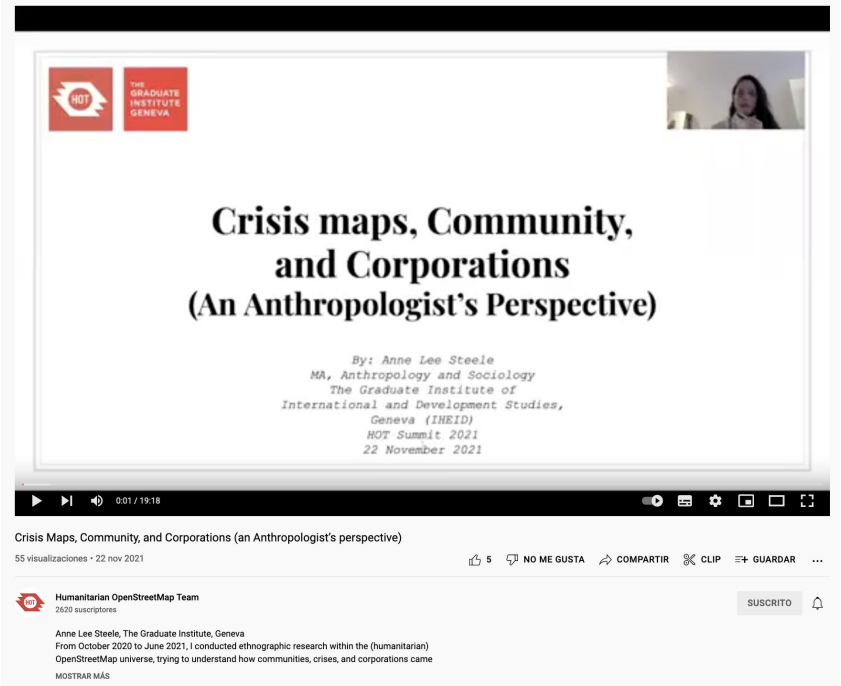
Mapping crises, communities and capitalism on OpenStreetMap: situating humanitarian mapping in the (open source) mapping supply chain

By: Anne Lee Steele
Anthropology and Sociology
Graduate Institute, Geneva
State of the Map 2022
21 August 2022

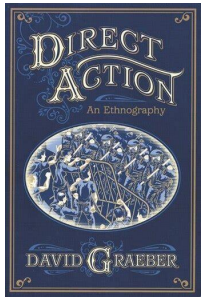
HOT Summit, November 2021

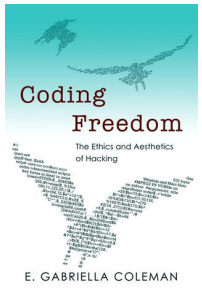


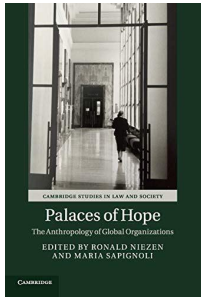
https://youtu.be/_0a84F0pdNU

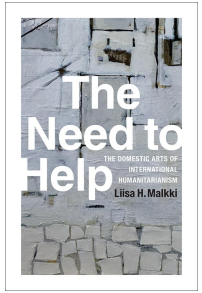
What’s an anthropologist doing at State of the Map?

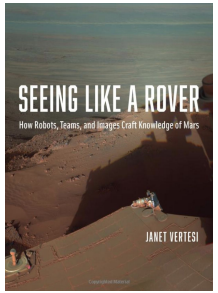
About anthropology & ethnography





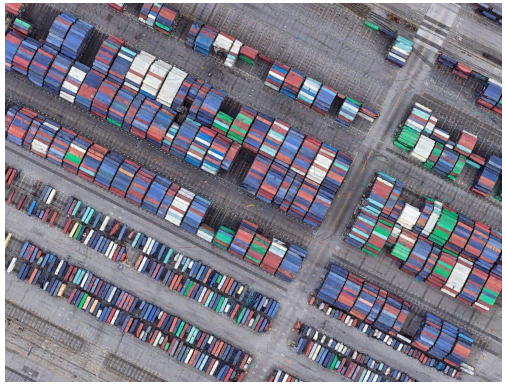






- Anthropologists study “culture” (defined broadly!)
- Connecting individual experiences to wider processes (small → big)
  - Rituals, Kinship, Belonging
  - Social norms, Societies at large
- **Can we learn about data-driven communities with analogue methods?**

Before OSM, I researched supply chains.



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A1 Name

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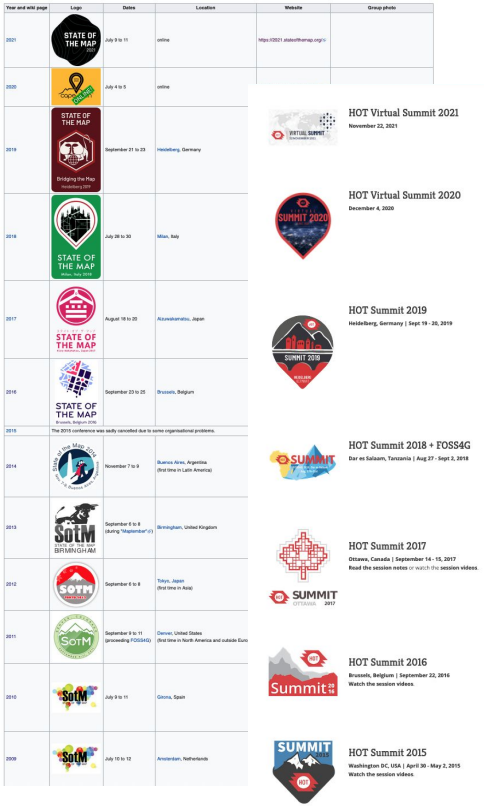
3	Amazon	https://upload.wi			
4	Zara	https://upload.wi		No	No
5	H&M	https://upload.wi		Yes	No
6	UNIQLO			Yes	Yes
7	Samsung	https://upload.wi			

- Who are the **people** involved?
- What **processes** happen along the way?
- How is **power** distributed?



Year and wiki page	Logo	Dates	Location	Website	Group photo
2021	STATE OF THE MAP	July 9 to 11	online	https://2021.stateofthemap.org/	
2020		July 4 to 5	online		
2019	STATE OF THE MAP	September 21 to 23	Heidelberg, Germany		
2018	STATE OF THE MAP	July 28 to 30	Milan, Italy		
2017	STATE OF THE MAP	August 18 to 20	Aizuwakamatsu, Japan		
2016	STATE OF THE MAP	September 23 to 25	Brussels, Belgium		
2015	The 2015 conference was sadly cancelled due to some organisational problems.				
2014		November 7 to 9	Buenos Aires, Argentina (first time in Latin America)		
2013	SOTM	September 6 to 8 (during "Maptember")	Birmingham, United Kingdom		
2012	SOTM	September 6 to 8	Tokyo, Japan (first time in Asia)		
2011	SOTM	September 9 to 11 (proceeding FOSS4G)	Denver, United States (first time in North America and outside Euro		
2010	SOTM	July 9 to 11	Girona, Spain		
2009	SOTM	July 10 to 12	Amsterdam, Netherlands		

Research Methods

Timeline: October 2020 - June 2021

Interviews

Primary: members of Humanitarian OpenStreetMap Team, past & present

Secondary: Mappers from across the OSM “universe”

Tertiary: Users of geospatial technology, humanitarian/development professionals, related industry professionals

~ 30 interviews (~35 hours, so far)

Participant Observation

Online events, conferences, lectures, mapathons

~ 30 events

Archives / Documentation

Conference talks, twitter threads, email listservs, blogs, wiki, news articles, OSM diaries, podcasts...

~ 3,000+(?) notes

Questions

Questions (small-scale)

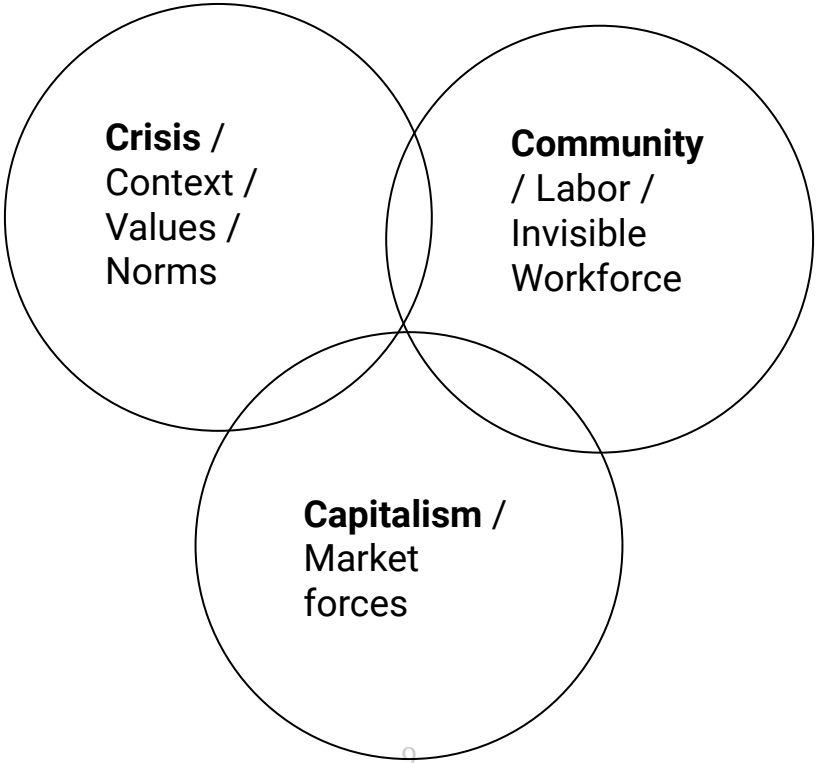
- Who makes OpenStreetMap, and why do they contribute?
- How is power distributed in the OSM ecosystem?
- How is humanitarian mapping affecting (or being affected by) other understandings of labor, humanitarianism, and technology?

Questions (bigger scale)

- What can OSM tell us about wider social processes?

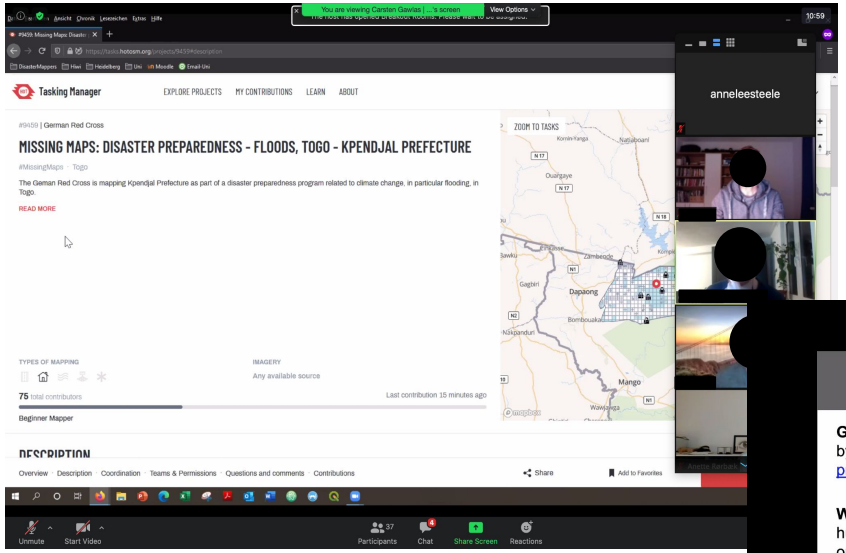
Part 1:
Mapping crises, communities, and capitalism on OSM

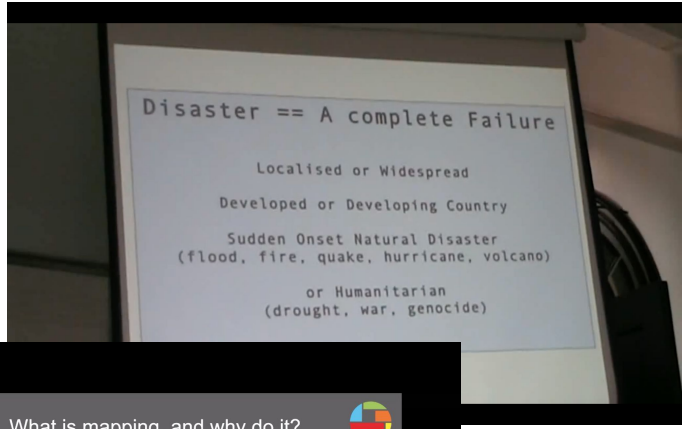
Why these three?



Crises

From the COVID-19 crisis to crisis mapping?





What is mapping, and why do it?

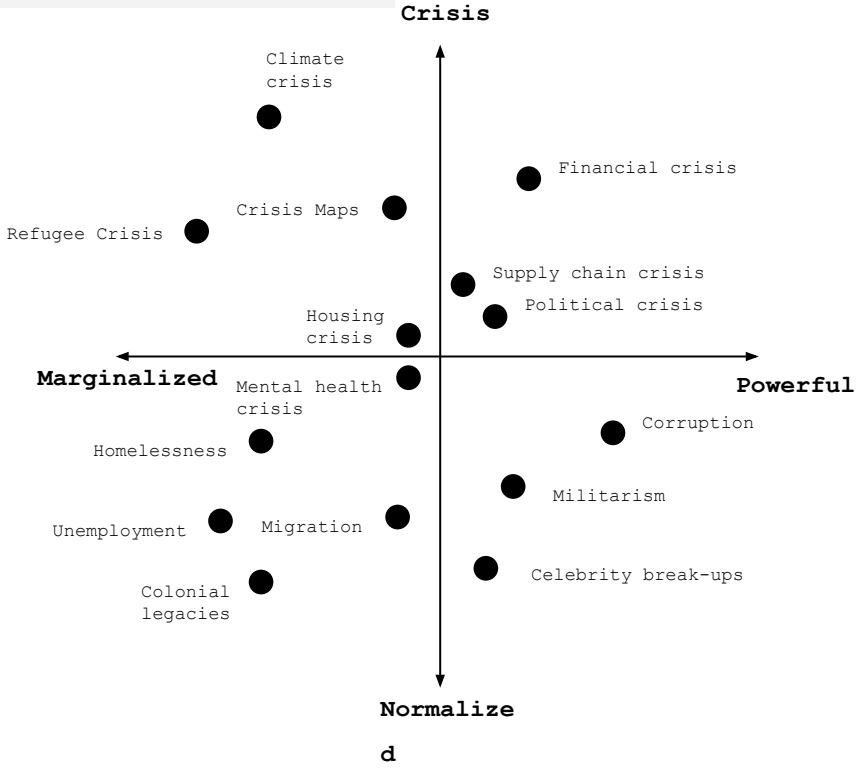
Goal: Creating digital maps of the world's 'forgotten' places by crowdsourcing. Described as 'the human genome project for international development'.

Why: Many parts of the world most vulnerable to humanitarian crises such as natural disasters, disease outbreaks, epidemics or conflict are not mapped. People have limited/ no visibility to the situation on the ground.

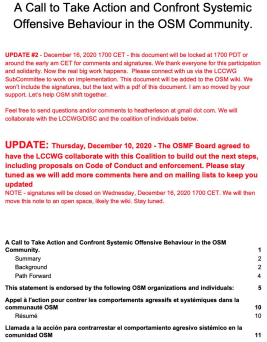
Humanitarian organizations use mapped information to plan risk reduction and activities that save lives

MISSING MAPS

What constitutes a crisis?



OSM → A community in crisis?



A Call to Take Action and Confront Systemic Offensive Behaviour in the OSM Community.

UPDATE #2 - December 16, 2020 1700 CET - this document will be locked at 1700 PDT or around the early am CET for comments and signatures. We thank everyone for this participation and solidarity. Now the real big work happens. Please connect with us via the LCCWG SubCommittee to work on implementation. This document will be added to the OSM wiki. We won't include the signatures, but the text with a pdf of this document. I am so moved by your support. Let's help OSM shift together.

Feel free to send questions and/or comments to heatherleson at gmail dot com. We will collaborate with the LCCWG/DISC and the coalition of individuals below.

UPDATE: Thursday, December 10, 2020 - The OSMF Board agreed to have the LCCWG collaborate with this Coalition to build out the next steps, including proposals on Code of Conduct and enforcement. Please stay tuned as we will add more comments here and on mailing lists to keep you updated

NOTE - signatures will be closed on Wednesday, December 16, 2020 1700 CET. We will then move this note to an open space, likely the wiki. Stay tuned.

A Call to Take Action and Confront Systemic Offensive Behaviour in the OSM Community. 1
Summary 2
Background 2
Path Forward 4
This statement is endorsed by the following OSM organizations and individuals: 5
Appel à l'action pour contrer les comportements agressifs et systémiques dans la communauté OSM 10
Résumé 10
Llamada a la acción para contrarrestar el comportamiento agresivo sistémico en la comunidad OSM 11

Community

- Representation (gender, geography, diversity)
- Role of corporate actors
- Recruitment
- Governance (OSMF)
- Sustainability
- Compliance
- Vandalism

A Call to Correct Narratives about Geospatial Work in the Philippines

A statement by members of the OpenStreetMap Philippines community in response to the "Philippines" episode of Amazon Web Services' documentary series Now Go Build *which highlights the work of the Humanitarian OpenStreetMap Team in the Philippines.*

3 September 2020 · Creative Commons Attribution-ShareAlike 4.0

Technical

- Tagging schemas
- Data quality
- Editors
- Renderers
- Software Libraries
- Licensing
- Attribution
- Applications
- AI/ML

Index » users: Thailand » BBC report on Facebook "success" in Thailand

Pages: 1

Russ McD 2019-07-25 10:55:15 #1

Member

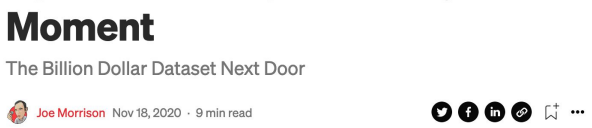
From: Hereford & Chiang Mai.
Registered: 2011-04-17
Posts: 292

This article appeared on Thaivisa :

https://www.bbc.co.uk/news/technology-49091093

Naturally I could not resist a comment...

What Facebook fail to state is the inaccurate manner in which their AI mapping worked. The OSM community in Thailand had for years, been working slowly on mapping the Country, with the aim of producing a free to use and accurate map for any user. Information was added backed by a strong local knowledge, which resulted in a usable GPS navigation system based on OSM data. Main roads were main roads, and jungle tracks were



OpenStreetMap is Having a Moment

The Billion Dollar Dataset Next Door

Joe Morrison Nov 18, 2020 · 9 min read

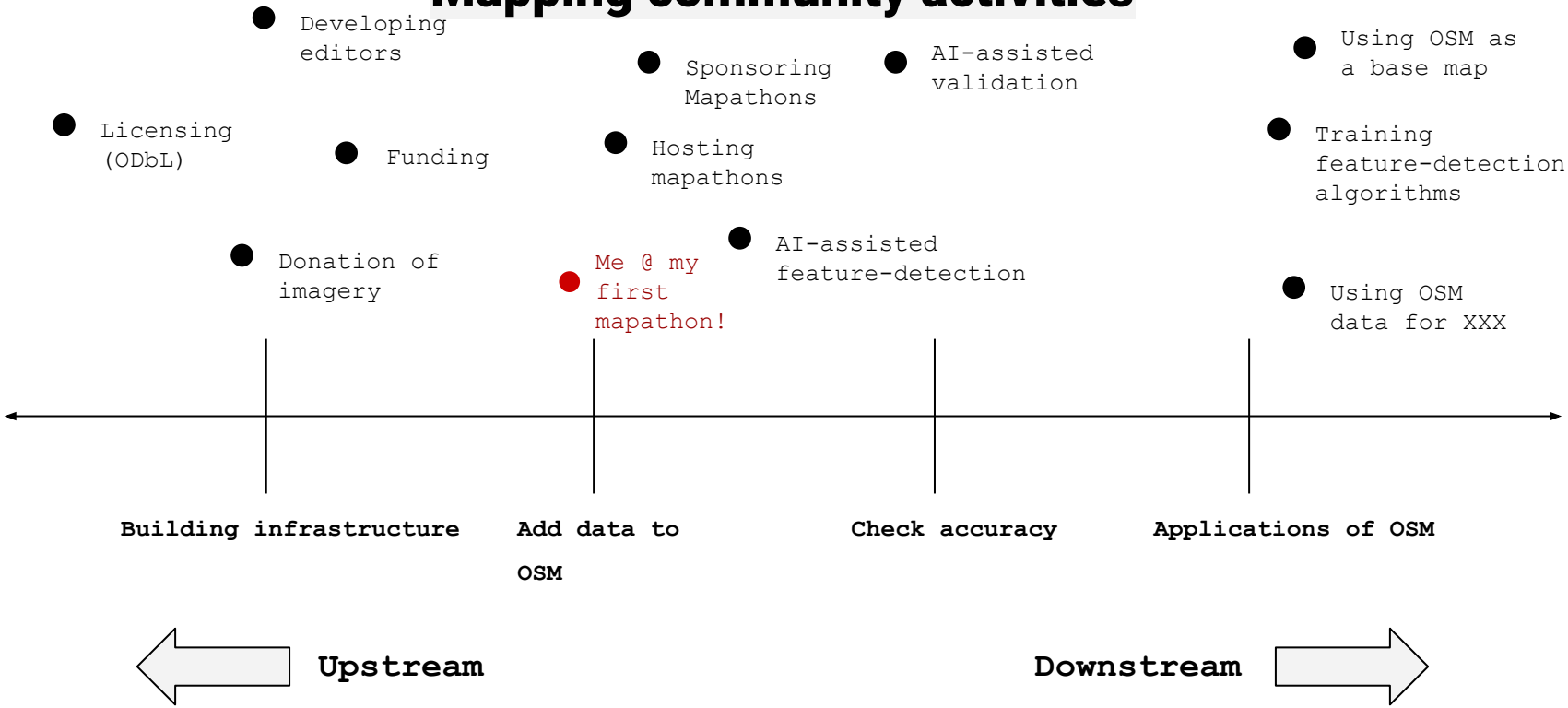
Mapping crises

- **“Crisis” as negotiated, ongoing, flexible, strategic**
  - Both externally facing & internally debated
- Crisis as **constitutive**, as community-building
  - Rituals of conferences (SoTM, HOT Summit)
  - Mapathons
  - Mailing lists

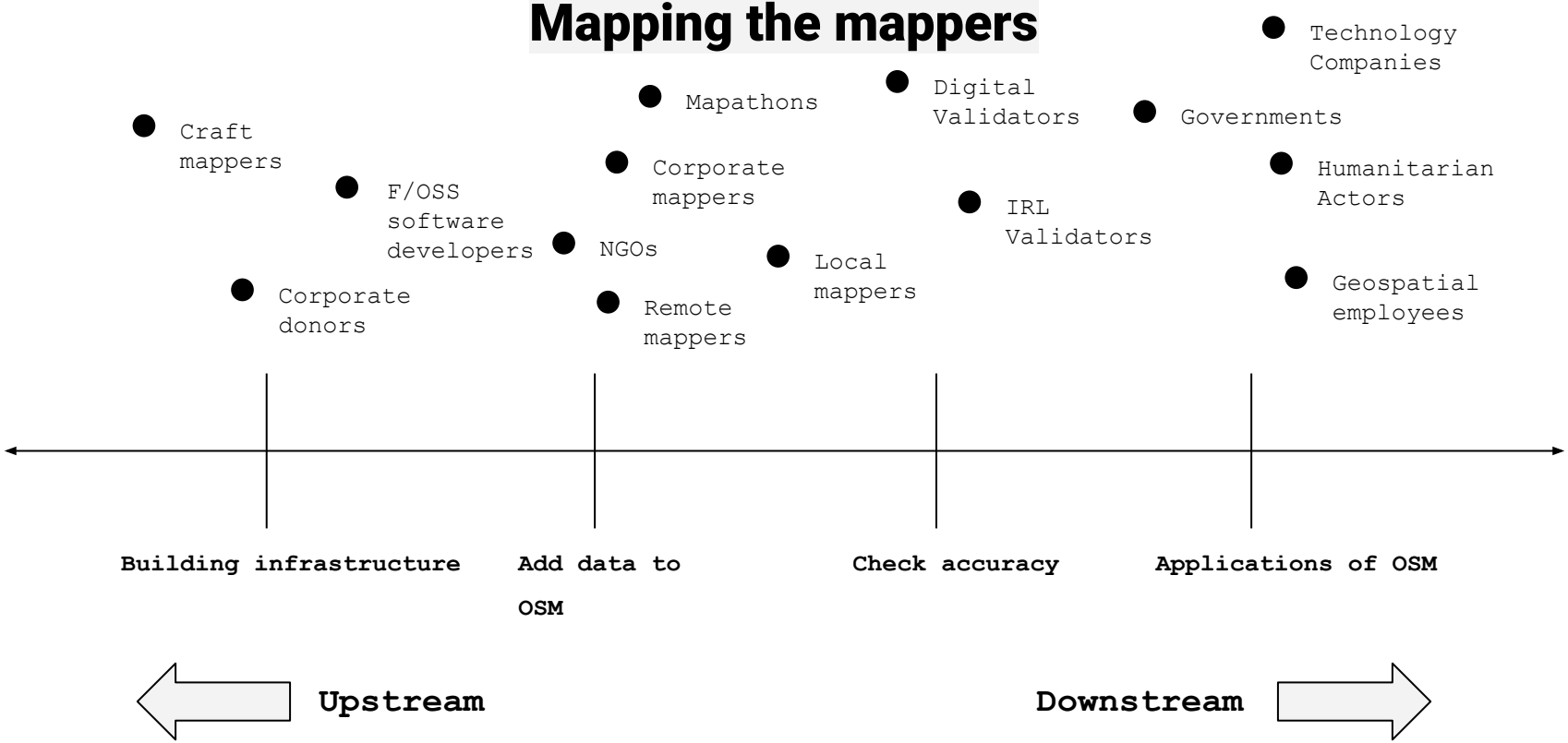
How does the split between community-based & technical-based questions affect how communities are being developed?

Communities

Mapping community activities

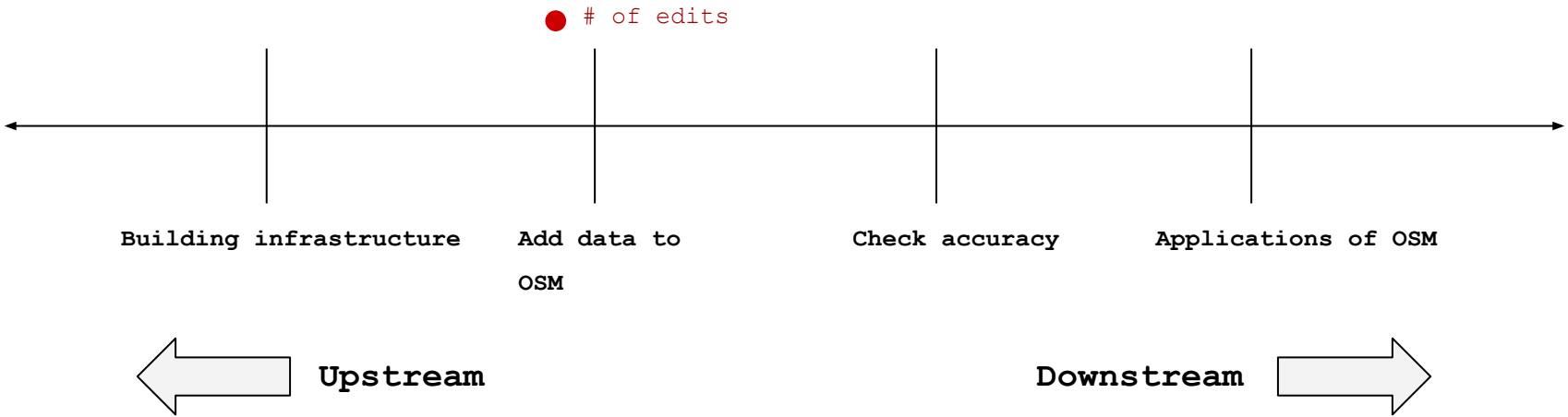


Mapping the mappers



What does power look like within OSM community?

"A part of people's power on OpenStreetMap is the number of changesets or the number of edits they've made. People always look at that. If you're saying or wanting to integrate a new local tagging scheme to try and recognise these local needs, and you weren't from that community [and] if you have only mapped it a couple times, I don't think your voice would really be heard by the wider open community."



Mapping communities

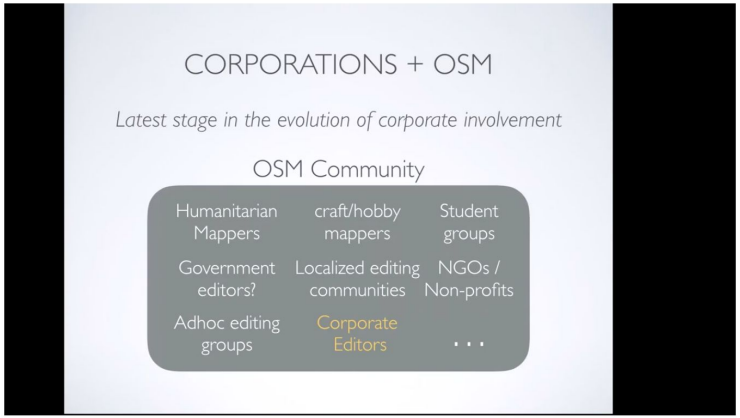
- **Mapping a community → mapping a distributed process**
- **Community engagement**
  - “It’s just a map” → one-time or beginner mappers
  - “It’s not just a map, it’s a database” → upstream role
  - “OSM is a part of a wider industry ” → downstream role
- **Community-sourced =/= Crowd-sourced**
  - “Recursive Publics” (Coleman 2013, Kelty 2008)

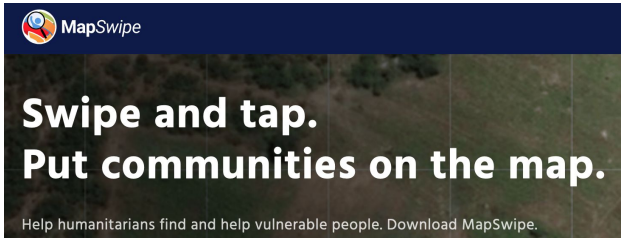
Capitalism

OSM Data is a valuable commodity

$1.67 billion.

Fears of corporate creep → AI/ML applications





OpenStreetMap is Having a Moment

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FACEBOOK AI Research Publications

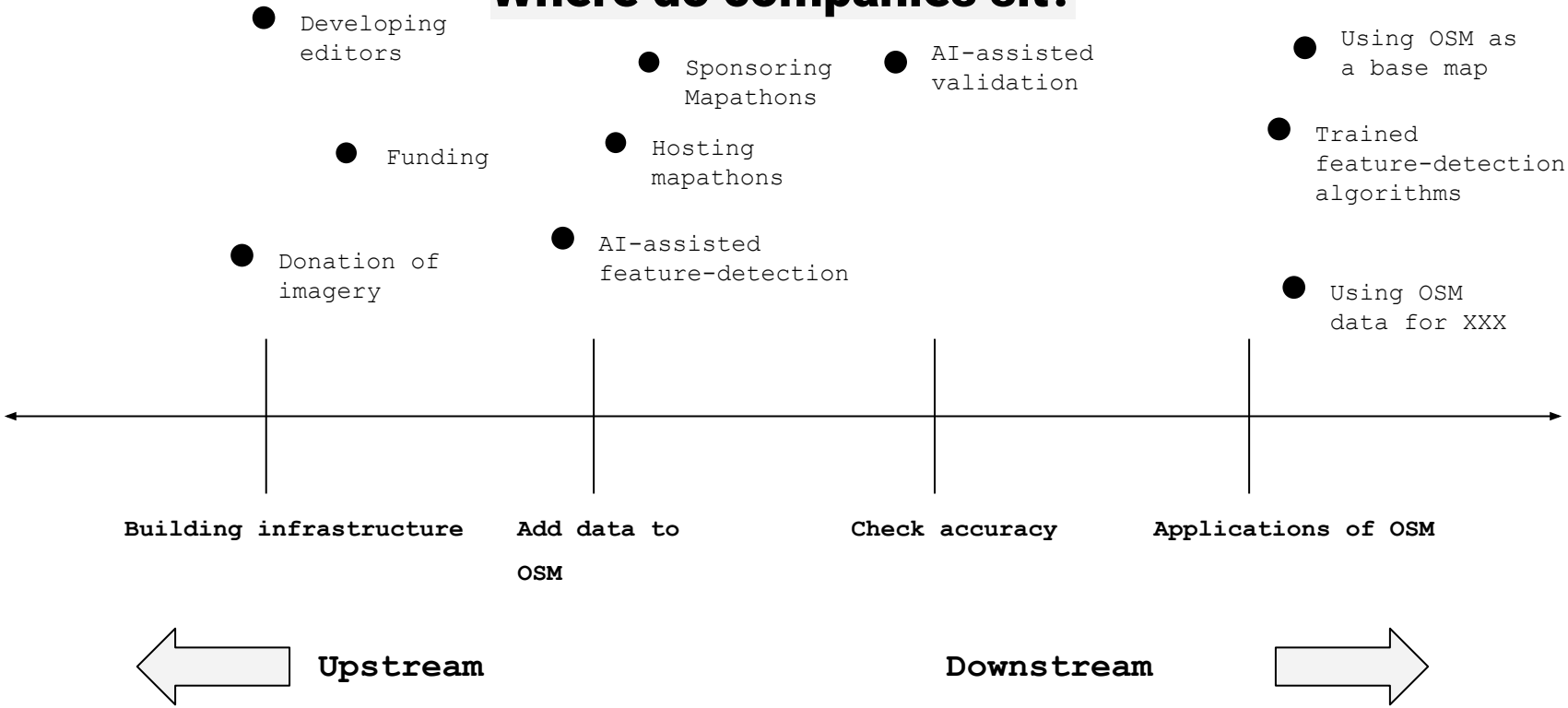
RESEARCH | ML APPLICATIONS

Mapping roads through deep learning and weakly supervised training

7/23/2019

Creating accurate maps today is a painstaking, time-consuming manual process, even with access to satellite imagery and mapping software. Many regions — particularly in the developing world — remain largely unmapped. To help close this gap, Facebook AI researchers and engineers have developed a new method that uses deep learning and weakly supervised training to predict road networks from commercially available high-resolution satellite imagery. The resulting model sets a new bar for the state of the art for accuracy, and because it is able to accommodate regional differences in road networks, it can effectively predict roads around the globe.

Where do companies sit?



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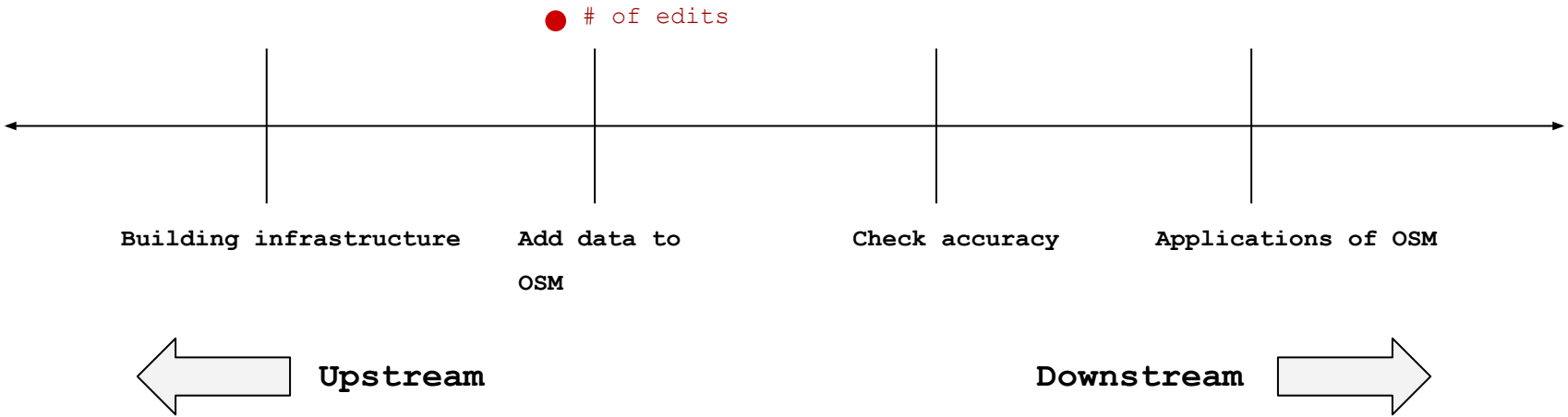
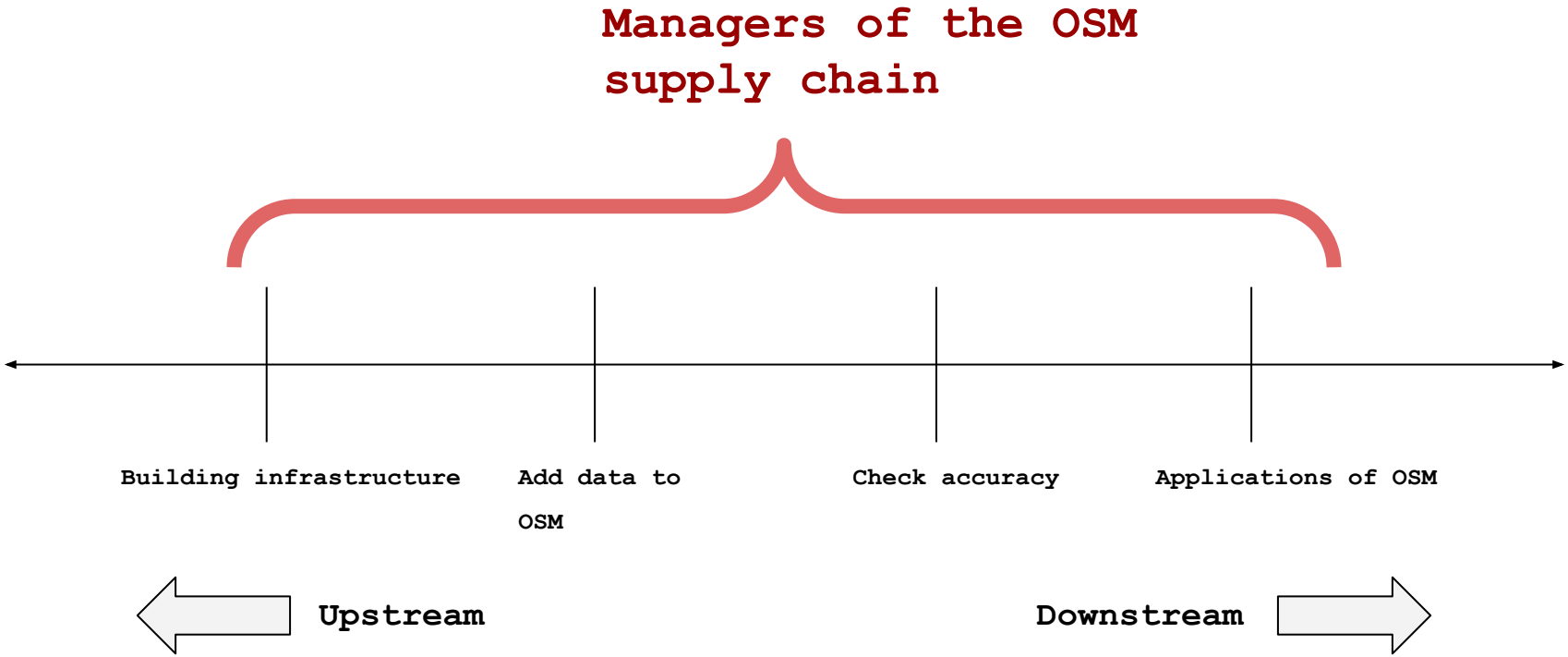
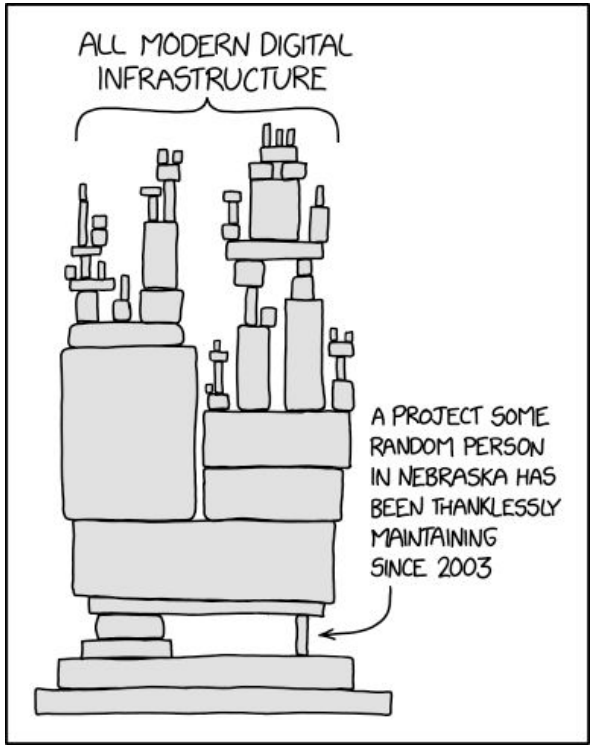


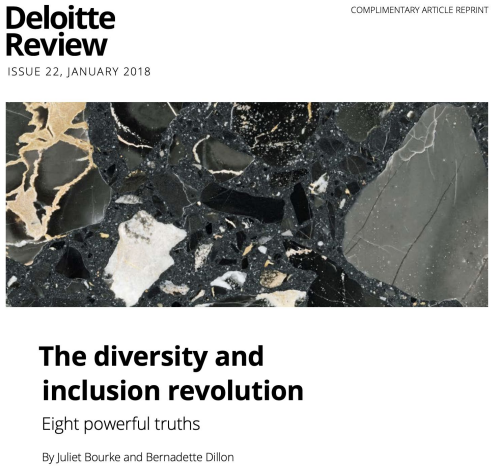
What does power look like within OSM more broadly?



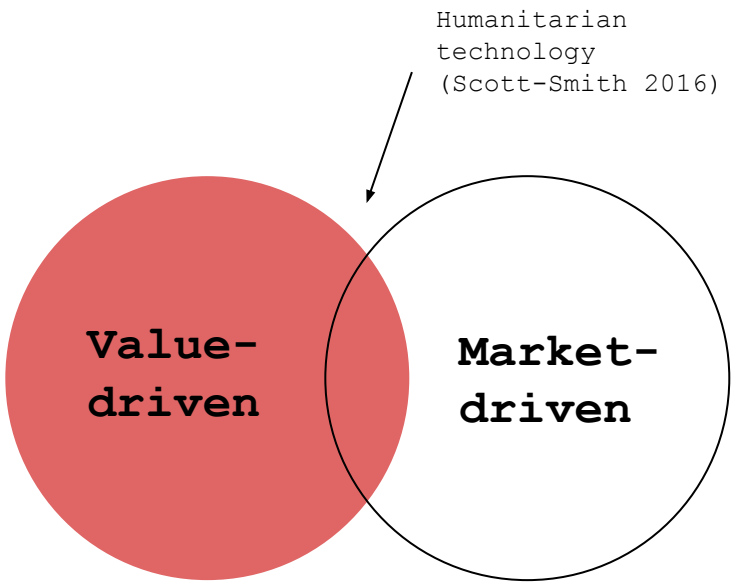
But it’s more complicated than that!



- Infrastructure Maintenance
- Supporting editors
- Employment
- Localisation
- Diversity
- Inclusion
- Codes of Conduct



Humanitarian + F/OSS + Corporate ethos



“Do Well by Doing Good” → Neoliberal economics

Harvard Business Review

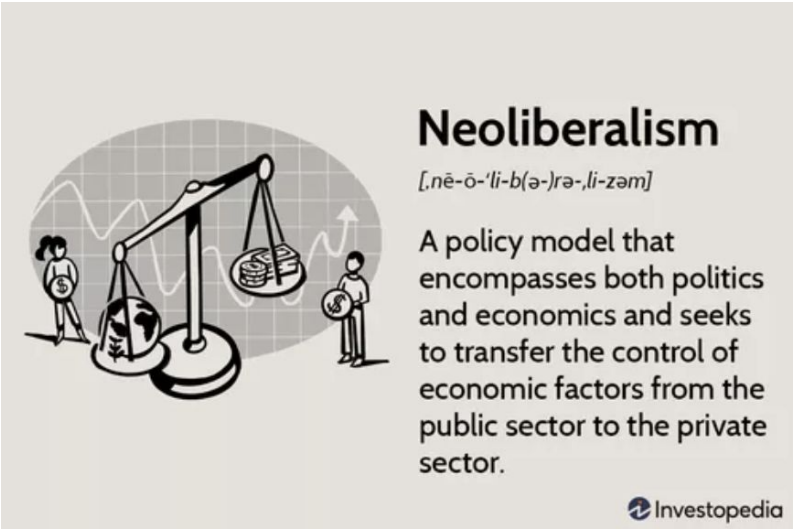
Subscribe Sign In

Organizational Culture

A Brief History of Doing Well by Doing Good

by Video

June 19, 2012



What is this leading towards?

- **Micro-scale & short term: OSM community dynamics**
  - Rapid expansion of humanitarian mapping projects
  - Influx of one-time mappers, low-quality edits
  - Growth of AI-assisted mapping
- **Meso-scale & medium term: humanitarian & corporate actors**
  - OSM map can compete with Google's
  - Trained feature-detection algorithms with diverse datasets
  - *"It's just a map" vs "It's a valuable commodity"*
- **Macro-scale & long term: Wider economic context**
  - Shifting landscape of digital work (Graham 2015, Wark 2019)
  - Growth of automation (Benanav 2020, Jones 2021)
  - Geospatial & humanitarian industries (+ Military)

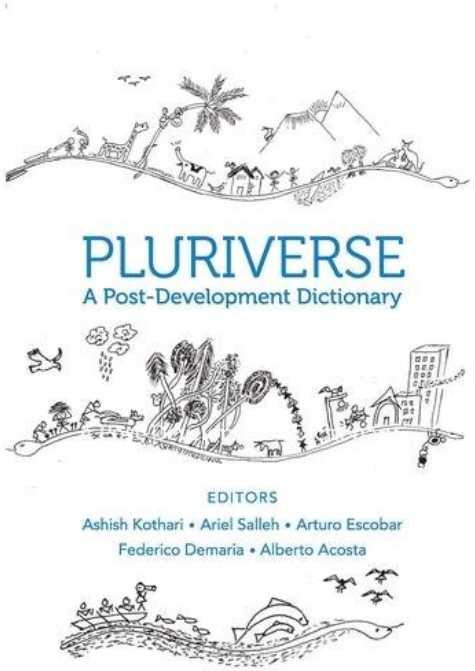
What are the **short**, **medium**, and **long-term implications of these shifts?**

Does OSM aim to be an economic pluriverse?

COUNTER-MAPPING PHILIPPINES

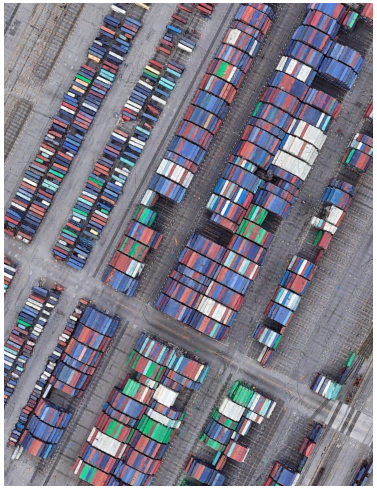
Counter-Mapping the Philippines

An interdisciplinary project that calls for engaged, participatory and reflexive mapping practices, CountermappingPH is an initiative rooted in efforts to consolidate the experiences of dispossession and the struggles of vulnerable communities amidst development aggression and various disenfranchising processes linked with urban transformations and uneven economic growth.



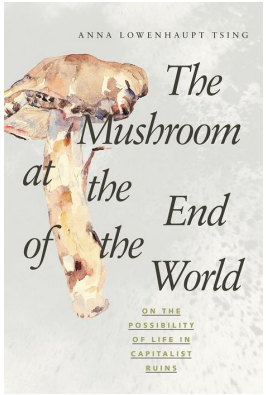
Conclusion
The (open source) mapping supply chain

OpenStreetMap → a supply chain?



- OpenStreetMap is like a supply chain: deeply precarious, full of uncertainty, yet somehow functioning

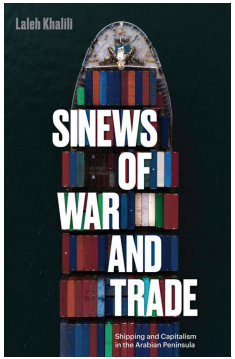
Capitalism & supply chains



Breakpoints and Black Boxes: Information in Global Supply Chains

December 1, 2021 Posted by Webmaster under Volume 31, Number 3, May 2021

Miriam Posner (bio)



THE CONTAINER: STACKING, PACKING, AND MOVING THE WORLD

Contributors: Charmaine Chua.

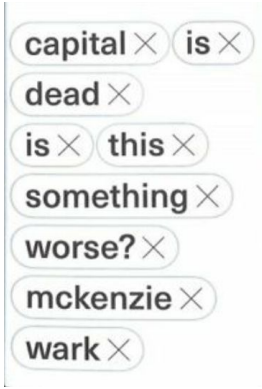
Rethinking Marxism

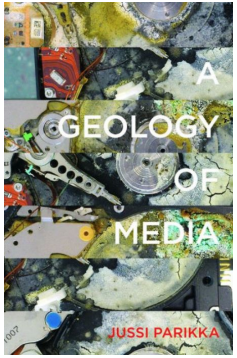
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713395221

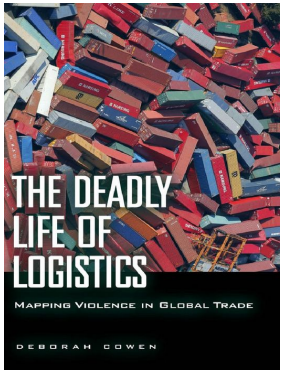
Supply Chains and the Human Condition

Anna Tsing

Online Publication Date: 01 April 2009

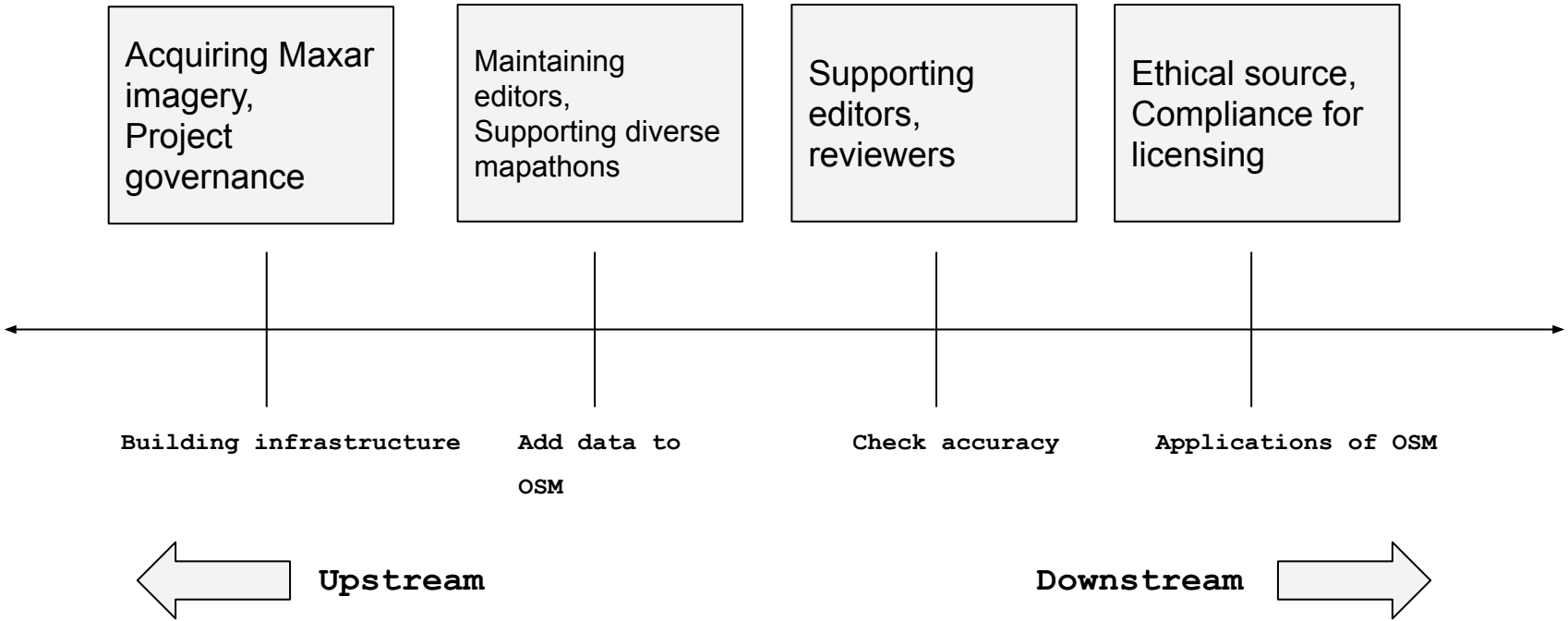




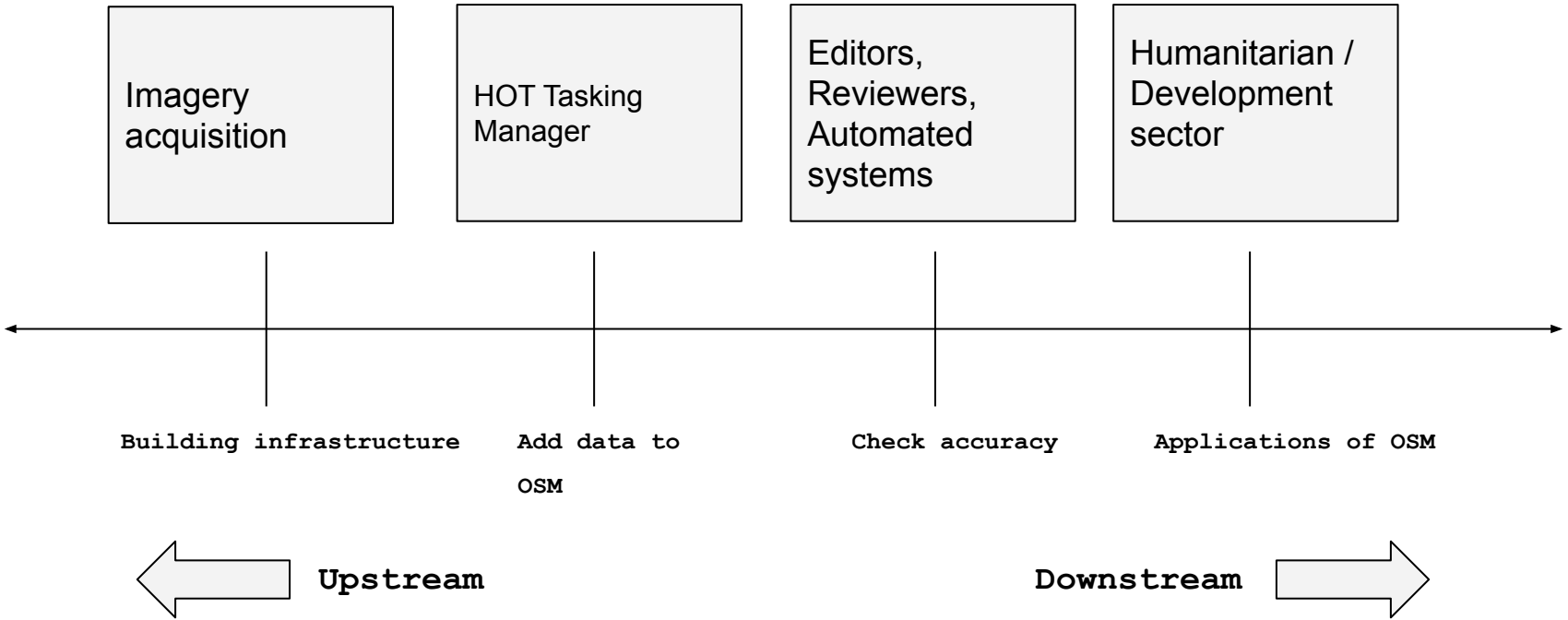


If OSM is a supply chain, what are its breakpoints?

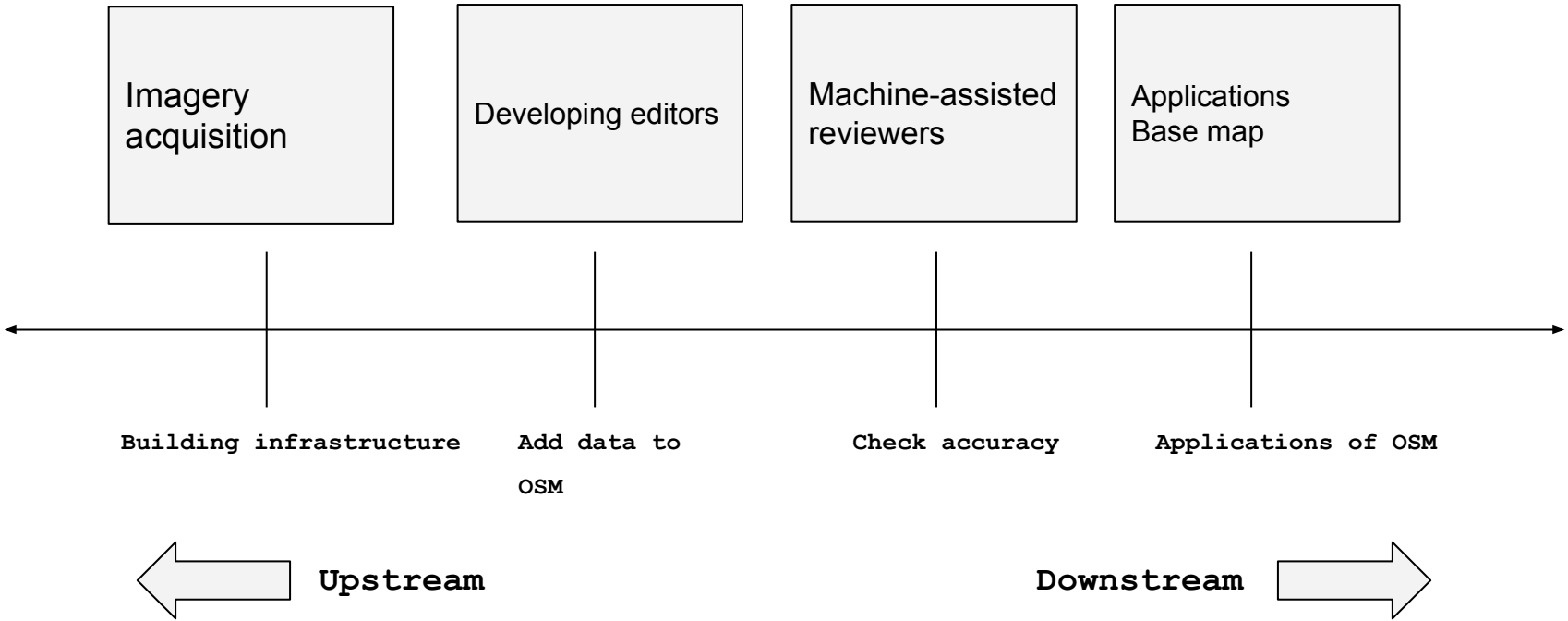
Where is power concentrated?



What role does humanitarian mapping play within this supply chain?



What role does corporate mapping play within this supply chain?



On supply chains and OSM

If OSM is like a supply chain, who should be supported?

Who is invisible or visible?

What kind of map is it enabling → and what kind of world in turn?

Thank you!

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Sources

Crisis maps

- **“This mapping thing could really take off”** (Steve Coast, *State of the Map*, 2007)
- **“OpenStreetMap. A Disaster Waiting to Happen.”** (Mikel Maron, *State of the Map*, 2007)
- **“An Incomplete History of HOT”** (Mikel Maron, *HOT Summit*, 2015)
- **“An Incomplete History of HOT 2”** (Kate Chapman & Mikel Maron, *HOT Summit*, 2020)

Community

- **“HOT: Where do we go from here?”** (Heather Leson, *HOT Summit,* 2016)
- **“The road towards diversity in OSM still needs to be mapped”** (Celine Jacquin, *State of the Map*, 2018)
- **“The road towards diversity in OSM still needs to be mapped”** (Miriam Gonzales, *State of the Map*, 2018)
- **“Caretography - Mapping Difficult Issues with OpenStreetMap during Difficult Times”** (David Garcia & Martin Dittus, *State of the Map*, 2019)
- **“There might have been a misunderstanding…Common misconceptions about OpenStreetMap”** (Frederik Ramm, *State of the Map*, 2020)

Corporations

- **“Corporate Editors in the Evolving Landscape of OpenStreetMap: A Close Investigation of the Impact to the Map & Community”** (Jennings Anderson, *State of the Map*, 2019)
- **“Curious Cases of Corporations on OpenStreetMap”** (Jennings Anderson, *State of the Map*, 2020)
- **“An Incomplete History of Companies and Professionals in OpenStreetMap”** (Mikel Maron, *State of the Map*, 2020)

Sources

"A Call to Correct Narratives about Geospatial Work in the Philippines." *OpenStreetMap*, September 3, 2020. OSM Philippines. https://wiki.openstreetmap.org/w/images/a/aa/A_Call_to_Correct_Narratives_about_Geospatial_Work.pdf.

"A Call to Take Action and Confront Systemic Offensive Behaviour in the OSM Community." Google Docs. Google. Accessed December 13, 2020. https://docs.google.com/document/d/130JCTX9ve4H4ORXznmIVTpXiN3TX8nRGA8ayuTZ9ECI/edit#.

Barbrook, Richard, and Andy Cameron (1996). "The Californian Ideology." *Metamute* 6 (1): 44–72. https://doi.org/10.1080/09505439609526455.

Benanav, Aaron (2020). *Automation and the Future of Work*. Verso Books.

Coleman, E. Gabriella (2012). *Coding Freedom*. Princeton University Press. https://doi.org/10.2307/j.ctt1r2gbj.

Jones, Phil (2021). *Work without the Worker: Labor in the Age of Platform Capitalism*. Verso Books.

Kelty, Christopher (2008). *Two Bits*. Duke University Press. https://doi.org/10.1215/9780822389002.

Graham, Mark, Stefano De Sabbata, and Matthew A. Zook (2015). "Towards a Study of Information Geographies: (Im)Mutable Augmentations and a Mapping of the Geographies of Information." *Geo: Geography and Environment* 2 (1): 88–105. https://doi.org/10.1002/geo2.8.

Redfield, Peter (2016). "Fluid Technologies: The Bush Pump, the LifeStraw® and Microworlds of Humanitarian Design." *Social Studies of Science* 46 (2): 159–83. https://doi.org/10.1177/0306312715620061.

Scott-Smith, Tom (2016). "Humanitarian Neophilia: The 'Innovation Turn' and Its Implications." *Third World Quarterly* 37 (12): 2229–51. https://doi.org/10.1080/01436597.2016.1176856.

Ticktin, Miriam (2017). "A world without innocence." *American Ethnologist 44 (4): 577-590.* https://doi.org/10.1111/amet.12558

Wark, McKenzie (2019). *Capital is dead: is this something worse?*. Verso Books.