

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

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State of the Map 2022
21 August 2022*

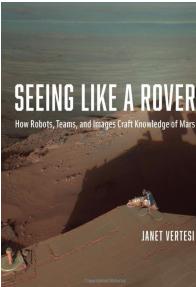
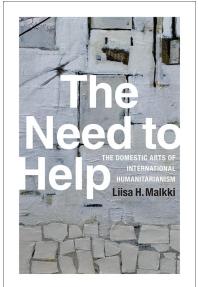
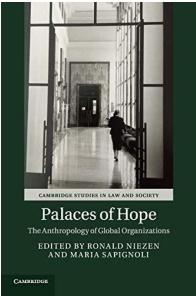
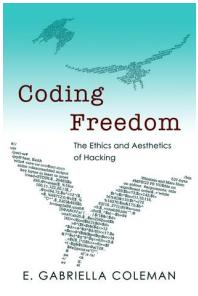
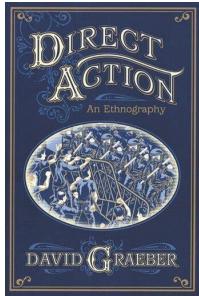
HOT Summit, November 2021

The image shows a video player interface. At the top left are the HOT logo (a red square with a white flame icon) and The Graduate Institute Geneva logo (a red rectangle with white text). At the top right is a small video thumbnail of a woman with dark hair, wearing a light-colored sweater, speaking. The main title in the center reads "Crisis maps, Community, and Corporations (An Anthropologist's Perspective)". Below the title is the author's information: "By: Anne Lee Steele, MA, Anthropology and Sociology, The Graduate Institute of International and Development Studies, Geneva (IHEID), HOT Summit 2021, 22 November 2021". The video player has standard controls at the bottom: play/pause, volume, and a progress bar showing 0:01 / 19:18. Below the video are social sharing icons: likes (5), no me gusta, compartir, clip, guardar, and more. At the bottom left is the channel header "Humanitarian OpenStreetMap Team" with 2620 subscribers. The channel description mentions research from October 2020 to June 2021 within the OpenStreetMap universe. At the bottom right are "SUSCRITO" and a bell icon.

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?**

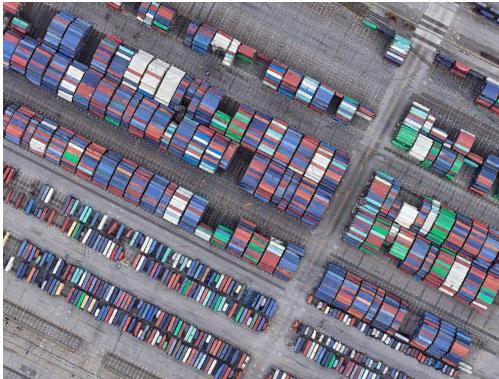
Before OSM, I researched supply chains.



Main_SC_Data

File Edit View Insert Format Data Tools Extensions Help Last edit was made on 1:53 PM by [REDACTED]

A1	Name	Logo	Description	Point_1_Supplier_List	Point_2_Workers_Reme
1	Name				
2	Apple	https://media.bu	Apple is a multin point_1		point_2
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 event page	Logo	Dates	Location	Website	Group photo
2021		July 9 to 11	online	https://2021.stateofthemap.org/	
2020		July 4 to 5	online		
2019		September 21 to 23	Heidelberg, Germany	HOT Virtual Summit 2021 November 22, 2021	
2018		September 28 to 30	Milan, Italy	HOT Virtual Summit 2020 December 4, 2020	
2018		July 28 to 30	Milan, Italy	HOT Summit 2019 Heidelberg, Germany Sept 19 - 20, 2019	
2017		August 18 to 20	Akita, Japan	HOT Summit 2018 Sept 19 - 20, 2018	
2016		September 23 to 25	Brussels, Belgium	HOT Summit 2017 Sept 14 - 15, 2017	
2015		September 4 to 6	Buenos Aires, Argentina (first time in Latin America)	HOT Summit 2016 Sept 4 - 6, 2016	The 2015 conference was sadly canceled due to some organizational problems.
2014		September 7 to 9	Buenos Aires, Argentina (first time in Latin America)	HOT Summit 2015 Sept 7 - 9, 2015	
2013		September 8 to 11	Birmingham, United Kingdom	HOT Summit 2014 Sept 8 - 11, 2014	
2012		September 8 to 11	Tokyo, Japan (first time in Asia)	HOT Summit 2013 Sept 8 - 11, 2013	
2011		September 8 to 11	Denver, United States (first time in North America and outside Euro)	HOT Summit 2012 Sept 8 - 11, 2012	
2010		July 9 to 11	Girona, Spain	HOT Summit 2011 Sept 9 - 11, 2011	
2009		July 10 to 12	Amsterdam, Netherlands	HOT Summit 2010 Sept 10 - 12, 2010	

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?

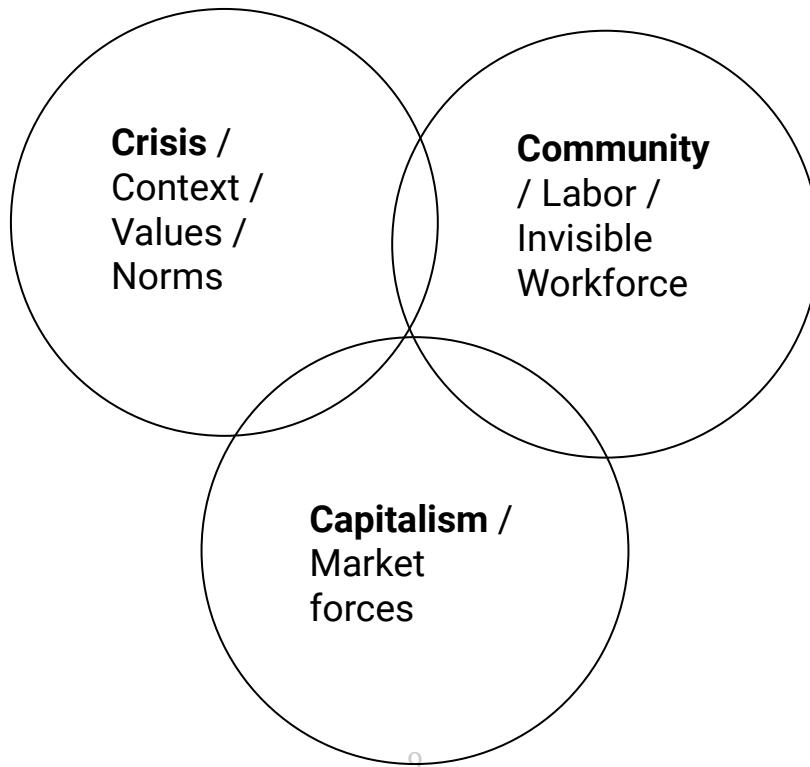
Questions (bigger scale)

- 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?

You are viewing Carsten Gavala ...'s screen

MISSING MAPS: DISASTER PREPAREDNESS - FLOODS, TOGO - KPENDJAL PREFECTURE

anneleesteele

MISSING MAPS - Togo

The German Red Cross is mapping Kpendjal Prefecture as part of a disaster preparedness program related to climate change, in particular flooding, in Togo.

READ MORE

TYPES OF MAPPING

IMAGERY

Any available source

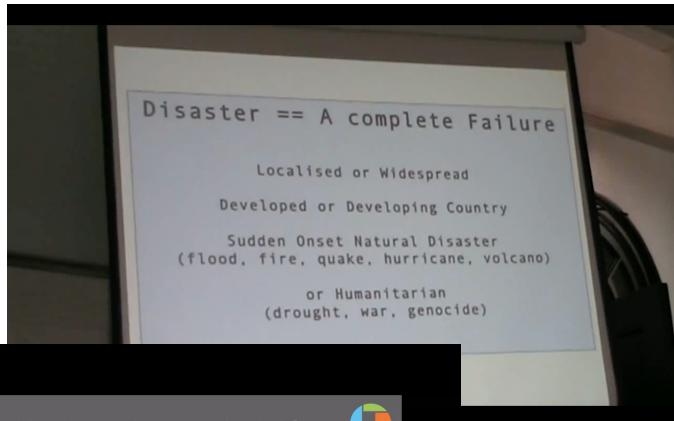
75 total contributes

Beginner Mapper

DESCRIPTION

Overview Description Coordination Teams & Permissions Questions and comments Contributions

Participants Chat Share Screen Reactions



What is mapping, and why do it?

MISSING MAPS

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

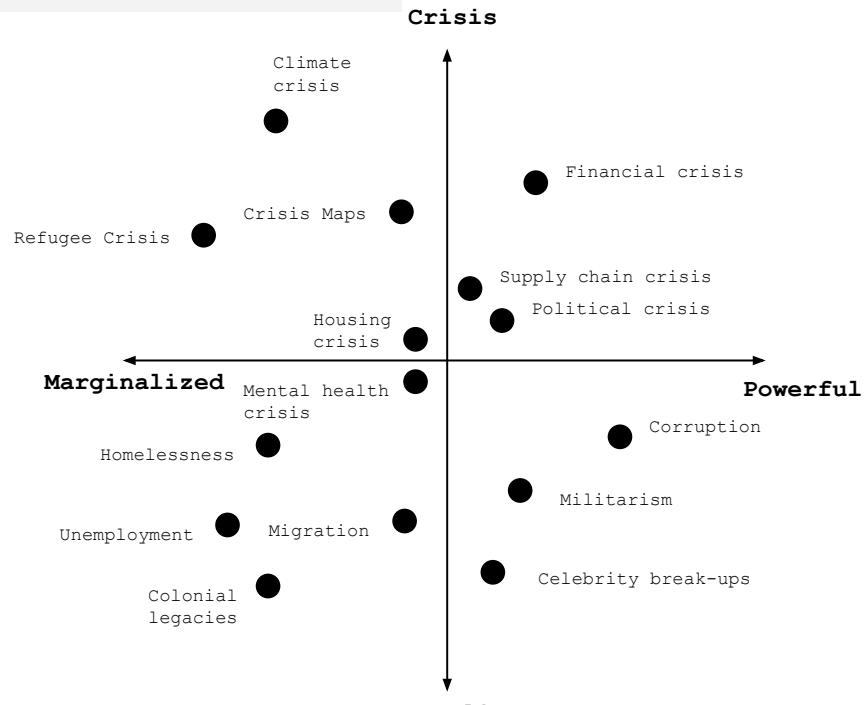
MISSING MAPS

What constitutes a crisis?

Mapmaker @mapmakerdavid · Jul 15

Example: whose gaze is used in a **crisis** map like this? Who gets to define the geography of crises?

...
SEE THE CRISIS CHANGE THE OUTCOME
WHO WE ARE WHAT WE DO
PRESS ROOM CRISIS UPDATES METHODOLOGY NEWS
SUBSCRIBE ACCESS ACAPS API
CrisisInSIGHT
Home - Crisis updates
Search a country
CRISIS SEVERITY
Very high severity
High severity
Medium severity
Low severity
Very low severity
Undetermined severity
U n d e r d e t e r m i n e d s e v e r i t y V e r y l o w s e v e r i t y (0 - 1) L o w s e v e r i t y (1 . 1 - 2) M e d i u m s e v e r i t y (2 . 1 - 3) H i g h s e v e r i t y (3 . 1 - 4) V e r y h i g h s e v e r i t y (4 . 1 - 5) R i s k
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d

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 UTC for comments and signatures. We thank everyone for their participation and look forward to the next steps. Please add your name and signature below. Please add your SubCommittee to work on implementation. This document will be added to the OSM wiki. We sincerely thank you for your support and help with a pdf of this document. I am so moved by your support, Let's help OSM shift together.

Please free to send questions and/or comments to heatherison@gmail.com. We will collaborate with the LCCWG/ODC 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.
Secretary
Subpoena
push Forward
This statement is endorsed by the following OSM organizations and individuals:
Appel à l'action pour contrer les comportements agressifs et systémiques dans la communauté OSM
Résumé
Llamada a la acción para contrarrestar el comportamiento agresivo sistémico en la comunidad OSM

OSM → A community in crisis?

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



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Technical

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

OpenStreetMap is Having a Moment

The Billion Dollar Dataset Next Door

 Joe Morrison Nov 18, 2020 · 9 min read



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

Pages: 1

Russ McD

2019-07-25 10:55:15

#1

Member



This article appeared on Thaivisa :

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

Naturally I could not resist a comment...

From: Headford & Chiang Mai.

Registered: 2011-04-17

Posts: 292

What Facebook fail to realize is the inescapable manner in which their AI mapping workflow. 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

...read more

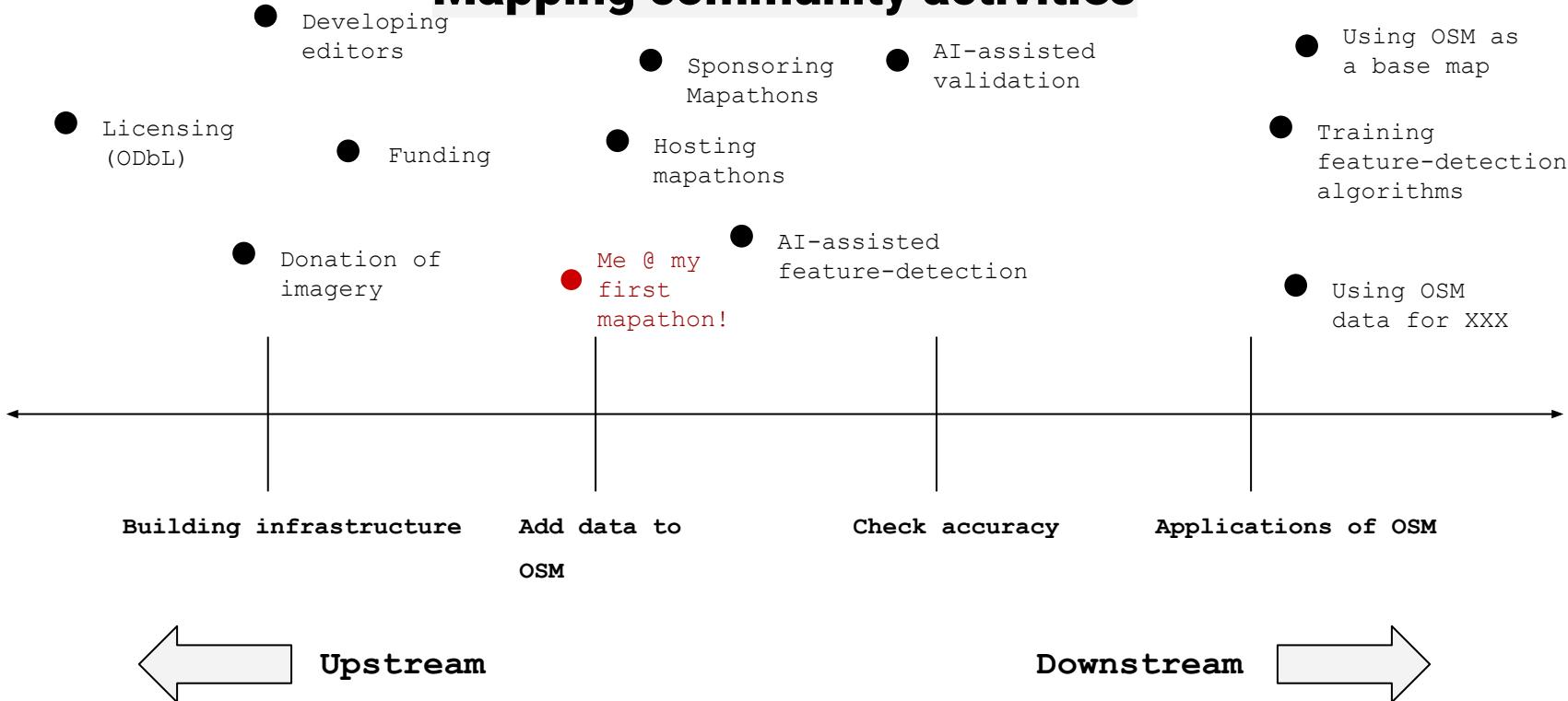
Mapping crises

- “**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

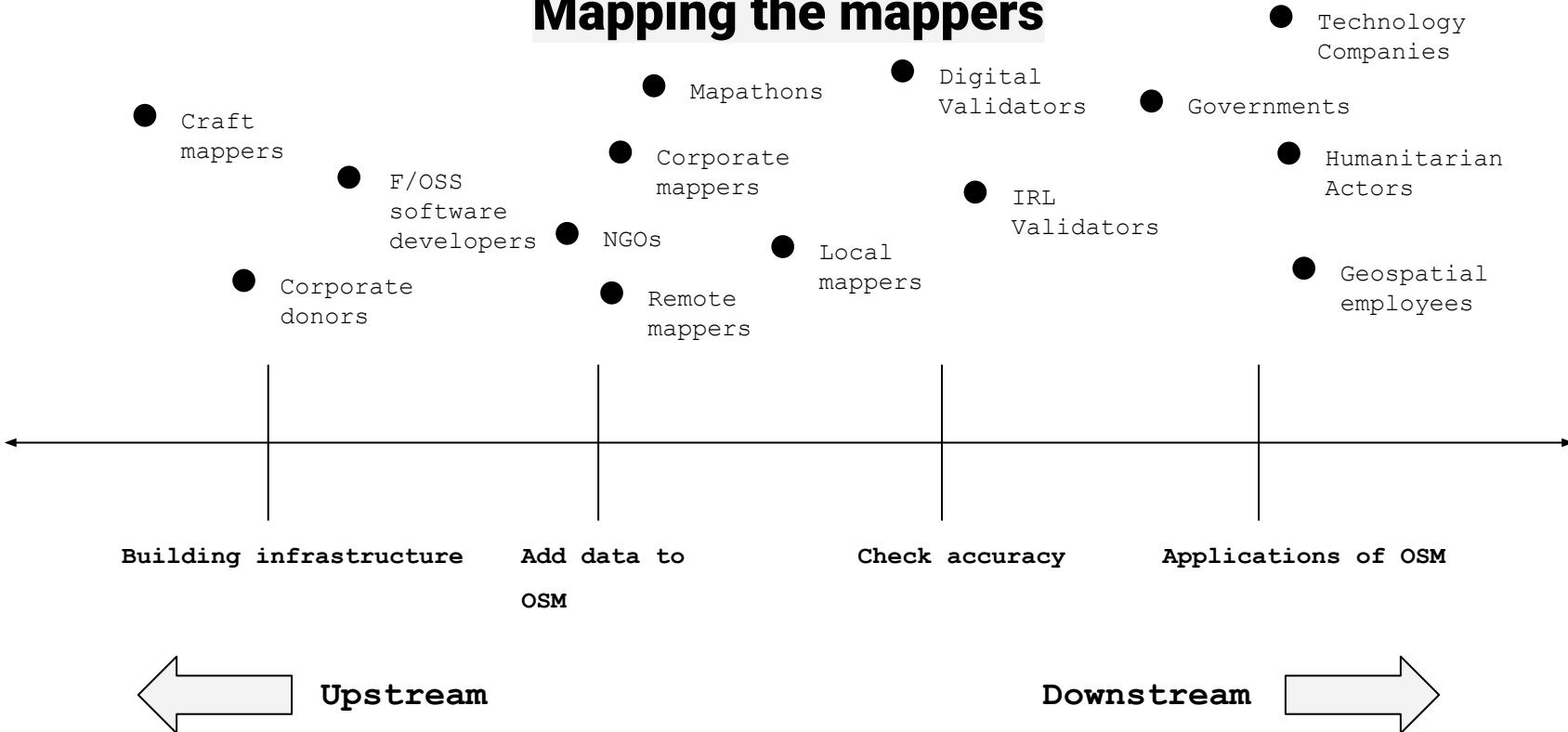
How does the split between community-based & technical-based questions affect how communities are being developed?

Communities

Mapping community activities

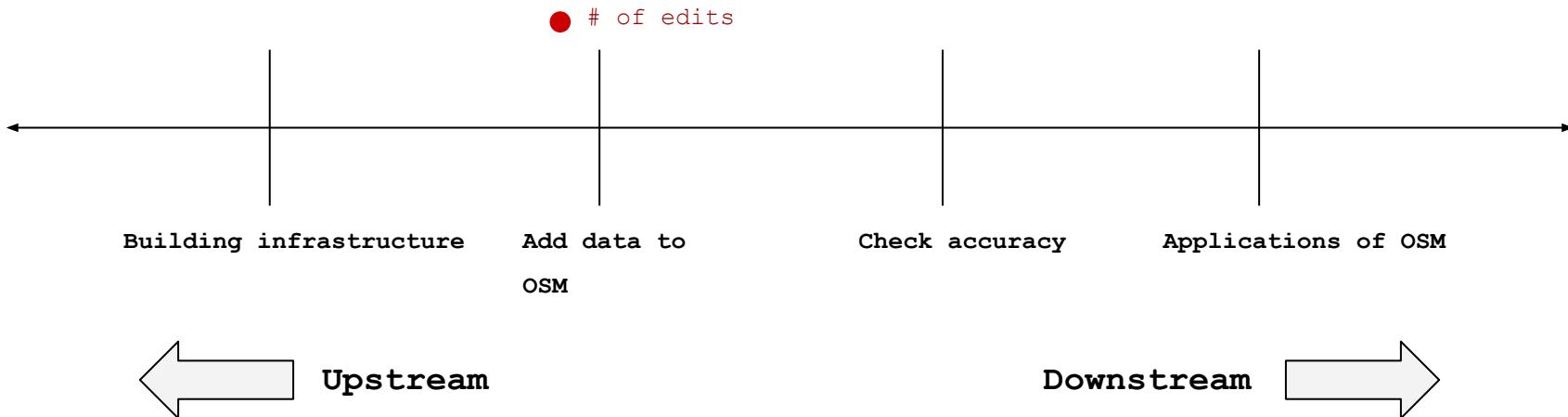


Mapping the mappers



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



While OSM is a tremendously valuable asset to the mapping community, (Accenture analysis values it at more than \$1.67 billion¹¹), making the most of it requires careful and informed navigation. Expert teams and tools can help develop and execute a robust OSM strategy and there are active communities of professional and volunteer developers coordinating to improve data quality and richness globally, which is helping OSM evolve in three primary ways:

\$1.67 billion.

Fears of corporate creep → AI/ML applications



OpenStreetMap is Having a Moment

The Billion Dollar Dataset Next Door



Joe Morrison Nov 18, 2020 · 9 min read



FACEBOOK AI

Research Publications

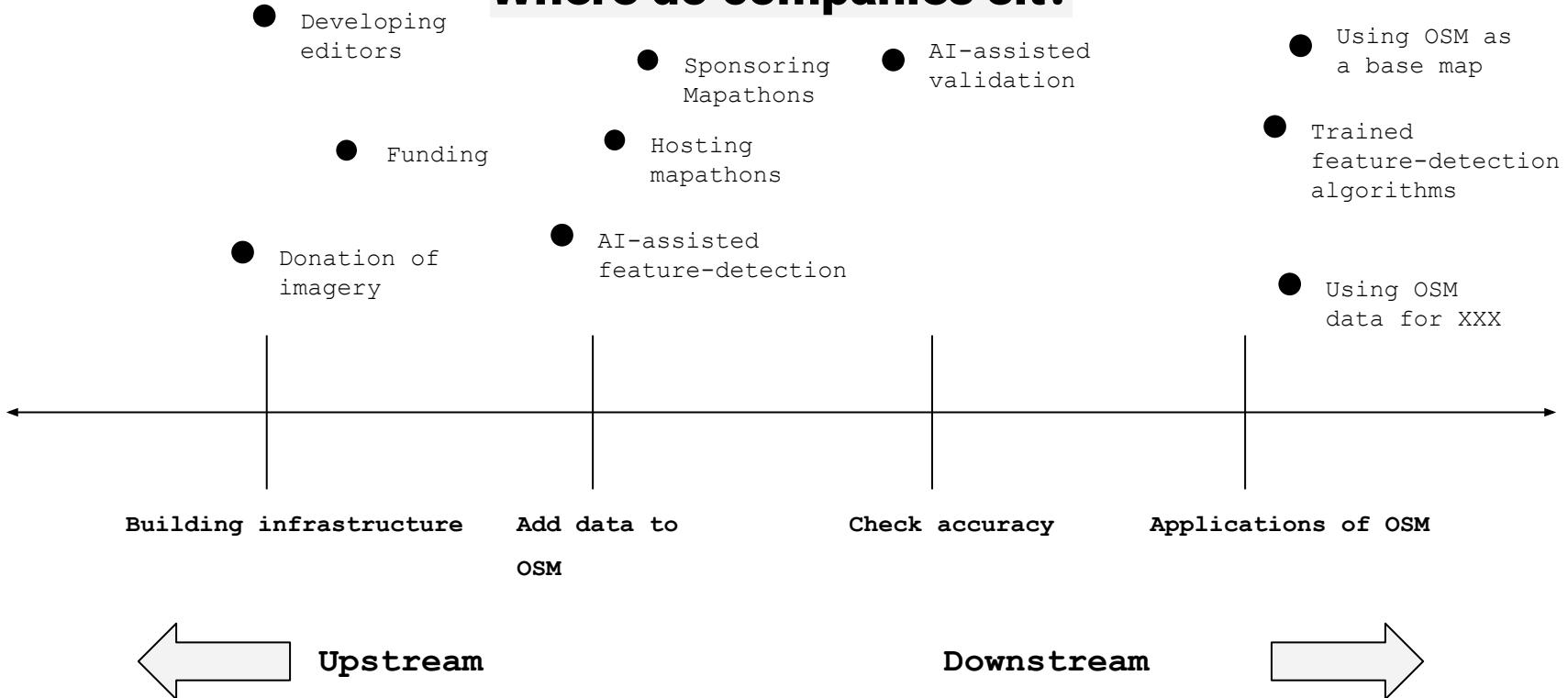
RESEARCH | ML APPLICATIONS

Mapping roads through deep learning and weakly supervised training

7/23/2019

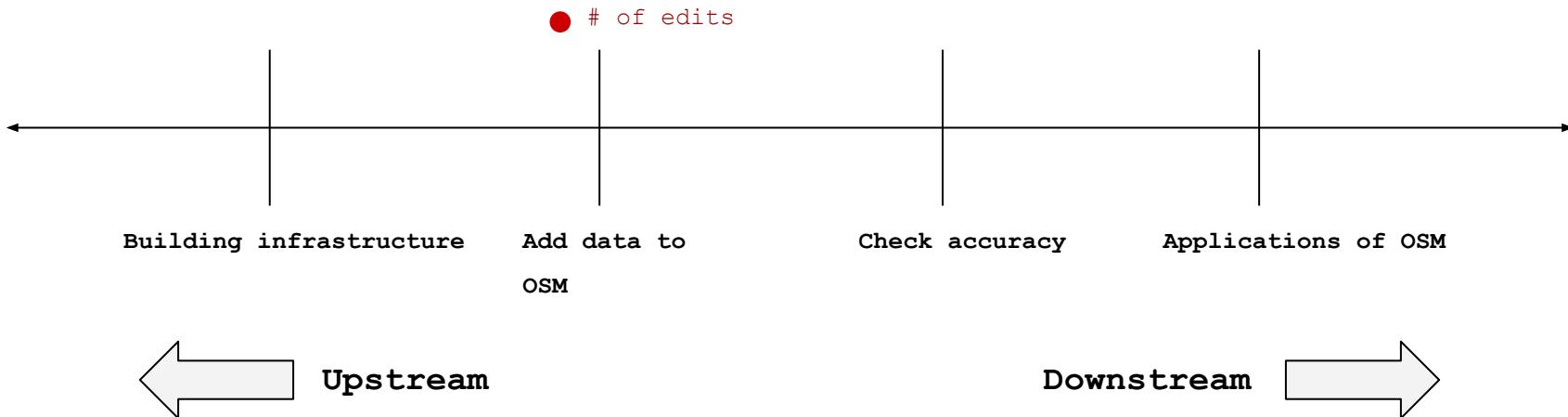
Creating accurate maps today is a painstaking, time-consuming manual process, even with access to satellite imagery and mapping software. Many regions — particularly in the developing world — remain largely unmapped. To help close this gap, Facebook AI researchers and engineers have developed a new method 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?



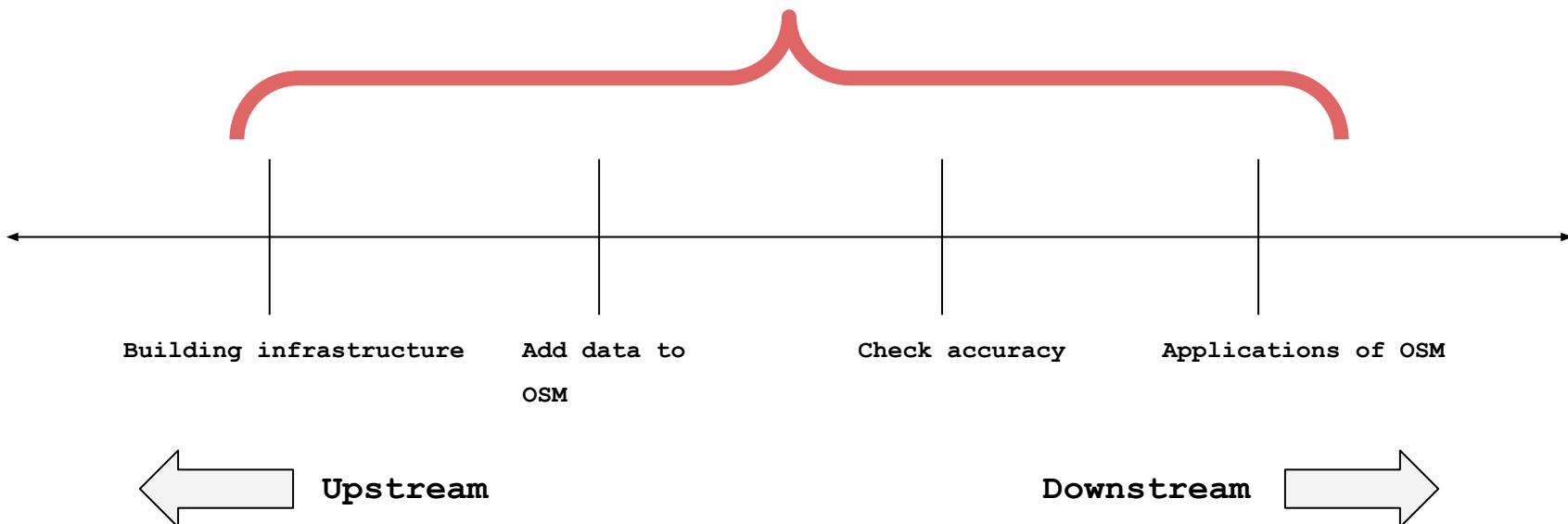
What does power look like within OSM community?

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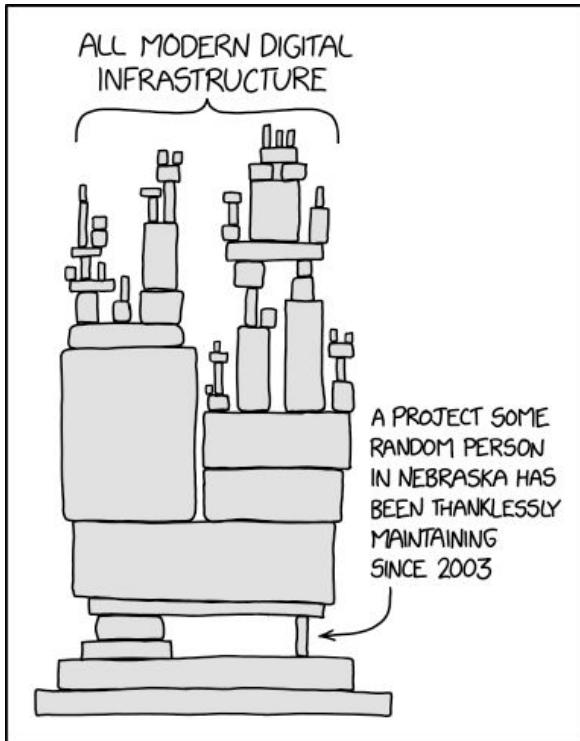


What does power look like within OSM more broadly?

Managers of the OSM supply chain



But it's more complicated than that!

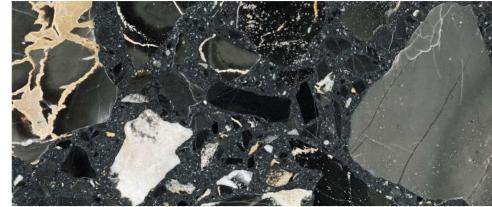


- Infrastructure
- Maintenance
- Supporting editors
- Employment
- Localisation
- Diversity
- Inclusion
- Codes of Conduct

**Deloitte
Review**

ISSUE 22, JANUARY 2018

COMPLIMENTARY ARTICLE REPRINT

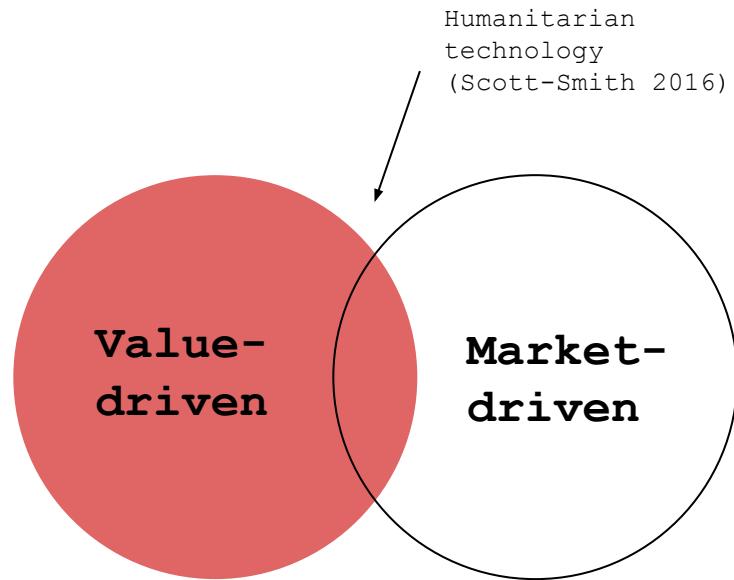


The diversity and inclusion revolution

Eight powerful truths

By Juliet Bourke and Bernadette Dillon

Humanitarian + F/OSS + Corporate ethos



“Do Well by Doing Good” → Neoliberal economics



**Harvard
Business
Review**

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Organizational Culture

A Brief History of Doing Well by Doing Good

by Video

June 19, 2012



Neoliberalism

[nē-ō-'li-b(ə-)rə-,li-zəm]

A policy model that encompasses both politics and economics and seeks to transfer the control of economic factors from the public sector to the private sector.

 [Investopedia](#)

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?



≡

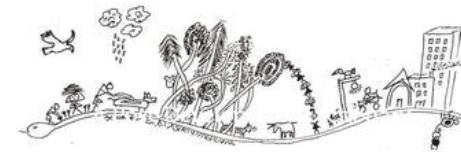
Counter-Mapping the Philippines

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.



PLURIVERSE

A Post-Development Dictionary



EDITORS

Ashish Kothari • Ariel Salleh • Arturo Escobar
Federico Demaria • Alberto Acosta



Conclusion

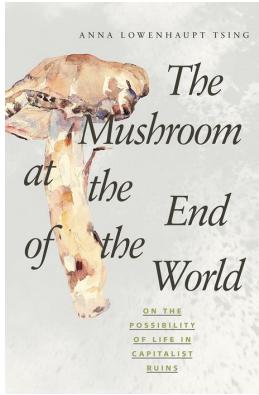
The (open source) mapping supply chain

OpenStreetMap → a supply chain?



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

Capitalism & supply chains



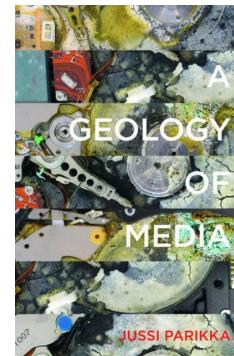
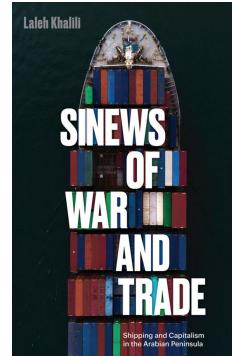
Breakpoints and Black Boxes: Information in Global Supply Chains

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

Miriam Posner (bio)

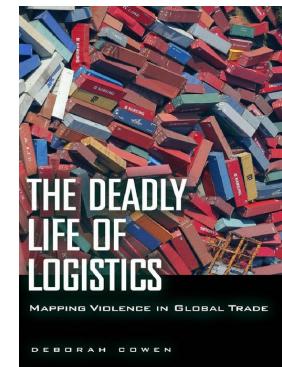


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wark ×

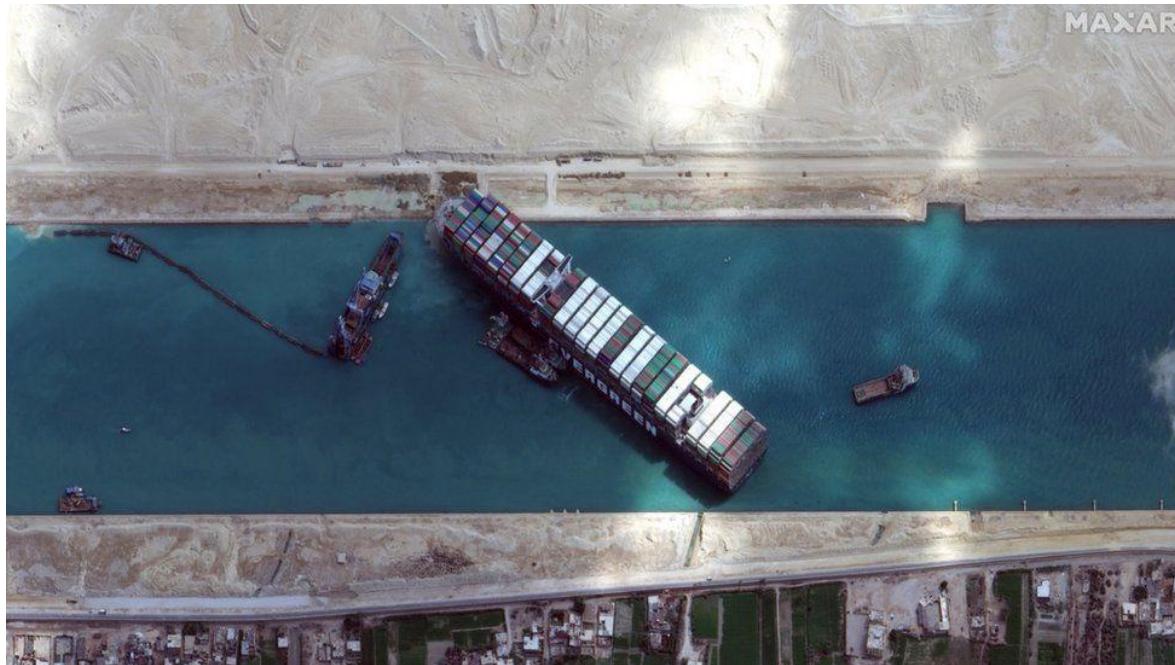


**THE CONTAINER:
STACKING,
PACKING, AND
MOVING THE WORLD**

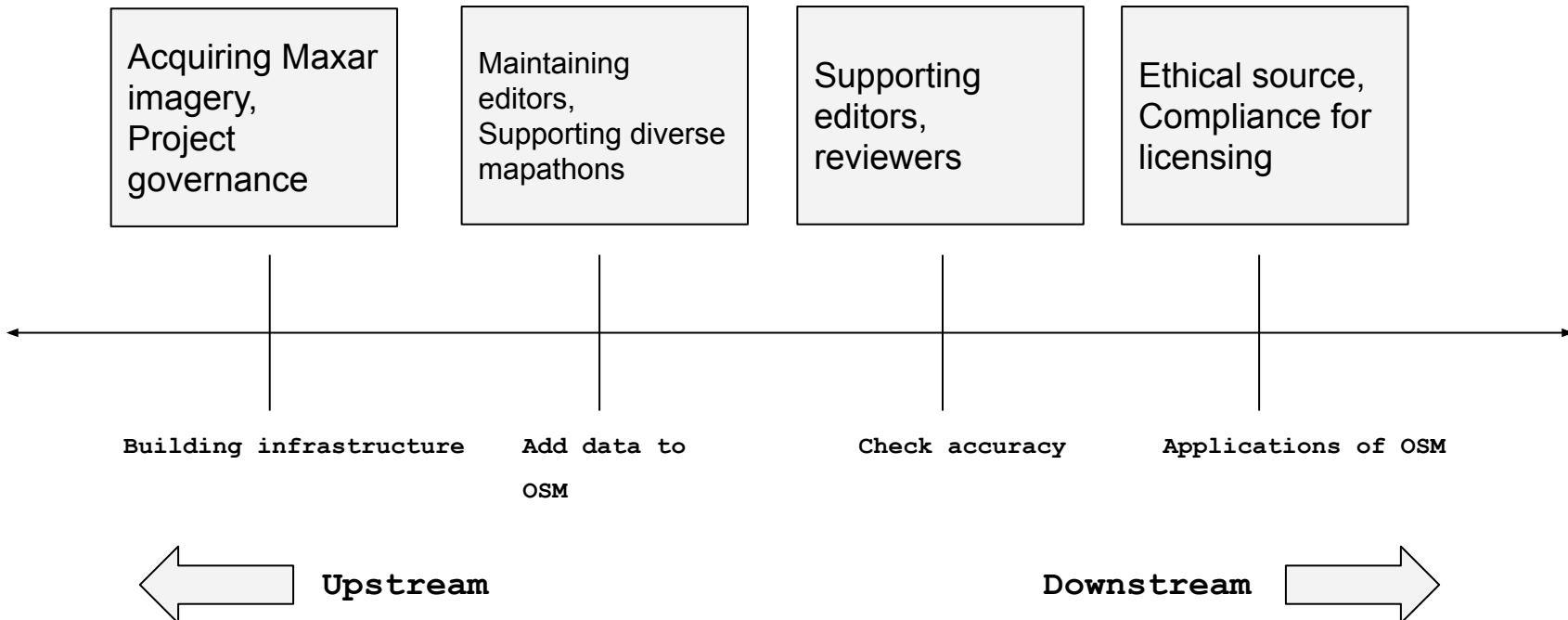
Contributors [Charmaine Chua](#).



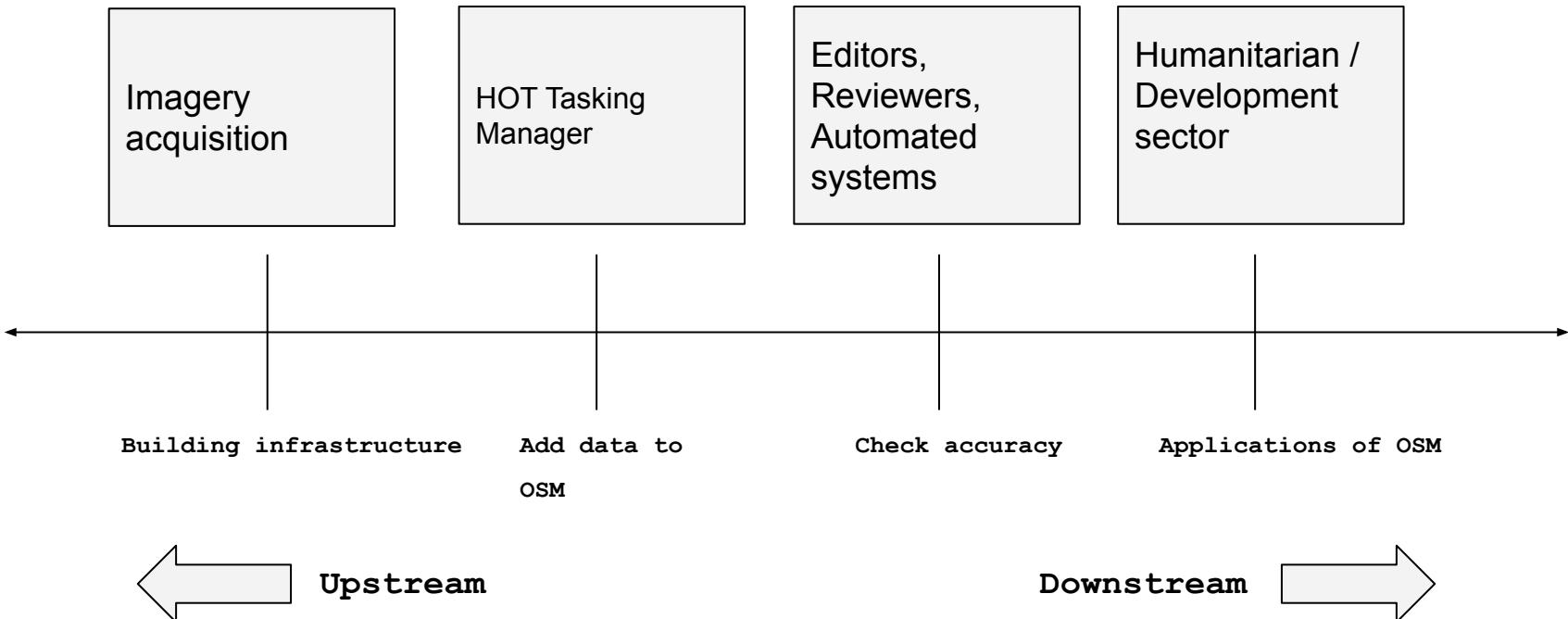
If OSM is a supply chain, what are its breakpoints?



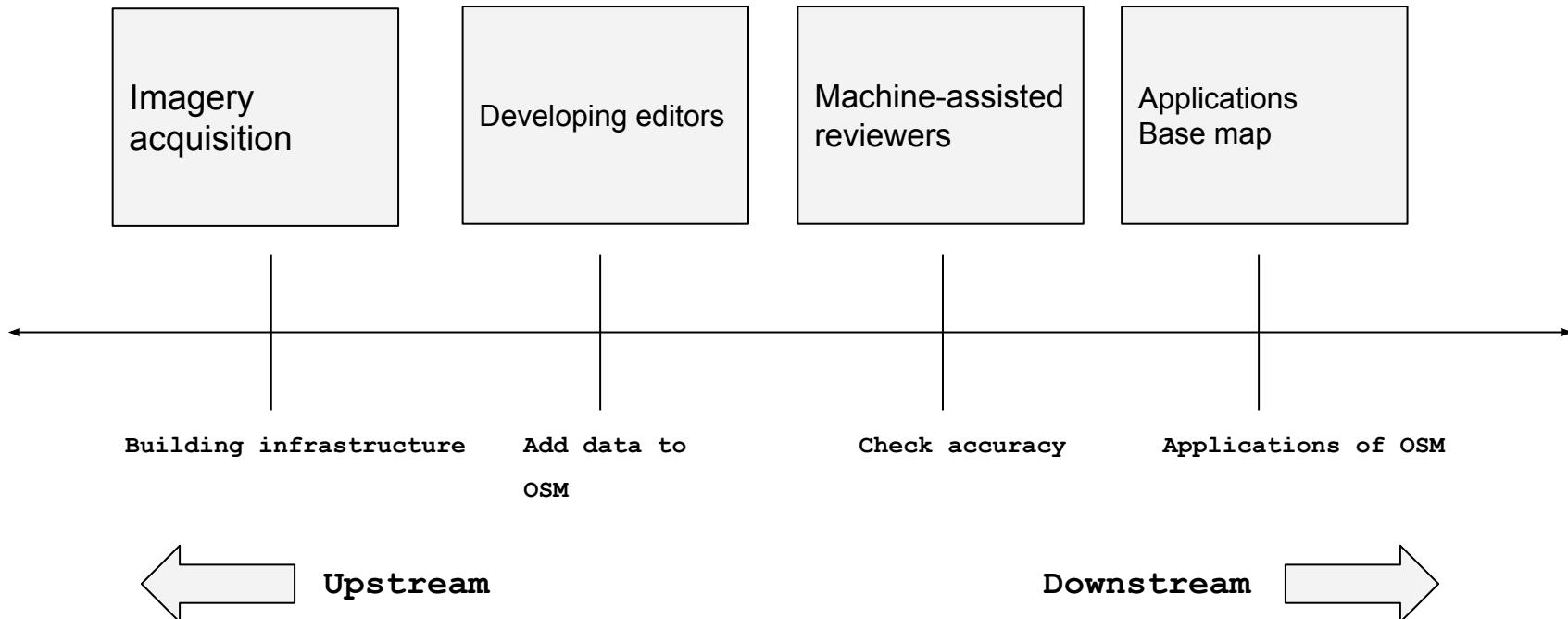
Where is power concentrated?



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!

Contact:

@aleesteele

aleesteele@gmail.com

Sources

Crisis maps

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- “**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)
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- “**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)

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