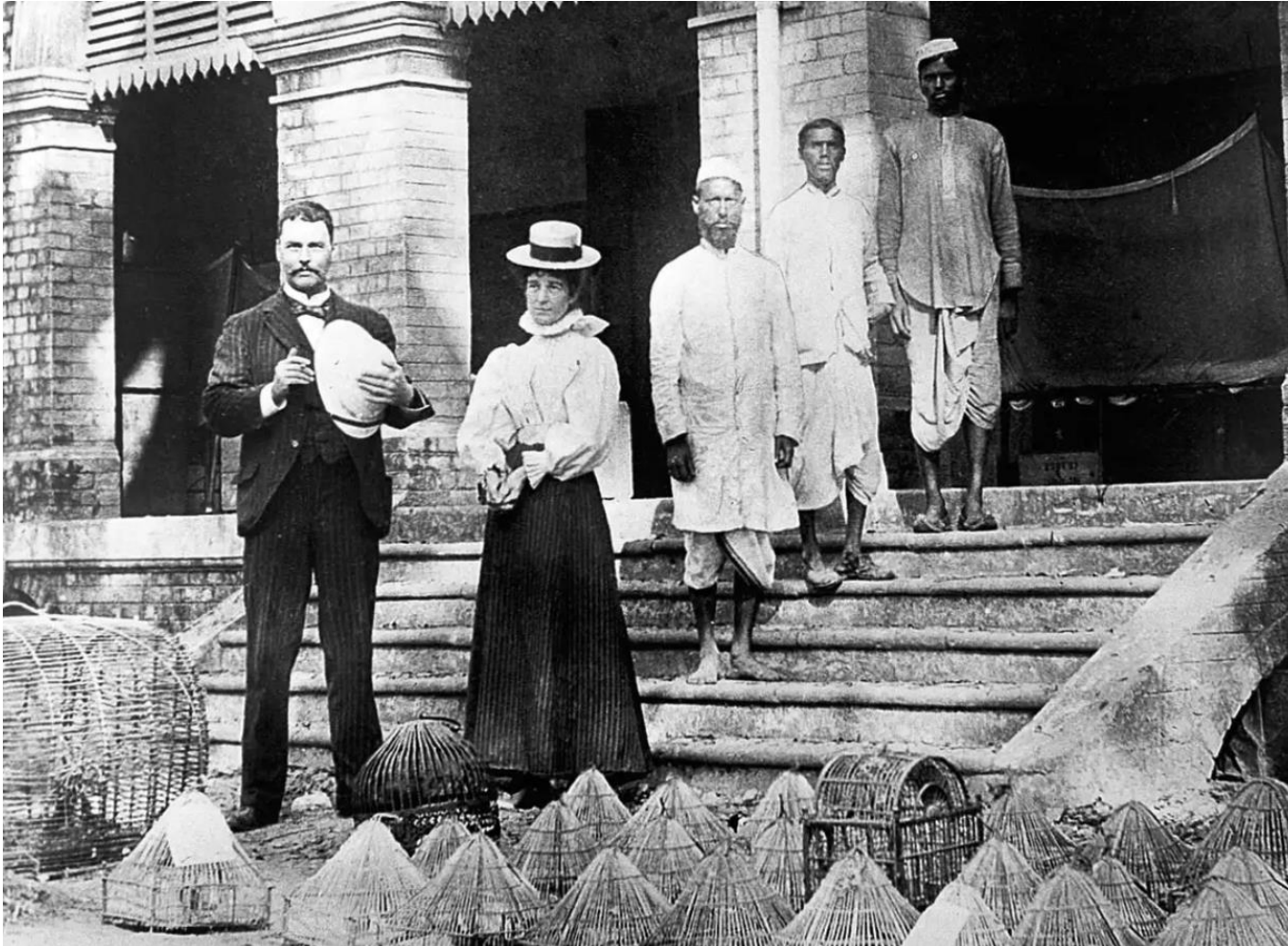
Nakata, “Indigenous Knowledge and the Cultural Interface”



Compare and Contrast: Effects of Colonization

What arguments do the two authors make about colonization and colonialism? How does each one describe the *effects* of colonialism in the contexts that they discuss?

Roy, “Decolonise Science”



The “gracious gift of science”: Roy shows how 19th century imperialist ideologies viewed science, technology, and medicine as “gifts” for the West to bestow on supposedly inferior peoples in other parts of the world.

Roy, “Decolonise Science”

*Take up the White Man's burden—
The savage wars of peace—
Fill full the mouth of Famine
And 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 nought.*

Excerpt from “The White Man’s Burden” by Rudyard Kipling (1899)

Technology and Colonialism



Roy's argument is mostly about science, but we can apply the same concepts to technological development as well.



ACROSS THE CONTINENT.
"WESTWARD THE COURSE OF EMPIRE TAKES ITS WAY."

Failings of Scientific and Technological Colonialism

The colonialist point of view failed to acknowledge many things:

- Local knowledge and expertise of Indigenous and colonised peoples
- Historical development of scientific work, mathematics, and medicine in other parts of the world
- Benefit to colonial powers of extracting raw materials to further develop science and technology
- Exploitation of people, materials, and environments that was necessary to maintain scientific and technological superiority

Technology and Colonialism

- **Technology as a *tool* for colonialism, i.e. used by colonial powers to expand and consolidate their empires:** steamboats that allowed for European exploration of Africa; aircraft that enabled surveillance and bombing; photographic techniques that helped to create/reinforce racial stereotypes; telegraph lines that facilitated communication between settlements
- **Technology as a *beneficiary* of colonialism, i.e. technological development driven by colonialism:** new techniques for geological surveying; new medicines
- **Technology as *reliant* on colonialism, i.e. technological progress built on colonial systems:** raw materials; new natural and technological knowledge; new labour forces through the widespread exploitation of colonized people

Technological Colonialism and the James Bay Project



- The James Bay Project is a series of state-owned hydroelectric power stations built since 1974 in Northern Quebec.
- The power stations exist in the La Grande watershed region, which is inhabited by the Cree and Inuit.
- In the early 1970s, the project became a site of legal, political, and cultural conflict, laden with questions about Quebec nationalism, Canadian federal politics, and Indigenous rights and status.

Technological Colonialism and the James Bay Project

The documentary film *Together We Stand Firm* (2012) tells the story of the James Bay Project from the point of view of Indigenous leaders who opposed the project in its initial form. The film presents several different roles that technology played throughout the conflict:

- The hydroelectric project as a nation-building tool, in terms of the technical capacity of the hydro stations and their status as a symbol of Quebec's self-sufficiency and self-determination
- The power stations as a tool of colonialism
- The project as a whole as reliant on colonialism
- Domestic technologies as a signifier of cultural identity (were the Cree still Cree if they drove Skidoos, hunted with guns, or used toasters to make their breakfast?)
- Technologies as both signifiers of modernity and as ways to maintain connection with the past

Technological Colonialism and One Laptop per Child



- The One Laptop per Child project was a joint initiative of the MIT Media Lab and the United Nations, started in 2005
- It aimed to produce a laptop that could be distributed for \$100 per unit
- The project ultimately failed: sales were expected to top 150 million within two years, but only reached a few hundred thousand
- Why? Cost, infrastructure, maintenance, relevance, mistrust, cultural compatibility

Digital Colonialism



- Scholars and activists have criticized large, globalized tech companies for engaging in modern day “digital colonialism” or “data colonialism.”
- Rather than extracting raw materials or labour, digital colonialist practices extract *data* from sources worldwide while concentrating power and resources in one place.

Nakata, “Indigenous Knowledge and the Cultural Interface”



Biopiracy: when indigenous knowledge is patented for profit

March 7, 2016 7:32pm EST

CIAT, CC BY

Email

Twitter

As genetic research becomes more sophisticated, so does our ability to use plants and animals to develop new drugs or modify crops to meet food security needs.

Author



Janna Rose

Compare and Contrast: Decolonizing?

What do each of the two authors say about *decolonizing* science and/or technology?
Why do they say that this is important? Why is it a challenge?

How do each of them suggest that we should attempt to decolonize science/technology?

Roy: Science, Technology, and Colonialism Today

Why the continued legacy of scientific and technological colonialism? Why is it difficult to dismantle this legacy?

- Colonialism created a scientific and technological hierarchy that is difficult to disrupt
- Imbalanced or unfair research collaborations between formerly colonised nations and their former colonisers
- Mistrust between foreign and local personnel in formerly colonised nations
- Continued colonial images of science and technology (leading to exclusion and underrepresentation of people and ways of thinking)

Roy, “Decolonise Science”



Roy: Science, Technology, and Colonialism Today

How to decolonise?

- Repatriate scientific specimens to former colonies, or pursue co-ownership
- Insist on an understanding of science and technology that recognizes how networks of people and institutions work together (e.g. Nightingale)
- Teach people about non-Western science and technology, and about the relationship between colonization and sci/tech
- Scientists and technologists should critically reflect on their own professions and the political contexts of their work

Nakata: The “Cultural Interface” and Decolonization

“I have called the intersection of Western and Indigenous domains, the *Cultural Interface*, and theoretically I have been inclined to begin there and have argued for embedding the underlying principles of reform in this space.”

“I see the Cultural Interface as the place where we live and learn, the place that conditions our lives, the place that shapes our futures and more to the point the place where we are active agents in our own lives – where we make decisions – in our lifeworld.”

“We don’t go to work or school, enter another domain, interact and leave it there when we come home again.”

Technological Opportunities at the Cultural Interface

- Online environments can “overcome distance”
- They can “reconstitute the balance between visual, oral, and textual modes of presenting information”
- The Web and hypertext can demonstrate the interdependence of documents and ideas

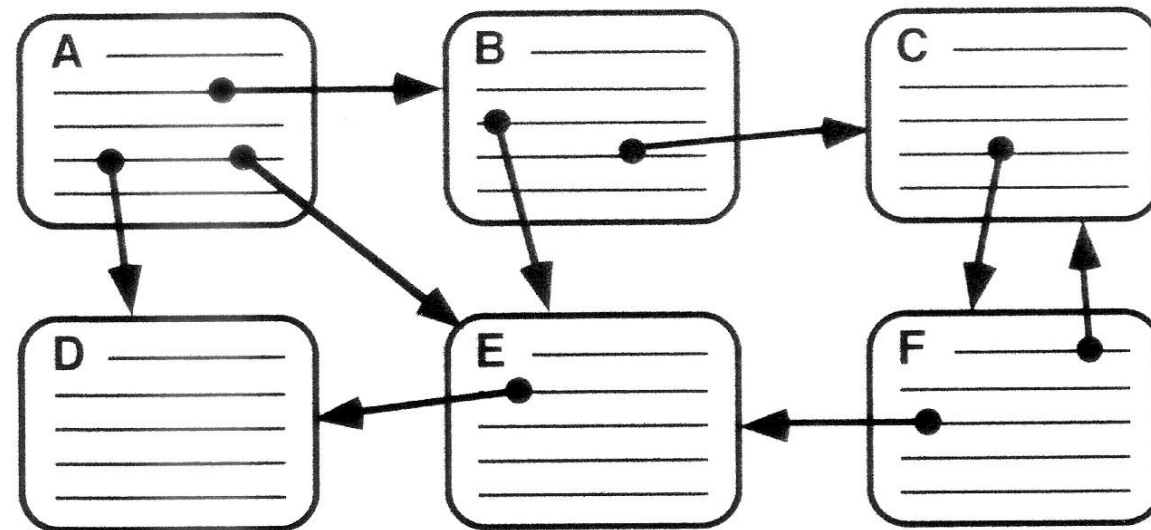
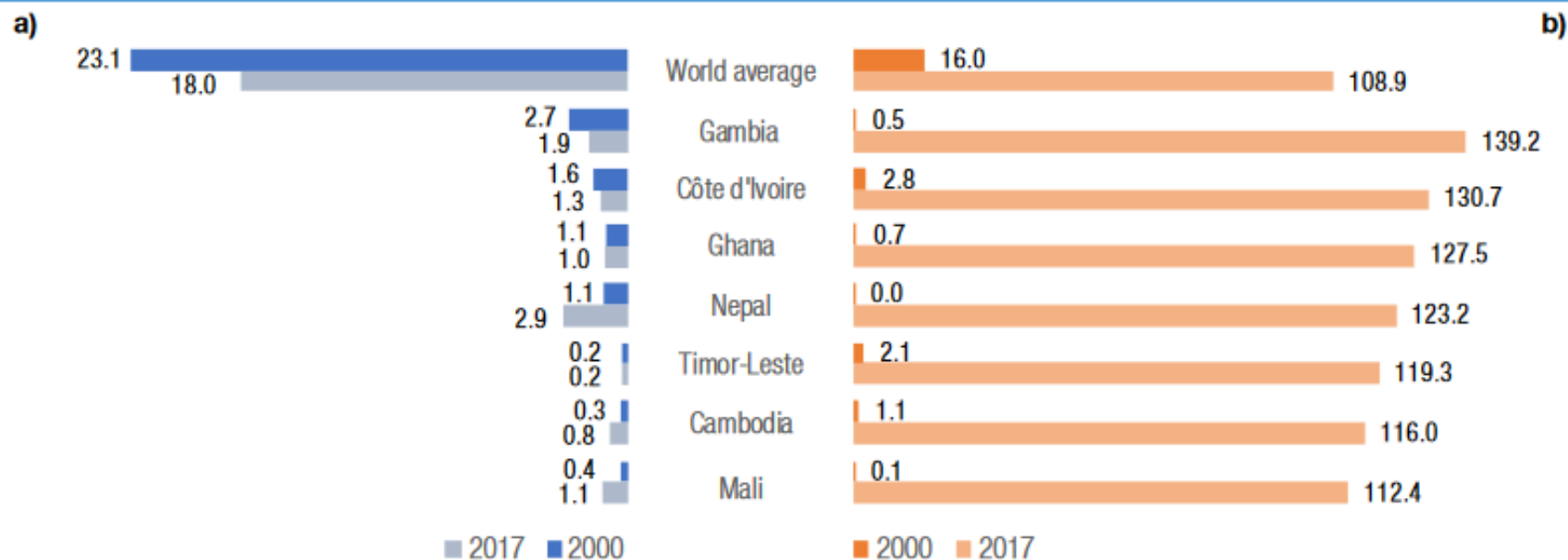


Figure 1 Countries that leapfrogged to mobile technology: A comparison of (a) fixed-telephone and (b) mobile subscriptions per 100 inhabitants, 2000 and 2017



Source: UNCTAD calculations based on data from the International Telecommunication Union.

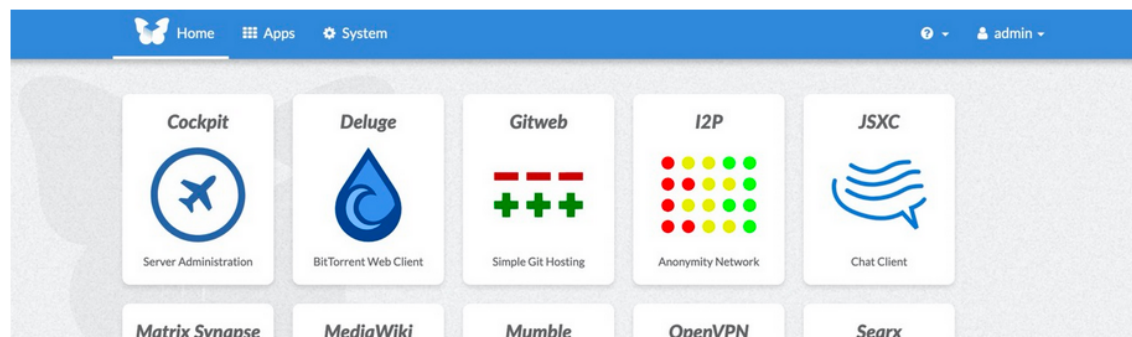
Note: Earliest data for Timor-Leste is for 2003; latest data for Gambia and Mali is for 2016.

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The Narwhal

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ON THE GROUND

‘Beyond what our instruments can tell us’: merging Indigenous knowledge and Western science at the edge of the world

Mini-Assignment #9: Technology and Colonialism in the News

- This Mini-Assignment asks you to reflect on the topics related to technology and colonialism that we've discussed today, and to do a little digging of your own.
- Find a case in the news (it does not have to be particularly recent) that relates to this week's content. It could be an example of a technology reinforcing, benefiting from, or relying on colonialism; a case where a technology has encoded a racial or cultural bias that is a legacy of colonialism; or a story about decolonizing a technology, field, or curriculum.
- Post a link to your case in the discussion forum, and include a description (1-2 paragraphs) of **how** the case relates to the course material.

Reading Hints for Monday

Governing ICTs

- *David H. Guston and Daniel Sarewitz, “Real-Time Technology Assessment”*
 - Focus on understanding what the authors mean by “real-time technology assessment.” How do you think this method of technology assessment differs from current practices?
- *Kal Raustiala, “Governing the Internet”*
 - Raustiala is a legal scholar, writing in a law journal. How does his argument relate to other authors (most of whom are not legal professionals) whose work we have read?
- Reflection Essay #3 due Friday, June 12th