

# Frontiers in Google Maps: Commodification and Territory in the Borderlands

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From carving up empires to enclosing the commons, the maps have long been caught up in creating, legitimising and representing borders and territories. There now exists a body of work critiquing maps as cultural artefacts, scrutinising the role that values, social structures and power relations play in their formation of meaning (Cosgrove, 1999; Harley, 2001). Drawing from these studies, in combination with other cultural, social and political theories, I shall turn to the hugely powerful and notably understudied cartographic representation: Google Maps.

This paper draws from research that I am currently conducting as part of a PhD at RMIT Melbourne, Australia, in the school of Global Studies. My thesis is centrally concerned with Google Maps at the intersection of technology and ideology in the context of globalization and capitalism. As this paper has been prepared for the Asian Conference on Cultural Studies, which in 2014 had the theme 'borderlands', it focuses on Google's portrayal of borders on their massively influential world map. In doing so, this paper sketches a brief overview of some key themes of my research, assembled with the hope of rising discussion.

There are three components to this paper: firstly, I shall begin by contextualising Google and explaining how they make their money. Then, I will follow a traditional concern of map makers and consider how Google Maps depicts disputed borders between nation-states. By giving a string of examples, this section will dispute Google's continual claims of political neutrality. Lastly, I move onto consider borders in a more figurative sense and discuss how the frontier of cyberspace has been pushed into the embodied world.

Formed in 1998 in Silicon Valley, Google Inc. became one of the world's fastest growing corporations. As of May 2014 Google's market capitalization was \$382.47 billion (US), approximately the same as the UN estimate for the GDP of Venezuela. Forbes Magazine ranks Google as the world's fifth most valuable brand, placing it below IBM and above McDonalds; and it gives Google the world's third highest market value, sitting below Exxon Mobil and above Microsoft (2014). It is highly significant to note that at least 96% of Google's money comes from advertising (Kim, 2011). The vast majority of their money is made by launching an automated global auction every time someone enters a word into Google's search engine. Advertisers make bids on words that they want their brand to be associated with. Any word—'security', 'sex', 'salad' or 'Schumpeter'—entered into Google's search engine

can lead to a bid in this global linguistic market (Levy, 2011, pp.83-99).

As Frédéric Kaplan has noted, Google have managed to extend the domain of capitalism into language itself, making words into a commodity (2011). In doing so, they have found an incredibly profitable business model based on this linguistic speculation. In commodifying symbolic communication, Google have massively facilitated the global market's push deeper into people's everyday social relations and practices. This can be understood as part of the neoliberal project that, in David Harvey's words, means, 'in short, the financialization of everything' (2005, p.33). All of Google's projects—search, Gmail, YouTube, and Google Maps—can be analysed through this prism.

In 2012 Google Maps claimed to have one billion unique users per month (Google, 2012). The vastness of this number is worth reflecting on. To put it into some perspective, 200 years ago there was less than a billion people on Earth, and only a tiny proportion of them—princes, military elite, navigators and some capitalists—would have used maps. Given Google Maps unprecedented audience, I argue that how the multinational corporation represents the world is very significant, for it actively contributes to shaping the way an enormous number of people imagine the world and their place in it. Also, as a practical wayfinding device, Google Maps affects social practice with an enormous number of people regularly using the cyber-spatial representations to facilitate their physical movement through space.

## Depicting the Borderland

Like most contemporary world maps, political borders are a prominently featured on Google Maps. They are visible on the outmost level of zoom, where these frontiers between self-contained nation-states are depicted by solid black lines. This representation of global space is a rather conventional world map: a standard north-up, Mercator projection subdivided into a jigsaw of nation-states. From this outmost level of zoom, national borders are visible all the way down to the innermost level of zoom. Figure 1 depicts the apex of the 'Golden Triangle', the borders between Thailand, Laos and Myanmar at the maximum level of zoom.

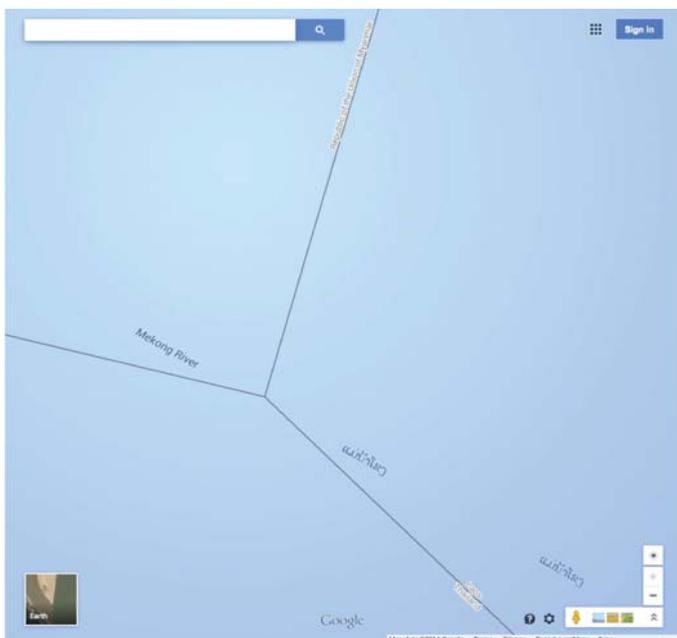


Figure 1. The apex of the 'Golden Triangle'. Captured 20/5/2014.

These straight lines meeting over the Mekong are a state imposition of order over the ever-changing flow of a river. This abstract geometry of power is reminiscent of Benedict Anderson's argument that maps function as a totalizing classificatory grid (2006, pp.170-8). While in some respects absurd, this example is again rather standard mapping discourse. Google Maps might pride itself on being 'innovative', digital and interactive but, as far as depicting the majory of national borders go, it is rather conventional.

Google Map's depiction of frontiers becomes interesting when it represents disputed borders. These borderlands not only raise the stakes politically, but they also reveal Google's ideological claims and offer an insight into how this map constructs subjectivity. The corporation claims they 'follow a hierarchy of values' which 'inform our depictions of geopolitically sensitive regions' (Boorstin, 2009). Using this hierarchy, Google claim to have reached the 'optimal combination of neutrality, objectivity, and legitimacy' (McLaughlin, 2008). This string of value laden words are key to understanding Google. The corporation consistently frames itself as being able to transcend culture and politics.

The most concise example of this was captured by Marissa Mayer, Google's former vice president of search products and user experience, and a key spokesperson for the corporation. She claimed to an audience at Stanford University: 'Data is apolitical'. Mayer went on to explain that Google are 'able to scientifically and mathematically prove' which course of action to take, and can therefore avoid politics (2006). However—to rephrase George Orwell—the opinion that one's belief is apolitical is itself a political opinion (2004, pp.4-5). Rather than some form of cyber-positivism, Google's motives are inseparable from the dictates of profit maximization.

Google's director of public policy is Bob Boorstin, a man with noteworthy neoliberal credentials. He was formally President Clinton's national security speechwriter and the foreign policy adviser to Robert Rubin. Regarding Google Maps, Boorstin announced the first tier of Google's hierarchy of values:

In all cases we work to represent the "ground truth" as accurately and neutrally as we can, in consistency with Google's mission to organize the world's information and make it universally accessible and useful (Boorstin).

In the latter half of this statement, Boorstin quotes Google's official mission statement. In my thesis I unpack this mission statement in detail, for I see it as an ideological statement par excellence. Every word of this totalizing statement is swollen and dripping with value judgements, political implications, and cultural beliefs. While fully unpacking Google's mission is beyond the scope of this paper, I want to draw attention to the fact that this mission is bound up with the sci-fi sounding goal of creating artificial intelligence. Since the very beginning Google's founders 'have been consistent in framing Google as an artificial intelligence company—one that gathers massive amounts of data and processes that information with learning algorithms to create a machinelike intelligence that augments the collective brain of humanity' (Levy, 2011, p.385). Furthermore, then seek to incorporate this learning machine into the circuits of capital accumulation and the commodification of everything.

The second tier of Google's hierarchy of values is 'authoritative references', to which the company seems to have a somewhat ambiguous relation. In a policy post, Google claim: 'While no single authority has all the answers, when deciding how to depict sensitive place names and borders we use guidance from data providers that most accurately describe borders in treaties and other authoritative standards bodies like the United Nations' (Boorstin, 2009). In another post, Google dismissively dubs the as UN a 'politicised organization'—as opposed to the corporations neutral, objective and legitimate pretensions—thus justifying their rejection of UN naming conventions or portrayal of national borders (McLaughlin, 2008).

Neither do Google follow the naming conventions of any single respected geographical society because they note that 'these organizations exist only in a handful of large, rich economies, and many believe they do not represent the views and values of other parts of the world' (ibid ). In this strikingly unreflective statement Google conveniently ignores the fact that they are a stupendously rich and powerful advertising corporation based in Silicon Valley, USA. Essentially, this 'authoritative references' tier is a loose attempt to justify Google's picking and choosing from various sources as they see fit while simultaneously holding itself superior.

The third tier 'local expectation' is perhaps the most curious part of Google's approach to representing borders. The interactive and global nature of Google Maps enables the company to tailor their map to reflect the assumed opinion of the user in question. They literally change the map depending who is looking at it. Google Maps makes generalizations about the supposed opinions of an individual, language group or nation-state and can change their map reflect this.

Liancourt Rocks is an illustrative and locally relevant example. Named after a French whaling ship that almost ran aground there in 1849, this small rocky outcrop is about 432km north-west of Osaka. These rocks, and the surrounding waters, are a disputed territory with both Japan and South Korea laying claim to the island. So the question is: on whose side of the

border does it fall? Google Maps responds by saying, it depends who is asking... Using Google.com, the ‘global’—read American—version of Google, will deliver this result depicted in Figure 2.1. Using Google.co.kr, with the .kr being the country code for South Korea, a user will see the island labelled ‘Dokdo’ (Figure 2.2). Whereas using the Japanese Google.co.jp, a user will see the rocks labelled ‘Takehima’ (Figure 2.3). What is more, the waters surrounding these islands are also contentious. Google Maps and Google Maps Japan agree that the body of water is called the ‘Sea of Japan’. Whereas the Korean Google Maps labels it the ‘East Sea’.

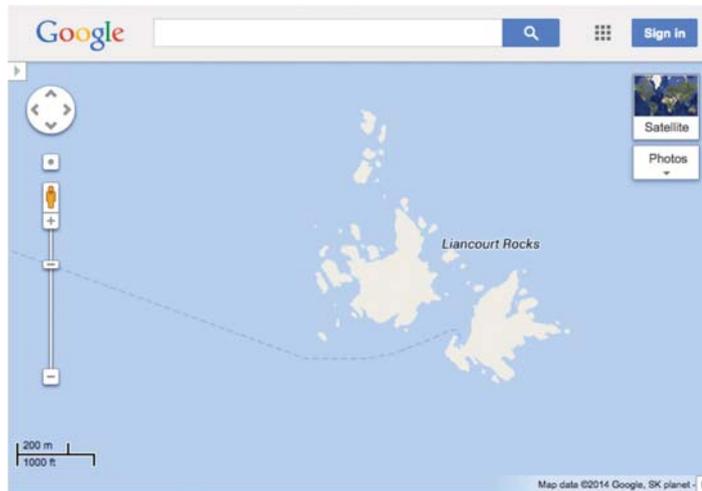


Figure 2.1 Google.com, ‘Liancourt Rocks’, Image captured 14/1/2014.



Figure 2.2 Google.co.kr, ‘Dokdo’ ‘독도’ Captured 14/1/2014



Figure 2.3 Google.co.jp, ‘Takehima’ 竹島, Captured 14/1/2014

Another example of the geopolitics of Google’s ‘local expectation’ can be seen in a territory fought over in the 1962 Sino-India border dispute. Google.com depicts this disputed territory with dotted lines, but labels it with the Indian name Arunachal Pradesh, as opposed to its Chinese name, South Tibet (Figure 3.1). Compare this with the Figures 3.2 and 3.3 to see how Google portrays the border on its Chinese and Indian versions of Google Maps.

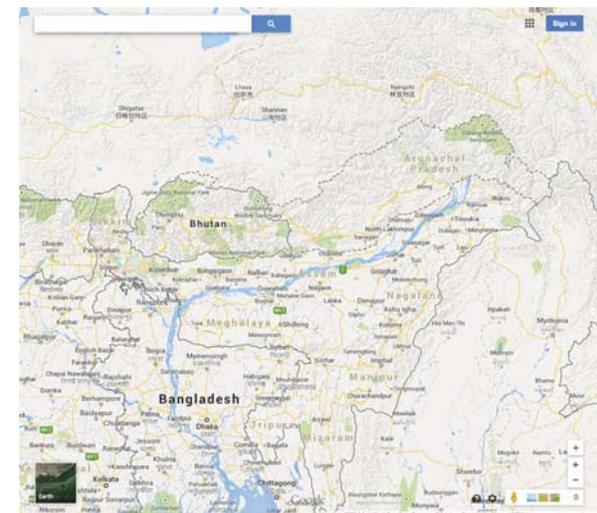


Figure 3.1 Google.com Sino Indian border, captured 15/5/2014

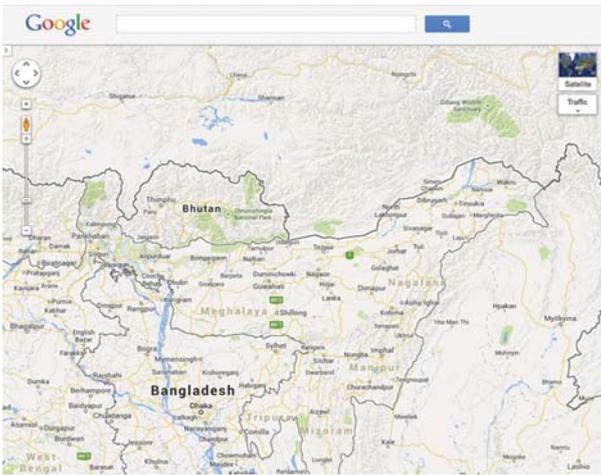


Figure 3.2 [ditu.google.cn/](http://ditu.google.cn/)  
South Tibet, captured 15/5/2014

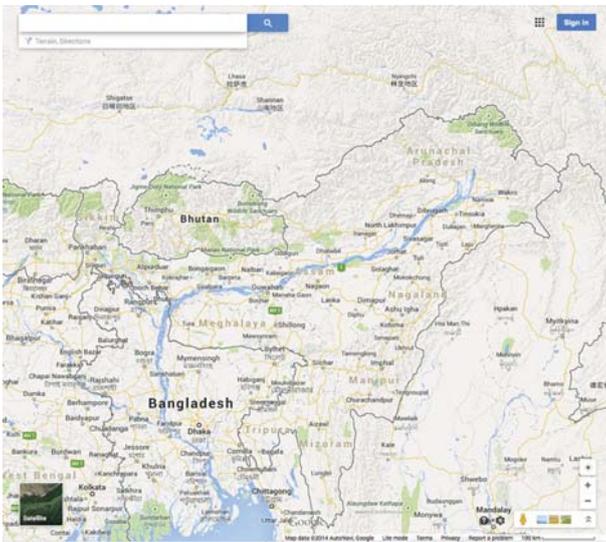


Figure 3.3 [google.co.in/maps](http://google.co.in/maps), Arunachal Pradesh,  
captured 15/5/2014

The recent situation on the Crimean Peninsular also features, with Google's .com version representing the new border with a dotted line (Figure 4). The line on the Russian Google Map is notably not dotted, leaving no ambiguity as to who controls the peninsular. Unfortunately, for the sake of this argument, Google do not have a Ukrainian version of their maps to compare.

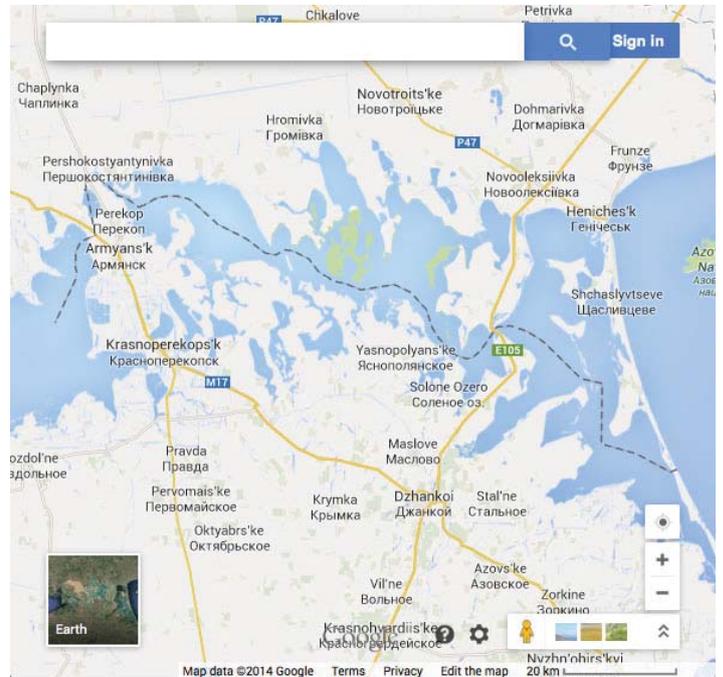


Figure 4(i): Google.com and Google.ru, the Crimean Peninsular, captured 21/5/2014

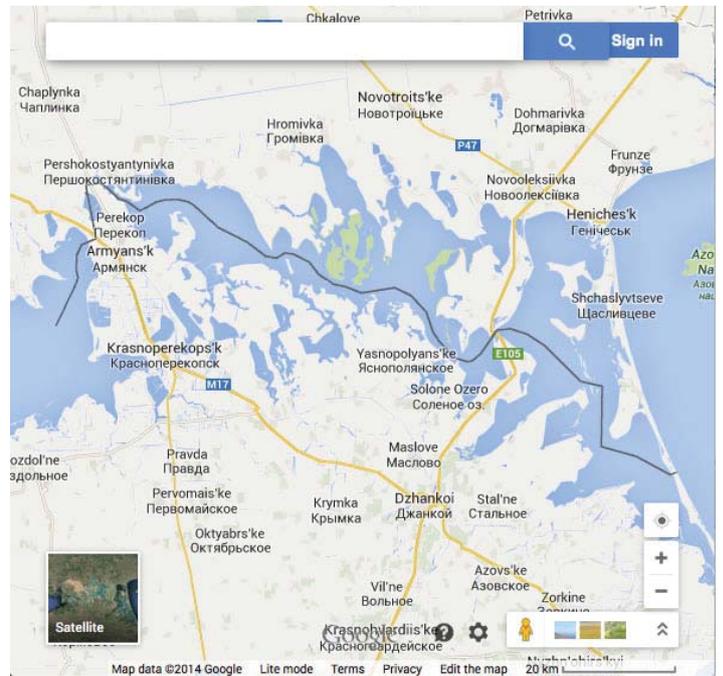


Figure 4(ii): Google.com and Google.ru, the Crimean Peninsular, captured 21/5/2014

Another example can be found in the South China Sea. According to Google Map's Chinese version, the contested sea is circled by line, which appears to denote the Middle Kingdom's unambiguous ownership of the sea.

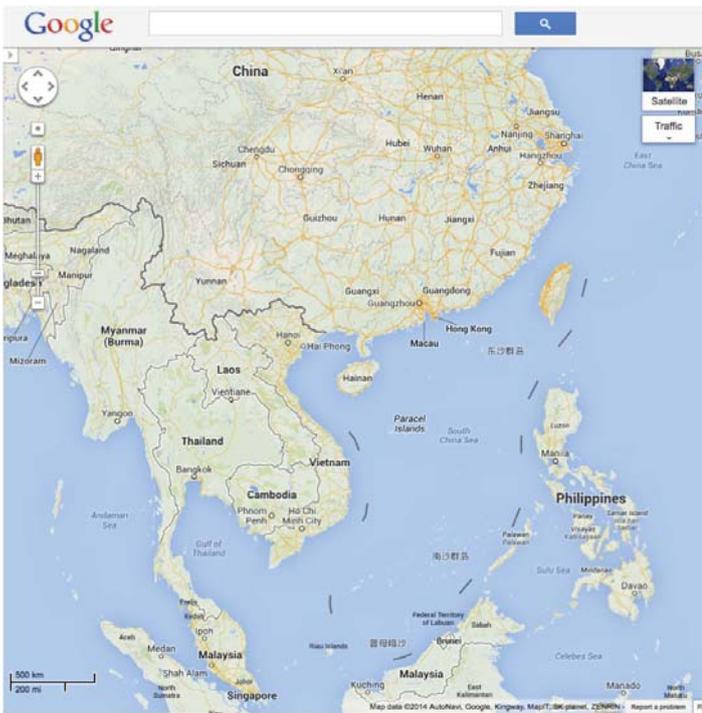


Figure 5: ditu.google.cn/ South China Sea, captured 15/5/2014

Moreover, this line also runs on the east of the Taiwan, which is notably not labelled as an independent country. In the case of Taiwan, Google Map's Chinese version even goes so far as to remove the labels of major state institutions, such as the Presidential Office in Taipei. Figure's 6.1 and 6.2 show the difference between Google's Taiwanese and Chinese services.



Figure 6.1: Google.com.tw, Presidential Office Building, captured 21/5/2014

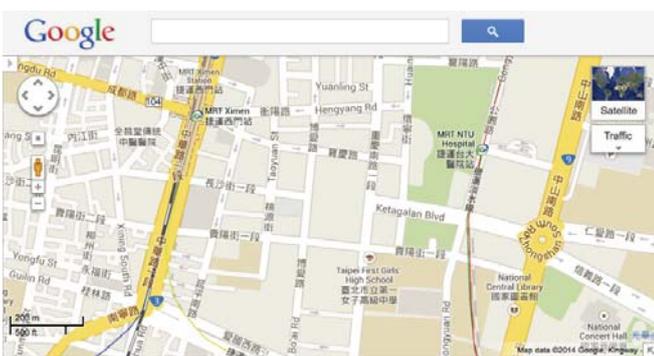


Figure 6.2: ditu.google.cn, Unlabelled structure, captured 21/5/2014

In 2012, the New York Times published an article with the provocative title: 'The First Google Maps War' (Jacobs, 2012). This article outlined a 2010 border dispute between Costa Rica and Nicaragua. This dispute began when Google depicted the Nicaraguan border a few square miles further south than the usually accepted international frontier. Explicitly citing Google, a Nicaragua official took the opportunity to cross the mouth of Rio San Juan and land in Isla Portillos. His expedition was soon followed by another 50 soldiers. Costa Rica protested and responded by sending 70 police officers into the area. These tensions were not just the result of Google, the roots of this dispute go back to the mid-19th century (Jacobs, 2012). While negotiations prevented a further escalation, this episode captures the tangled histories and power relations that can make demarking borders on a map murky territory.

Another problematic aspect of Google's 'local expectation' approach is that it feeds into what Eli Pariser called the 'filter bubble'. He is concerned that 'personalization filters serve up a kind of invisible autopropaganda, indoctrinating us with our own ideas, amplifying our desire for things that are familiar and leaving us oblivious to the dangers lurking in the dark territory of the unknown' (cited in Bauman & Lyon, 2013, p.123).

Google claim that they 'work to provide as much discoverable information as possible so that users can make their own judgments about geopolitical disputes' (Boorstin, 2009). Google Earth does include some little notes that can be opened with a click. For instance, a button on Liancourt Rocks states: 'Administered by Korea as Dokdo, claimed by Japan as Takeshima'. Google Earth also depicts disputed borders in red, rather than yellow. However, the corporation's apparently lofty principle of providing enough 'neutral' information so people can make up their own minds does not appear to translate to the far-more-popular Google Maps.

## The Frontier of Cyberspace

The implications of Google 'local expectation' leads me to turn away from the map's representation of political borders and to consider the theme 'borderlands' in a somewhat more figurative manner. The later half of the 20th century saw the exponential rise of networked computers, which qualitatively intensified the globalization process. By evoking the term 'globalization', I am not implying it in a simplistic, economic sense. Our world is neither 'borderless' or 'flat'. Rather, I understand globalization as referring 'to the expansion and intensification of social relation and consciousness across world-time and world-space' (Steger, 2013, p.15). In this sense, globalization is a material and symbolic process that is fundamentally multidimensional and multiscalar. The spread of the Net had a hugely deterritorializing effect on cultures and social practices around the world, with symbols and objects circulating the globe at unprecedented levels. I argue that corporations like Google have reterritorialized cyberspace, orienting as much of it as possible toward capital accumulation.

As Lev Manovich has noted, space is a key metaphor in new media and networked computers (2001, pp.272-3). The term 'cyberspace', first used by sci-fi writer William Gibson, is illustrative (1984). 'Cyber' is derived from the Greek term for 'steersman', implying someone who navigates through space. Indeed, the persistent spatial metaphors permeate much of the

Web. Consider the names of some browsers—Netscape Navigator, Internet Explorer, and Safari—these examples are all framed in spatial terms, all conjure the image of an individual user navigating through an unknown territory.

In the same novel, Gibson also used the term ‘cyberspace cowboy’. Drawing on the American frontier myth, he used this to refer to elite high-tech hackers exploring the wilderness of the Web. To take this image further, as in the 19th century steam engines pushed the frontier of ‘civilization’ further into uncharted territory, so in the late 20th century, search engines pushed into the uncharted cyberspace, reterritorializing it along commercial lines. Manifest destiny has been replaced by a utopian, neoliberal technological determinism. Rouges, re-appropriators and revolutionaries still move through this landscape, but much of the terrain has been reorganized, with the cowboy days being largely replaced by a sprawling ranch economy.

This is where Google began, as the most successful search engine to penetrate cyberspace. It functioned as a hugely profitable tool for assisting people to navigate their way through the imagined territory of the Web. Then, in the mid-2000s, Google began to spill out into the offline world. Initially, Google made their money from selling ads based on what one was searching for. Then with the advent of the mobile Web, where one searches from is almost as important as what one is searching for (Madrigal, 2012). At the end of 2012, at least 20% of Google’s queries are now ‘location specific’, a number that is certainly much higher for mobile users (Rushe, 2013).

And this is big business. The emergent ‘geo-services’ industry currently estimated at generating up to US\$270 billion of revenue per year, according to a Google commissioned report (Oxera, 2013). ‘Geo services’ include electronic maps, satellite imagery, location based searches, GPS navigation and satellite receivers. To put the staggeringly number into some perspective, geo-services are worth at least six times as much as the global video games industry (\$25 billion) or up to half of the world airline industry (\$594billion) (ibid, p.iv). As the most popular online map, Google Maps is at the forefront of this industry, leading the corporation’s interweaving of cyberspace and physical space. In so doing, it has created a sort of borderland between the two.

I will now offer a solid, if hypothetical, example of a local manifestation of this process in order to tease out the complex, problematic and contradictory nature of this borderland and its reterritorialization. Imagine a person walking through the streets of Osaka on their way to the 2014 Asian Conference on Cultural Studies. Rather than asking somebody for directions, the person runs Google Maps on their ‘smart phone’. They navigate the Web to navigate the city, they access commercial cyberspace in order to move through embodied space. The person taps ‘Rihga Royal Hotel’ (the conference venue) into Google Maps. What follows usually occurs within the pseudo-magical realm of the technological ‘black box’.

The phone’s hardware and operating system translates the person’s finger strokes into digital information, interfacing it with the browser, and then emitting it wirelessly. This information then jumps across the Pacific—via transoceanic fibre-optic cables—to the US where it fires up between 700

and 1,000 computers in several of Google’s massive data-farms (Figure 7). Hundreds of algorithms groom over the search request, indexing and ranking it (Google, 2014a).

One crucial factor is where the person is searching from. Thanks to the Pentagon owned GPS system, Google locates them with great accuracy in Osaka. They thus decide that the person means this Rihga Royal Hotel, as opposed to the other five across Japan. It is their ‘local expectation’. The person’s search term and physical movements are recorded by Google and, in combination with their search history, they are profiled by the corporation’s pattern recognition algorithms and sold to Google’s advertisers in an attempt to manipulate the person’s consumer habits. This intricate surveillance mechanisms allows Google to efficiently launch contextual and targeted advertisements at their users. It also provides the data for Google’s machine learning algorithms to improve themselves as part of the company’s quest to create artificial intelligence.

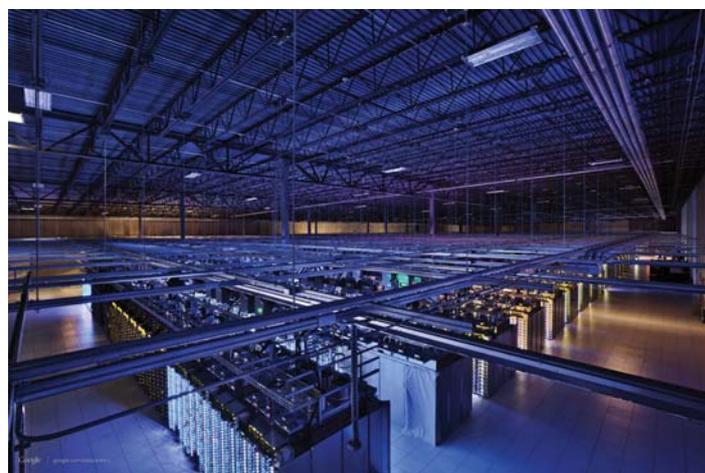


Figure 7: Inside a Google Data Centre, Council Bluff, Iowa, USA (Google, 2014c).

Then, the results are blasted back halfway around the world where the person’s mobile device translates the abstract code into a image that the person recognizes as a map (Figure 8). This whole process takes place at inhuman speeds and the results are delivered in less than a second. Google Maps directs the person to cross a bridge and then turn right. On route, they pass a 7-Eleven, which features as a corporate landmark. 7-Eleven is presumably a paid-up Google Maps advertiser with its logo featuring prominently on the map. I say ‘presumably’ as there is no way to tell, which businesses that feature on Google Maps are paid advertisers and which are not. This violates part of point one of Google’s self-proclaimed philosophy, which explicitly states that advertising must be clearly marketed (Google, 2014b). It seems this principle does not translate to Google Maps.

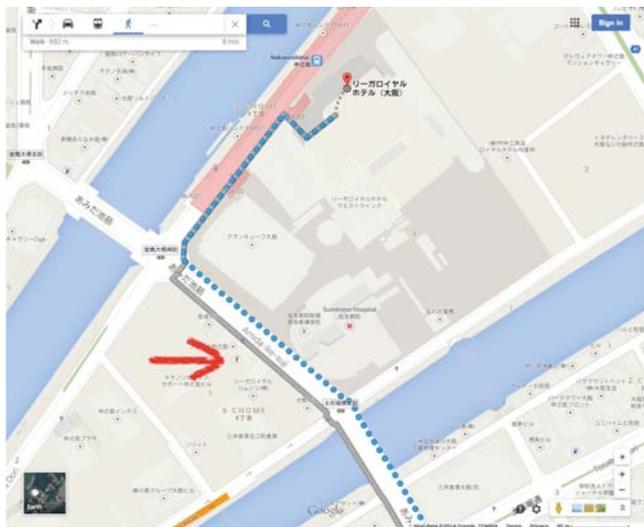


Figure 8: Google Maps to this Rihga Royal Hotel, via 7-Eleven (arrow added)

Wrapped up in this enterprise is a complex and cross-hatched tapestry of time and space which are woven together through the hypothetical person's use of Google Maps: social time and cyberspace; digital processing time and subjective sense of place; biological time and corporate 'geo-services'; global networks and local navigations. The everyday act of a person using Google Maps to navigate to this conference is a fascinating example of the multiscalar and multidimensional dynamics of globalization.

## Conclusion

While constantly claiming to have the 'optimal combination of neutrality, objectivity, and legitimacy', the issue of Google Map's depiction of disputed territories clearly demonstrates the farcical nature of Google claim for neutrality. Their map

cannot exist beyond politics because the map itself is an incarnation of politics. It is a visualization of a perspective of a contested historical process, one fundamentally connected with subjectivity, power relations and social formations.

While making these bold claims, Google are expanding their commercial power and profit margins. The corporation's influence and ambitions have spilt out from the Web and begun to reterritorialize the embodied world. This has created a sort of borderland between the formal realm of cyberspace—with its algorithms and axioms, conformity and code—and the place beyond software, our physical earth and social worlds; a place of infinite complexity and order that we inhabit and embody.

And it is this paradox, the ability to mix the formalised with the more messy—non-mathematical formalisms, linguistic, and visual objects and codes, events occurring at every scale from the ecological to the erotic and political—which gives computing its power effects, and which folds back into software in its existence as culture (Fuller, 2008, pp.5-6).

In the 19th century coal was thrown into the boilers of steam engines, providing the power for expansion at the frontiers of 'civilization'. In the 21st century, language is thrown into the boilers of Google automated linguistic market. This provides the power for the search engine to reorganize the web and to reterritorialize the space beyond it, dragging as much of it as possible into the circuits of capital accumulation. In this way, Google Maps facilitates the global markets push deeper into the social fabric of the embodied world.

Full references for this paper can be found in the Table of References section.