Mobile ensembles:

The uses of mobile phones for social protest by Spain's indignados

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Abstract

During the 2011 wave of protests millions of citizens around the globe employed a vast range of digital media to demand greater democratic freedoms and social justice. Although mobile phones were widely used in all these protests, their significance remains unclear. This chapter draws from both qualitative and quantitative research to shed light on the recent uses of mobile technologies for social protest, with Spain's Indignados (or 15M) movement as the case study. The chapter argues for the importance of processual analyses of the new protests that situate the uniqueness of each mobile technology and 'mobile ensemble' within a particular moment in the collective biography of a movement. This approach reveals the importance of smartphones as new articulators of online spaces and occupied physical spaces, especially via Twitter and live streaming.

Introduction

During the wave of protests that swept the world in 2011, millions of ordinary citizens employed a variety of digital media to demand greater democratic freedoms and social justice[1]. Although mobile phones were widely used in all these protests, their significance remains unclear. So far most of the academic and media debate has centred on the purported role of social media platforms such as Facebook and Twitter[2], but the mobile aspects of this usage have remained largely implicit. This stands in contrast with the situation in the first half of the 2000s, when much of the attention (and hyperbole) was devoted to the reported emergence of 'smart mobs' around mobile phone texting.[3]

The aim of this chapter is to redress the balance with a focus on the uses of mobiles, especially smartphones, for protest, with Spain's Indignados (or 15M) movement as the case study. Spain is an ideal setting for this kind of study as it offers us a crucial historical dimension missing in most discussions, namely the contrast between the events of March 2004 when protesters used SMS to successfully mobilise against the government, and the equally paradigmatic occupation of squares across the country in May 2011, within a far more complex media ecology in which texting was but one option available to protesters living in an age of 'polymedia'[4].

The chapter starts with a review of the mobile activism/protest literature that takes off from Rheingold's now classic popular study of 'smart mobs' in 2002. We then identify four issues in need of further research and theorisation, namely (1) mobile affordances, (2) media ecologies, (3) mobile collective action concepts ('smart mobs', 'flash mobs', 'swarms', etc.) and (4) processuality. Although all four issues shape our presentation, our emphasis is on the need for processual (phase-by-phase) analyses of the new protest movements that will situate each mobile technology within a particular moment in the collective biography of a movement. To this end we distinguish three main phases in the early development of the movement, namely its preparation, explosion and diffusion. We are particularly interested in what we propose to call, adapting Bausinger's classic notion of domestic 'media ensembles'[5], *mobile ensembles*, that is, the unique set of mobile (and other) technologies that are brought to bear on a specific collective action, e.g. occupying a square, preventing an eviction, or holding a general assembly. This approach reveals the key role played in Spain by smartphones as articulators of online spaces and occupied physical spaces, especially in combination with Twitter and live streaming.

Mobile collective action

One useful entry point to the mobile collective action literature is Howard Rheingold's *Smart Mobs*[6]. In this journalistic work, Rheingold explores the growing importance of 'smart mobs' (or 'mobile ad hoc networks') to collective action[7]. Drawing from examples such as the 1999 protests in Seattle or the 2001 People Power II protests in the Philippines, he suggests that smart mobs arise when the human propensity towards cooperation is amplified by information and communication technologies.

Two years after the publication of *Smart Mobs*, in 2004, the events that followed Islamist terrorist attacks in Madrid seemed to confirm Rheingold's prognosis. Following an attempt by Spain's ruling People's Party to lay the blame on Basque separatists, a large crowd was summoned via text messaging in front of the party's headquarters. The spontaneous protests led to a surprise electoral victory for the opposition Socialist Party[8]. According to Salido, mobile phones gave Spaniards an 'alternative information channel' to the mainstream media[9]. As in the Philippines, Spain's citizens were urged to 'pass on' (*pásalo*) the SMS messages, resulting in an unstoppable 'snowball effect'.

Other authors have sought to challenge what they regard as simplistic technocentric accounts. For example, Rafael questions the reported seamlessness of Manila's crowds and mobile technologies in the People Power II protests. He argues that the crowds themselves served as an alternative medium of communication, transmitting messages 'which at times converged with, but at other times diverged from, those emanating from cell phones'[10]. For his part, Miard found no evidence to support the frequent claim that "mobile phones alone will create a measurable impact on political activism" after conducting regression analyses of a number of case studies, including People Power II and Madrid 2004[11].

A more recent landmark publication is *Here Comes Everybody*, by Clay Shirky[12]. Like Rheingold, Shirky is optimistic about the potential uses of mobile technologies for collective action, arguing that they foster the rise of new forms of collective action by greatly reducing users' investment in time and money. However, Morozov[13] has criticised Shirky for his insistence on the emancipatory potential of new media, countering that in fact the internet, including the mobile web, strengthens the surveillance capabilities of authoritarian regimes[14].

Other researchers have steered clear of the controversies. For instance, a *Guardian*- LSE team found that BlackBerry Messenger was the 'communication method of choice' for youths rioting in England in 2011. This was partly due to the low cost of 'pay as you go' and partly to the secure nature of this network[15]. Cost is also a key factor noted by scholars in Africa where 'pay as you go' and 'please call me' have made mobile phones affordable to vast numbers of people. Drawing from research into an anti-eviction campaign in South Africa, Chiumbu argues that rather than replacing earlier forms of word-of-mouth mobilisation, mobile phones have amplified them[16].

The 2011 wave of popular protests around the globe has revived interest in the mobilising potential of digital media, although as said earlier much of the attention has so far been focused on social media. For example, Penney and Dadas[17] have developed a typology of Twitter uses for protest by participants in the Occupy movement. Yet for Tufekci and Wilson[18], like for Chiumbu in the South African study just mentioned, the new protests can only be understood in relation to the media environments in which they are embedded, not 'in terms of any specific platform or device'. In the Arab world, they suggest, the rise of the TV network Al Jazeera, combined with the spread of new mobile and social media, had major consequences.

In *Networks of Outrage and Hope*, Manuel Castells argues that the 2011 protests were inextricably tied to 'the creation of autonomous communication networks supported by the Internet and wireless communication'[19]. Yet Barassi contends that Castells overlooks the 'complex dialectics between transformation and continuity, between the technical and the social, and between old and new political repertoires of political action and media activism'[20]. Gerbaudo[21] likens Castells' networks to Hardt and Negri's 'swarms'[22], those fluid social formations (reminiscent of Rheingold's smart mobs) arising from 'complex technical linkages' that enable intelligent collective action out of heterogeneity and multiplicity, without the need for centralisation. But for Gerbaudo these authors' rejection of the 'imaginary of the crowd or the mass' makes them overlook the centrality of places 'as sites for the display of collective action' in the 2011 protests[23]. Rather than spawning networks or swarms, he regards social and mobile media 'as emotional conduits to facilitate the coming together of individualised constituencies'[24].

A more accommodating stance towards networks is taken by Juris[25]. Adopting a diachronic approach (see below), Juris argues that in the early stages of the Occupy protests, social and mobile media contributed to an emergent 'logic of aggregation' whereby 'masses of individuals from diverse backgrounds' assembled in specific places. However, following the evictions from the occupied physical spaces, he observed a shift towards 'more decentralized forms of organizing and networking'[26].

Unresolved issues

This broad overview of the mobiles for activism and protest literature reveals four main areas of theorisation in need of further development. First, the *specific affordances* of different mobile technologies matter and should not be subsumed under general notions

such as 'new media' or 'digital media'. As we saw with the English riots, the low cost, speed and privacy of Blackberry made it an ideal device for rioters. By contrast, Twitter became the preferred platform for grassroots clean-up operations after the riots[27].

Second, we must also consider the wider, and shifting, media environments in which such affordances are played out. A manner of *dynamic holism* is called for in which the interactions and combinations of old and new technologies, agents and actions are integral to the analysis. A variety of working concepts are being currently tested to attain this elusive goal, e.g. Barassi's 'complex dialectics'[28], Chadwick's 'hybrid media system'[29], Tufekci and Wilson's 'new media ecology'[30], or Constanza-Chock's 'media cultures'[31]. Third, the study of *new forms of mobile action* is still in its infancy, with notions such as Wasik's 'flash mobs'[32], Rheingold's 'smart mobs'[33], Hardt and Negri's 'swarm intelligence'[34] and cognate terms all in urgent need of critical comparison and interrogation[35]. Finally, further thinking is also required on the diachronic, *processual dimension* of these phenomena. It is not sufficient to take 'snapshots' of the uses of mobile media for activism and protest at a single point in time. We must also conduct phase-by-phase analyses in order to establish which (mobile) technologies – and mobile ensembles – were particularly salient at which stages in the life course of a protest movement.

Thus, below we offer a processual account of three phases in the early development of Spain's Indignados (15M) movement, with special reference to the uses of mobile phones in each phase and their relationship to the movement's rapidly shifting mediascapes. By way of contextualisation, we first provide two brief overviews of the recent histories of mobile telephony and protest in Spain.

Mobile telephony in Spain

In 2011 Spain had an estimated population of circa 45 million[36]. In that year there were 114 mobile phones per 100 people[37] and 67.9% of the population had Internet access[38]. A total of 19.3 million users accessed the Internet via mobile networks, a 65.1% increase since 2010 (with 11.7 million users). Of the total figure of active mobile Internet users, 15.9 million connected via their voice terminal and 3.4 million via datacards or USB modems[39].
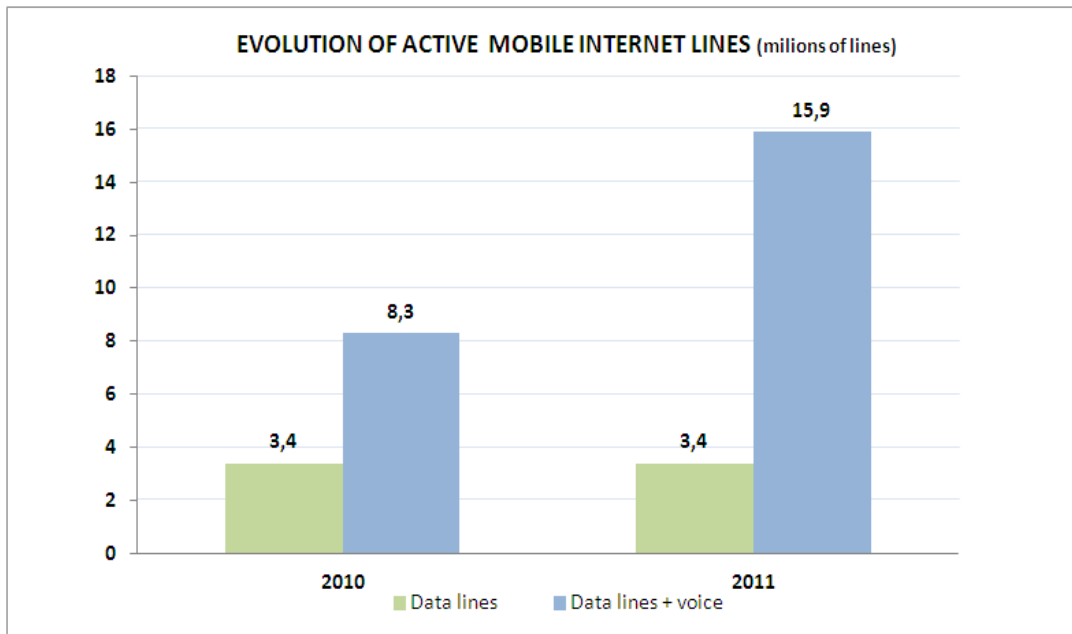
Figure 1. Evolution of active mobile Internet lines in Spain, 2010-2011. Source: Comisión del Mercado de las Telecomunicaciones (CMT).

In 2011 the lines linked to voice and data devices that were actively connected to the mobile Internet totalled 15.9 million. This meant an increase of 91.3% in relation to the previous year. There was also a proliferation of flat rates offered by different mobile companies which estimated that 13.5 million mobile lines were flat rate. By the end of 2012, the total number of lines was 24.9 million (of which 18.7 million were data lines) – a 29% increase[40]. Meanwhile the uptake of mobile phones in Spain grew by 65.1% from 2010 to 2011 and by 'only' 20% from 2011 to 2012, a markedly slower growth following the 2011 boom.

The increase in the number of registers users of mobile Internet services via datacards or voice and data lines (3G mobile phones or smartphones) was accompanied by a significant traffic growth in the mobile communication networks. This type of service reached a total traffic of 90,500 terabytes, a 40.7% increase over the previous year.

A processual approach

In this section we provide a brief chronology of Spain's Indignados (or 15M) movement from February to November 2011. We have chosen this particular period because it will allow us to 'zoom into' three distinct configurations of mobile (and other digital) media as the protests unfolded.

Phase	Period	Mobile uses
Preparation	Feb 2011 - 15 May 2011	Low-intensity mobile communication around organisation and diffusion of 15M marches, esp. face-to-face, Facebook and other social media.
Explosion	15 May 2011 - 19 June 2011	Hugely expanded citizen media landscape. Intense use of mobiles in real time from occupied physical spaces, incl. Twitter and streaming. Mobiles to publicise, coordinate, document and denounce, e.g. police abuses.
Diffusion	Sep -Oct 2011	Spanish template exported and reworked through Occupy, incl. mobile practices (via Twitter, streaming, aggregator sites). On 15 Oct protests took place in over 1000 cities around the globe.

Table 1. Three main stages in the early evolution of Spain's Indignados (15M) movement and their mobile dimensions.

Contrary to some journalistic and popular accounts, the 15M movement was not spontaneous. Although its first notable public appearance was the well-attended demonstrations of 15 May 2011, its immediate precedents can be found in the internet mobilisations against the anti-digital piracy Sinde bill as well as in the Icelandic and Arab revolts[41]. The North African uprisings were catalysts for the emergence of new organisational and communicative practices in Spain[42], a source of 'contagious' inspiration for Spaniards who now believed it was possible to rebel against an unjust political system[43].

To understand the part played by mobile phones in the 2011 evolution of the 15M movement we can distinguish three main phases, namely preparation, explosion and diffusion (see Table 1).

Preparation

This first stage in the early development of 15M was characterised by the low intensity of its mobile communication. The emphasis was on organising and publicising the 15 May 2011 marches planned for cities around Spain, with Facebook, Twitter and face-to-face meetings emerging as key sites for this endeavour.

In March 2011 a 'Platform for the coordination of pro-mobilisation groups' was created around a manifesto calling for mass demonstrations on 15 May[44]. This platform

soon morphed into the Facebook group Democracia Real Ya (DRY). DRY faced the daunting challenge of organising protest marches in over 60 cities under the slogan 'Take the streets. We are not commodities in the hands of politicians and bankers' in under three months. In its first few weeks of existence, DRY spawned numerous local groups across Spain and throughout the build-up towards the 15 May marches it collaborated with other new platforms such as No Les Votes and Juventud Sin Futuro.

From March onwards numerous face-to-face meetings were held in different cities. These were narrowcast via ad-hoc ensembles of mobile phones, Twitter, Facebook and email. Mobile phones were also crucial in the days prior to the 15 May demonstrations as a way of reaching out to the press through the Twitter hashtag #prensa15M (#15Mpress).

The evolution of the most popular keywords used by Spanish Twitterers from March to May shows a shift from a general political vocabulary (with terms such as 'politics', 'corruption' or 'elections' being commonly used) to what today we recognise as a distinctive 15M language ('streets', 'Sol', 'real democracy')[45]. Thus Spain's 'trending topics' for the 10-15 May period included hashtags such as #15M, #15Mfacts, #tomalacalle (#takethestreet), #15Mpasalo (#15Mpassiton) and #spanishrevolution. A study by the University of Zaragoza found a marked increase in the flow of 15M-related tweets in the two weeks prior to the 15 May marches. All this indicates that these were not spontaneous 'smart mobs' (see above)[46]. Instead, these were carefully planned events in which activists engaged in social media 'games' such as 'playing the algorithm' in order to make their actions 'trend' on Twitter[47], or interpellating Facebook group members to achieve maximum publicity and participation on the day.

Although we have no quantitative data on the use of mobiles during the preparatory phase of the movement, extended participant observation showed that mobile phones were indeed widely used to propagate news and commentary about the planned marches through users' personal networks. On the day of the marches itself, the use of smartphones was particularly noticeable[48].

Explosion

Following the 15 May marches, a small group of protesters decided to set up camp in Madrid's central square, Puerta del Sol, but were evicted by the police during the night.

The following day a larger crowd returned to the square, as did others in Barcelona and Valencia, but were once again evicted. They had been summoned largely via Twitter and other social media. When thousands of people challenged the government's decision to ban the *acampadas* (encampments), #Acampadasol was born. A similar process took place in Barcelona and during the course of the week over fifty encampments mushroomed across Spain[49].

To understand this explosive phase, we must consider the unique set of factors that converged on the encampments. First, there was a marshalling of collective power during the 15 May marches. Second, in an unscripted move following the marches, a pioneering group of protesters decided to reproduce the Tahrir Square model, a move that captured the popular imagination. Third, as was to be the case months later with the Occupy movement, the police's violent response to the peaceful protesters had the unintended 'Streissand effect' of multiplying the number of participants manifold[50]. Fourth, digital media technologies played a crucial role in spreading and amplifying the decisions taken by the platforms prior to 15 May, turning the encampments into 'augmented events'[51].

The ensuing boom in 15M-related content creation included web forums, blogs, collaborative documents, pedagogical materials (e.g. on Spain's electoral system), analogic versions of digital forms (e.g. post-it tweets displayed publicly), print and online cartoons, citizen photography, radio phone-ins, live streaming from mobile phones, videoclips, and a huge range of social media texts, visual and audiovisual materials[52]. The explosion started in the social media and later spread to the traditional mainstream media[53], the two mutually influencing one another as the movement gathered momentum. For Gerbaudo, mobile and social media 'helped to sustain a sense of *emotional attraction* to the mass sit-ins'[54].

According to studies by Espanix[55] and Pilar Portero[56], from 16 to 18 May 2011 there was a 20% increase in mobile data traffic in Spain, with the number of requests being even higher, which at one point resulted in collapsed services at Puerta del Sol in Madrid[57]. Twitter held special significance for occupiers, as it made it possible for other encampments and the general public to follow events at a distance.

Figure 2 shows the number of tweets published daily and the unique users per day. In six days 983,744 tweets were posted by 162,397 unique users. A small decline

can be observed on 16 May followed by a 17 to 20 May rise, after which when the number falls again[58].

Another insight into the impact of mobile technologies is provided by the case of live video streaming via the internet. Thus on the nights of 20 and 21 May a number of streamings took place simultaneously from different encampments, creating a visual connection across the various sites of occupation, a manner of digital square of squares. The website Sol.tv alone generated nearly 10 million visits during the first seven day of the occupations, 'just as the city council of Madrid switched off its webcam in Puerta del Sol in an attempt to black-out the protests'[59]. These streamings were indexed by the popular sports website Rojadirecta. Overall, hundreds of streamings took place throughout this initial phase[60].
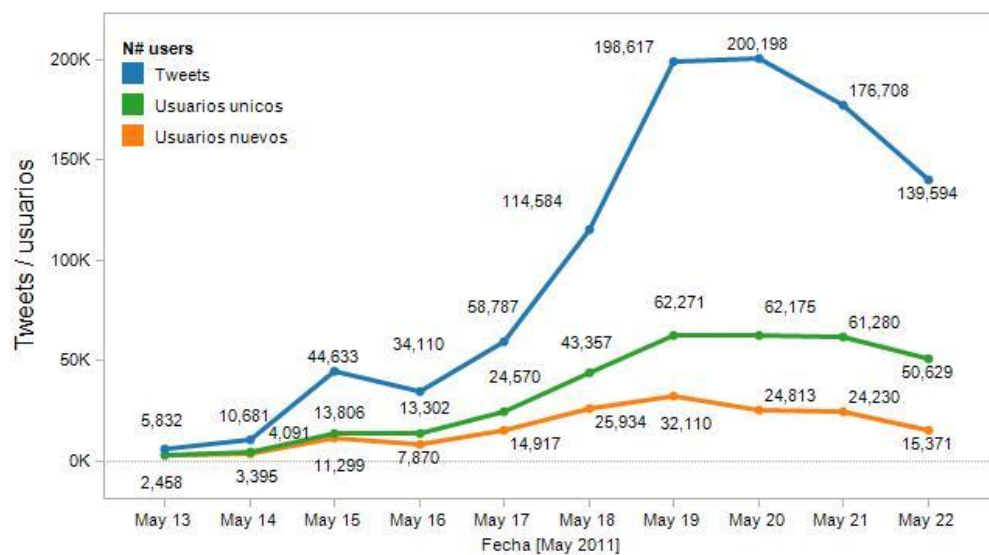

Figure 2. Increase in Twitter activity during the first few days of the square occupations in Spain. Source: Barriblog[61].

For a whole month, the encampments became spaces for citizen debate and political pedagogy where contents, practices and methods were shared and discussed. In June, many of the encampments relocated to the neighbourhoods (*barrios*) where they became local assemblies[62]. This move was signalled on Twitter with hashtags such as #We'reNotLeaving #We'reMoving as well as offline by means of demonstrations held in over 90 cities[63], with some 250,000 people marching in Barcelona and 150,000 in Madrid.

Diffusion

On 15 October 2011 the 15M movement aligned itself with similar movements elsewhere, such as Occupy in the US or the anti-austerity protests in Greece and Portugal, to launch a wave of protests in more than 1000 cities around the world [64]. Figure 3 captures the movement's networks of global diffusion by means of tweets containing the main hashtags used in connection with the 15 October demonstrations, such as #15oct, #15oready, #15o, and #99percent[65]. We can also see the different groups that came together around these galvanising keywords, originally coded by colour.

Social network analysis reveals some of the multiple ties that existed between the collective accounts of 15M protesters and those of Occupy Wall Street throughout October, and particularly on 15 October. The crucial importance of collective as
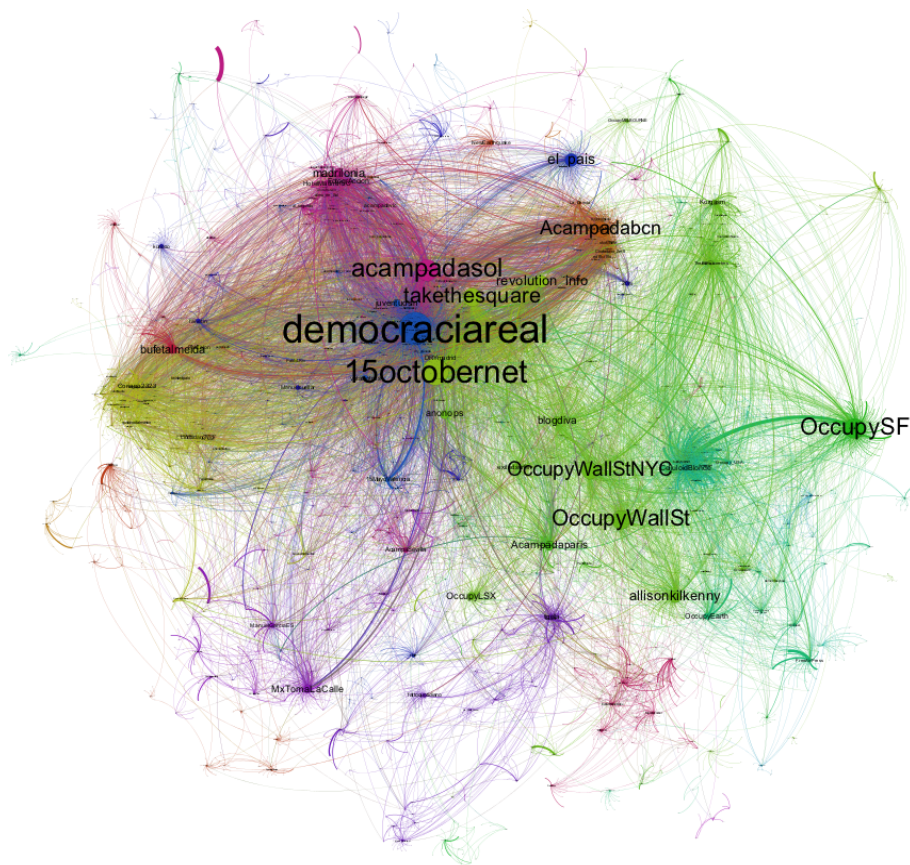

Figure 3. Globalisation of the 15M movement as of October 2011.

opposed to personal accounts is in evidence here, both for the 15M movement (@democraciareal, @acampadasol, @acampabcn) and for Occupy (@OccupyWallStNYC, @OccupySF).

As was the case with the May 2011 protests in Spain, mobile phones were widely used for live participation, promotion and morale-boosting across physical and online sites. With over 200,000 tweets around the hashtag #15o[66], Twitter was once again a central hub. An examination of the origin of the 15 October-related tweets shared during October shows that 205,000 tweets came from Twitter's web application and another 105,000 from mobile web applications (40,000 were Twitter for iPhone, 30,000 Twitter for Android, 15,000 Twitter for Blackberry and 20,000 Twitter for others devices)[67]. This means that over 25% of all the tweets were created on a mobile device, which demonstrates the importance of these devices for the global diffusion of the protests. Meanwhile, over 100 mobile streamings took place simultaneously from cities across the globe, namely 64 in the US, 10 in Spain and 28 elsewhere[68].

In sum, the Spanish template was exported and reworked around the world via Occupy Wall Street, with ensembles of mobile and online technologies (especially Twitter, streaming, and aggregator sites) providing the liveness and 'historical event' quality of the demonstrations.

Conclusion

Approaching the 15M movement processually allows us to visualise the unfolding of new forms of protest across physical and online spaces, with mobile phones emerging as the main access to the internet (and therefore to other protesters and publics) from the occupied public spaces. This generalised access to flexible, portable and affordable communication technologies allowed citizens in Spain and elsewhere to set – or at least strongly shape – the media agenda at strategic points in the protests' history.

If a few years ago it was still justifiable to separate mobile and Internet technologies when studying 'smart mobs' such as People Power II in the Philippines in 2001 or the Madrid protests against Spain's ruling party in 2004, with the advent of smartphones this is no longer possible. Instead, the evidence presented above demonstrates the powerful articulation of internet and mobile media within contingent sets of technologies.

This emphasis on mobile ensembles does not mean that we should neglect the specific affordances of the key mobile technologies. Whilst in 2004 Madrid residents 'passed on' news of the impending protest via text messages, in the current age of 'polymedia'[69] texting is but one amidst numerous communicative options. The research challenge is to establish which technological affordances – or sets of affordances – were used for what purposes at what stage in a protest. As we have seen, the proliferation of mobile internet devices has opened up countless possibilities for the hybridisation of physical and digital space. This was clearly in evidence in Madrid and other key occupied spaces across Spain.

All this suggests the urgent need for analyses of the relationship between mobile technologies and emergent forms of protest that take account of the open-endedness and complexity of this relationship. It is not sufficient to study the sets of media technologies and practices that come into play; we must also track the wider techno-political relations and mutations operating across the whole of society at critical historical conjunctures.

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