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Gold, power, protest: Digital and social media and protests against large-scale mining projects in Colombia

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Abstract

Colombia's Internet connectivity has increased immensely. Colombia has also 'opened for business', leading to an influx of extractive projects to which social movements object heavily. Studies on the role of digital media in political mobilisation in developing countries are still scarce. Using surveys, interviews, and reviews of literature, policy papers, website and social media content, this study examines the role of digital and social media in social movement organisations and asks how increased digital connectivity can help spread knowledge and mobilise mining protests. Results show that the use of new media in Colombia is hindered by socioeconomic constraints, fear of oppression, the constraints of keyboard activism and strong hierarchical power structures within social movements. Hence, effects on political mobilisation are still limited. Social media do not spontaneously produce non-hierarchical knowledge structures. Attention to both internal and external knowledge sharing is therefore conditional to optimising digital and social media use.

Keywords

Civic engagement, Colombia, digital media, Facebook, keyboard activism, mining protests, online activism, political mobilisation, social media, social movements

Introduction

Digital media use developed significantly the past decade, providing mobilising and opportunity structures that allow social movement organisations (SMOs) to emerge or renovate and spread their narratives through social media (Juris, 2005; McAdam et al., 1996 cited in Garrett, 2006). Colombia is one of those countries where Internet and mobile technologies expanded tremendously (Ministerio de Tecnologías de la Información y las Comunicaciones [MinTIC], 2014). The question of how digital and social media affect activism and SMOs in Colombia is therefore opportune. This study assesses this impact on SMOs engaging in mining protests. Digital and social media¹ transform political activism and SMOs notably in terms of action repertoire, spatial scope of action, international exposure and potential social influence (Anduiza et al., 2012; Gil de Zúñiga, 2009; Van Laer and Van Aelst, 2010). However, most literature on SMOs and digital media tends to focus on developed countries (e.g. Bennett et al., 2008; Garrett, 2006) and the Islamic world (e.g. Juris, 2005; Robertson, 2015). Studies

on how digital media affect political mobilisation in developing countries are still scarce (e.g. Ali, 2011; Harlow, 2012; Rojas and Puig-i-Abril, 2009; Valenzuela, 2013).

Focusing on protests against the gold mining company La Colosa in Tolima Department, this article aims to contribute to this field by addressing the questions of (1) whether and how Colombian SMOs use digital media in protesting against adverse effects of the mining industry in Colombia, (2) whether these technologies create the critical mass to fight the mining company and (3) whether they enhance horizontal leadership and knowledge structures. After presenting the contextual background and methodology employed, we address these questions in the 'Results' section. We then discuss the potential of digital and social media in mining protests. The conclusion answers the research questions and discusses the implications.

Background

Growing resistance against the mining industry

Colombia is home to 12 of the world's largest gold deposits (those over 1 million oz). In the past decade, high demand and prices, improved security and public policies gave a boost to the industry, with the departments of Antioquia and Chocó being the lead producers (Sarmiento et al., 2013). The Santos government's policy of opening doors to foreign mining companies has paved the way for foreign exploitation. Despite a mere 2% contribution to Colombia's gross domestic product (GDP), mining helped to stimulate an average 4.8% GDP growth rate between 2010 and 2013, making Colombia the fifth largest economy in Latin America (World Bank, 2015). Through a business-friendly and security-oriented policy, the government hopes to attract foreign investment, stimulate export and the inflow of foreign exchange and stabilise the national economy (Aguilera, 2012; Vélez-Torres, 2014). Conversely, expanding gold mining brings competing land and water claims, pollution with cyanide and heavy metals, environmental degradation, displacement of communities, increasing militarisation and policing, violations of indigenous and human rights, and loss of livelihood opportunities for farmers, small-scale miners and workers in the tourism industry.² Mining expansion since the mid-2000s has therefore led to increased protests and the rise of environmental SMOs across the country. Of the 99 environmental conflicts in Colombia registered in the Environmental Justice Atlas (ejatlas.org), 36 revolve around gold with varying intensity levels (Figure 1).

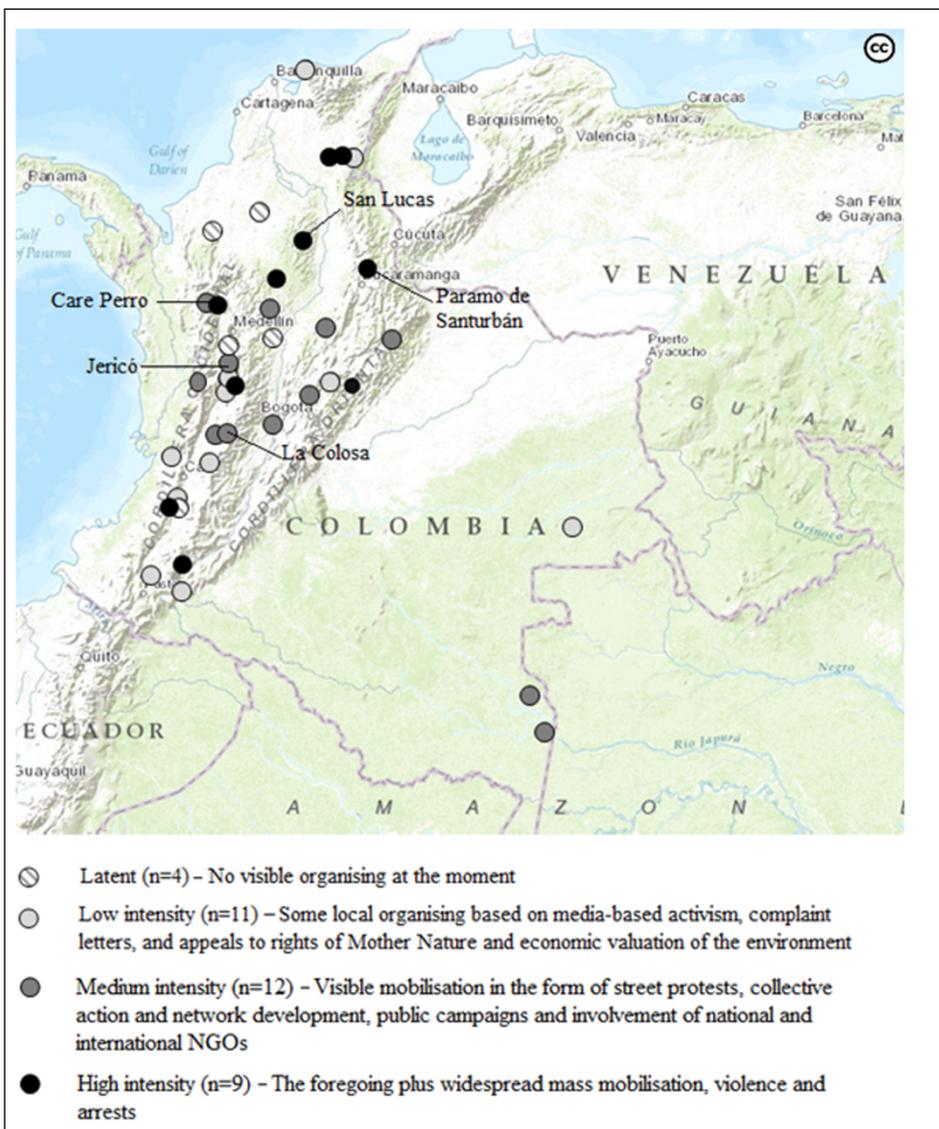


Figure 1. Gold mining-related conflicts reported by Ejolt Atlas 2012–2015, Conflict Data, June 2015 (<http://ejatlas.org/>, accessed June 2015).

Among the high-level conflicts is the Angostura mining project in the Páramo de Santurbán in eastern Colombia, involving more than 40 SMOs (Özkaynak and Rodríguez-Labajos, 2012). AngloGold Ashanti (AGA), the company involved in the conflict addressed in this article, is also involved in several other mining conflicts classed as medium-to-high level, for example, those associated with the Gramalote mining project and mining in the municipality of Jericó (Antioquia) and the Serranía de San Lucas conflict (southern Bolivar).

These protests occur against a background of violent conflict due to guerrilla war and drug trafficking, brutal oppression, structural poverty, natural resource conflicts and almost constant US military interventions (Sarmiento et al., 2013). Demonstrating

a statistically significant increase in homicides and massacres in municipalities with gold production, Idrobo et al. (2014) believe that gold is ‘the new engine in the Colombian conflict’ (p. 4).

Protests achieved minor successes, such as the suspension of policies that promote large-scale mining in the Quindío Department, re-assessment of World Bank funding for the Angostura mining project in the Páramo of Santurbán and delays of explorations due to successful court cases or disputed Environmental Impact Assessments (ejatlas.org; Özkaynak and Rodríguez-Labajos, 2012).

Uptake of mobile and digital technologies and social media use in Colombia

Colombia has 25 million Internet users (52% of the population), 63.8% of whom accessed Facebook, Twitter, Instagram and other social networking sites in 2014 (Departamento Administrativo Nacional de Estadística [DANE], 2015; International Telecommunication Union [ITU], 2014a, 2014b; MinTIC, 2014). The proportion of individuals using the Internet in Colombia is higher than neighbouring Andean countries, and in terms of Internet connectivity, Colombia occupies a middle position between developed and developing countries (Table 1).

Mobile phone subscriptions per 100 inhabitants increased from 97.7 in 2010 to 108.3 in 2013 (MinTIC, 2014), and mobile Internet subscriptions per 100 inhabitants in 2014 (42.2%) had grown 16% compared to 2010 (MinTIC, 2014). Hence, there is sufficient infrastructure in Colombia for digital media to play a role in SMO protests. The introduction of Facebook’s ‘internet.org’ project in Colombia in January 2015 is likely to see this usage increase dramatically (MinTIC, 2015).

Case study area: Cajamarca region, Tolima Department

Cajamarca (18,000 inhabitants) is situated in the Tolima Department along the highway from Bogotá to the rest of western Colombia. The town caters to this passing trade, but most inhabitants are employed in farming. Unemployment runs at 12.4% with many people living subsistence lifestyles on small land plots (DANE, 2014). Wired Internet and telephone access is limited and physical connections do not reach many of the outlying parts of the town. Ibagué (650,000 inhabitants), the department capital, conversely has accessible Internet connections to most homes.

Tolima sits upon a large gold deposit. With estimated resources of 26.9 Moz (million ounces) and an average head grade (metal content of ore) of 0.81 g/t, annual production of 70 tonnes over 25 years is anticipated (AGA, 2012). In 2003, this deposit was sold as the Colosa mining concession to the South African AGA company – the world’s third largest gold producer, active in Colombia since 2000 (AGA, 2012). The 600-km² concession lies 14 km from Cajamarca and 6 km from the main highway in the Coello basin (AGA, 2011). When operational, La Colosa will add significantly to AGA’s portfolio within Colombia (AGA, 2011).

Despite AGA’s ‘commitment to environmental stewardship’ (AGA, 2008), concerns about adverse impacts of La Colosa revolve around the potential destruction of the

Table 1. Internet and mobile phone use in Colombia in comparative perspective (2013).

Country/region	Mobile cellular subscriptions/100 inhabitants ^a	% of individuals using the Internet	Mobile-broadband penetration rate ^b	ICT Development Index (IDI) ^b	IDI rank in the Americas ^b	Global IDI rank ^b
World		40 ^c				
Developed countries		78 ^c				
Developing countries		32 ^c				
Bolivia	97.7	39.5 ^b	14	3.78	25	107
Colombia	104.1	51.7 ^b	25	4.95	14	77
Ecuador	111.5	40.4 ^b	27	5.46	19	55
Peru	98.1	39.2 ^b	3	4.00	24	105
Venezuela	101.6	54.9 ^b	4	4.81	16	80

Sources: ^aWorld Bank (2015), ^bITU (2014a) and ^cITU (2014b).

ITU: International Telecommunication Union; ICT: information and communications technology; IDI: ICT development index.

páramo, a rare tropical mountain habitat,³ and the consequences for drinking water provision in Cajamarca and rice production downstream⁴ due to the huge quantities of water needed for the mining activities and water pollution due to waste and waste rock disposal containing heavy metals and poisons such as arsenic and mercury (Özkaynak and Rodríguez-Labajos, 2012). Several interviewees (see section ‘Methodology’) also expressed fears that Cajamarca will be ‘consumed’ by the mining complex and that the social fabric would be negatively affected by diverging opinions on the mine among family and friends. Several SMOs within and outside the region protest the extractive industry (Table 2).

Hypotheses

Reducing communication costs, facilitating communication between geographically dispersed persons and aiding the formation of collective identities, Internet and digital media allow a space for voice and political mobilisation (Bennett, 2003: 143). This article discusses four factors that determine the political effectiveness of digital and social media use by SMOs: socioeconomic constraints, fear of oppression, the risks of keyboard activism and ‘clicktivism’, and the internal politics of knowledge.

Socioeconomic constraints

The persisting digital divide (Harlow, 2012; Van Laer and Van Aelst, 2010) and different cultural contexts (Harlow and Harp, 2012; Valenzuela, 2013) may affect digital and social media use and effectiveness among SMOs in developing countries differently. Despite increased connectivity, Colombia still suffers from a digital divide. Mobile Internet use is not affordable for all: the cost of handset-based mobile-broadband services is 1% of disposable income for the richest 20% and more than 20% of disposable income for the poorest 20% of the population (ITU, 2014a: 147–148). While all regions have network coverage, at least in department capitals (MinTIC, 2014), there is still a significant urban-rural divide (ITU, 2014a). Literacy, language barriers and cultural relevance have also been mentioned as constraints to the use of information and communications technologies (ICTs) in developing countries (Ali, 2011). Hence, our first hypothesis:

Table 2. Overview of SMOs protesting La Colosa.

SMO	Location	Scope and characteristics
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1. Semillas de Agua	Bogotá/Ibagué	Established in 1992 to protect water. Strong international network. Leading pioneer in resisting La Colosa
2. WWF Colombia	Cali	Broad scope of actions related to freshwater, forests, climate change, oceans. Provides advice and training to SMOs protesting the mining industry
3. Comité Ambiental y Campesino Cajamarca	Bogotá/Ibagué/Cajamarca	Local branch of national NGO (Network for Environmental Justice in Colombia). Eco-socialist focus on climate change and mining
4. Fundación Vida Libre	Cajamarca	Environmental NGO
5. Asociación de Productores Agroecológicos del Cañón del Río Anaime (APACRA)	Cajamarca	Small SMO promoting agro-ecological farming through workshops and a small shop
6. Colectivo SocioAmbiental Juvenil Cajamarcaño (Colectivo Cosajuca)	Ibagué	Environmental student organisation (Universidad de Tolima)
7. Conciencia Campesina	Ibagué	Local branch of a wider global Campesino movement. Established in Ibagué in 2009
8. Latin American Institute for an Alternative Society and Alternative Law (ILSA)	Bogotá	American organisation providing legal support to communities and SMOs in the region

SMO: social movement organisation; WWF: World Wide Fund For Nature; NGO: non-governmental organisation; ILSA: Instituto Latinoamericano para una Sociedad y un Derecho Alternativos.

H1. Socioeconomic constrains affect the use and political effectiveness of digital and social media by SMOs in a developing country like Colombia.

Fear of oppression

Colombia has a rich history of oppression by the military, paramilitary and guerrilla (e.g. Palacios, 2006). Ziccardi (2013: 126) assumes that digital resistance is more likely to occur in states with little respect for human rights. However, the very same technologies that have been hailed as tools to free the world are also being used to control and oppress opposition to governments worldwide (Joseph, 2012; Van Laer and Van Aelst, 2010). Although Colombia is not particularly known for legal or technical restrictions to Internet use, self-censure may occur if Internet users feel the normalising effects and disciplining power of Internet control and surveillance (Mehta and Darier, 1998). The ‘invisible hand’ of mining companies may be felt considering that 89% of human right violations and 78% of attacks against union members occur in regions with extractive industries (Contraloría General de la República, 2013). The lines between gold mining companies, politics and paramilitary forces can be thin (Rochlin, 2015).

This results in our second hypothesis:

H2. Fear of oppression by government and companies limits the engagement of SMO members in digital and social media.

Keyboard activism

Social media may lull people into thinking that they are creating change without making any real stands. This bears the risk of ‘slacker activism’ or briefly ‘slacktivism’ or ‘clicktivism’ – a ‘token display of support for a social cause’ without willingness to ‘devote significant effort’ to effect change (Kristofferson et al., 2014: 1149). It involves low-cost, low-effort actions such as signing online petitions, sharing content and pushing social buttons such as ‘liking’ something on Facebook (Halupka, 2014). Controversy exists on whether slacktivism is a legitimate form of protest or whether it negatively affects more meaningful activism on the ground (Kristofferson et al., 2014). The risk of ‘keyboard activism’ is that it may not impress those targeted in protests (Van Laer and Van Aelst, 2010).

We therefore hypothesise the following:

H3. Social and digital media use by SMOs does not necessarily translate into greater power.

The internal politics of knowledge

Knowledge is value-laden and constructed from interests (Hordijk and Baud, 2006: 672); ideas can never be seen as innocent but ‘either reinforce or challenge existing social and economic arrangements’ (Bryant, 1998: 87). These Foucauldian notions of ‘knowledge as power’ challenge the much-lauded ability of digital and social media to break down hierarchical structures, create horizontal power and increase political participation through an almost socialist management of knowledge (Castells, 2012; Juris, 2005). There is even ‘the risk of furthering inequality if the population of social media users is skewed towards the technologically savvy and those with high human, social, and economic capital’ (Valenzuela, 2013: 17). Political ecology has examined the ‘politics of knowledge’ (Bryant, 1998; Leach and Scoones, 2007; Peet and Watts, 2004) as strategies to construct and politically use multiple knowledges to frame problems and solutions in one’s interests – by those in power to justify exclusion of particular groups from access to resources or by those engaged in social action to contest established knowledge and power relations.

Much less attention has been paid to the *internal* politics of knowledge within SMOs, which is much more related to the adage ‘knowledge is power’ and provides authority to knowledge holders to negotiate with other parties, advocate their cause and pursue their interests. Seeking to maintain this privileged position makes them unwilling to share their knowledge (Jacobs et al., 2015), which may be reinforced by a lack of trust and solidarity (Kavada, 2005). This may confirm and strengthen the digital divide between those who have the means and skills to use Internet and those who have not (Van Laer and Van Aelst, 2010), with the risk of creating a ‘democratic divide’ (Norris, 2001).

Our fourth hypothesis is therefore as follows:

H4. Internal ‘politics of knowledge’ prevent digital and social media to produce horizontal leadership structures within SMOs.

Methodology

Mixed methods were employed, including surveys, interviews and participant observation. Purposive sampling was used to identify respondents from SMOs, snowballing from Universidad del Valle, Cali, where links with SMOs were already formed. This technique was required due to prevailing suspicion and mistrust within SMOs, which made it impossible to gain access without an introduction.

The survey among SMO members ($n = 98$) was primarily meant to ascertain the levels of mobile phone, smartphone and Internet connectivity. At this stage, questions about protest and collective action were asked in broad and open terms, with no specific link to the mining industry. An online version enabled people to take the survey remotely ($n = 23$) and mitigate some of the security limitations. Some persons ($n = 10$) undertook the survey digitally in the presence of the principal researcher, which gave additional insights into the use of computer technologies.

The survey provided data to test H1–H3. For H1, questions were asked about personal characteristics, including education, occupation and digital media possession. For H2, questions included whether respondents refrained from publishing information on the Internet out of fear of companies or government. Data for H3 were collected through questions about the frequency and purpose of Internet, social media and smartphone use.

Semi-structured interviews were held with people ($n = 24$) heading SMOs protesting the mining industry. These helped ascertain the nature and actions of SMOs and gave insight into how these organisations see the role of digital and social media in their protest. More in-depth questions about Internet use and information sharing provided data to assess H4.

Participant observation helped making estimates and assumptions about peoples' readiness to use their phones in public spaces and to share collective devices. Secondary material such as flyers, maps, books, pamphlets, photographs and notations was also collected and reviewed.

Survey data were processed using Statistical Package for the Social Sciences (SPSS); qualitative data from semi-structured interviews were transcribed and coded for further analysis.

Results

Among SMOs in Tolima, digital technologies are primarily used to share information quickly across difficult to reach locations. This occurs mainly through email lists, and while used to some extent to facilitate planning of actions, it still falls second to face-to-face meetings. Little or no information is shared via social media with a view to increasing mobilisation. In order to understand why this is the case, the four hypotheses are explored below.

Table 3. Smartphone ownership by town ($n = 98$).

Location	No	Yes
Cajamarca	17	21
Ibagué	23	18
Other Coello Basin	11	8
Total	51	47

Source: Survey 2013.

The use of digital media

None of the SMOs owned collective digital devices, and personal devices were used to access the Internet; hence, ownership of a personal device becomes salient. Almost half of respondents within the sample of SMO activists have a smartphone (Table 3), slightly below the national average, but enough for them to facilitate digital and civic engagement.

A total of 42 SMO affiliates (43%) connected to the Internet at least once per day using a laptop or PC and about the same amount (40) used a smartphone for daily or more frequent Internet access. Only 15 would use an Internet café daily to access the Internet; those using Internet cafés generally accessed the Internet less frequently. In all, 24 affiliates used an Internet café less than once per fortnight or had never used one at all, and 51 regularly used a friend's device to connect to the Internet. There were no surveyed SMO affiliates who had never accessed the Internet.

The majority (70) of survey respondents accessed social media at least once per week, with the majority of daily social media activity taking place in Cajamarca. Age apparently does not affect social media use; the 50+ age group accounted for 16% of users and the 26–30 age group for 24%. However, those aged between 26 and 30 years are using social media most often (>3/day). Gender makes no significant difference in social media use within the sample group.

The results suggest that there is potential for SMOs to build campaigns through social media, as there is sufficient usage among members who also reported regular contact with protest-related information online. The use of such information sources appears to transcend gender and age and is generally popular, although has yet to reach its full potential. While there is not 100% penetration of smartphone use, the levels of engagement with mobile Internet technologies is sufficiently high as to enable quick and far-reaching dissemination of information. Social media are used extensively, in a personal capacity, and the potential to utilise this resource to spread protest-related information is apparent, particularly through Facebook. Mobile technologies seem to have already begun to cheapen the costs of potential mobilisation and connectivity.

The centralised use of digital media by SMOs themselves in the Tolima region is, however, limited, both in scope and reach. Three SMOs have no collective engagement with social media at all (Table 4). Semillas de Agua did establish a Facebook page in May 2013, but with only 4 posts and 12 followers it can be discounted as a tool in the fight against La Colosa.⁵ The use of social media by World Wide Fund For Nature (WWF) Colombia is also curtailed. Despite strong online presence with blogs, Facebook pages and a Twitter feed, the information posted is limited by the rules outlined by WWF International, implying that they cannot openly support the SMOs in Cajamarca (see Note 4).

Table 4. Social and digital media strategies and use among SMOs.

SMO	Social and digital media strategy	Media used	Scope of use
1. Semillas de Agua	No active use of social media; email lists for interaction with other SMOs	Email list, Facebook page	Email: for internal communications ^a ; Facebook page: 64 likes/4 posts total
2. WWF Colombia	Active use of social media but restrictive policy regarding taking positions	Email list, Facebook page, Twitter feeds, blog	Email list frequency: 4/month; Facebook page: 14,160 Likes/32 posts/month; Twitter: 14.1K followers, \bar{x} 218

			tweets/month; blog posts: \bar{x} 5/month
3. Comité Ambiental Cajamarca	No active use of social media; email lists for interaction with other SMOs	Email list	Internal communications
4. Fundación Vida Libre	No active use of social media; email lists for interaction with other SMOs	Email list	Internal communications
5. APACRA	No active use of social media; email lists for interaction with other SMOs	Email list	Internal communications
6. Colectivo Cosajuca	Active use of social media, primarily nationally	Email list, Twitter, Facebook page, Internal Email list	Email: for campaigns; Facebook page: x Likes (not in public domain)/ \bar{x} 11 posts/month; Twitter: 78 followers, \bar{x} 0.9 tweets/month
7. Conciencia Campesina	Very active use of social media, nationally and internationally	Twitter, Facebook page, Email list	Email: for internal communications; Facebook page: 36,478 Likes/ \bar{x} 15 posts/month; Twitter: 886 followers, \bar{x} 175 tweets/month; blog inactive since 2012
8. ILSA	No active use of social media; email lists for interaction with other SMOs	Email list	Internal communications

SMO: social movement organisation; WWF: World Wide Fund For Nature; APACRA: Asociación de Productores Agroecológicos del Cañón del Río Anaime; ILSA: Instituto Latinoamericano para una Sociedad y un Derecho Alternativos.

^aInternal in the sense of targeting those subscribed to the email list.

Two organisations that engage collectively with social media do so extensively. Colectiva Cosajuca's fan base is limited to students within Colombia, but it has a vast social network and uses social media to spread information about rights and protests, and to mobilise students to undertake solidarity protests and strikes. A Colectiva Cosajuca affiliate argues that this is the way in which to contact the student body: 'We can reach lots of people really quickly, and without much money too'.⁶ Conciencia Campesina, which brings together peasant movements across the country and globe, and which works on a small scale within Cajamarca, is the other notable exception. With a Facebook following of 21,991 people,⁷ it has an extensive presence online and is very effective in using social media to highlight its causes. Conciencia Campesina's affiliates work directly in posting to social media and felt that it effectively reaches out to a wider audience, informing them of their work and struggle.⁸ The Conciencia Campesina Facebook page attracts a large international following. However, it mainly deals with agrarian issues. La Colosa features regularly on their news feed, but is not a direct focus.

Interviewees mentioned several obstacles to engaging collectively in the digital environment. The first relates to the work needed to keep the information accurate and up-to-date. 'Who would be in charge of deciding what is published?',⁹ asked an Instituto Latinoamericano para una Sociedad y un Derecho Alternativos (ILSA) affiliate. A Semillas de Agua affiliate expressed similar concerns: 'we have to publish the right information, and from the right sources, or else people will stop listening to

us; we would lose our credibility' (see Note 3). This is of particular significance given the reliance on the use of individually owned devices.

Second, SMOs rely on personal devices rather than those owned by the SMO, but not all individuals can afford a smartphone or other device to engage effectively with digital media. Moreover, the time required to first learn how to effectively use social media and then to employ someone to manage it is not deemed cost-effective.¹⁰ ILSA still publishes everything on paper because

We know how to do that cost effectively, it is the way we have learnt to do it. Our publications are available online, but we don't have the time or money to pay someone to build a social media strategy. (See Note 9)

Similarly, Semillas de Agua, Asociación de Productores Agroecológicos del Cañón del Rio Anaime (APACRA) and Comité Ambiental Cajamarca stated that 'We need training to use social media effectively, but don't have the money or time to engage with it at present' (see Note 10). Conciencia Campesina has been able to effectively manage this system financially by providing administrative access to their Facebook page to multiple persons. Each of these geographically dispersed administrators can add or remove information from the public page, via personal devices, without the consent of other administrators. This system allows Conciencia Campesina to mitigate the costs of managing their knowledge dissemination.

Third, 54% of respondents appeared to be concerned about companies and government having access to data, particularly those sent via Internet cafés. This translated into a little over half of respondents reconsidering the publication of information due to rumours that AGA monitors all activity.

Fourth, education level plays a role, primarily in who has access to the technology. Results show a positive correlation between having a higher level of education and owning digital media. This could be due to the likelihood of having a better-paid job and more income for those with higher qualifications. For people with a lower socioeconomic background, a phone was far from their list of priorities: 'What would I need that for? I see everyone when I pass through town each day. It's just not practical to have on the farm; I don't need a phone, that's for people who live in the city'.¹¹ Educational attainment also affects the likelihood of engaging with social media. Those with a higher education are more likely to implement social media such as Facebook in their daily life (Spearman's rank for 'education versus social media use' correlation coefficient = $-.44$). A further Spearman's Correlation test on the survey data showed that those with university education were marginally more likely to be engaged in online protest activities, and while the correlation level is relatively low ('education versus engagement in online protest engagement' correlation coefficient = $.122$), those who had failed to complete secondary school were significantly under-represented in online protest groups ($n = 3$).

Despite limited use of social media, all SMOs in the region use digital media to aid internal and inter-SMO communications. Email has been a great boon, enabling SMOs to overcome topographic constraints and accelerate the rate of information exchange internally and with partner organisations. Furthermore, email enables them to maintain relations with international non-governmental organisations (NGOs), such as ILSA and WWF. Both NGOs make time for regular meetings in Ibagué or Cajamarca, which would be difficult to arrange without email contact. Semillas de Agua, Comité Ambiental, ILSA and WWF also used email to facilitate conversations with

organisations outside Colombia. ‘We are able to share a great deal of resources and experience [via email]’, stated a Semillas de Agua affiliate (see Note 3).

Finally, three organisations maintain email distribution lists to send mass email communications to supporters around the globe. Having joined each of these mailing lists it became apparent that only WWF uses this tool regularly. Comité Ambiental uses its list only to report urgent actions and events, such as the assassination of the peasant activist César García.¹² Email and the speed of electronic communication is clearly a great tool for SMOs in the region and used extensively. Social media, however, play little or no role in the fight against La Colosa and AGA.

Digital technologies and horizontal leadership

Unequal access to electronic devices among individuals and SMOs has implications for the control of information and the power dynamics within organisations. The previous section suggested that those with higher income and education levels are most likely to possess the required technology to access the Internet and to engage with social and digital media using these devices. This may pose some difficult barriers in creating decentralised organisations and breaking standard knowledge hierarchies within and around SMOs.

Although SMO staff are apparently keen to use social media in their work, the continuation of old power systems, in which persons with more human and financial capital control flows of information and knowledge, affect uptake. Key players, generally from a socioeconomically more affluent background, still fulfil a brokerage role within the digital environment. Key staff of Semillas de Agua, Conciencia Campesina and ILSA, all male, are presently in the position of controlling the flow of information about environmental and socioeconomic impacts of mining, which can be used to counter the arguments put forward by the mining company. Each has a university degree, and all continue to forge relationships with universities and research institutes. When discussing the role of social media, each raised concerns over who would control the knowledge and output, and it seemed clear that none of them were keen to relinquish the hold over the knowledge they presently have. A Semillas de Agua member suggested that ‘you shouldn’t just let anyone post, there should be just one or two people from each organisation’ (see Note 3). An affiliate of another SMO, considered a key member of the resistance by multiple organisations, does not hold a high education level, and is often marginalised by the other members of the organisation, with many of his suggestions being ignored due to the ‘emotional rather than factual’ manner in which they were presented. He is excluded from a knowledge production position, and although he does take a lead in knowledge dissemination, this is often met with concern by other members. This person’s ability to work in this position is derived solely from his high level of social capital; having previously worked as a missionary in the region, he knows many families. While other SMO members acknowledge the value of his networks, there is a reluctance to place more power over knowledge in his hands. Only a minority of SMO members fulfil a brokerage role, and they tend to concentrate most of the action in the network around themselves, both as content producers and as targets for the messages sent by others. This was clearly seen in the offline spaces of focus groups carried out: all information was channelled through key actors, and talk of using social media regularly referred back to these actors as being those who should control how it is used.

This jostling for control over information also translated into a lack of collaboration between SMOs. Despite many meetings between groups, online and offline strategies comprised separate and often competing actions.

Discussion

The use of digital media in mining protests

Digital media use in Tolima does not appear to have reached the critical mass which would enable it to play a significant role in the protests against La Colosa. All organisations in the region use digital media to their advantage and to some extent, but most of this revolves around using personal devices for quick email correspondence across the region's difficult terrain and with organisations in other regions and countries facing similar issues. This is hugely important in enabling information exchange in a quick and far-reaching way, and in protecting this data from laptop thefts and hard drive destruction often faced by members of the protest sector. Social media play, however, a very small role in campaigning in the region. Four main reasons explain this, each of which is explored below through a discussion of the hypotheses.

The effectiveness of digital and social media use among SMOs

We hypothesised that low socioeconomic standing (H1), fear of oppression (H2), the nature of keyboard activism (H3) and internal politics of knowledge (H4) limit the effectiveness of digital and social media use by SMOs.

Socioeconomic constraints (H1). The cost of the technologies appears to be holding back the use of digital media. Despite Colombia's determination to provide 100% Internet access across the nation, the costs for accessing this infrastructure are still prohibitively high. Only *Conciencia Campesina* succeeded in mitigating the costs of managing knowledge dissemination by decentralising information management over multiple administrators. This provides an example of a more horizontally structured knowledge management system that proved to be cost-effective. This, however, generally leads to concerns over consistency of story and accuracy of information.

It also became clear that persons actively engaging in SMOs required a reasonable level of both financial and human capital to engage with digital media, and even more so to engage with protest actions via digital outlets. These factors appear to restrict the use of digital and social media by both SMOs and their affiliates more than initially assumed.

Fear of oppression (H2). Also the fear that deficient information management may lead to a loss of legitimacy or repercussions affected how SMOs used the Internet. Despite many incidences of human rights abuses over the last 50 years, we found no evidence that this spurred digital actions by SMOs as suggested by Ziccardi (2013). To the contrary, limiting digital engagement and withholding information from the Internet out of fear that deficient information management may lead to loss of legitimacy or repercussions confirm our hypothesis that fear of oppression by government and companies limits SMO members' engagement in digital and social media. Respondents were aware that there is little room for anonymity on the Internet. The information held about those posting information on sites like Facebook means that by engaging in online political activities SMO staff may open themselves up to persecution, not only

from governments and security forces but also from companies and individuals. These concerns made the majority of respondents to be sparing with what they share online, suggesting that a lot of information and knowledge is unlikely to be spread via social media for fear of reprisals. This suggests that more recent reassessments of the role of digital media in the Arab Spring (e.g. Robertson, 2015) are perhaps more accurate than Ziccardi's (2013) expectation that 'a smart use of technology can help the expansion and manifestation of human rights' (p. 126).¹³

Keyboard activism (H3). Despite all respondents in the research already being members of SMOs, the findings support our third hypothesis about limited effectiveness of keyboard activism. Slacktivism often refers to the disconnect between motivation and mobilisation (Kristofferson et al., 2014), and while respondents were already mobilised, there is a sense that social media will not be able to further increase participation among the general populace. If used, it must be to amplify traditional forms of protests rather than to merely move them online (Valenzuela, 2013). The quick dissemination of knowledge through digital media supports positive notions of slacktivism, enhances political engagement of SMO members in the region and ensures that the momentum of the organisation is kept in flow. Using little more than email distribution lists to share information does, however, mean only 'preaching to the converted'. While slacktivism was not recorded in itself, the fear that keyboard activism moves protest away from the streets and does not reach those targeted in the protests means that social media are barely used to increase levels of political engagement. Furthermore, SMOs in Tolima may be subject to their own introvert form of clicktivism. Constantly sharing information quickly via email among themselves has led to the development of a positive feedback loop, in which there is a sense of doing much work and producing a large amount of positive results, which in reality are rarely translated into increased participation or direct action. Further research is needed to unravel the effects of such digital and social media use on public mobilisation and political effectiveness.

The internal politics of knowledge (H4). In Tolima, the ideal of breaking down hierarchical structures and creating horizontal power failed to manifest itself. Although SMOs in the region consider creating a collective counter narrative to the government and mining company discourse as hugely important, strong hierarchical structures are perpetuated, reinforcing scientific knowledge and a male-educated dominance within SMOs. While a lack of finances and skills are oft-mentioned hindrances to including more social media within the work of SMOs, it appears that the underlying concern about knowledge ownership and management is a greater barrier to opening up to wider participation in knowledge production and sharing. Repeated concerns were heard as to who might control and hold the knowledge spread through social media and how the information and knowledge can be kept accurate. While this may partly be driven by concerns about a demobilising effect or violent repercussions (see H2), the fear of losing power and status as the head of an SMO might be reducing the desire to engage in more horizontal organisational structures. Knowledge production and management among SMOs in Tolima are therefore heavily controlled by those with higher socioeconomic backgrounds – a situation compounded by the lack of collective devices. This corroborates our final hypothesis that the internal 'politics of knowledge' impede digital and social media to produce horizontal leadership structures within SMOs. Showing traits of a reinforcing mechanism for outmoded power models, it is unlikely that increased use of digital and social media in Tolima will break down

existing hierarchies. To the contrary, these hierarchies first need to be broken before greater levels of participation through digital and social media can be achieved.

Conclusion

We examined whether and how Colombian SMOs use digital media in protesting adverse social and environmental effects of the mining industry. While limited use of social media by SMOs in Tolima makes it difficult to assess their level of impact on the fight against La Colosa, clear connections between the available digital infrastructure and the use of digital media to create, disseminate and view knowledge and the mobilisation within SMOs were observed. In Tolima, digital media, almost exclusively email, have enhanced the connectivity between SMOs. In a country with long and difficult journeys due to vast distances between towns and the mountainous terrain, the power of digital media to disseminate information, goals and events should not be underestimated. While this use of email has had important implications for sharing knowledge about the impacts of mining companies and protests, it has not led to a breakdown of hierarchies and, in the majority of opinions, needs to be coupled with more direct action.

The fight against AGA in Tolima will not be easily won. Fear of oppression and the constraints of keyboard activism still limit the effectiveness of digital action in the fight against the mining industry. It is, however, unlikely that SMOs will reach a critical mass, or draw enough international attention to their struggle to militate against the juggernaut of AGA, without the aid of social media and wider public participation. Using all digital means available to them, including the Internet and social media, may help SMOs in reaching critical mass through the creation of epistemic communities that anybody with an Internet connection can access while retaining the SMOs as the main nodes within protest networks engaging in outreach activities.

Attention to internal communication is also needed. Evidence regarding the final research question suggests that the internal politics of knowledge limit horizontal leadership. More research is needed for a better understanding of the mechanisms that control the diffusion of protest information. Particular attention is needed for the power structures within which digital sources are used and owned. The much championed ability of social media to create horizontal power structures and reach much-needed critical mass cannot develop organically where the power over knowledge and its dissemination continues to lay in the same, generally male, middle-class, hands.

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Notes

1. This article defines digital media as all fixed and mobile devices that can access the Internet (Anduiza et al., 2012). Social media (e.g. Facebook and Twitter) are understood as the infrastructure and tools used to produce and disseminate digital information.
2. Based on an analysis of gold mining conflicts in the Environmental Justice Atlas (2014) available at ejatlas.org (accessed May 2015).
3. Interview with Semillas de Agua staff, Ibagué, Colombia, 8 September 2013.
4. Interview with World Wide Fund For Nature (WWF) Colombia staff, Cali, Colombia, 10 July 2013.
5. Information from Semillas de Agua's Facebook page: <https://www.facebook.com/semillasde.agua.5>
6. Interview with Colectiva Cosajuca staff, Cajamarca, Colombia, 4 August 2013.
7. Information from Conciencia Campesina's Facebook page: <https://www.facebook.com/concienciacampesina?fref=ts> (accessed 27 December 2013).
8. Interviews with Conciencia Campesina staff, Cajamarca, Colombia, 3 August 2013.
9. Interview with Instituto Latinoamericano para una Sociedad y un Derecho Alternativos (ILSA) staff, Bogotá, Colombia, 26 August 2013.
10. Focus group Semillas de Agua, Ibagué, Colombia, 8 August 2013.
11. Interview with a farmer/Semillas de Vida affiliate, Ibagué, Colombia, 6 September 2013.
12. Peasant environmental leader from Cajamarca who protested the Colosa mine and was assassinated on 2 November 2013.
13. As noted by an anonymous referee, further research would be needed to substantiate this fear based on judicial reports, human rights accusations or formal investigations.

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