



Author: Wilken, Rowan
Title: Places Nearby: Facebook as a location-based social media platform
Year: 2014
Journal: New Media and Society
Volume: 16
Issue: 7
Pages: 1087-1103
URL: <http://hdl.handle.net/1959.3/385300>

Copyright: Copyright © The Author(s) 2014. The author's accepted manuscript version is reproduced in accordance with the copyright policy of the publisher. The published version of this article can be found at:
<http://doi.org/10.1177/1461444814543997>

This is the author's version of the work, posted here with the permission of the publisher for your personal use. No further distribution is permitted. You may also be able to access the published version from your library.

The definitive version is available at: <http://doi.org/10.1177/1461444814543997>

Places Nearby: Facebook as a Location-based Social Media Platform

Rowan Wilken

Swinburne University of Technology, Australia

Abstract

This article examines the growing importance of Facebook as a location-focused platform. Facebook's approach has been cautious but deliberate. However, following the strategic acquisitions of location-sharing start-ups Gowalla and Glancee, Facebook has ramped up its location-based services: they launched their Nearby feature in December 2012, and adjusted their application programming interface (API) in early 2013 to enable 'seamless' location-sharing across third party applications. These, and more recent acquisitions, are part of ambitious, longer-term moves that reposition Facebook as a local recommendation service (taking on Foursquare and Yelp), and, significantly, establish Facebook as a key local, and increasingly mobile-centred, advertising portal (taking on Google).

Keywords

Facebook, location-based social media, Instagram, Places, Nearby, Glancee, WhatsApp.

Introduction

A location service only gets interesting when you get to a certain scale. (Josh Williams quoted in Constine, 2012e)

Then Williams dropped a bomb. 'Now we're seeing 250 million of our users tagging location on a monthly basis – a bit over 800 location tags per second.'
(Constine, 2012e)

This article examines the growing significance of location and geocoded data to Facebook. In it, I take a political economy of the media and platform studies approach and argue that the global significance of Facebook is amplified significantly when it is conceived of as a location platform. Despite an extensive critical literature on Facebook (Caers, et al., 2013), little attention has been paid to date to how Facebook might, and I argue ought to be, understood as a location platform. While much of the attention on location-based services has been directed to the likes of Foursquare and Google, Facebook has quietly gone about building the necessary infrastructure in order to extract meaningful location data. Of particular concern for Facebook has been to strengthen its position as a *mobile* location-based social networking (and advertising) service.

In August 2010, it launched its mobile only service, Facebook Places. The following year, this was phased out and replaced by other location features, most notably an opt-in location button that tags each post with general location data. Facebook's approach

has been a cautious but deliberate one, aimed at getting users accustomed to location sharing prior to 'monetizing' this data. However, following the strategic acquisitions of location-sharing start-ups Gowalla and Glancee, as well as photo-sharing site Instagram (and, later still, the messaging service, WhatsApp), Facebook significantly ramped up its location-based services: the company adjusted their API in early 2012 to enable 'seamless' location-sharing across third party applications, and, in December 2012, they launched their Nearby feature. These are all part of ambitious, longer-term moves that reposition Facebook in three ways: first, they establish Facebook as a location-based services company; second, they refocus the company as a local recommendation service (taking on the likes of Foursquare, Yelp, and Groupon); and, third, they establish Facebook as a key local and mobile advertising portal (taking on Google). The portrait that results of Facebook's initiatives to better integrate location and improve its mobile operations is that of a company now with extensive geodemographic profiling capacities, a strengthened position in local and mobile advertising, and an expanding corporate sphere of influence.

This examination of Facebook's growing interest in location and geocoded data is informed by prior work within mobile media scholarship which documents the complicated cultural economies of mobile phones (Goggin, 2006) and locative media (Farman, 2012; De Souza e Silva and Frith, 2012; Gordon and De Souza e Silva, 2011), as well as that which calls for attention to be paid to the infrastructures that enable and support mobile communications (Horst, 2013). Furthermore, in providing a detailed account of Facebook as company and social media service, I also engage with established work on the political economy of new media (Mansell, 2004; Van Couvering, 2011) as well as more recent work within platform studies (Van Dijck,

2012, 2011; Barreneche, 2012a, 2012b). My aim in this article is to contribute to what José van Dijck (2012: 172) terms the 'politico-economic project' of attending to the 'technicity of platforms' and their business models. Thus, in detailing Facebook's internal initiatives and corporate acquisitions, I seek to develop, in Gerlitz and Helmond's (2013: 2) words, 'a platform critique that is sensitive to [Facebook's] technical infrastructure whilst giving attention to the social and economic implications of the platform'. In the final section of the article, I examine the larger implications of Facebook's pivot towards location and mobiles, drawing on and engaging with Mark Andrejevic's (2007) concept of the 'digital enclosure'. While Andrejevic developed this concept on the cusp of the emergence and wider take-up of smartphones, it nonetheless provides a productive theoretical framework for considering Facebook's recent corporate acquisitions and its geocoded data ambitions.

This article draws on an extensive search of the technology trade press and related sites in the US. Since the US Sarbanes-Oxley Act (2002), reliable corporate data is notoriously difficult to obtain and trade papers remain a crucial resource for scholarly researchers interested in the political economic dimensions of networked media and parallel fields (Sinclair, 2005), and the everyday representation of them. As van Dijck and Poell (2013: 2) point out, while 'the underlying principles, tactics, and strategies' of social media platforms and firms 'may be relatively simple to identify', it is, however, 'much harder to map the complex connections between platforms' and the business decisions and internal company directives underpinning these connections and other economic arrangements. In the present content, a critical analysis of trade sources thus provides insight into Facebook's evolving engagement with location and

related issues over time, as well as enabling a desirable continuity of data collection (a diachronic as opposed to a synchronic perspective). In addition, these sources make possible an examination of the narratives and other discursive strategies that are being used to shape location-based social media platforms like Facebook. This article is significant as the first to build a comprehensive account that demonstrates the strategic consolidation of location and ubiquitous mobile computing by Facebook.

Prior to exploring Facebook's strategic interest in location, however, it is important to, first, take a step back by tracing the rise of location as a key aspect of mobile phone use.

The Rise of Location-based Mobile Media and Geocoded Data Extraction

While consumer embrace of location-based mobile services is comparatively recent, the use of cell phones as positioning technologies is well established. For example, in the pre-smartphone era of mobile communications, there were 'broadly three ways of locating a handset or other user equipment with cellular networks' (Goggin, 2006: 195): the first 'takes advantage of the cellular radio design, which allows the user's handset to be identified as being within a particular cell' (196); the second involves 'measuring the time taken from signals from the handset to two or more network base station transmitters' (196); and the third is GPS, which permits the 'calculation of position based on propagation delays of different transmissions' (196).

Since the arrival of the smartphone, end-user location can be determined with much greater accuracy via the above means, through wi-fi networks (De Souza e Silva, 2013: 117), and as a result of 3G and 4G networks (Goggin, 2006: 195-197). Also

crucial to the global growth of smartphone-based location services has been the emergence of the 'geoweb' (the combination of the internet with mapping and locational technologies) (Gordon and de Souza e Silva, 2011; De Souza e Silva and Frith, 2012), and developments in sensor technologies (including iBeacons) that are now connected to networks.

As a result of these developments, and the growing popularity of smartphones, there has been, according to a 2013 Pew Internet study, notable growth in use of location-based services, with 'growing numbers of [US] internet users [...] adding a new layer of location information to their posts, and a majority of [US] smartphone owners us[ing] their phones' location-based services' (Zickuhr, 2013). This, in turn, has led to end-user location and location-based services becoming 'of intense interest to the cell phone, wireless, and mobiles industries' (Goggin, 2006: 196), as well as the advertisers and marketers, and the major players of the technology industry, such as Facebook. The reason is simple: smartphones 'gather unprecedented amounts of longitudinal data on their users' locations – data which can support new kinds of tailored retail and consumer services, lifestyle profiling and mapping, and surveillance, with considerable privacy and social implications' (Wilken and Goggin, 2014: 6).¹

Within social networking services, specifically Facebook, there are a variety of means by which location data is accrued. From an end-user perspective, location can be disclosed by the information entered in the predetermined data fields in Facebook's settings (and in response to questions such as where are you from? Where do you live? Where did you go to high school?). Geolocational information can also be disclosed in status updates and tagged photographs.

Social media and search companies deploy a variety of techniques for accruing location information according to what Carlos Barreneche (2012b) calls 'place ontologies': 'ways of categorizing the world' based on the extraction and use of different forms of geocoded location information. Places databases can be built from one of a number of different types of spatial information. Like Foursquare, Facebook uses Points of Interest (POIs), which are human-determined features on a map (or in a geodataset), with each feature occupying a particular point. POIs, as Barreneche (2012b) notes, 'may include name, current location, category, address, telephone, email, social media accounts, URI [uniform resource indicator, a string of characters used to identify a name of a web resource], [...] and essentially a unique place identifier'. The strategies used to populate location information differ between platforms (Barreneche, 2012b). In Facebook's case, it 'harnesses its social graph' to collect an array of different forms of 'local/location data' (Barreneche, 2012a: 335). Facebook's larger aims for location information, in the words of one company spokesperson, are, ultimately, to shift end-user thinking away from conceiving of location as 'being a specific type of information people broadcast via their mobile phones, to metadata that you could add to any experience in your life' (Mangla, 2012). How the company is working towards achieving this goal of 'location as metadata' is examined in the sections that follow, detailing Facebook's own internal developments (Places, Nearby), as well as key strategic corporate acquisitions to strengthen its position as a location-based mobile social networking platform.

Facebook Places

By Mark Zuckerberg's own admission, Facebook has been a relative latecomer to location and mobile location. By the time it launched its first significant location offerings in 2010, other major players, such as Twitter and Google, had already integrated location into their operations (Bilton, 2010). In addition to Google and Twitter, a suite of specialist location-based mobile social networking start-ups had also emerged, including Loopt (founded in 2005), Whrrl, Brightkite, and Gowalla (all founded in 2007), and Foursquare (founded in 2009 from the ashes of Dodgeball).

Characteristically, despite playing catch up, Facebook played a cautious hand. Rather than rushing to add more explicit locational elements to its social networking service, Facebook focused on laying careful foundations on which to build meaningful location functionality. An announcement about its much-rumoured location features was expected at its f8 developer conference in April, 2010 (O'Dell, 2010). However, clearly concerned about the possible privacy implications of aggregating users' location data, this announcement was delayed in order for the company to 'hammer out' a new privacy policy (O'Dell, 2010). An earlier update to the company's privacy policy, released in November 2009, paved the way by inserting the statement: 'When you share your location with others or add a location to something you post, we treat that like any other content you post' (quoted in Bilton, 2010). Equal care was also given to achieving the seamless integration of location within the Facebook platform in a way that would accord with its business plans while not disrupting end user engagement.

The result, Facebook Places, was eventually unveiled in August, 2010. There were two aspects to this new location feature. The first, a mobile only service, allowed

Facebook users to check-in via smartphone to specific locations and to share each check-in with friends. The decision to launch a mobile only feature was likely driven by acknowledgment that most competing location-based check-in services were mobile driven, and in recognition of the fact that, as of 2010, Facebook had '200 million people around the world [who were] actively using Facebook from a phone', a number that had tripled from the previous year and was only likely to continue growing (Tseng, 2010). With this in mind, Facebook tried to sell Places to its users via its blog with the pitch that 'life happens in real time, and so should sharing', including the sharing of specific locations (Tseng, 2010).

Further Places refinements soon followed. A 'starred friends list' was added, which was a way of tagging those friends a user frequently checked in with. A Places Editor app was also tested that enabled users to correct location or venue information and categorize this information (Constine 2011a). Facebook also sweetened the Places service for both its end and business users by introducing Deals (Tseng, 2010), offers that users could share with friends nearby (Fougner, 2011). Deals was initially launched in the USA, and subsequently expanded the following year to include Canada, France, Germany, Italy, Spain, and the UK (Fougner, 2011). Deals formed a key addition to Facebook's location offerings: while Facebook claimed in 2009 that any location service it might develop would not compete with Foursquare, Loopt, or Gowalla, with Deals it was clearly beginning to stake out the same turf as two other competitors, Yelp and Groupon.

The second aspect to the Places feature was Facebook's decision to open up its place editing API (application programming interface) and geocoding service to a limited

number of third-party developers. Significantly, this permitted the ability for a select list of 'intrepid developers (including Foursquare, Gowalla and Loopt) to develop interesting location-based services on top of Facebook' (Lardinois, 2010). It was a particularly canny move on Facebook's part. As a company without first mover advantage in the area of geo services, opening up its API enabled it to gain access to and aggregate location data generated through other applications. Thus, its places database grew exponentially.

Even more powerful was the addition of single sign-on to its mobile app (Tseng, 2010). Otherwise known as Facebook Connect, this service gives smaller sites the option of allowing their users to sign in via their Facebook account (Bilton, 2010). The attraction for users is that it simplifies authentication processes, and enables them to "connect" their Facebook identity, friends, and [apply their Facebook] privacy [settings] to any site' (Morin, 2008); interactions that occur on these other sites will then also appear on their Facebook page. The attraction for businesses is access to 'the precious user data connected to the platform', including, with certain permissions, users' location information (Hijleh, 2012) – information which marketers tend to view as highly prized. There are also obvious benefits of single sign-on for Facebook. Given that the announcement of single sign-on for mobile made explicit mention of Loopt, Yelp, and Groupon, among other apps (Tseng, 2010), one clear benefit would appear to be granting Facebook access to a large pool of geocoded data, much greater than Facebook's users would generate via the Facebook app alone. Reflecting on one description of single sign-on as 'like a virtual passport', Nancy Baym (2011) asks whether 'we really want to think of Facebook as a nation', and to question the implications of what it means for 'Facebook citizenship to become

a requirement for accessing other domains'. Facebook's appeal to the concept of the nation in selling single sign-on is telling insofar as this feature of its interface evokes another concept from political theory: that of the 'sphere of influence' which, in its loosest sense, is used 'to denote any territory in which a foreign power sought to exert exclusive influence without annexation' (Moore, c1963: 165). When applied to Facebook's business dealings, this is precisely what single sign-on is designed to achieve: a means of exerting influence over how web-based information is accessed in order to gain privileged access to the data – including geocoded data – that restricted access yields.

By August 2011, only one year after its launch, Facebook Places was discontinued. Jessi Hempel makes reference to Facebook's 'three steps forward one step back launch approach' where the company launches a product in order to test the waters, then pulls back before rolling it out again more slowly (cited in *Mark Zuckerberg: Inside Facebook*, 2013). As this remark suggests, the discontinuation of Places by no means signalled a diminished interest in location and geodata on Facebook's part. On the contrary, at the same time that it was 'killing Facebook Places', the company was 'adding a lot more location features' (Protalinski, 2011a), and revamping its privacy settings in order to accommodate them (Constine, 2011b). Facebook also enabled location check-ins for its desktop users (rather than limiting it to mobile only functionality), and permitted opt-in location-tagging of all Facebook content (status updates, photos, Wall posts, and so on) (Protalinski, 2011a). The above are all key steps in Facebook's vision of location as metadata, where 'location isn't just a node in the graph, but information that could be part of all content' (Tseng quoted in Constine, 2010), a 'layer' (Constine, 2012b) sitting over the top of everything.

It is possible to interpret these developments in a number of ways. The move by Facebook away from a mobile-only location service could well have been driven by awareness that, while mobile internet use was growing, it still represented a smaller proportion of wider internet use. For instance, in 2010, of the overall proportion of the US population who accessed the internet (79 per cent), 29 per cent did so via a cell phone (Zickuhr, 2013). Second, it is also possible that take-up was slow, and that Facebook's mobile users were reluctant to geotag content. By expanding location-tagging capabilities to desktop users, Facebook was able to target a much larger proportion of its overall user base and, in the process, habituate users to the practice of geotagging content (Protalinski, 2011a). Third, by no longer restricting location tagging to the present, and widening this capability to include the past (such as geotagging old photos) and the future (such as sharing tips with friends regarding future events), Facebook had the potential to expand significantly the pool of user-generated geocoded data.

In this interim period, Facebook engineers also worked on a new way of presenting check-in data: the 'timeline map'. This required back-end work building a 'global places directory', along with data-fetching capabilities and aggregation algorithms, in order to achieve accurate location pins on a map, as well as systems to enable users to retroactively geotag their content in order for it to appear on the timeline (Mangla, 2012). In order to realise their ambition of the 'timeline map' constituting 'a single source for people to display the places they've visited', the Facebook engineers also released a series of location-related APIs that opened up access to third-party developers (beyond the select few of Loopt, Foursquare, Gowalla, and so on). These

included APIs for 'read, write, and search'. In the case of the first of these, the *read* APIs, with permission, 'will allow any application that a person is interacting with to access the places that that person and their friends have visited' (Mangla, 2012). Moreover, as Constine (2012b) explains, the read API 'lets developers pull the coordinates of your friends based on their posts from Facebook or any location [...] as long [as] they're cross-published to Facebook and you're authorized to see them there, you could view Foursquare posts on Highlight, or Banjo posts on Glassmap'. In the second case, *write* APIs 'allow applications that have obtained user permission to post content and location tags directly onto [a user's timeline] map' (Mangla, 2012). While in the third case, *search* APIs were upgraded 'to allow applications to access universal search requests so they don't need to build their own location search capabilities' (Mangla, 2012). For Constine (2012b, 2012c), these developments reposition Facebook as a 'hub for location data', a 'backbone' that can carry extensive social interaction and wide geofunctionality, and represent a further significant scaling of their location ambitions and further extends their sphere of influence in the field of location-based services.

Facebook Nearby

The next major step in Facebook's engagement with location only took one year, and came with the launch of Nearby for iPhone and Android in December 2012. Why Nearby is important, and how it differs from Places, is revealed by understanding three key, strategic corporate acquisitions Facebook made.

The first of these was the purchase of Texas-based Gowalla in December 2011 for an undisclosed sum. Gowalla was an early location-based mobile social networking

service which was understood to have lost significant ground to its New York-based rival Foursquare (Protalinski, 2011b), making it a prime candidate for acquisition. Facebook's interest in acquiring Gowalla was not the service itself, which it closed within months. Rather, the key motivation for buying it was gaining access to the expertise of its staff, many of whom, including co-founders Josh Williams and Scott Raymond, relocated to Palo Alto, California, to work on further building Facebook's location services (Protalinski, 2011b).

The second key acquisition was Instagram. In early April 2012, two months after filing its own IPO paperwork but still not yet a publicly listed company, Facebook purchased the popular mobile photo-sharing site, Instagram, for US\$1bil (Constine and Cutler, 2012). A week before this purchase, Instagram itself had closed a financing round worth around US\$50mil (Tsotsis, 2012c). The price Facebook paid for Instagram was considered high, even by Silicon Valley standards. According to one rather blunt industry assessment, the reason Facebook was prepared to shell out so much for the company was clear: 'Facebook was scared shitless and knew that for the first time in its life it arguably had a competitor that could not only eat its lunch, but also destroy its future prospects' (Malik, 2012). This, it was suggested, was due to the fact that Instagram not only had a passionate userbase ('People like Facebook. People use Facebook. People love Instagram'), but, more crucially, because 'Facebook is essentially about photos, and Instagram had found and attacked Facebook's achilles heel — mobile photo sharing' (Malik, 2012). Instagram, in short, had 'cracked the code where Facebook itself failed: viral growth on mobile' (Malik, 2012).

The third key acquisition was Facebook's purchase in May 2012 of Gancee for an undisclosed sum (Tsotsis, 2012a). Gancee was one of a number of 'second generation' location start-ups known as 'ambient social location' or 'social search' applications (Lee, 2013: 27-28). Gancee tracks a user's location in the background, links to Facebook and Twitter accounts, shows 'people who are using the app and their shared social graph interests and Facebook picture' (Burns, 2012), and includes a 'radar' function to reveal their physical proximity (Lee, 2013: 27).

Facebook's purchase of Gancee was also principally a 'talent acquisition'. The application was shut down, and Gancee's three co-founders, Andrea Vaccari, Alberto Tretti, and Gabriel Grise, all joined Facebook. Labeled 'a nice-guy ambient social location app for normal people' (Eldon, 2012), this acquisition was viewed at the time as a good fit between Gancee's 'ideas and founders' and Facebook's 'mainstream user base' (Tsotsis, 2012a).² As a 'talent acquisition', Facebook would have had reason to be pleased. Vaccari, for instance, was formerly at Google Maps, as well as MIT's Senseable City Lab, where he worked on a number of high profile data visualisation projects and co-authored articles on, among other things, engagements with urban space and place as determined from the aggregation of mobile phone activity log data (Girardin, Vaccari, Gerber, et al., 2009). Tretti brought valuable location research expertise of his own, having written a Master of Computer Science thesis at the University of Illinois on the analysis and presentation of results for mobile local search.

The eventual fruit of this harvest of new talent was Nearby. Described as Facebook's 'first attempt at local business discovery' and search (Constine, 2012d), Nearby

provides a 'relevancy-sorted list of businesses and landmarks' that Facebook thinks each user will be interested in, based on a ranking process that takes into account 'friends who've Liked a business, checked in, left a short text recommendation, or given the Place a star rating' (Constine, 2012d). Each business listing contains category, location, and rating information, and the ability to leave personal tips (Constine, 2012d).

Crucial to Facebook's longer-term vision for Nearby was the release of Instagram 3.0, which was regeared significantly around the capture and incorporation of location data. Instagram's changes included the introduction of Photo Maps – Instagram's answer to Facebook's timeline – which displayed images arranged by location, as a preferred way of archiving and organizing photo libraries (rather than chronological ordering).

In introducing Photo Maps, Instagram CEO Kevin Systrom's larger ambition for geocoded visual data was clear: 'We eventually want 100% of photos to be geotagged' (Tsotsis, 2012b). Furthermore, he viewed photos not just as a searchable commodity, but as a mechanism for conducting searches, whereby those interacting with Instagram were 'using location the same way [one would] explore via hashtags or via a profile' (Tsotsis, 2012b). What was left unspoken yet was apparent in these statements was that there were clear longer term commercial benefits for Instagram and its parent company Facebook in geocoding pictorial data (Constine, 2012a), and it was inevitable that Instagram's datastream would feed into Facebook's – a move signalled by pre-emptive changes in December 2012 to its privacy policy to accommodate future integration (Crook, 2012).

Here it is also worth noting Facebook's USD\$19 billion purchase in early 2014 of mobile messaging client, WhatsApp. A key attraction of this deal was gaining access to WhatsApp's 450 million active users (72 per cent of whom are active each day) (Evans, 2014). Further motivation for purchasing the service, it has been suggested, was photos: 'According to the company's own numbers, WhatsApp is processing 500 million images per day [...]. For its part, Facebook processes a comparatively paltry 350 million photos a day, with an additional 55 million per day from Instagram' (Lacy, 2014).

All of these moves – the release of Nearby, the release of a new version of Instagram, and the acquisition of WhatsApp – collectively mark a significant 'ramping up' (Geron, 2012) of Facebook's mobile and location ambitions. Data integration with Instagram and WhatsApp would boost significantly the volume and quality of the geolocation data added to Facebook Nearby, and its Graph Search capabilities.

'A location service', Josh Williams once said, 'only gets interesting when you get to a certain scale' (cited in Constine, 2012e). Facebook's combination of newfound technical expertise in the area of mobile and ubiquitous computing, the addition of new local search, rating, and recommendation functionalities, and the sheer size of its dataset, have made it a formidable location-based services company. The net result is that Facebook is now a key player in mobile social networking, local search, and location-based mobile advertising and, because of this, finds itself in direct competition with other key firms working with location-related services, most notably

ratings and recommendations firms Foursquare, Yelp, and search and advertising giant Google.

'Architects of Recentralization': Facebook, Geocoded Data, and the 'Digital Enclosure'

In a 2004 reflection on what political economy approaches can bring to the study of 'new media', Robin Mansell (2004: 99) writes, 'a political economy of new media insists on an examination of the circumstances that give rise to any existing distribution of power and of the consequences for consumers and citizens'. Having detailed Facebook's development of mobile and location capacities, here I want to give consideration to the above issue by reflecting on some of the larger implications of this analysis of Facebook's corporate maneuvers.

José van Dijck and Thomas Poell (2013: 9) make the point that, as platforms mature, they turn 'more into data firms deriving their business models from their ability to harvest and repurpose data'. It is the richness of the 'audience traffic' that is facilitated by the platform that forms the 'core, saleable asset' for the owners of the platform (Van Couvering, 2011: 198). And, the more users – and user-generated data – a platform can claim, the higher the advertising rates (Fuchs, 2012: 144).

Ongoing alterations to Facebook's APIs and mobile and desktop interfaces to incorporate location-awareness are significant as part of these user-focused data-mining efforts. Facebook's various place APIs and its advertising arm serve as key gateways to the platform's 'audience traffic'. Both are vital instruments 'enabling the

capitalization' (Lapenta, 2011: 22) of its network data. Facebook's decision to open up its location-related APIs to third-party developers, and to keep it accessible, is interesting in this context. Maintaining an 'open platform' (Facebook 'wants other companies to take over its pages' – Lacy, 2009: 200) is a deliberate strategy, and, in the present context, certainly assists it in compensating for lack of first mover advantage in location and mobile by hoovering up geodata from elsewhere via its APIs. What Facebook has realised, in short, is that *geocoded* user data holds greater commercial value for marketers and advertising than non-geocoded data. As van Dijck (2011: 343) has argued in relation to Twitter, and the same is true for Facebook, by enabling geolocational functionality, users 'could be monitored more precisely; hence, certain revenue options became more viable'. Just as the richness of this geocoded Facebook user data increases, it follows that so, too, will the commercial value of this data increase.

The larger platforms like Facebook grow, the farther their commercial influence tends to extend, such that 'control over tools and services [comes to be increasingly] held by a small number of media corporations' (Van Dijck, 2012: 171) – these companies become, in Mark Andrejevic's (2007: 298) words, 'architects of recentralization'. Facebook has been able to achieve this through talent acquisition and extending its corporate 'sphere of influence'. The introduction of 'single sign-on', for instance, has provided greater access to and exploitation of resources (in this case, the extraction of rich geocoded user data pulled into its places database).

Mark Andrejevic (2007) describes these processes as forms of 'digital enclosures': 'productive data gathering' (299) and monitoring 'facilitated by ubiquitous

interactivity' (297). The logic of the digital enclosure, Andrejevic argues, 'combines the spatial characteristics of land enclosure with the metaphorical process of information enclosure' (304). A good illustration of this can be found in Facebook's deal, in early October 2013, with Cisco's Enterprise Networking Group to roll-out a 'free' Wi-Fi service to any business in the US that wishes to use it (Hajela, 2013). Bearing the rather awkward title of 'Connected Mobile Experiences (CMX) for Facebook Wi-Fi', the arrangement was that merchants would use their own existing router and broadband subscription, which then integrates with the CMX software (Constine 2013).

Of course, the notion of 'free' Wi-Fi is a misnomer. As Robert Gehl (2013: 230) notes, 'Facebook's business model is based on trading access to the social graph for personal data'. The only difference here is that what is being traded for personal data is access to the social graph *and* the internet. In exchange for each business signing up to the service, Facebook 'provides the merchant with the aggregate ages, genders, and other demographic info of those who check in, but in an anonymized format without names attached' (Constine, 2013). For its part, Facebook is able to create an incentive for its mobile users to register their location which it can then scrape, as well as providing, along with Facebook Connect, another means of potentially reducing its subscription churn rate (Gehl, 2013: 225). Furthermore, Facebook can encourage more businesses to sign-up as a 'prelude to buying ads' (Tate, 2012), thereby extending the reach of its Nearby local search and recommendation and Deals services.

As Andrejevic (2007: 299) points out, 'the model of enclosure highlights the ongoing importance of structures of ownership and control over productive resources'. It is in reference to this point that I want to suggest an additional concept as productive for thinking about Facebook's location-driven acquisitions of Instagram and WhatsApp. This is the idea, taken from international trade, of the *entrepôt* – 'a place or district which acts as an intermediary centre for trade between foreign countries', for example Hong Kong (Moore, c1963: 63). In its general, and for my purposes more apposite, sense, it involves 'the receipt of goods from one part of the world and their distribution to another part; or a place where goods are temporarily stored' (63). In the case of Facebook, we might think of its present relationship with Instagram and WhatsApp, where these two (at least for now) enjoy relative independence from their parent company, as a form of application-based corporate (as opposed to transnational) *entrepôt* trade. A key difference from earlier conceptions of *entrepôt* trade, however, is that, in the present case, the 'goods' are generated by end-users (in the forms of geotagged status updates, likes, and so forth), received and 'stored' by *entrepôt* intermediary centres (Instagram, WhatsApp), before flowing to the parent trader (Facebook) and into its places database and social graph. What we see here, to adapt Mark Andrejevic's (2007: 296) words, is a portrait emerging of 'user activity made possible by ubiquitous [social media based] interactivity [... that is] increasingly detailed and fine-grained, thanks to an unprecedented ability to capture and store patterns of interaction, movement, transaction, and communication'. What is produced via such arrangements, Carlos Barreneche argues, are sophisticated forms of 'geodemographic profiling': data aggregation practices that use 'the data-mining of records of location trails to produce the socio-spatial patterns that make up the segmentations that enable inferences about users' identity and behaviour'

(Barreneche, 2012a: 339). Not only is geodemographic profiling reconfiguring how we understand and interact with places in potentially troubling ways ('the POI ontology mirrors the worldview of neoliberal urban politics of privatization and disappearance of public space' – Barreneche, 2012b), the addition of geodata to other forms of demographic profiling raises a number of privacy concerns pertaining to the types of user-data that are used by Facebook for advertising purposes, and what forms of protections, if any, users can expect from these forms of participatory economic surveillance (Fuchs, 2012: 141; Dwyer, 2014).

Conclusion

This article has examined the variety of ways that Facebook has cautiously but deliberately gone about building geolocation and mobile functionality into the Facebook platform. In it, I have traced the development and subsequent phasing out of Facebook Places; the extensive background work done after this time to add in significant geotagging functionality; the many crucial corporate acquisitions (of Gowalla, Glancee, and Instagram and WhatsApp) that lay the foundations for the next step in geolocation functionality; the launch and implications of Nearby; and, briefly, Facebook's forays into 'free' Wi-Fi provision. My contention has been that the global significance of Facebook as a social media platform is amplified significantly when it is conceived of a mobile-based *locative platform*.

In January 2013, Mark Zuckerberg unveiled a revamped search engine, which he referred to as the 'third pillar' of Facebook's business, the other two being its timeline, and its news feed (Facebook: Search me, 2013). Facebook's steady and persistent development of mobile and location, and the increasing economic importance of geotagged data for its operations, especially its advertising service,

suggests mobile and location as a key 'fourth pillar' of Facebook's still-evolving business. As Zuckerberg puts it, 'if 2012 was the year we turned our core product into a mobile product, then 2013 was the year when we turned our business into a mobile business' (quoted in Vizard, 2014).

Facebook recognises that this 'fourth pillar' of mobile and location is increasingly central to its future success. Redoubling of efforts around location and mobile are already paying dividends. Facebook's scale and global reach, and their decision to open their places APIs to developers, means a continual enrichment of its 'social graph' which, in turn, strengthens its position as a local and mobile advertiser.

Facebook posted its first billion dollar mobile advertising quarter in the three months ending December 2013 (Vizard, 2014), bringing stiff competition to Google.

The implications of Facebook embracing mobile and location are likely to be far reaching. For those concerned about the personal data and privacy challenges posed by locative media, and Facebook's accrual of location data coupled with its own notorious privacy track record, such developments are likely to generate considerable disquiet.

In this context, critical analysis offers the opportunity to engage with a range of critical issues, especially such as strategies for the extraction, retention, and commercial exploitation of user location data. Van Dijck's (2012: 173) 'analytical prisms', which call for analysis of public values, legal concepts, and economic instruments, provides a useful framework for directing future work around the ongoing impacts and implications of Facebook's 'fourth pillar' of mobile and

location.³ The importance of this task is further amplified when we consider Facebook's growth in developing markets, their ambitions for a 'drone network' in Africa, and the ongoing struggles for corporate dominance against competitors such as Google.

Acknowledgements

I wish to thank the Australian Research Council for its financial support, Jenny Kennedy for her invaluable research assistance, and the anonymous reviewers and guest editors for their helpful comments.

Funding

This article is an output of the Australian Research Council (ARC)-funded project, 'The Cultural Economy of Locative Media' (DE120102114).

References

- Andrejevic M (2007) Surveillance in the digital enclosure. *The Communication Review* 10: 295-317.
- Barreneche C (2012a) Governing the geocoded world: Environmentality and the politics of location platforms. *Convergence: The International Journal of Research into New Media Technologies* 18(3): 331-351.
- Barreneche C (2012b) The order of places: Code, ontology and visibility in locative media. *Computational Culture* 2. Available at <http://computationalculture.net> (accessed 11 March 2014).

Baym N (2011) Introducing Facebook nation. *Social Media Collective Research Blog*,

27 September. Available at:

<http://socialmediacollective.org/2011/09/27/introducing-facebook-nation/>

(accessed 31 March 2014).

Bilton N (2010) Facebook will allow users to share location. *The New York Times*, 9

March. Available at: [http://bits.blogs.nytimes.com/2010/03/09/facebook-will-](http://bits.blogs.nytimes.com/2010/03/09/facebook-will-allow-users-to-share-location/?_r=0)

[allow-users-to-share-location/?_r=0](http://bits.blogs.nytimes.com/2010/03/09/facebook-will-allow-users-to-share-location/?_r=0) (accessed 23 September 2013).

Burns PL (2012) SXSW 2012: The year of the ambient social location app.

arc3/communications, 27 March. Available at:

<http://arc3communications.com/sxsw-2012-the-year-of-the-ambient-social-location-app/> (accessed 5 October 2013).

Caers R, De Feyter T, De Couck M, Stough T, Vigna C, and Du Bois C (2013)

Facebook: A literature review. 15(6): 982-1002.

Constine J (2010) Facebook updates mobile platform with location APIs, Single Sign-

on, and Deals. *Inside Facebook*, 3 November. Available at:

<http://www.insidefacebook.com/2010/11/03/launches-mobile-platform-location/>

(accessed 7 October 2013).

Constine J (2011a) Facebook asks users to clean up its location database with Places

Editor and Favorite Places. *Inside Facebook*, 1 July. Available at:

<http://www.insidefacebook.com/2011/07/01/favorite-places-editor-location-database/> (accessed 6 October 2013).

Constine J (2011b) Facebook overhauls privacy, brings control in-line with content.

Inside Facebook, 23 August. Available at:

<http://www.insidefacebook.com/2011/08/23/in-line-privacy/> (accessed 7 October 2013).

Constine J (2012a) 800K #Sandy-grams showed Systrom Instagram is 'going to need to be a big data company'. *TechCrunch*, 5 November. Available at: <http://techcrunch.com/2012/11/05/instagram-big-data/> (accessed 23 September 2013).

Constine J (2012b) Facebook becomes location backbone that lets apps import checkins from each other. *TechCrunch*, 7 March. Available at: <http://techcrunch.com/2012/03/07/facebook-becomes-location-backbone-that-lets-apps-import-checkins-from-each-other/> (accessed 14 March 2013).

Constine J (2012c) Facebook SoLoMo-fies the platform, lets app tag friends and places. *TechCrunch*, 7 March. Available at: <http://techcrunch.com/2012/03/07/facebook-solomo-fies-the-platform-lets-apps-tag-friends-and-places/> (accessed 7 October 2013).

Constine J (2012d) Hands on with Facebook Nearby, a new local biz discovery feature that challenges Yelp and Foursquare. *TechCrunch*, 17 December. Available at: <http://techcrunch.com/2012/12/17/facebook-nearby/> (accessed 23 September 2013).

Constine J (2012e) Josh Williams on why Facebook acquired his startup Gowalla to put a 'Nearby' lens on 250M geo-posts per month. *TechCrunch*, 17 December. Available at: <http://techcrunch.com/2012/12/17/facebook-nearby-gowalla/> (accessed 23 September 2013).

- Constine J (2013) Facebook and Cisco let brick-and-mortars demand customers check-in to get Wi-Fi. *TechCrunch*, 2 October. Available at: <http://techcrunch.com/2013/10/02/facebook-wifi/> (accessed 7 October 2013).
- Constine J and Cutler K-M (2012) Facebook buys Instagram for \$1 billion, turns budding rival into its standalone photo app. *TechCrunch*, 9 April. Available at: <http://techcrunch.com/2012/04/09/facebook-to-acquire-instagram-for-1-billion/> (accessed 5 October 2013).
- Copeland D (2012) How to use Facebook's newest stalking app. *ReadWriteWeb*, 25 June. Available at: <http://readwrite.com/2012/06/25/how-to-use-facebooks-newest-stalking-app> (accessed 8 October 2013).
- Crook J (2012) Instagram will share user data with Facebook according to its new privacy policy. *TechCrunch*, 17 December. Available at: <http://techcrunch.com/2012/12/17/instagram-will-share-users-data-with-facebook-according-to-its-new-privacy-policy/> (accessed 23 September 2013).
- De Souza e Silva A (2013) Location-aware mobile technologies: Historical, social and spatial approaches. *Mobile Media & Communication* 1(1): 116-121.
- De Souza e Silva A and Frith J (2012) *Mobile Interfaces in Public Spaces: Locational Privacy, Control, and Urban Sociability*. New York: Routledge.
- Dwyer T (2014) Evolving concepts of personal privacy: Locative media in online mobile spaces. In: Wilken R and Goggin G (eds) *Locative Media*. New York: Routledge, pp. 121-135.
- Eldon E (2012) Glancee: A nice-guy ambient social location app for normal people. *TechCrunch*, 9 February. Available at:

<http://techcrunch.com/2012/02/09/glanceelocationapp/> (accessed 5 October 2013).

Evans B (2014) WhatsApp and \$19bn. *Benedict Evans*, 19 February. Available at <http://ben-evans.com/benedictevans/2014/2/19/whatsapp-and-19bn> (accessed 12 March 2014).

Facebook: Search me (2013). *The Economist*, 19 January. Available at: <http://www.economist.com/news/business/21569766-social-networks-shares-recover-it-fixes-its-search-problem-search-me> (13 September 2013).

Farman J (2012) *Mobile Interface Theory: Embodied Space and Locative Media*. New York: Routledge.

Fitzpatrick A (2012) Facebook pulls Find Friends Nearby 'test'. *Mashable*, 27 June. Available at: <http://mashable.com/2012/06/26/find-friends-nearby/> (accessed 8 October 2013).

Fougnier J (2011) Introducing Deals. *The Facebook Blog*, 1 February. Available at: <https://blog.facebook.com/blog.php?post=446183422130> (accessed 23 September 2013).

Fuchs C (2012) The political economy of privacy on Facebook. *Television & New Media* 13(2): 139-159.

Gehl RW (2013) 'Why I left Facebook': Stubbornly refusing to not exist even after opting out of Mark Zuckerberg's Social Graph. In: Lovink G and Rasch M (eds) *Unlike Us Reader: Social Media Monopolies and their Alternatives*. Amsterdam: Institute of Network Cultures, pp. 220-238.

- Gellman B and Soltani A (2013). NSA tracking cellphone locations worldwide, Snowden documents show. *The Washington Post*, 5 December. Available at http://www.washingtonpost.com/world/national-security/nsa-tracking-cellphone-locations-worldwide-snowden-documents-show/2013/12/04/5492873a-5cf2-11e3-bc56-c6ca94801fac_story.html (accessed 13 December 2013).
- Gerlitz C and Helmond A (2013) The Like economy: Social buttons and the data-intensive web. *New Media & Society* 15(8): 1345-1365.
- Geron T (2012) Facebook takes on Foursquare and Yelp with Nearby. *Forbes*, 17 December. Available at: <http://www.forbes.com/sites/tomiogeron/2012/12/17/facebook-takes-on-foursquare-and-yelp-with-location/> (accessed 13 September 2013).
- Girardin F, Vaccari A, Gerber A, Biderman A and Ratti C (2009) Towards estimating the presence of visitors from the aggregate mobile phone network activity they generate, *11th International Conference on Computers in Urban Planning and Urban Management (CUPUM), Hong Kong, 16-18 June*. Available at: http://www.girardin.org/fabien/publications/girardin_et_al_cupum09_final_pre_editing.pdf (accessed 5 October 2013).
- Goggin G (2006) *Cell Phone Culture*. London: Routledge.
- Gordon E and de Souza e Silva A (2011) *Net Locality: Why Location Matters in a Networked World*. Chichester, West Sussex: Wiley-Blackwell.
- Gross D (2013) Why Facebook may want to track your location. *CNN*, 6 February. Available at: <http://edition.cnn.com/2013/02/06/tech/mobile/facebook-mobile-app-privacy/index.html> (accessed 13 September 2013).

Hajela S (2013) Facebook and Cisco connect businesses and customers. *Cisco Blog*, 2 October. Available at: <http://blogs.cisco.com/news/facebook-and-cisco-connect-businesses-and-consumers/> (accessed 7 October 2013).

Hijleh A (2012) A brief guide to Facebook single sign on. *Soshable*, 16 February. Available at: <http://soshable.com/facebook-single-sign-on/> (accessed 2 October 2013).

Horst HA (2013) The infrastructures of mobile media: Towards a future research agenda. *Mobile Media & Communication* 1(1): 147-152.

Lacy S (2009) *Once You're Lucky, Twice You're Good: The Rebirth of Silicon Valley and the Rise of Web 2.0*. New York: Gotham Books.

Lacy S (2014) Follow the photos: The real reason Facebook just paid almost 10% of its market cap for WhatsApp. *PandoDaily*, 19 February. Available at: <http://pando.com/2014/02/19/follow-the-photos-the-real-reason-facebook-just-paid-almost-10-of-its-market-cap-for-whatsapp/> (accessed 20 February 2014).

Lapenta F (2011) Geomedia: On location-based media, the changing status of collective image production and the emergence of social navigation systems. *Visual Studies* 26(1): 14-24.

Lardinois F (2010) Report: Location sharing is coming to Facebook. *ReadWrite*, 9 March. Available at: http://readwrite.com/2010/03/09/location_sharing_is_coming_to_facebook_-_how_will_users_react (accessed 23 September 2013).

Lee N (2013) *Facebook Nation: Total Information Awareness*. New York: Springer.

MacMillan D (2013) Facebook is said to create mobile location-tracking app.

Bloomberg, 5 February. Available at: <http://www.bloomberg.com/news/2013-02-04/facebook-is-said-to-create-mobile-location-tracking-app.html> (accessed 8 October 2013).

Malik O (2012) Here is why Facebook bought Instagram. *GigaOm*, 9 April. Available at: <http://gigaom.com/2012/04/09/here-is-why-did-facebook-bought-instagram/> (accessed 8 October 2012).

Mangla K (2012) Under the hood: Building the location API. *Facebook Engineering*, 9 March. Available at: <https://www.facebook.com/notes/facebook-engineering/under-the-hood-building-the-location-api/10150558607303920> (accessed 7 October 2013).

Mansell R (2004) Political economy, power and new media. *New Media & Society*, 6(1): 96-105.

Mark Zuckerberg: Inside Facebook (2013) Television program, 22 September. Sydney: ABC 1.

Morin D (2008) Announcing Facebook connect. *Facebook developer blog*, 9 May. Available at: <http://developers.facebook.com/blog/post/2008/05/09/announcing-facebook-connect/> (accessed 2 October 2013).

Moore WG (c1963) *A Dictionary of Geography*. Harmondsworth, Middlesex: Penguin.

Newman J (2013) Friend finder or location tracker? Facebook's trust problem, visualized. *Time*, 5 February. Available at:

<http://techland.time.com/2013/02/05/friend-finder-or-location-tracker-facebooks-trust-problem-visualized/> (accessed 23 September).

O'Dell J (2010) Facebook location features confirmed and coming soon. *Mashable*, 21 June. Available at: <http://mashable.com/2010/06/21/facebook-location-confirmed/> (accessed 13 September 2013).

Price E (2013) Facebook is creating location-sharing app, report says. *Mashable*, 5 February. Available at: <http://mashable.com/2013/02/04/facebook-location-sharing/> (accessed 13 September 2013).

Protalinski E (2011a) Facebook kills Places, but emphasizes location sharing more. *ZDNet*, 23 August. Available at: <http://www.zdnet.com/blog/facebook/facebook-kills-places-but-emphasizes-location-sharing-more/2972> (accessed 23 September, 2013).

Protalinski E (2011b) Gowalla confirms: Facebook acquires location-based social network, 5 December. Available at: <http://www.zdnet.com/blog/facebook/gowalla-confirms-facebook-acquires-location-based-social-network/5808> (accessed 23 September 2013).

Seifert D (2013) Secret program gives NSA, FBI backdoor access to Apple, Google, Facebook, Microsoft data. *The Verge*, 6 June. Available at: <http://www.theverge.com/2013/6/6/4403868/nsa-fbi-mine-data-apple-google-facebook-microsoft-others-prism> (accessed 30 March 2014).

Sinclair J (2005) Global advertising data SOX-ed up. *Flow*, 21 January. Available at: <http://flowtv.org/2005/01/global-advertising-data-sox-ed-up/> (accessed 4 October 2013).

Snead E (2012) Facebook pulls so-called 'stalker app' hours after it quietly launched.

Hollywood Reporter, 25 June. Available at:

<http://www.hollywoodreporter.com/news/facebook-stalker-app-friendshake-mark-zuckerberg-341532> (accessed 8 October 2013).

Tate, R (2012) Why Facebook might get into the free Wi-Fi racket. *Wired*, 2

November. Available at: <http://www.wired.com/business/2012/11/facebook-wifi/> (accessed 13 September 2013).

Tseng E (2010) Making mobile more social. *The Facebook Blog*, 4 November.

Available at: <http://blog.facebook.com/blog.php?post=446167297130> (accessed 13 September 2013).

Tsotsis A (2012a) Facebook buys location-based discovery app Gancee. *TechCrunch*,

4 May. Available at: <http://techcrunch.com/2012/05/04/facebook-buys-location-based-discovery-app-gancee/> (accessed 23 September 2013).

Tsotsis A (2012b) Instagram 3.0 bets big on geolocation with photo maps, letting you showcase the story behind your photos. *TechCrunch*, 16 August. Available at:

<http://techcrunch.com/2012/08/16/instagram-3-0-bets-big-on-geolocation-with-photo-maps-letting-you-showcase-the-story-behind-your-photos/> (accessed 23 September 2013).

Tsotsis A (2012c) Right before acquisition, Instagram closed \$50m at a \$500m valuation from Sequoia, Thrive, Greylock and Benchmark. *TechCrunch*, 9 April.

Available at: <http://techcrunch.com/2012/04/09/right-before-acquisition-instagram-closed-50m-at-a-500m-valuation-from-sequoia-thrive-greylock-and-benchmark/> (accessed 13 April 2013).

Van Couvering E (2011) Navigational media: The political economy of online traffic.

In: Winseck D and Jin DY (eds) *The Political Economics of Media: The Transformation of the Global Media Industries*. London: Bloomsbury Academic, pp.183-200.

Van Dijck J (2011) Tracing Twitter: The rise of a microblogging platform.

International Journal of Media and Cultural Politics 7(3): 333-48.

Van Dijck J (2012) Facebook as a tool for producing sociality and connectivity.

Television & New Media 13(2): 160-176.

Van Dijck J and Poell T (2013) Understanding social media logic. *Media and*

Communication 1(1): 2-14.

Vizard S (2014) Facebook posts first billion-dollar mobile quarter. *MarketingWeek*,

30 January. Available at: <http://www.marketingweek.co.uk/disciplines/social-media/facebook-posts-first-billion-dollar-mobile-quarter/4009323.article>

(accessed 31 March 2014).

Wilken R and Goggin G (2014) Locative media: Definitions, histories, theories. In:

Wilken R and Goggin G (eds) *Locative Media*. New York: Routledge, pp. 1-19.

Zickuhr K (2013) Location-based services. Pew Internet and American Life Project.

12 September. Available at <http://pewinternet.org/Reports/2013/Location.aspx>

(accessed 16 December 2013).

Notes

¹ There have also been revelations that surveillance interest in location data extended to the US National Security Agency extracting and storing "vast volumes" of location data from around the world by tapping into the cables that connect mobile networks globally' (Gellman and Soltani,

2013). Earlier leaked documents also revealed that the NSA had direct access, via its PRISM program, to Facebook content (Seifert, 2013).

² Interestingly, one month after the Glancee purchase, on June 25, 2012, Facebook tested a new mobile app called Find Friends Nearby (also known as 'Friendshake') that allowed users to find profiles of people in close geographical proximity (Lee, 2013: 28). The app was pulled a day after its trial. The reasons given for this vary from concerns over privacy (Snead, 2012) and as a result of press description of it as 'Facebook's newest stalking app' (Copeland, 2012; Lee, 2013: 28), to the threat of legal action from start-up Friendthem, who claimed that Facebook had stolen their idea (Fitzpatrick, 2012). Rumours of a networked version of a Facebook location-sharing or tracking app resurfaced in the trade press in early 2013 (Price, 2013; MacMillan, 2013; Newman, 2013; Gross, 2013).

³ To flesh out these categories, van Dijck's (2012: 173) 'analytic prisms' include 'public values (participation, community, democracy, popularity), legal concepts (privacy, intellectual property, trust), and economic instruments (business models, value creation) [as they are] intertwined in the construction of social media platforms'.