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# Information Geographies and Digital Maps

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Oxford Internet Institute · [geography.oi.ox.ac.uk](http://geography.oi.ox.ac.uk)

Geonet Symposium, 27-28 March 2019  
University of Johannesburg

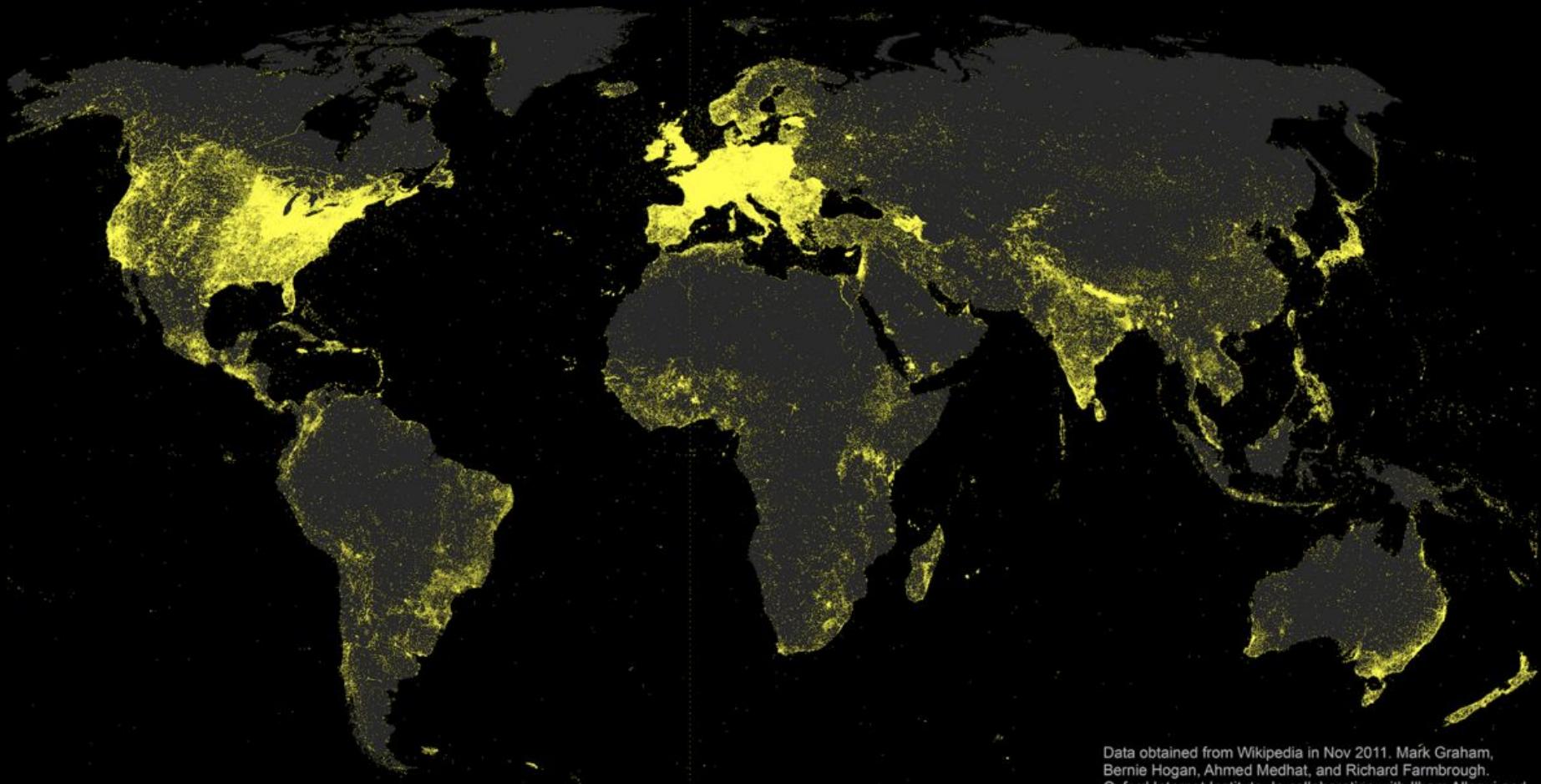
# Geographic representation on Wikipedia

The screenshot shows a Mac OS X browser window displaying the English Wikipedia page for Nideggen Castle. The URL in the address bar is [en.wikipedia.org/wiki/Nideggen\\_Castle](https://en.wikipedia.org/wiki/Nideggen_Castle). The page title is "Nideggen Castle". The main content area describes the castle's history and features, mentioning it is a hill castle in Nideggen, Germany, owned by the county of Dürren. It was the seat of powerful counts and dukes of Jülich. A sidebar contains a table of contents, a "History" section, and a "References" section. To the right, there is a "Coordinates" box showing 50°41'19"N 6°28'38"E, an aerial photograph of the castle, and a map of Germany with a red dot indicating its location in North Rhine-Westphalia. Below the map are the coordinates again and a "Type" entry of "hill castle".

# Articles can have geotags (geographic coordinates):

The screenshot shows a Wikipedia article page for "Nideggen Castle" on en.wikipedia.org. The page includes a sidebar with navigation links like Main page, Contents, and Tools. The main content area features a heading "Nideggen Castle", a summary, and a detailed description of the castle's history and features. A "Contents" section is also present. On the right side, there is a map of Germany with a red dot indicating the location of Nideggen. Below the map is an aerial photograph of the castle. Two red boxes highlight specific coordinates: one in the top right corner of the page and another at the bottom right of the map area, both showing the coordinates 50°41'19"N 6°28'38"E.

## 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.oiil.ox.ac.uk/vis](http://www.oiil.ox.ac.uk/vis)

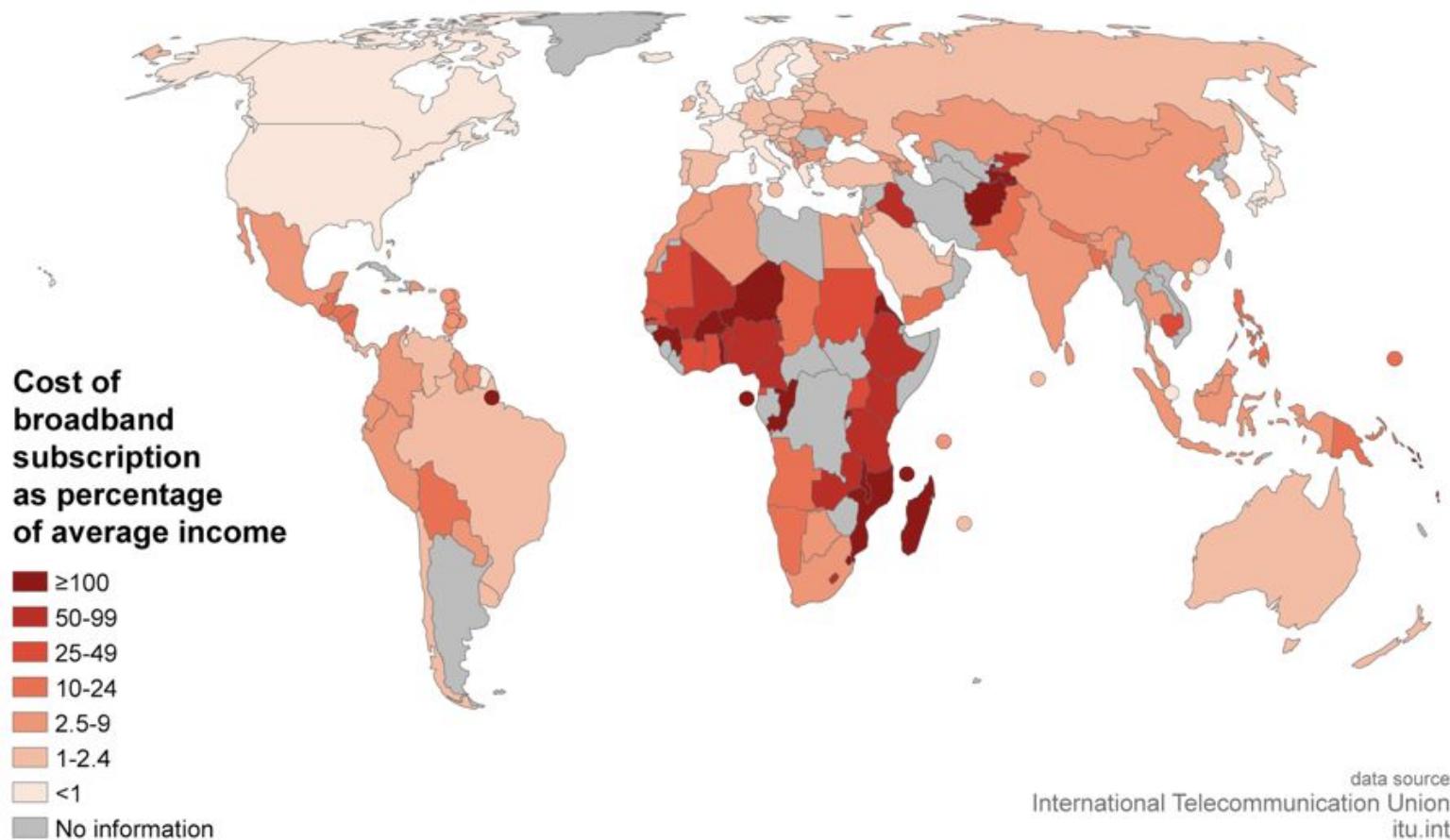
<https://geography.oiil.ox.ac.uk/mapping-english-wikipedia>



# For Wikipedia, this revealed an imbalance of representation

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

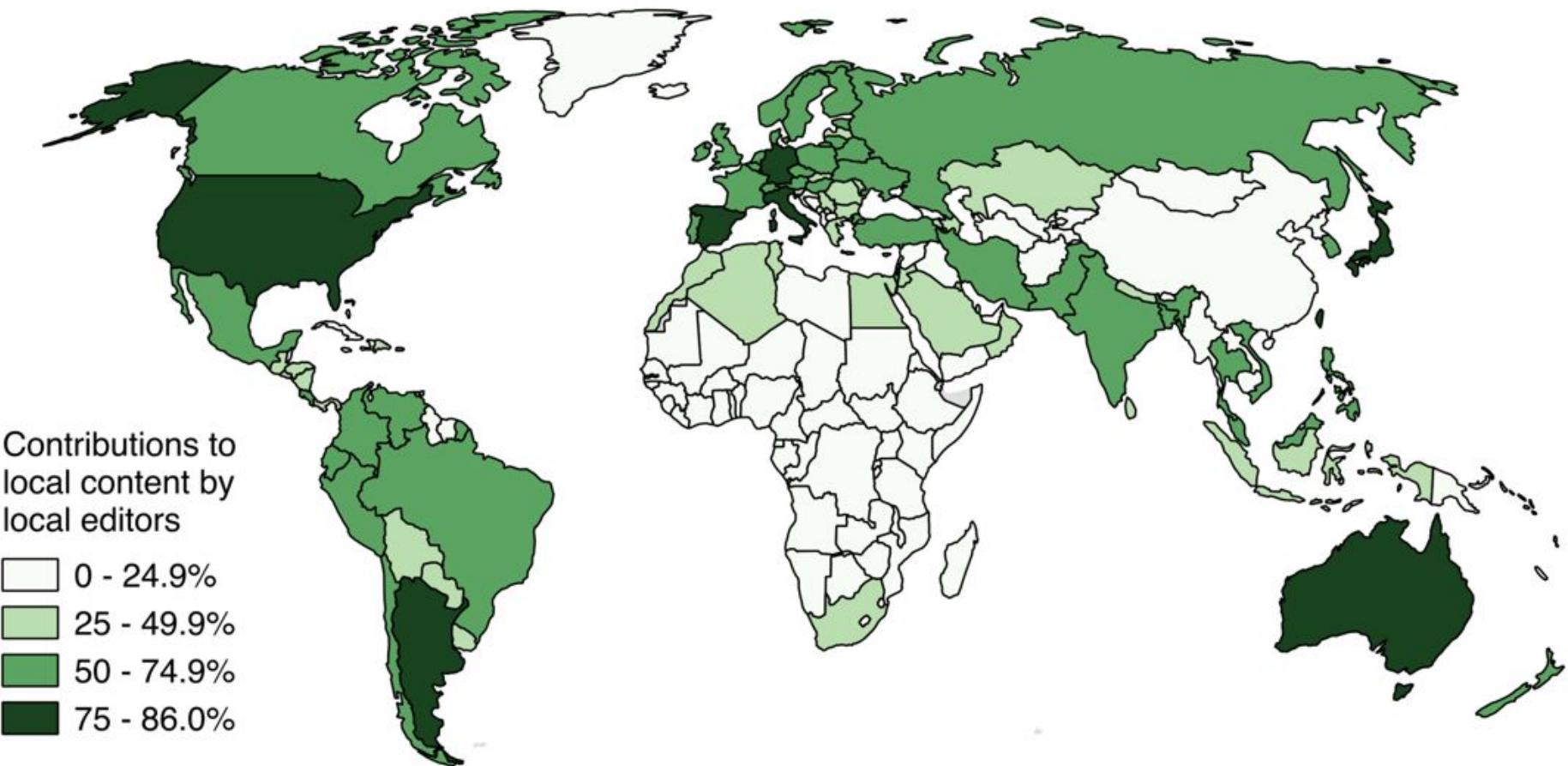
# Local participation requires *connectivity*



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"

In other words, we also see an  
imbalance of participation

# Who has the capacity to tell their own story?



Share of edits from domestic IP addresses (in %)

<https://geography.ox.ac.uk/the-uneven-geography-of-wikipedia/>

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

# 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.

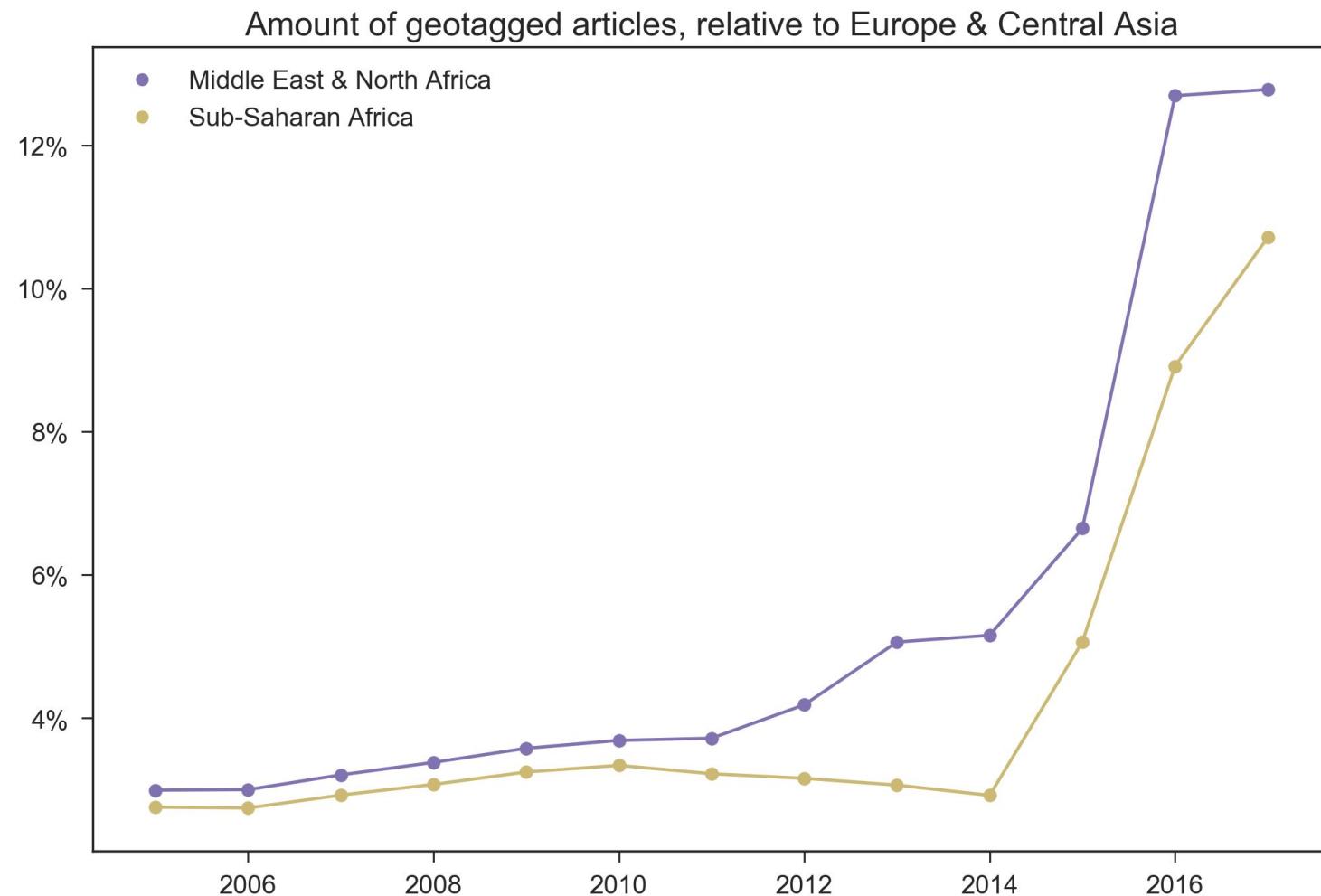
## **We will break down the social, political, and technical barriers preventing people from accessing and contributing to knowledge.**

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.

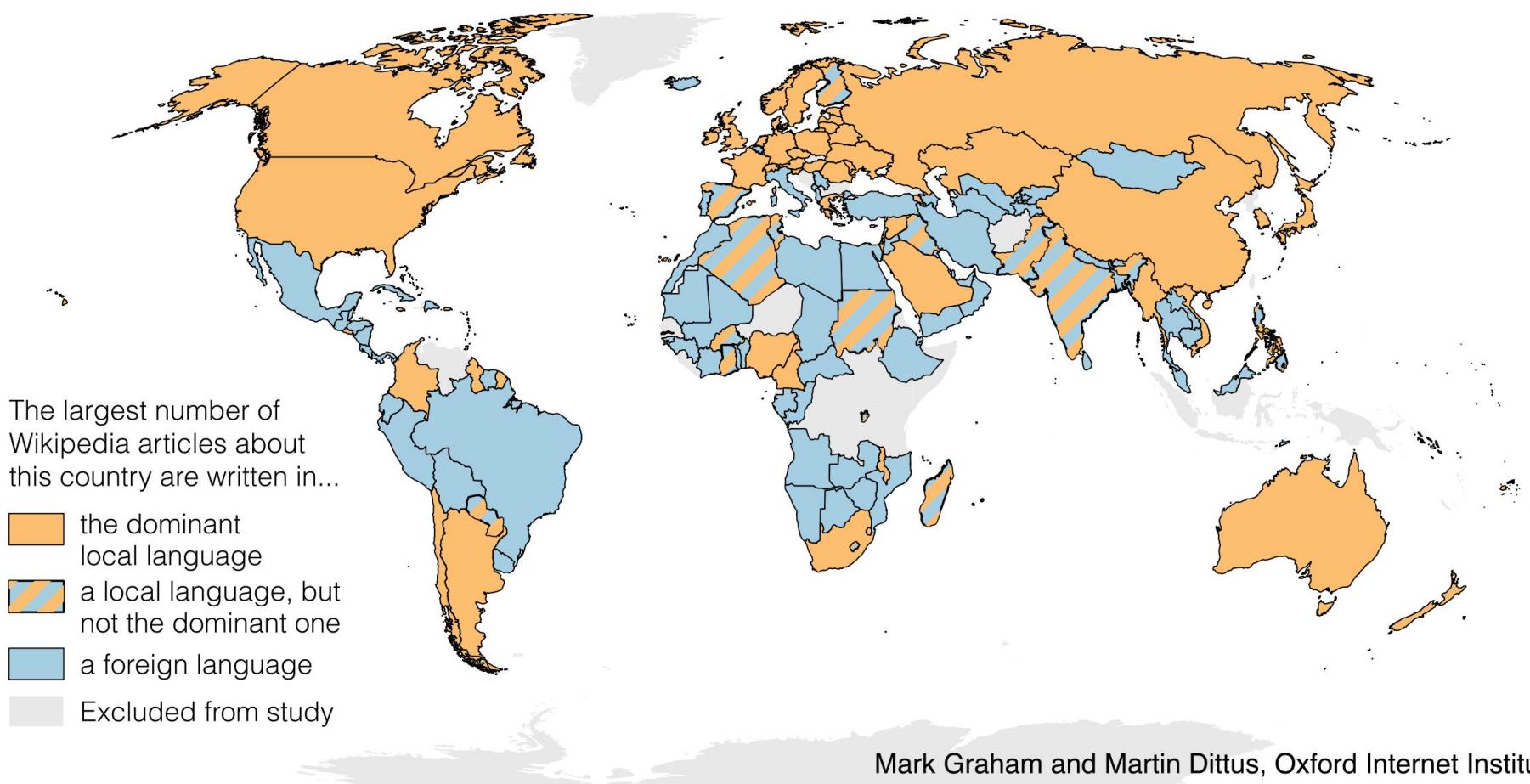
[https://meta.wikimedia.org/wiki/Strategy/Wikimedia\\_movement/2017/Direction](https://meta.wikimedia.org/wiki/Strategy/Wikimedia_movement/2017/Direction)



# Wikipedia's geotagged content for Africa is growing



# Yet, the most detailed representations are still not always written in a local language



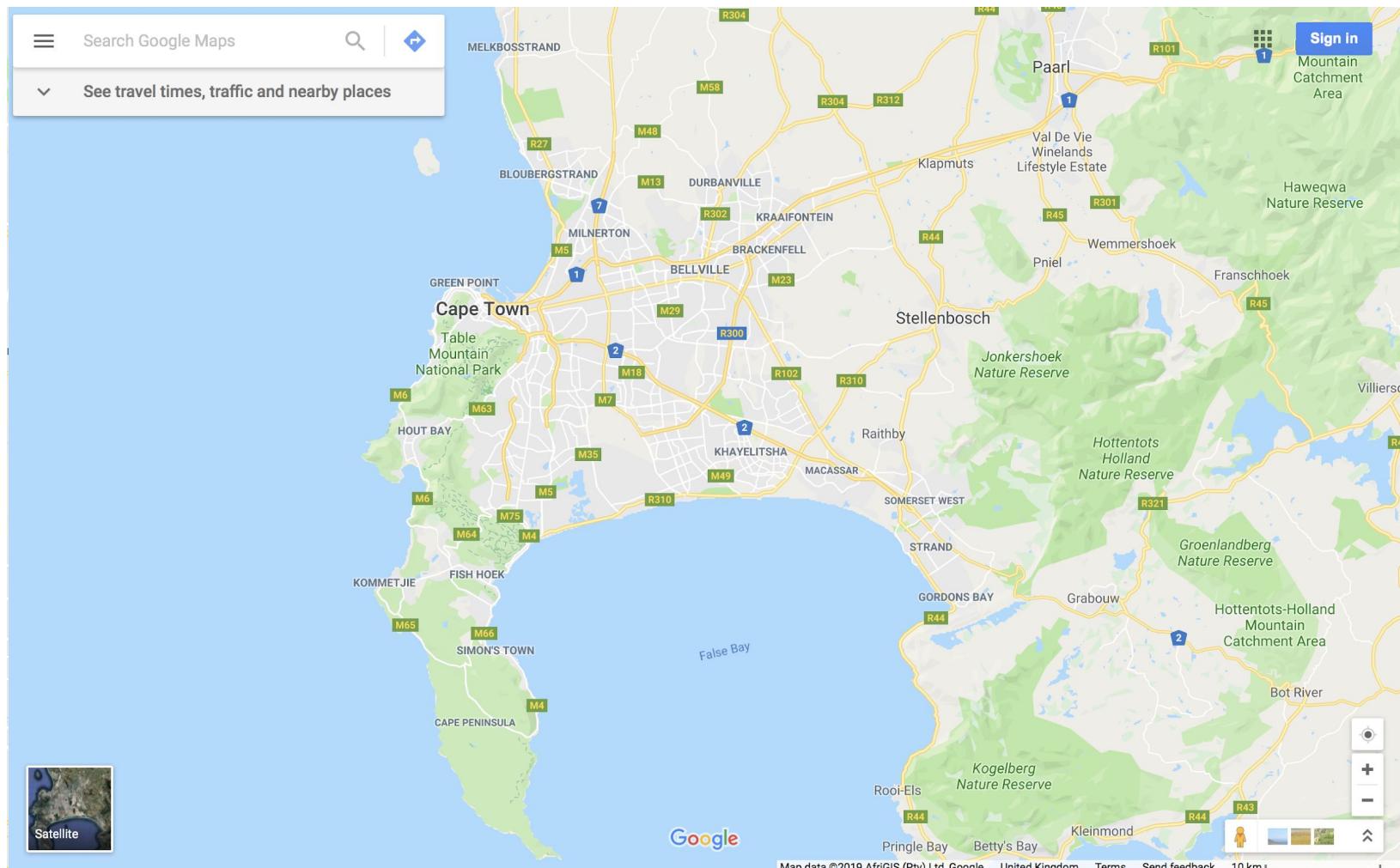
Martin Dittus, Mark Graham (forthcoming), “Mapping Wikipedia’s Linguistic Contours”

Not everyone has **access** to  
knowledge about the world  
in their **own language**

# How does this shape our understanding of the world?

# How does this shape our actions in the world?

# Google Maps can help us move around the city





[Get directions](#) [My places](#)

## "restaurant" near 32.075,34.775



### A Cafe Barnash

Bograshov 87, Tel Aviv, Israel 81 m S  
+972 3-620-3747 · [cafebarnash.co.il](http://cafebarnash.co.il)

Category: Hamburger Restaurant

1 review

" Sabbath 4 Chabotim Laarhot Bakr, the arorot he is muulot - "

[shakshokot.td.eat.co.il](http://shakshokot.td.eat.co.il)



### B Bar gyora

Bar Guyora 4, Tel Aviv, Israel 117 m N  
+972 3-620-4880 · [bargyora.co.il](http://bargyora.co.il)



Category: Restaurant- Bar

★★★★★ 13 reviews

"Try the Peter Logger Cookie. Woohoo! Also very good: Sabich Sandwich, the ..." - qype.co.uk



### C Moon

Bograshov 58, Tel Aviv, Israel 289 m W  
+972 3-629-1155



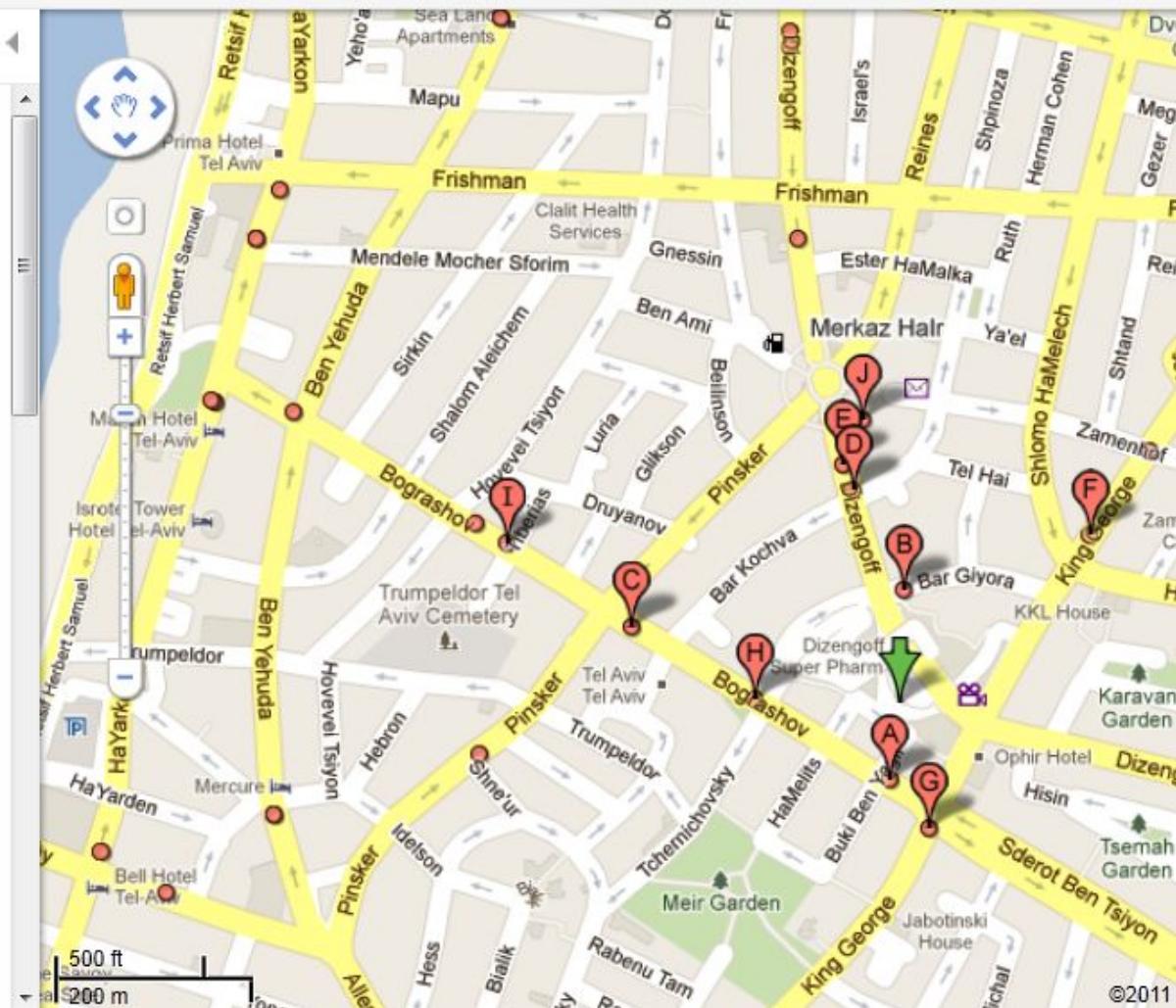
Category: Restaurant- Bar

★★★★★ 57 reviews

"Amazing sushi in tel aviv"



### D Amilia caffe



[Get directions](#) [My places](#)

## "מועדה" near 32.075,34.775



### A Bar gyora

Bar Guyora 4, Tel Aviv, Israel 117 m N  
+972 3-620-4880 · [bargyora.co.il](http://bargyora.co.il)



Category: בר מסעדה

★★★★★ 13 reviews

"Try the Peter Logger Cookie. Woohoo! Also very good: Sabich Sandwich, the ..." - qype.co.uk



### B Frangelico - תל אביב

Dizengoff 50, Tel Aviv, Israel 48 m NE  
+972 3-532-9640

Category: מסעדה

1 review

"לא גרגליק"



### C Moon

Bograshov 58, Tel Aviv, Israel 289 m W  
+972 3-629-1155



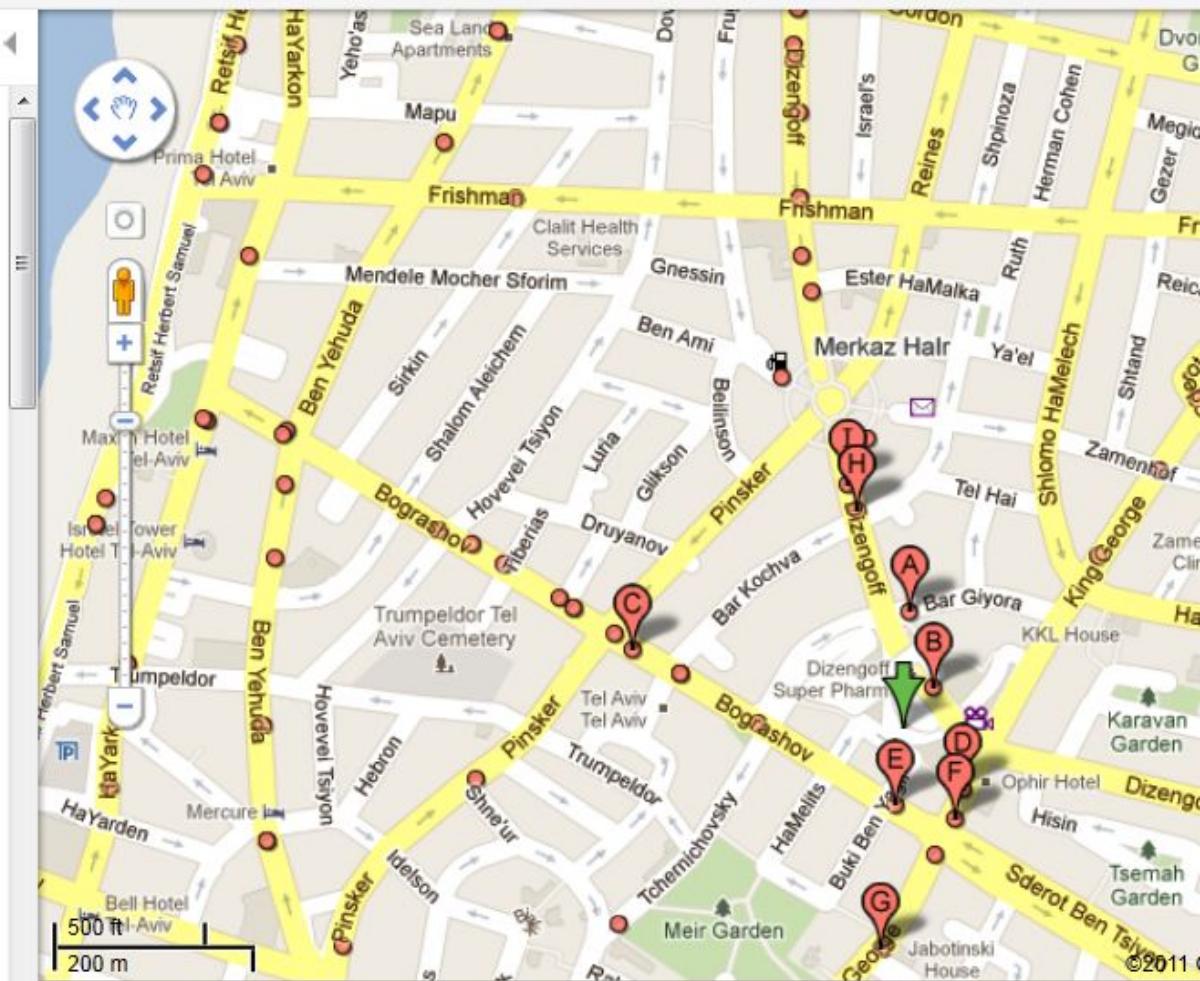
Category: בר מסעדה

★★★★★ 57 reviews

"Amazing sushi in tel aviv"



### D מטבח אגופריה





[Get directions](#) [My places](#)

"مطعم" near 32.075,34.775

**A** [Ophir Hotel](#)

Dizengoff 43, Tel Aviv 0, Israel 98 m E  
+972 3-525-7350 · [sexaviv.co.il](http://sexaviv.co.il)



3 reviews

"يضم مطعم Ophir Norma Restaurant في فندق Ophir المأكولات المغربية والفرنسية. وهناك أيضا مقهى، ويتم توفير وجبة فطور كاملة - إسرائيلية بالمطعم نفسه." - booking.com

**B** [Hotel Metropolitan Tel-Aviv](#)

Trumpeldor 11, Tel Aviv 63803, Israel  
734 m W  
+972 3-519-2727 · [hotelmetropolitan.co.il](http://hotelmetropolitan.co.il)



2 reviews

"يمكنك الاستمتاع ببيوفيه الإفطار في مطعم Metro Cafe، والذي يكون مفتوحاً أيضاً في وجبتي الغداء والعشاء. الوجبات الخفيفة متوفرة طوال اليوم - في البار الموجود ..." - booking.com

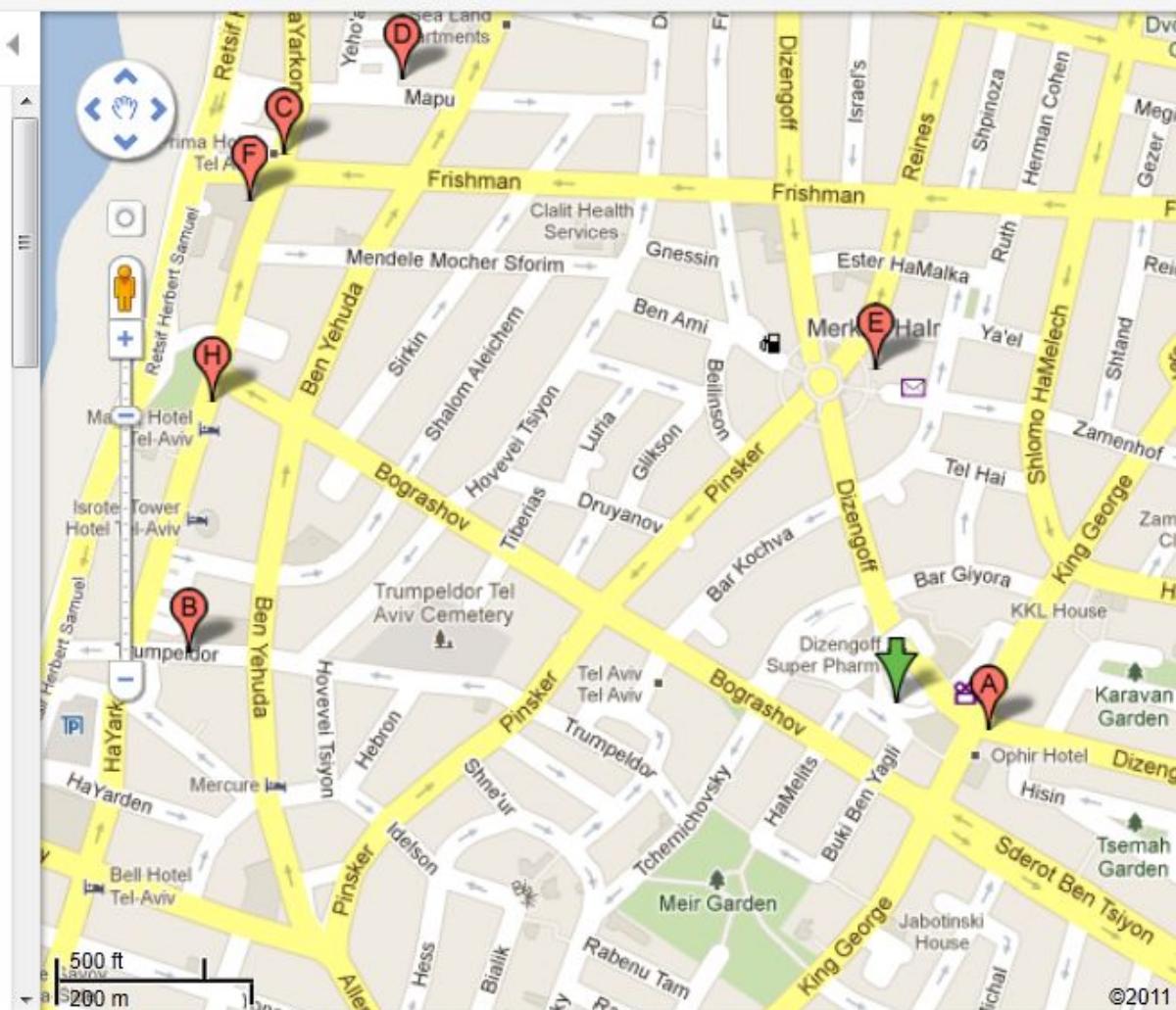
**C** [Prima Hotel Tel Aviv](#)

HaYarkon 105, Tel Aviv 63903, Israel  
850 m NW  
+972 3-520-6666 · [english.prima.co.il](http://english.prima.co.il)



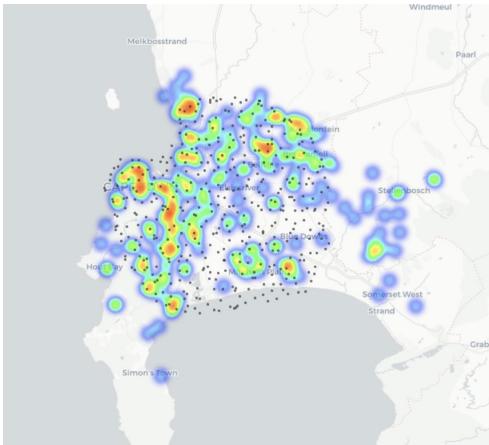
1 review

"يقدم مطعم Prime Grill اللحوم المتنوعة الطازجة وأطباق إسرائيلية شهية أخرى. ويقع شارع Dizengoff ، وهو شارع التسوق الرئيسي ، على بعد

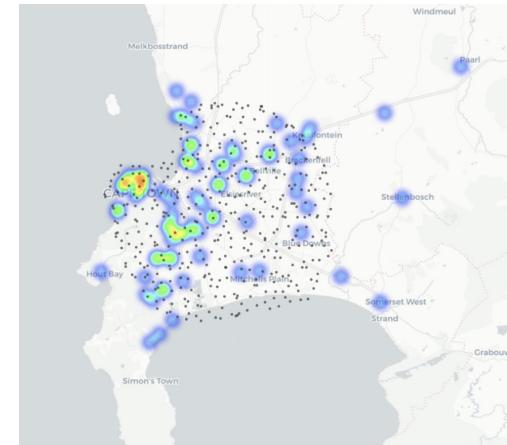


# Searching for restaurants in Cape Town

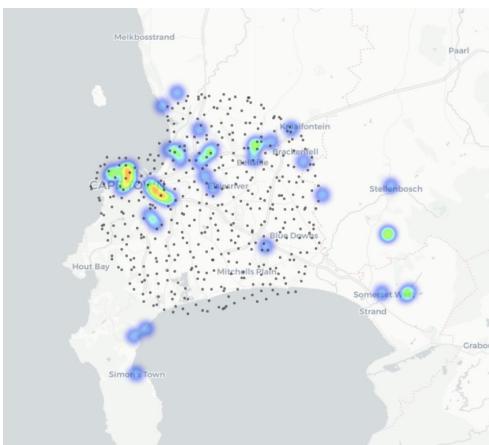
Afrikaans



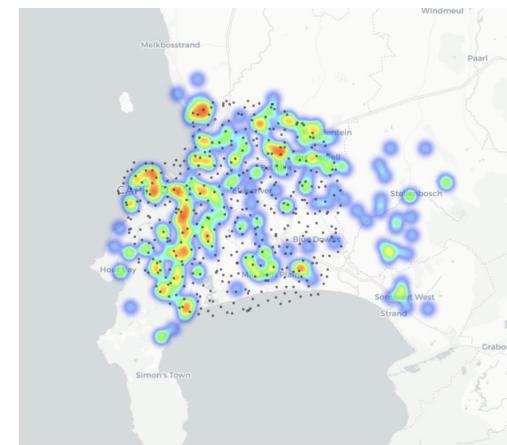
Arabic



Chinese

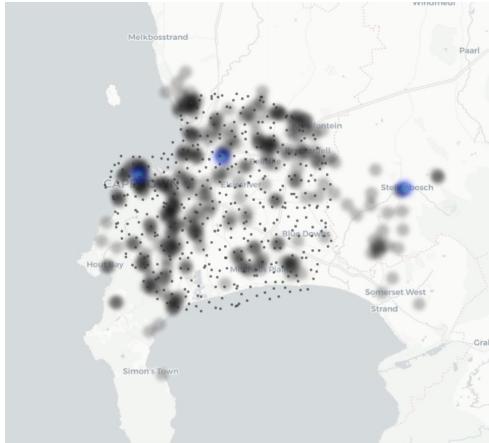


English

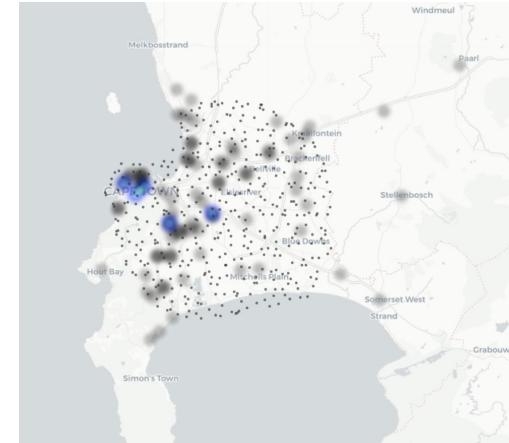


# Few results are actually in the chosen language!

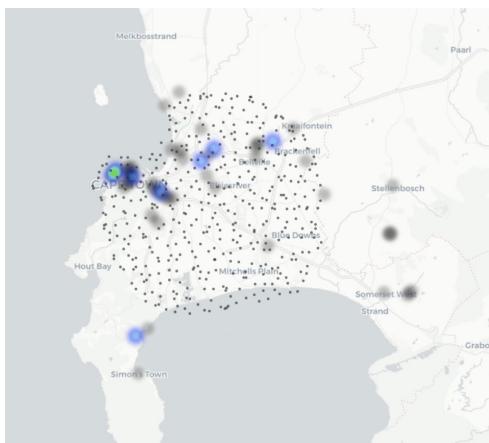
Afrikaans



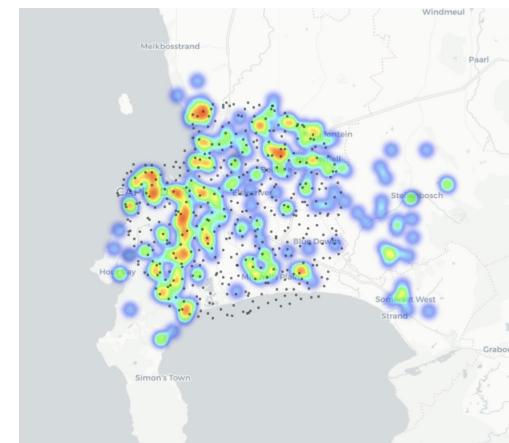
Arabic



Chinese



English



What might this look like for Zulu, Swahili, Xhosa, ...?

In Johannesburg, Nairobi, Tangier, ...?

We are now preparing a more comprehensive study.

**We need help translating search terms!** We have selected ~40 search terms in English and would like to translate them to major African languages, including Zulu, Swahili, Xhosa, Afrikaans, and Arabic.

Email me at [martin.dittus@oii.ox.ac.uk](mailto:martin.dittus@oii.ox.ac.uk) (I can give you a business card), or speak to me today or tomorrow.

It likely won't take more than 10 minutes!

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Oxford Internet Institute  
University of Oxford



# THANK YOU!



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Mark Graham · @geoplace

Digital Geography – Mapping Geographies of Digital Exclusion  
Oxford Internet Institute · geography.oii.ox.ac.uk