Oxford Internet Institute
University of Oxford

Knowledge Equity and Spatial Justice on Wikipedia

Martin Dittus and Mark Graham
Oxford Internet Institute · geography.oii.ox.ac.uk

WikiArabia 2019, 4-6 October 2019
Marrakesh, Morocco

300 languages, *millions* of articles, *millions* of contributors

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Wikipedia is incredibly rare as a **non-profit** online platform.

It places **collective benefit** at its centre.

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The vision: to make the sum of **all human knowledge** available to **every person** in the world

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How close are we to this vision?

For example, **which regions of the world have been written about** on Wikipedia today?

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Geographic representation on Wikipedia

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Articles can have geographic coordinates ("geotags")

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Geotagged Articles in English Wikipedia
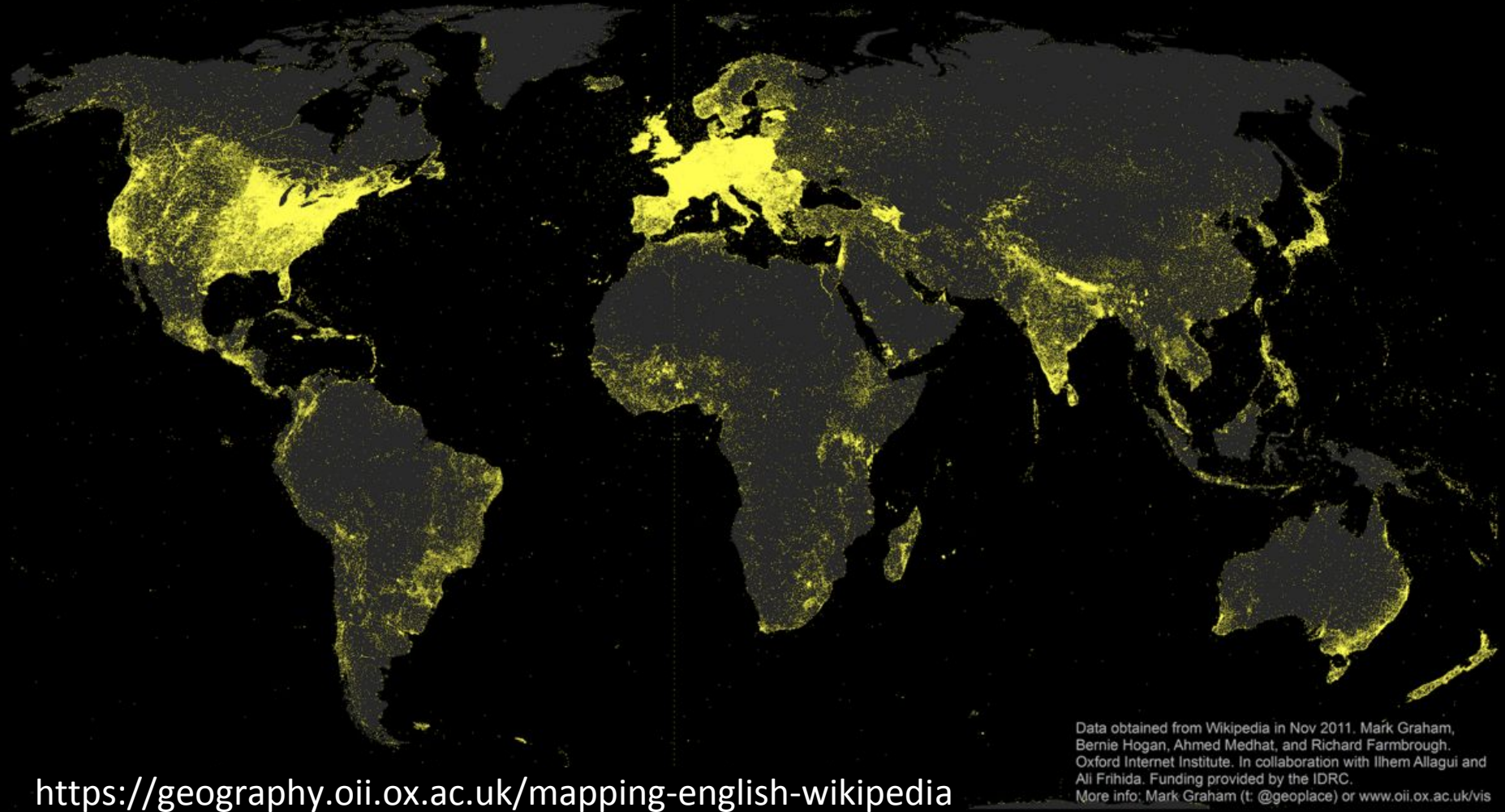
Data obtained from Wikipedia in Nov 2011. Mark Graham, Bernie Hogan, Ahmed Medhat, and Richard Farmbrough. Oxford Internet Institute. In collaboration with Ilhem Allagui and Ali Frihida. Funding provided by the IDRC.
More info: Mark Graham (t: @geoplace) or www.oii.ox.ac.uk/vis

https://geography.oii.ox.ac.uk/mapping-english-wikipedia

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Information geography: seeking to understand an increasingly digital world

In traditional geography, people and places are defined by their **physical locations** and properties.

Does this place have a castle?

Yet our lives and the places we live in are increasingly digital, and are increasingly defined by their **virtual attributes** and digital shadows.

Does this place have a Wikipedia page?

Graham, Zook, Boulton (2013). Augmented Reality in Urban Places: contested content and the duplicity of code.

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For Wikipedia, this revealed an **imbalance of *representation***

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Why do we see this **imbalance of representation**?

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Local participation requires *connectivity*
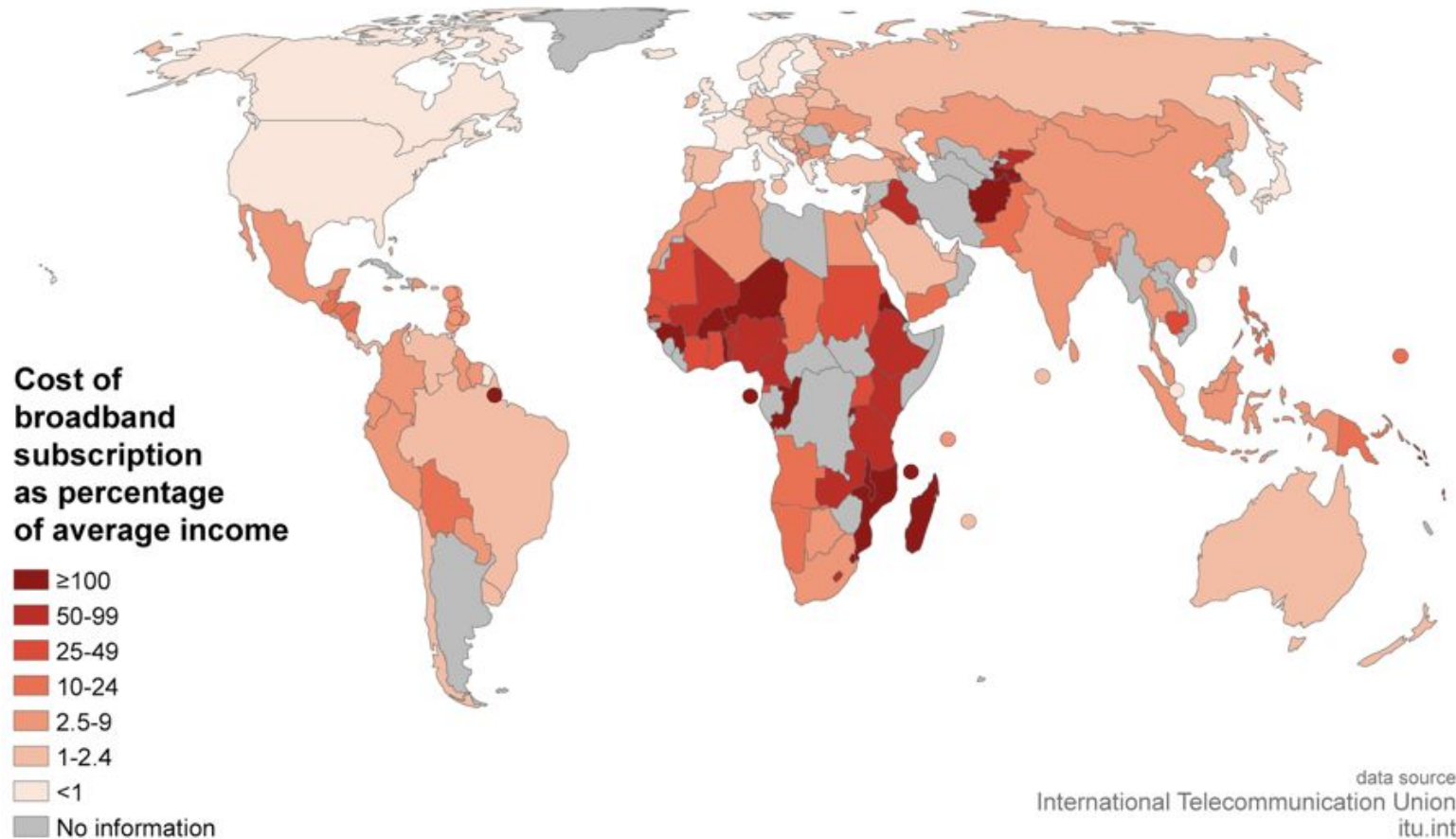
The cost of broadband subscriptions relative to the gross national income per capita, in 2013. Graham et al. (2015), "Towards a Study of Information Geographies"

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In other words, we also see an **imbalance of _participation_**

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Who has the capacity to tell their own story?

Contributions to local content by local editors

- 0 - 24.9%
- 25 - 49.9%
- 50 - 74.9%
- 75 - 86.0%
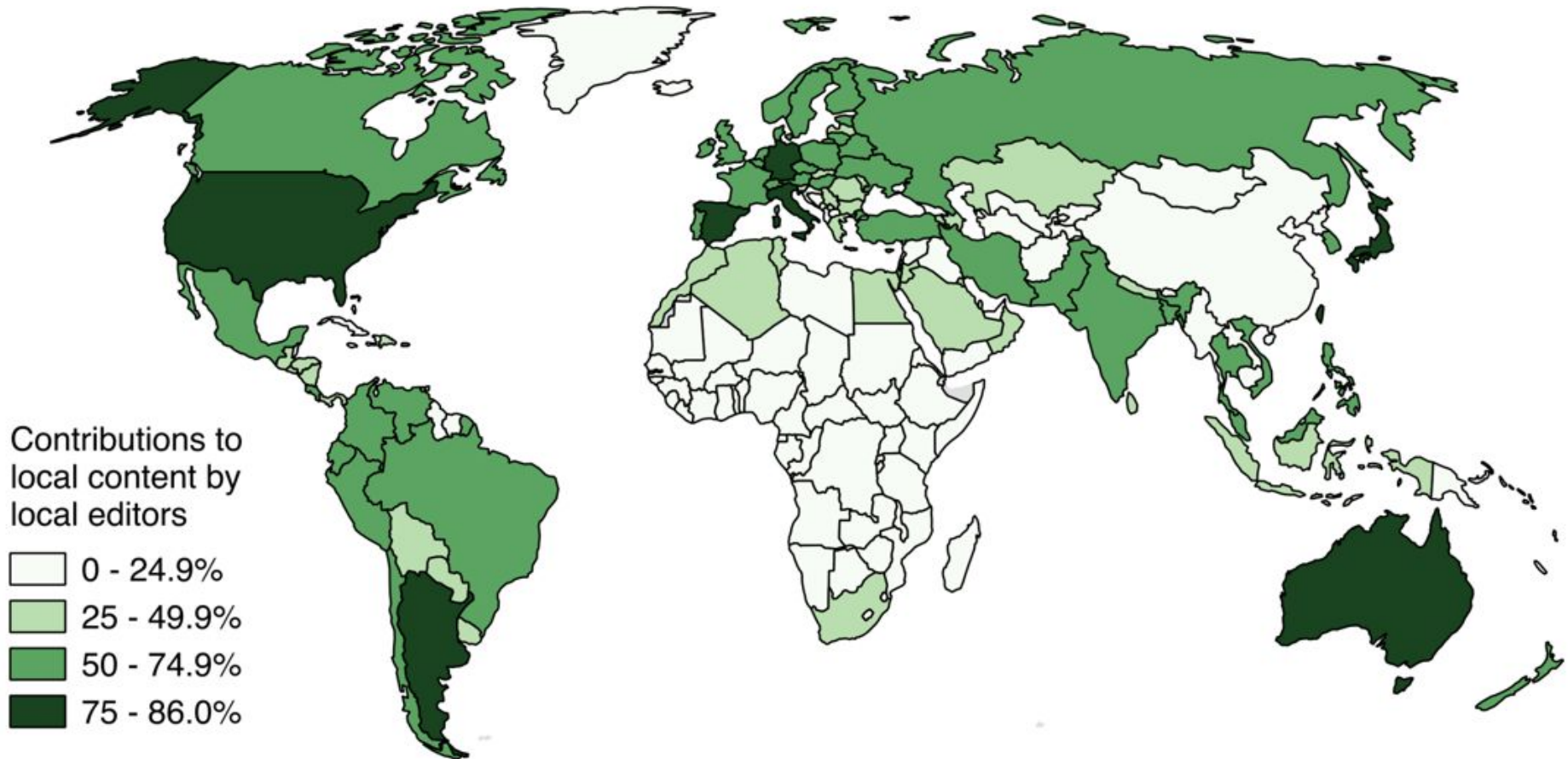
Share of edits from domestic IP addresses (in %)
https://geography.oii.ox.ac.uk/the-uneven-geography-of-wikipedia/

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An unintentional barrier: contribution norms

Children stay close to their mothers when young; most of the childrearing is done by women. Yanomami groups are a famous example of the approximately fifty documented societies that openly accept polyandry,[14] though polygyny among Amazonian tribes has also been observed.[citation needed] Many unions are monogamous. Polygamous families consist of a large patrifocal family unit based on one man, and smaller matrifocal subfamilies: each woman's family unit, composed of the woman and her children. Life in the village is centered around the small, matrilocal family unit, whereas the larger patrilocal unit has more political importance beyond the village.

https://en.wikipedia.org/wiki/Yanomami

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Local contributors need **local-language** *references…* which are not always available.
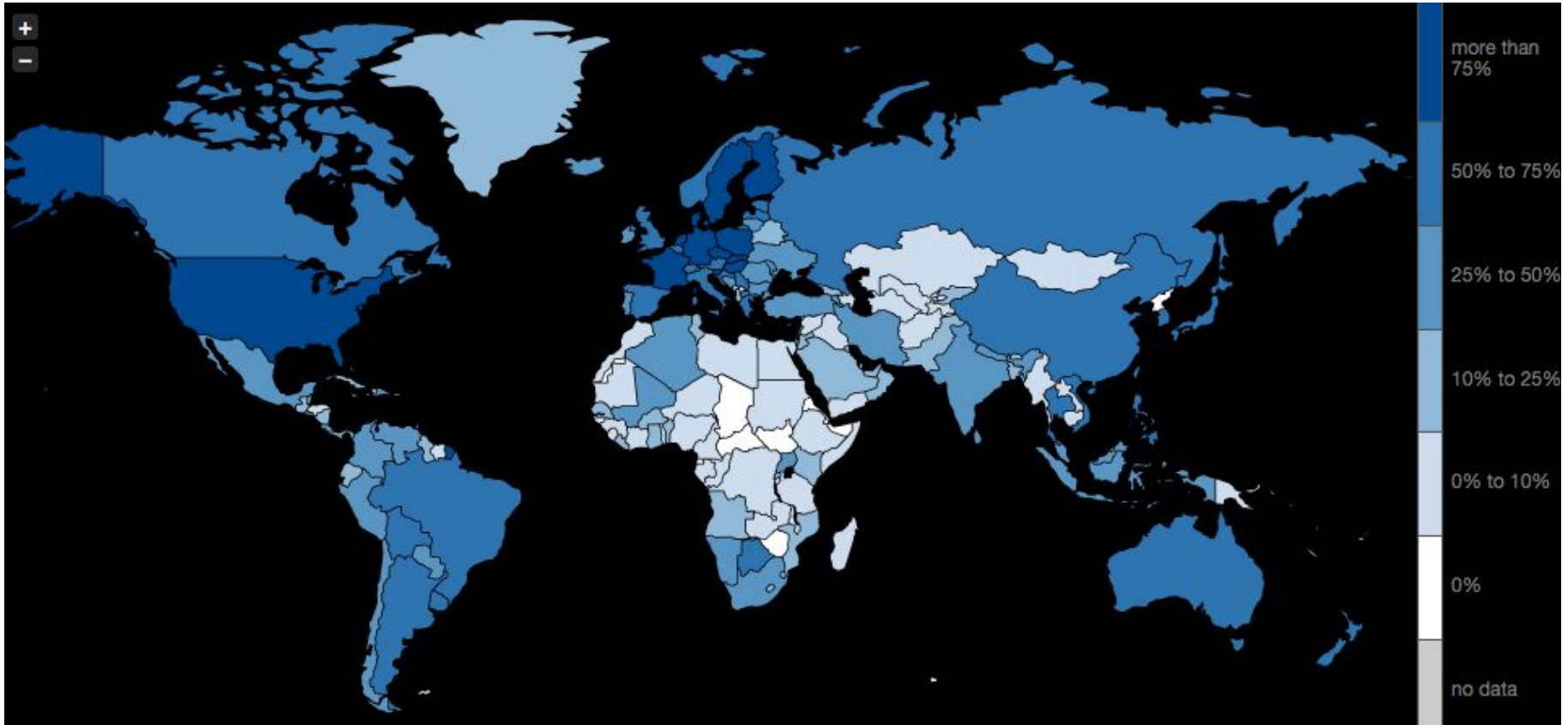
Source localness for Wikipedia articles. Interactives at http://www.shilad.com/localness/
Sen et al. (2015), "Barriers to the Localness of Volunteered Geographic Information"

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The most detailed representations are not always written in a local language

The largest number of Wikipedia articles about this country are written in...

- the dominant local language
- a local language, but not the dominant one
- a foreign language
- Excluded from study

Mark Graham and Martin Dittus, Oxford Internet Institute
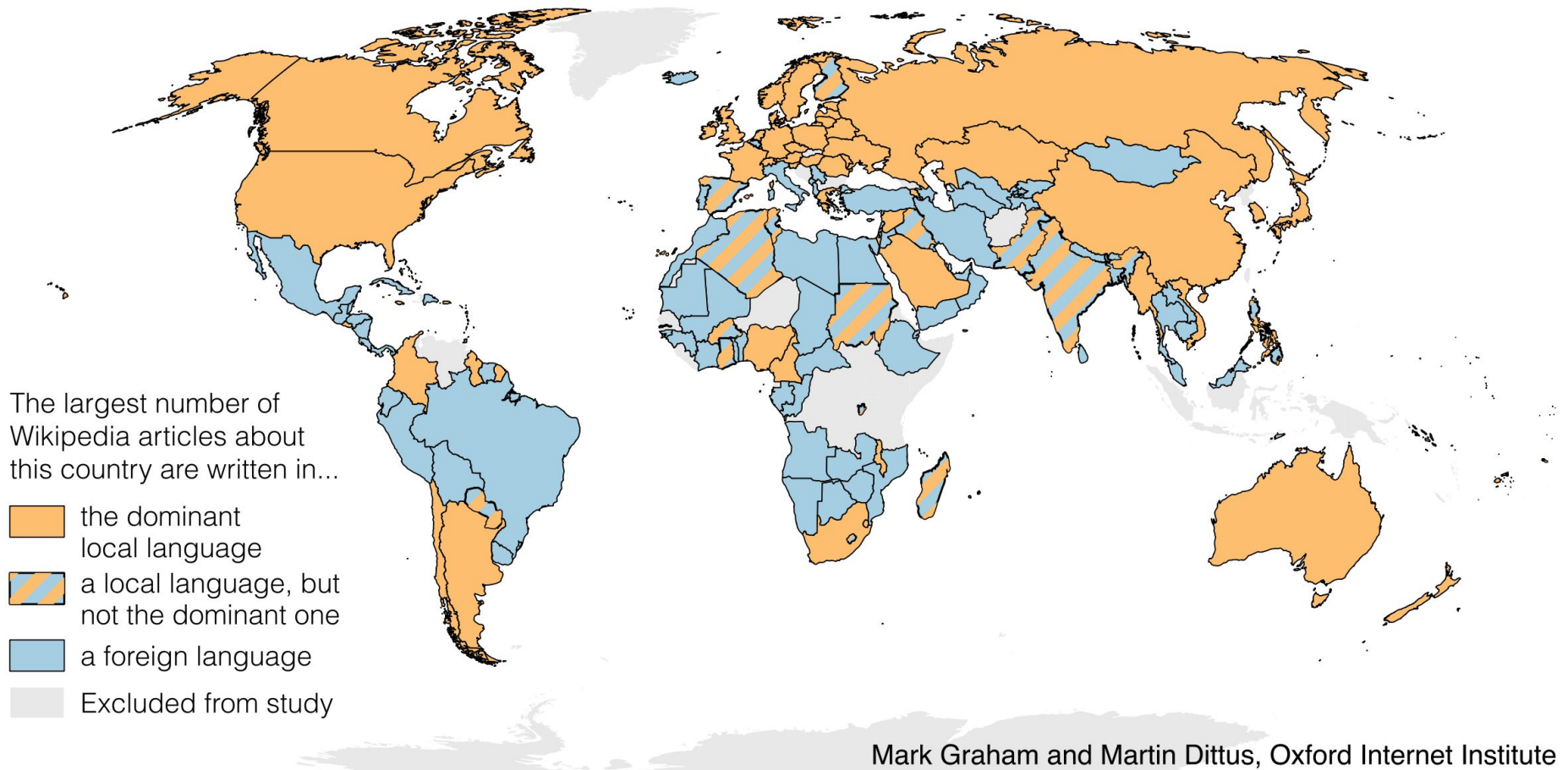
Martin Dittus, Mark Graham (forthcoming), "Mapping Wikipedia's Geolinguistic Contours".
Digital Culture and Society.

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Who creates, **shapes** and **controls** these digital representations of the world?

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The Wikipedia response: **knowledge equity**

"We will strive to **counteract structural inequalities** to ensure a **just representation** of knowledge and people in the Wikimedia movement."

Knowledge equity: Knowledge and communities that have been left out by structures of power and privilege

We will strive to counteract structural inequalities to ensure a just representation of knowledge and people in the Wikimedia movement. We will notably aim to reduce or eliminate the gender gap in our movement. Our decisions about products and programs will be based on a fair distribution of resources. Our structures and governance will rely on the equitable participation of people across our movement. We will extend the Wikimedia presence globally, with a special focus on under-served communities, like indigenous peoples of industrialized nations, and regions of the world, such as Asia, Africa, the Middle East, and Latin America.

We will welcome people from every background to build strong and diverse communities.

We will create a culture of hospitality where contributing is enjoyable and rewarding. We will support anyone who wants to contribute in good faith. We will practice respectful collaboration and healthy debate. We will welcome people into our movement from a wide variety of backgrounds, across language, geography, ethnicity, income, education, gender identity, sexual orientation, religion, age, and more. The definition of community will include the many roles we play to advance free and open knowledge, from editors to donors, to organizers, and beyond.

We will break down the social, political, and technical barriers preventing people from accessing and contributing to knowledge.

We will work to ensure that free knowledge is available wherever there are people. We will stand against censorship, control, and misinformation. We will defend the privacy of our users and contributors. We will cultivate an environment where anyone can contribute safely, free of harassment and prejudice. We will be a leading advocate and partner for increasing the creation, curation, and dissemination in free and open knowledge.

https://meta.wikimedia.org/wiki/Strategy/Wikimedia_movement/2017/Direction

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Equal **treatment** vs. equal **opportunity**

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Hundreds of Wikipedia projects are now working hard to address systemic bias

Sri Lanka articles by quality and importance

Quality	Importance						
	Top	High	Mid	Low	NA	???	Total
★ FA		1	1	1			3
★ FL	2	1		8			11
⊕ GA	6	8	7	11			32
B	3	2	3	2			10
C	60	112	131	220			523
Start	162	562	901	1,899		2	3,526
Stub	174	461	964	9,207		1	10,807
List	17	132	129	253	1	1	533
Category		3	2	6	6,258		6,269
Disambig			3	59	17		79
File	11	39		3	388		441
Portal	1				48		49
Project	1	9			8		18
Redirect	3	20	18	106	71		218
Template	6	64	47	89	376		582
NA					1		1
Assessed	446	1,414	2,206	11,864	7,168	4	23,102
Unassessed						1	1
Total	446	1,414	2,206	11,864	7,168	5	23,103
WikiWork factors (?)		ω = 84,657			Ω = 5.68		

https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Sri_Lanka

Pages in category "WikiProjects relevant for countering systemic bias"

The following 153 pages are in this category, out of 153 total. This list may not reflect recent changes (learn more).

A
- Wikipedia:WikiProject Africa
- Wikipedia:WikiProject African diaspora
- Wikipedia:WikiProject AIDS
- Wikipedia:WikiProject Algeria
- Wikipedia:WikiProject Americas
- Wikipedia:WikiProject Angola
- Wikipedia:WikiProject Antarctica
- Wikipedia:WikiProject Antigua and Barbuda
- Wikipedia:WikiProject Arab world
- Wikipedia:WikiProject Archaeology
- Wikipedia:WikiProject Argentina
- Wikipedia:WikiProject Football/Argentina task fo[r]
- Wikipedia:WikiProject Asia

B
- Talk:Baby factory in Nigeria

L
- Wikipedia:WikiProject Latin America
- Wikipedia:WikiProject Lesotho
- Wikipedia:WikiProject LGBT studies
- Wikipedia:WikiProject Liberia
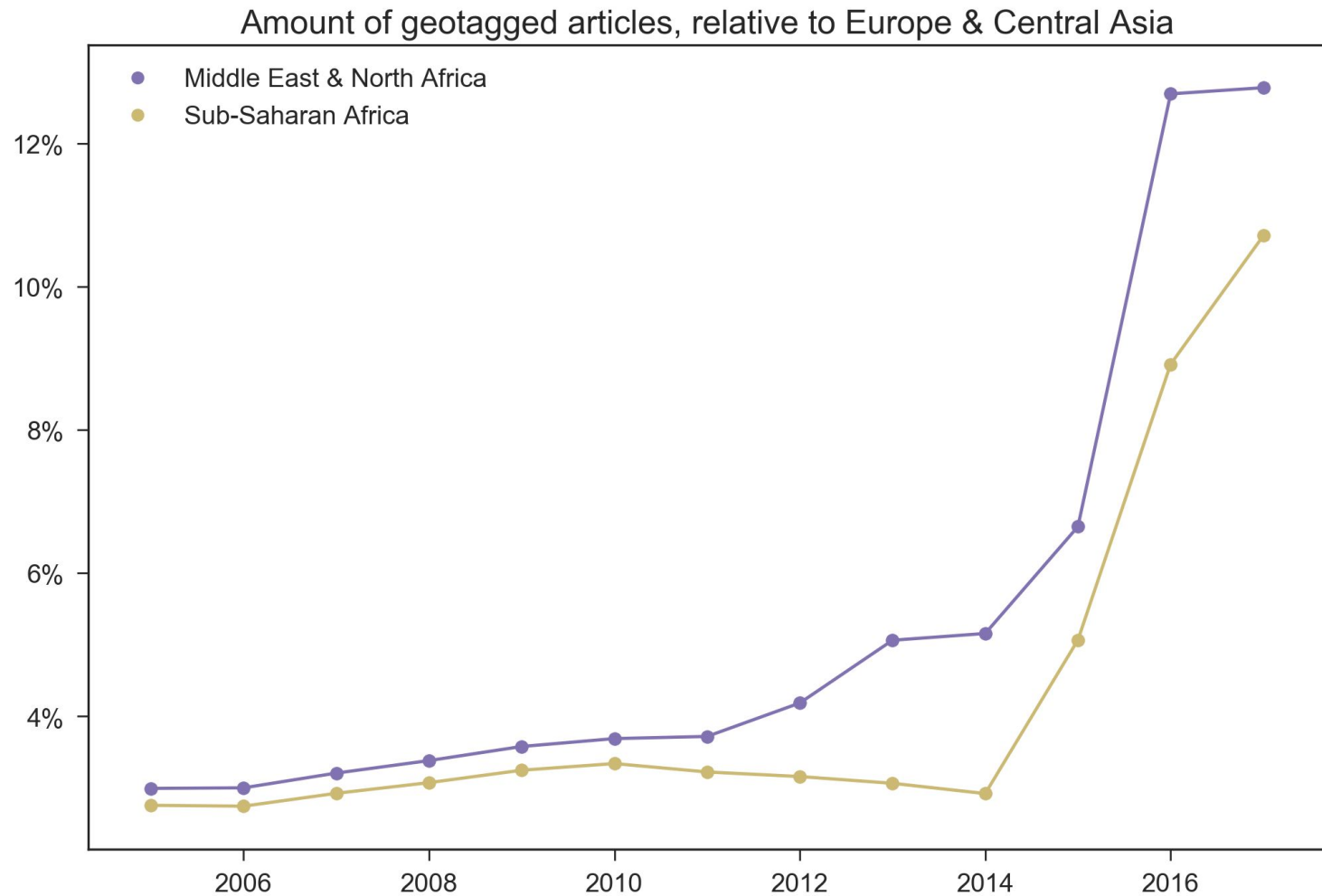- Wikipedia:WikiProject Libya

https://en.wikipedia.org/wiki/Category:WikiProjects_relevant_for_countering_systemic_bias

https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Wiki_Loves_Women/Tanzania

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Wikipedia's geotagged content for Africa is growing

Amount of geotagged articles, relative to Europe & Central Asia

Legend:
- Middle East & North Africa
- Sub-Saharan Africa

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Europe is still growing faster than all other regions…

Geotagged articles, by global region

Legend:
- North America
- Latin America & Caribbean
- Europe & Central Asia
- Middle East & North Africa
- Sub-Saharan Africa
- South Asia
- East Asia & Pacific

Y-axis: Geotagged articles (millions)

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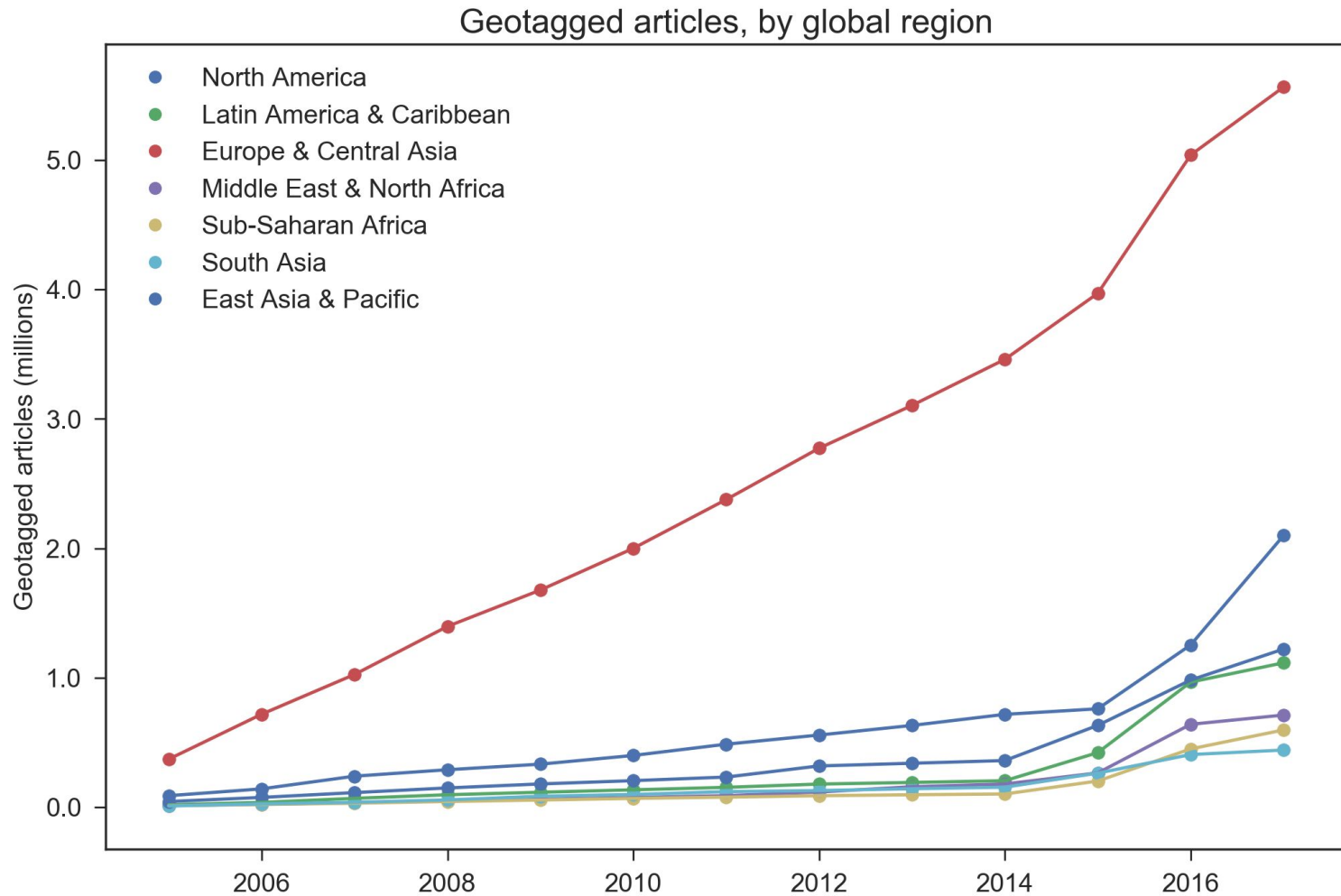
Wikipedia is a **pioneering project** to collect a truly **global body of knowledge**.

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It is equally **a miracle of human collaboration**, and **perpetually insufficient**

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It regularly brings us to the edge of our understanding: **how can we do this *well*?**

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WIRED

WIRED Opinion

To reduce inequality, Wikipedia should consider paying editors

The online encyclopedia is a lopsided representation of the world. Should it break its non-profit taboo?

—

By **MARTIN DITTUS** and **MARK GRAHAM**
6:00 AM

In a question and answer session at Wikimania 2018, the annual global gathering of the Wikipedia community in Cape Town in July, an African Wikipedia editor stood up and asked an unusual question.

"You expect us to contribute our knowledge for free?," she said. "People here can't afford to volunteer their time."

What might sound like a provocation was in fact a genuine challenge: Wikipedia should reconsider its current stance against paying editors. The reason? Reducing inequality.

As a free, crowdsourced, online multilingual encyclopedia, Wikipedia has turned previously paid labour into a spare-time activity. Its reliance on self-motivated volunteers works exceedingly well in certain parts of the world; but, in other regions, this model has become an economic barrier to entry. Maybe as a consequence, Wikipedia is surprisingly imbalanced in its coverage of global knowledge.

Almost a decade ago, we began mapping all of the content on Wikipedia and found that the site was a highly
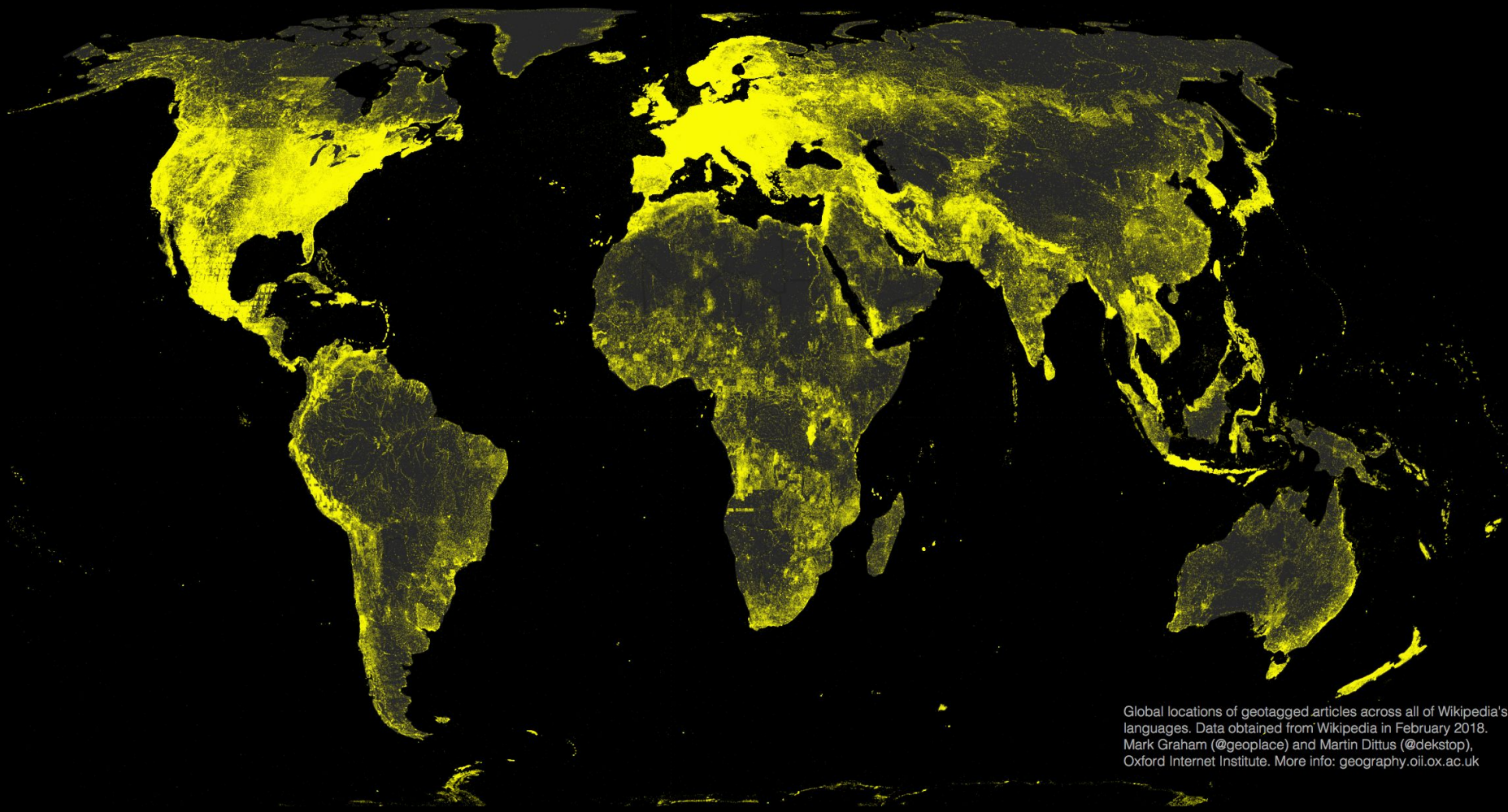
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Economic imbalances can bring about **unintentional processes of exclusion**

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Coming back to our global map of **geotagged articles** in the beginning…

What does it look like today?

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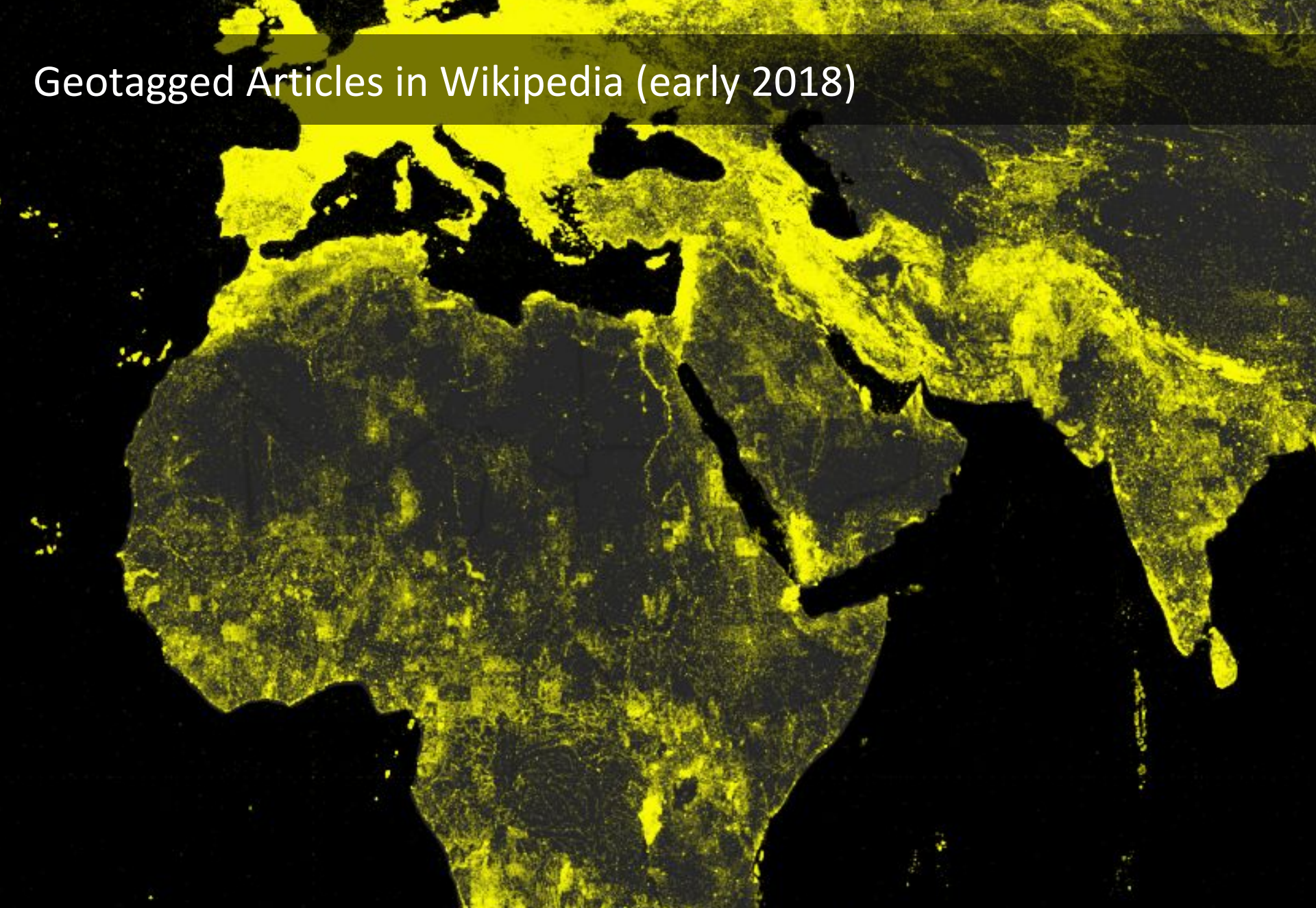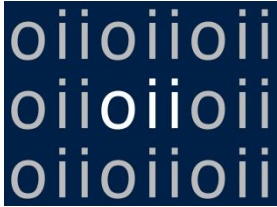@geoplace

Geotagged Articles in Wikipedia

Global locations of geotagged articles across all of Wikipedia's languages. Data obtained from Wikipedia in February 2018. Mark Graham (@geoplace) and Martin Dittus (@dekstop), Oxford Internet Institute. More info: geography.oii.ox.ac.uk

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Geotagged Articles in Wikipedia (early 2018)

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THANK YOU!

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Digital Geography – Mapping Geographies of Digital Exclusion
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