

New Media and the Formation of Alternative Publics:  
A cross-case comparison of the #15M and #Occupy movements

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## ABSTRACT

While social problems are increasingly globalized, traditional protest actions are geographically-bounded by the nation-state. In order to understand the ways in which activists may be using new media platforms to develop alternative publics, taking a mixed methods approach I use data from movement publications and Web hyperlinking patterns to examine the early development of the Spanish 15M and U.S.-based Occupy Wall Street movements, as well as the structural interlinkages between them.

Key words: New Media, 15M, Occupy Wall Street, Social Network Analysis

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**New Media and the Formation of Alternative Publics: A cross-case comparison of the #15M and #Occupy movements**

2011 was known as the year of “The Protester.” As it came to a close, *Time* magazine chose the millions who confronted and took down dictatorships during Arab Spring, marched and occupied against income equity across Europe, the United States and beyond as its “Person of the Year” (Andersen, 2011). The global protests embodied the hopes and dreams for a better world of activists and ordinary citizens around the world. As the debt crisis worsens and governments impose austerity measures, income inequality continues to grow while the jobs outlook remains bleak, particularly for younger workers (International Labor Organization, 2011). In Spain, youth unemployment stands at 44 percent (Marquand, 2011). Fueling the “99% vs. 1%” meme, in the United States the share of income going to the top one percent more than doubled between 1980 and 2008 (OECD, 2011). Using language of “contagion” and “viral,” *Time’s* reportage draws connections between social movements around the world. While social problems are increasingly globalized, traditionally protest actions are geographically-bounded within the realm of the nation-state. In order to understand the ways in which activists seek to overcome geographical divides in the formation of alternative publics in this paper, I explore the intertwined movement trajectories of the Spanish *Indignados*, or “outraged,” and Occupy Wall Street activists in the United States. Modeled on the methodological approach of Bennett, Foot, and Xenos (2011) to fuse the study of narrative and social network structure, I use data from movement publications, websites, and social media to examine the early development of both the 15M and Occupy Wall Street movements, as well as the structural linkages between the two movements.

I will first turn my attention to the theoretical underpins of this research.

**From Place to Mediated Online Citizenship: Some Theoretical Strands**

**Geography.** The problems of capitalism are global. Therefore activists need globalized tactics to confront its manifestations. Yet social movements are rooted in place. What becomes “transnational” or “global” is a collection of locality-rooted movements (Featherstone, 2008; Routledge & Cumbers, 2009). Within this context, “place” serves as a site for the production of agency and identity (Featherstone, 2008). Through information exchanges in social movement networks, the construction of “alternative knowledges” and resistance to the manifestations of capitalism is scaled-up to global movements (Routledge & Cumbers, 2009). According to Harvey (2006), localized movements need to transcend the “particularist militancies” centered on geographical difference by tapping universal social justice discourses. Even so, questions remain as to how these processes take place.

**Communication Studies.** New media technologies are changing the ways in which we exercise citizenship (e.g. Rojas & Puig-i-Abril, 2009). According to Castells we are now living in an era of the *global network society*. It is one “whose social structure is made around networks activated by microelectronics-based, digitally processed information and communication technologies” (Castells, 2009, p. 24). According to Castells the network society has fundamentally altered the dynamics of power relations between nation-states and civil society. Social movements now have the potential to “reprogram” this globalized network by using the global communication technology infrastructure (Castells, 2009, p. 53). Through building new forms of “communication power” movements can exercise social power within the global network society to shape discourses (Castells, 2009, p. 53). Questions remain as to what discourses and publics activists are trying to influence. In a much cited critique of Habermas's bourgeois public sphere, Fraser (1992) argues the communicative space between the private domain of family life and that of the state is exclusionary when examined through the lens of

“actually existing democracy.” She suggests that marginalized populations form “subaltern counter publics” in the face of unequal power relations with elites to open discursive spaces. The goals for these alternative publics are twofold: 1) serve as “space to withdraw and regroup” and b) function as “training grounds for agitational activities directed at wider publics” (Fraser, 1992, p. 124). Extending Habermas’ theorizing on *communicative action*, Friedland, Hove, and Rojas (2006) argue that networked forms of organization, based on self-regulation of open networks are at the core of the emergence of a new type of “mediated public sphere.” What is at issue here are the implications of the synergistic ways in which we enact citizenship in public and private realms, in online and physical space.

Alternative forms of “communicative power” rest in defining the frame of reference and entry point into inquiry. “Definitional power” comes with control of information communication technologies (Castells, 2009; Schiller, 2010). Much has changed since Schiller first introduced the concept of “media imperialism” in the 1960s but not as much as Castells would have us believe. Schiller notes, “Media-cultural imperialism is a subset of the *general* system of imperialism. It is not freestanding” (2010, p. 248). He argues that what was in his original formation the domination of the United States is now “*transnational corporate cultural domination*” (p. 249). Equally as important, though garnering less attention by U.S. scholars, is the work of García Canclini (2000) on consumption as a mediated enactment of citizenship. His is a story of globalization’s discontents as cultures are “deterritorialized,” with cities at the nexus of globalized markets and privatized consumptive practices. In rushing to the utopian vision of the “network society” let us not forget definitional power and in whose hands the vast majority of it still rests. As scholars we need to go beyond the problem of *access* to questions of *use*. In a neo-Marxist vein, power is rooted in both *content generation* (controlling the image of oneself

and others), as well as *infrastructure development* (the means to produce, transfer, and facilitate access to content). So it becomes crucial to bring so-called “communication on the margins” into the analytical lens. In all likelihood they will not “break” into the mainstream. More likely is the development of potentially subversive tactics to move around the edges of corporate defined information-communication space, or “cultural hybridity” (see Thussu, 2010). Downing names this “dynamic mental co-habitation,” writing that the development of “oppositional consciousness” is as much a social process as psychological one. Technology cannot “create” such thought but it can serve as a channel to facilitate the communicative processes that underlie alternative formations of group identity (Downing, 2010).

**Sociology.** For this research I take a social network perspective. Rather than test for correlations between variables where individual observations are assumed to be independent of each other, this approach focuses on the structural relationships between “actors” that are assumed to be *interdependent* (Wasserman & Faust, 1994). Within sociology—an argument that can be extended to mass communications research—Emirbayer advocates for replacing the dominant “static” view of social processes with a “relational” paradigm that can accommodate “dynamic, unfolding relations” (1997, p. 281). Accordingly the goal of social network analysis, as a set of methods, is to describe and test “patterns of social structure” (Wasserman & Faust, 1994, p. 56). “Social structure” is conceptualized as “a relatively prolonged and stable pattern of interpersonal relations” (Freeman & Romney, 1987, as cited in Wasserman & Faust, 1994, p. 56). Therefore, the variables are structural in nature. These structural “linkages” are “channels for [the] transfer or ‘flow’ of resources (either material or nonmaterial)” (p. 4). For example, information is one such resource that “flows” through a network.

Social network analysis allows researchers to describe the “actual” structure of social

relations—as opposed to idealized network structure—between actors (Phillips, 1991). Baldassarri and Diani (2007) argue that in order to explain collective action processes, researchers “need to reconstruct how interorganizational ties combine in complex structural patterns” (p. 738). They also note that the *content* of the ties between actors is also important in explaining structure. Phillips notes the “interdependence” network *structure* and the *agency* of individual actors within it. The idea is that the structure of relationships between interdependent “actors”—either organizations or individuals—both supports and at the same time constrains the actions of these actors within a social movement (see Phillips, 1991; Wasserman & Faust, 1994). Taking a network perspective, Diani and Bison define *social movements* as “networks of informal interactions between a plurality of individuals, groups, or associations, engaged in a political or cultural conflict, on the basis of a shared collective identity” (2004, p. 282).

Lastly, in this research I draw on theorizing by Oliver and Myers (2002) on the *coevolution* of social movements. They consider social movements to be like species and that their actors are interrelated, working in “strategic interaction” with each other. The actions of one actor affect the trajectory of protest cycles. For example, in the case of Occupy Wall Street the arrest of more than seven hundred people on the Brooklyn Bridge on October 1, 2011, by New York Police, attracted widespread media attention, galvanizing national and international solidarity. Two key processes at play are diffusion and adaptive learning. In addition, information is a resource within movements. While they discuss information exchange in these terms, Oliver and Myers do not consider the role of new media technologies in facilitating direct information exchange between geographically dispersed social movements. Such channels of information exchange could facilitate the development of alternative publics in ways that differ from the dynamics of traditional media and social movements.

### **Plan of Analysis and Research Questions**

As cultural-political phenomena, movements in vein of #Occupy and #15M present a

unique set of methodological challenges as to how researchers can fully investigate the intersections of online and offline movement coevolution.<sup>1</sup> While scholars such as Rogers (2010) make compelling arguments for studying what he calls the “micro-politics of association” in online relationships as separate from offline ones, I believe that cases like 15M and Occupy Wall Street embody a new synergistic mode of organizing that by necessity must be examined as a holistic fusion of off and online relationships. As Tufekci (2011) aptly points out, social media are *tools* used by real people to challenge what they see as collective injustices and that as scholars we need to ask “how” questions to address the role of these new media technologies in collective action.

In order to tackle this task I follow the approach outlined by Bennett et al. (2011) to combining the study of narrative with network analysis. Thus, I use a mixed methods design. This study consists of two interdependent parts. First, I employed online ethnographic techniques to develop an overall sense for how the culture of the two movements is manifest online, as well as identify the key actors in each movement (see Kozinets, 2010). For this aspect, I wanted to understand the *whys* behind the movements, in other words precisely what activists believe about the world and what they do. My core questions draw on the literature from sociology, geography, and communication studies discussed above and in this comparative case study analysis I explore the following research questions:

*RQ1: What do activists' narratives say about their shared values?*

*RQ2: How are key actors in the Occupy Wall Street and 15M movements using new media technologies to form alternative publics?*

*RQ3: Are key actors in the two movements structurally linked and if so, what is the nature of the social network structure?*

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For a discussion on digital methods, see the work of Richard Rogers at the University of Amsterdam and the director of the Govcom.org project, which houses the online platform Issue Crawler used in this research (e.g. Rogers, 2010).

For the purposes of this research, I conceptualize “new media” as:

Digital communication technologies, such as the Internet, mobile phones, email and Skype, which facilitate rapid interpersonal and 'mass self-communication' across time and space (see Castells, 2009).

In the second part of this study, after developing a thick description of the two social movements' origins and a sense for how they use both old and new media technologies, I will present a series of predictions about the social network structure of each movement, as well as the possible linkages between the two. I hypothesize the link between narrative and structure along the lines of: narrative allows us to see the values that underlie how activists use technologies, in an iterative process this then informs what we learn about how they are using technologies to mobilize supporters. These mediation processes take place within an online realm that could be viewed as a public sphere, alternative or otherwise. Taking this approach it is my hope to better understand why the activists behind 15M and Occupy made the choices they did in the early stages of each movement and the origins of possible interrelations between them. Looking then at the network structure will subsequently allow us to see if claims by activists that they are part of a global movement can be empirically illustrated via network analysis. This will hopefully allow us to draw conclusions as to “global” organizing and the embeddedness of local movements within it. I will now turn my attention to a thick description of the early development of the 15M and Occupy movements.<sup>2</sup>

### **From *#SpanishRevolution* to *#Occupy*: Organizing Global Change**

**Los Indignados.** Leading up to May 22<sup>nd</sup> municipal elections in Spain, youth activists organized under the slogan “Without your vote they are nothing. In the next elections, don’t vote

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<sup>2</sup> Given the scale of the protests I have chosen to bound my analysis here to the origins and early periods of each movement.

for them” (Castells, 2011). They called for Spanish voters to boycott three of the main political parties: the center-right People's Party (PP), the social democratic Spanish Socialist Workers' Party (PSOE), and the center-right Catalan Convergence and Union Party (CiU) (*No Les Votes*, 2011). And, on a Sunday one week before the elections, May 15, 2011, thousands took to the streets in 50 Spanish cities to protest corruption and demand “real democracy,” calling for crisis management by “the people and not the banks” (*Periodismo Humano*, 2011). Forty demonstrators gathered in Madrid's main square, Puerta del Sol, into evening of May 15<sup>th</sup> talking about the country's future decided to stay. In the early morning hours of May 16, those in the plaza made a key tactical decision to negotiate with police over their presence, who allowed them to stay the night (Sánchez, 2011). And they camped, sparking what is now know as the 15M movement, for the date of its commencement, or #SpanishRevolution after one of the movement's main Twitter hashtags (Sánchez, 2011). More than one thousand people reportedly participated in the second “general assembly,” or participatory decision-making gathering, the following day, with more than 28,000 gathered in the square five days later on May 20, 2011 (Sánchez, 2011).

While the May 2011 elections—as well a national election in November of that year saw the rise of conservatives—have passed, the encampments grew into a national movement of *Toma la Plaza*, or “Take the Square,” groups organizing in more than 70 Spanish cities. The narrative of their movement, as described on the website of the Madrid *Toma la Plaza*, is one of personal choice and collective action to bring about a “new society”:

Each of us has decided, after the demonstrations on Sunday, May 15, that we are determined to continue fighting for dignity and political and social awareness.

We do not represent any political party or association.

We are joined by the singular cause of change...

We demand a change in society and an increase in social awareness. We are here to make it known that the people have not fallen asleep, and we will continue fighting...peacefully. (Democracia real YA, n.d.)

In late May, Madrid's *Acampadasol* released a list of demands its general assemblies had approved up to that point. They include: the right to housing, doing away with political privileges, addressing unemployment, fiscal and electoral reform, affordable and environmental-friendly transit systems, increasing taxes for the rich, and protecting civil liberties and Internet freedom (Castells, 2011).

By the end of 2011, seven months into organizing, the 15M movement had developed a federated structure, centered online around *tomalaplaza.net*. Organizers hold regular *encuentros*, or meetings, which bring working groups together in physical space, while simultaneously using new media platforms such as the video gaming software Mumble to coordinate remote participation. For example, the fourth such meeting was held in Sevilla at the end of November (see *encuentro15m.tomalaplaza.net*). 15M activists have also started their own social network, N-1, which as of December 2011 had more than 35,000 members.

**Enter *Adbusters* and Anonymous.** Claiming inspiration from Arab Spring, in addition to the 15M and anti-globalization movements, in a blog post from July 13, 2011, the Vancouver-based culture-jamming magazine *Adbusters* put out a call for 20,000 people to engage in a “shift in revolutionary tactics” and converge on Wall Street on September 17, 2011, to make “one simple demand in a plurality of voices” (*Adbusters*, 2011a). Claiming to present a “new formula” and “novel tactic” for working toward “radical democracy,” *Adbusters* called that, “We talk to each other in various physical gatherings and virtual people's assemblies... We zero in on what our one demand will be, a demand that awakens the imagination and, if achieved, would propel us toward the radical democracy of the future” (*Adbusters*, 2011).

The genesis of Occupy Wall Street continued to develop during the summer of 2011. The website *occupywallst.org* was launched on July 26, 2011. Shortly thereafter, the Madrid-based Commission for Group Dynamics in Assemblies of the Puerta del Sol Protest Camp released a how-to guide in Italian, French, Spanish, and English to encourage the development of people's assemblies based on the 15M experiences on July 31, 2011, via the Take the Square website. The guide emphasizes *process* to construct new social structures through varying forms of consensus and "collective thinking" to imagine new possibilities for social organization:

Two people with differing ideas work together to build something new. The onus is therefore not on my idea or yours; rather it is the notion that two ideas together will produce something new, something that neither of us had envisaged beforehand. This focus requires of us that we actively listen, rather than merely be preoccupied with preparing our response. (Commission for Group Dynamics, 2011)

The September/October 2011 issue of *Adbusters #97 Post Anarchism – How to Live Without Dead Time* hit newsstands at the end of August. The original July 13th blog post had promised it would include Occupy Wall Street campaign materials. The issue's front cover features the Occupy Wall Street graphic of a ballerina balancing on the bull in the upper right-hand corner. The centerfold features the full grayscale image of the ballerina, including huddled masses, who appear to be male demonstrators, wearing gas masks in a hazy cloud in the background. The top (one the right-hand page) reads in all-caps red lettering: "WHAT IS OUR ONE DEMAND?" The bottom of the image (on the left-hand page) reads in white all-caps text:

#OCCUPYWALL STREET  
SEPTEMBER 17TH.  
BRING TENT.

*Adbusters #97* themes include: an urgency to act, consumerism as root cause of social ills, the system is broken and crushes "possible alternative futures," ecological crisis, crisis in the private

sphere of home and family, being “indignant” in the vein of 15M is not enough but we need to “revolt,” and that we live in a “consumerist nightmare.” In the style of the Looney Tunes sign-off, the last page of the issue reads: “That's all Folks! See you Sept. 17, Wall St. bring tent.”

In another key early narrative, the Internet hacker group Anonymous endorsed Occupy Wall Street in a video posted on YouTube calling on “citizens of the Internet” to demand freedom “in a plurality of voices” (Anonopss, 2011). Speaking over ominous music the narrator names violence as the actions of corporations, saying, “This is a non-violent protest, we do not encourage violence in any way. The abuse and corruption of corporations, banks and governments. Ends here.”

**The New York City General Assembly.** Activists in New York City had organized since the summer in response to the *Adbusters* call to occupy Wall Street with little fanfare beyond traditional activist circles. The first publicly available general assembly minutes date from September 10, 2011, one week prior to the planned occupation highlight the group’s struggles with planning for the possibility of arrests and the logistics that would come with maintaining an ongoing encampment, including the Food Committee requesting additional experienced dumpster drivers to scavenge for supplies and the Internet Committee promising that a working website would be up by the day of the demonstration. While tensions surrounding working group areas of responsibility arise later, the first set of minutes reference four committees tasked with various aspects of internal and external communications: Internet, Media, Tactical, and Communications. The Communications Committee reports that, “Spain’s ‘Take the Square’ movement wants a contact within the NYCGA to coordinate actions” and that translations to other languages than English is needed for outreach.

Potentially affecting the course of later events, at the September 10 meeting the group

makes a key tactical decision not have marshals to engage with law enforcement. Organizers also decide to invoke “solutions instead of demands” and set-up a framework for discourse to engage attendees in small group discussions during the first public general assembly:

Begin with a discussion of problems that we as individuals, we as a community &/or we as a society are facing, will face, or have faced.  
Then a discussion of vision for the future.  
Finally, a discussion of what one may possibly feel are solutions to the problems that were discussed or otherwise. (NYCGA, September 10, 2011)

In summary, textual analysis of general assembly minutes from the early weeks of the Wall Street occupation in Zuccotti Park, renamed Liberty Plaza by demonstrators, show a movement striving to recreate social structures and build a new America, while grappling with tensions between individual actions, the group’s collectivity and the day-to-day logistical, procedural challenges of maintaining a livable presence in an urban outdoor space that is welcoming to individuals from diverse backgrounds and challenging systemic privileges of gender, race, ethnicity and class. Tensions arose surrounding the issue of whether or not to issue demands or a list of grievances. Appeals made in the assemblies often started with the refrain, “If you want to...,” followed by a call to action or request for volunteers. All of this was taking place along with the stresses of dealing with repeated massive arrests and subsequent national and international media attention.

The minutes also reflect linkages to movements globally and references to unity and solidarity with “the people of the world” and with the refrain “The whole world is watching.” Yet, there is a disjuncture between what took place in the physical space of the park and in the online sphere. For example, leading up to the October 15<sup>th</sup> Global Day of Action, two individuals brought a proposal to the general assembly to endorse a global democracy statement. Stating that it had been approved by general assemblies around the world, including in Spain and Tahrir Square, and that “Our occupation was not born in a vacuum” an individual addresses the

possibility of amending the statement with the response:

This statement was forwarded to me by an artist who's a member of a collective 16 Beaver that was forwarded by another organization that has a URL that I cannot recall. I have the original email with me but I lost it. So all I have right now is a print out that doesn't include that information. (NYC General Assembly, October 2, 2011)

Going against all of the hype surrounding global activism, this excerpt indicates that coordinating a movement on the globally mediated stage was superceded in many respects by the more pressing concerns of negotiating human interactions and needs in physical space. In the end, the group decided to defer the decision in favor of a teach-in the following day and the proposal was withdrawn. Interestingly in contrast, the New York general assembly minutes place more emphasis on traditional methods of movement outreach, such as flyering during rallies and on subways than social media and canvassing throughout New York's outer boroughs.

### **Predicting Network Structure**

Based on the above thick description of the 15M and Occupy Wall Street movements, in the second part of this study I made a series of predictions about the structure of the two national networks, as well as the linkages between them.

**Structural Predictions: Nationally-based Networks.** As of December 2011 when the data used in this study was collected, 15M organizing in Spain has been ongoing for more than twice as long as Occupy organizing in the United States. As a result Spanish activists had developed a greater degree of coordinating structures. On the other hand, the Occupy movement in the United States, at the end of its third month of organizing following the start of the first encampment in New York's Zuccotti Park (Liberty Plaza) in September had dealt with the additional pressures of widespread arrests and evictions by law enforcement throughout the country. This potentially diverted resources away from longer-term national coordination. At nearly two months, the main occupation in Zuccotti Park also lasted approximately twice as long as the encampment in Madrid's Puerta del Sol, ending when NYC police forcibly evicted

demonstrators in the wee hours of November 15, 2011.

The two movements share many values, such as an emphasis on the process of creating a new society carried out through participatory decision-making and working group structures that generate specific projects. Yet under pressure from law enforcement and arguably in reaction to a mainstream media focus on its early lack of demands Occupy Wall Street developed a trajectory of actively denouncing demands and promoting individual autonomy. This opens possibilities for more diffused actions and less centralization within the network.

Therefore, I predict that the Spanish 15M network will be denser than the U.S. Occupy network. I also predict the Spanish network will display a greater degree of clustering within the network since local groups may have been able to develop and strengthen horizontal ties that are not necessarily dependent on organizers in Madrid. As discussed above, I expect that the 15M network will also reflect national coordination efforts, namely the national *encuentros* and activists' development of alternative technological platforms.

**Structural Predictions: Global Network.** As discussed above, by the close of 2011 the Occupy movement had entered into a phase of its lifecycle in which activists were starting to create coordinating structures that have the potential to sustain the movement over the long-term in a post-active encampment stage. For example, in late November a website called *InterOccupy.org* emerged with the goal of establishing coordination between general assemblies within the movement. The New York City general assembly issued the following statement on November 24, 2011:

This communiqué is presented by the people of the Liberty Plaza General Assembly in New York City to all the good people convening at local General Assemblies around the world. There are hundreds of Occupations and General Assemblies standing in solidarity to protest mass injustice and create a better world. To strengthen our solidarity, we need to develop a mechanism of communication between all of our General Assemblies.

To address this need, we have created an Inter-Occupation Communication group here at Liberty Plaza. Our InterOcc [sic] group works with analogous groups from other Assemblies to provide horizontal channels of communication that adhere to open and transparent democratic processes in order to connect individuals or working groups across Occupations. (InterOccupy, 2011)

InterOccupy started to hold weekly conference calls, with the capacity for up to 500 participants, as well as thematic working group calls centered around issues such as media, direct action, or sharing skills. Like the 15M movement, the New York General Assembly minutes also show that Occupy demonstrators express concern over the reliance on corporate media technologies and a preference for open source alternatives.

There are concurrent coordination efforts taking place on an international level. On December 1, 2011, the Occupy LSX International Commission (in London) issued a call for improving global coordination of “People’s Assemblies,” including a listing of global clearinghouses of information, a multilingual email platform (English, French, and Spanish), and weekly Skype conference calls through Take the Square and *Democracia Real Ya!* in Spain (Peoples Assemblies Network, 2011). Given all of this, I predict that 15M and Occupy movements will be structurally linked, but that the network structure will rely to a greater extent on key bridging actors to pass information between the two geographical and linguistic spheres.

## **Methods**

To reconstruct the network structures in the two nations, as well as globally, I used a qualitative approach to identify key actors both the Spanish and U.S. cases, as well as actors that would potentially play a bridging function in a global network (see Appendix A). My intent was not to capture the entire network in either case, but rather to systematically depict a testable visualization of the corresponding structures, following methods developed by Bennett et al. (2011). I then used the online Issue Crawler interface, developed by researchers at the University of Amsterdam, to capture subset of social movement actors based on several listings of URL starting points or “seed list” (one for each network).<sup>3</sup>

I collected the data included in this part of the study in a series of four web crawls conducted on December 11, 2011. Following the standard protocol for using Issue Crawler to construct an issue network for 15M in Spain, Occupy in the United States, and interlinking

<sup>3</sup> Issue Crawler is a project of the Govcom.org Foundation, based at the University of Amsterdam ([www.govcom.org](http://www.govcom.org)).

“United for Global Change” actors, I set the program a one iteration web crawl, going two pages deep in each of the sites. In order to be included each network, an actor needed to be “colinked,” i.e. have links to or from at minimum two of the URL starting points for that network. The Spanish 15M network is based on 72 starting points from the *Toma la Plaza*’s listing of local and global movements on its main webpage (see Figure 1).<sup>4</sup> The U.S.-based #Occupy network is based on 87 starting points from the coordinating Occupy Together website’s listing of local occupy groups on its “Actions and Directory” page (excluding Facebook pages). Note that this network includes groups based outside of the United States, such as Occupy Italy and Occupy Amsterdam, as “Occupy” has arguably become a global meme for social movements confronting income inequity and capitalism (see Figure 2).

To develop a picture of the transnational linkages between the two movements I first developed a listing of key organizations working in both national spheres, as well as several that aim to reach global audiences (see Appendix A). Based this background research, I ran two web crawls with the goal of depicting the global network structure. The basis for the first is a listing of 36 “Squares Around the World” on the Spanish Take the Square website (the English language version of *Toma la Plaza*, though it is a distinct site not just a translation of the content on the one in Spanish). For this network, see Figure 4. The final web crawl I conducted is based on 21 starting points produced from my qualitative assessment of the main activist organizations in Spain and the United States. I included the main home page for each group, as well as the “actions” or “events” pages on each site (see Figure 5). I will now turn my attention to a discussion of the results.

### **Structural Findings**

In order to produce a more detailed visualization of the data for each network than is available from Issue Crawler, I imported it into an open source data visualization software

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<sup>4</sup> Additional documentation on the web crawls and listings of the individual URLs for each case are available by request from the researcher.

program called Gephi.<sup>5</sup> The program can also be utilized for social network analysis (Bastian, Heymann, & Jacomy, 2009). For each of the networks I focused on measures of the overall directed density of each network, normalized to a score that fell between 0 and 1, where a density of 1 would indicate that all of the potential paths (referred to as “degrees”) in the network are connected. I also looked at point centrality, or which actors are “stars” in each network in would have the highest number of direct contacts with other nodes (Scott, 2000). Centrality can be broken down into several measures: closeness, betweenness, and eigenvector centrality. “Closeness centrality” is a measure of an actor’s average distance from all of other network actors. “Betweenness centrality” is a measure of an actor’s location within the network. It could be the case that a node with a small number of degrees (inlinks and outlinks) could serve a bridging, or “gatekeeper,” role for information exchange within the network, thus it would be high on this measure (Freedman, 1979, as cited in Scott, 2000, p. 86). Lastly, “eigenvector centrality” is a measure, similar to Google’s PageRank, of how connected a node is to other well-connected nodes within a network (Hansen, Shneiderman, & Smith, 2010, p. 41).

**Nationally-based Networks.** Recall that I predicted the Spanish 15M network structure would be denser, with a higher level of clustering, than the U.S. Occupy network. I found this to be the case, however neither network proved to be particularly dense. The 15M *Toma la Plaza* network has a directed density of 0.070, while the U.S. Occupy Together network has a directed density of 0.032. The 15M network also displays a higher level of clustering, with an average clustering coefficient of 0.126. The average clustering coefficient for the Occupy network is 0.055. While the average clustering coefficient of the 15M network is approximately double that of the Occupy network, it is important not to overstate this finding because both are relatively low (see Figure 3).

In terms of eigenvector centrality, for the 15M network the social networking site Twitter has the highest eigenvector value of 1, while the coordinating site *Toma la Plaza* has a much lower value of 0.530. Two other key actors have low values: *Democracia Real Ya!* (0.348) and

<sup>5</sup> The software is available for download at [gephi.org](http://gephi.org).

the Madrid *Toma la Plaza* (0.376). In contrast, for the Occupy network Occupy Together has an eigenvector centrality of 1. The only other two sites with values of more than 0.75 are Twitter (0.940) and *OccupyWallSt.org* (0.818). In contrast, 91 sites in the network have an eigenvector value of 0. On the whole, eigenvector values in the 15M network are lower and more evenly distributed, suggesting a more horizontal network. However, this finding must be qualified by the fact that 15M has been in existence for twice as long as the Occupy movement, giving activists more time to develop coordinating structures of the kind that are only now emerging in the Occupy case. It is clear that Twitter serves as a crucial platform for information exchange in both networks. Other new media technologies present are Livestream and Facebook, as well as the popular web platform WordPress.

**Global Network.** By exploring the global linkages between 15M in Spain and the Occupy movement in the United States, I wanted to see what longer-term structural linkages may be developing out of the movements' rhetoric of solidarity and shared foundational values of participatory democracy and social justice. Looking at structural ties adds empirical evidence to other knowledge about the ways in which activists are using new media technologies to organize beyond local geographies. Knowing that a stated goal of both movements is to facilitate "horizontal" communication channels and that they favor open source technologies, I predicted that key global actors (coordinating websites) would serve a bridging function.

To depict these global relationships, I ran two web crawls using Issue Crawler (see "Methods" above). The first is "Squares Around the World" from Take the Square, a site with the goal of exporting the #SpanishRevolution globally. Like the national networks discussed above, it has a low directed density (0.042). In addition, the majority of the sites included are based in Europe. Its average clustering coefficient is 0.062. Twitter has the highest eigenvector centrality, as the only node with a value of 1. The next highest is *15October.net*, a site which advocated, and served as a coordinating hub, for demonstrations that took place in cities around the world as the G20 met in Paris, France in October 2011. The U.S.-based *OccupyWallSt.org* has a lower

eigenvector centrality value of 0.410. Additionally, sites that rank high provide WordPress software. They also have high closeness centrality values, meaning that many of the actors in the network link to them, indicating they are popular with activist groups as technological platforms. Other sites with closeness centralities of 1 include: the video sharing site *Vimeo.com* and Occupy Oakland.

Lastly, based on the online qualitative research detailed above, I visualized a “global change” network derived from a list of key social movement actors in the United States and Spain (see Figure 5). Not surprisingly the site within this network with the highest number of inlinks is Twitter, again indicating its importance as a forum for information exchange. Interestingly, the second highest site in terms of inlinks from the network is a website translation service ICanLocalize. Its eigenvector value is also 1. Also ranked highly is the website of the WordPress Multilingual Plugin.<sup>6</sup> There also does not appear to be a substantial amount of inter-linkage between linguistic spheres beyond the coordinating sites. The network’s directed density is 0.042 and the average clustering coefficient is 0.075. Sites with closeness centralities of 1, include: the “How to Camp” of Take the Square, the 10December Day of Action for Human Rights (a project of Take the Square), InterOccupy, London’s New Economics Foundation, the Spanish *Democracia Real Ya!*, Occupy Oakland, and YouTube.

## Conclusion

In this research I theorized that narrative and network structure are interdependent such that narrative allows us to see the values underlying how activists employ new media technologies, which then constrains how they use them to mobilize supporters and attempt to influence broader publics. These mediation processes take place within an online realm that can be viewed conceptually as a public sphere, alternative or otherwise. I have shown here the web-based structural linkages between the 15M *Indignados* in Spain and Occupiers in the United States. New media technologies enable movements to learn from—and be inspired by—similar

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<sup>6</sup> The WordPress Multilingual Plugin website is: *wpml.org*.

struggles taking place around the world. As I have illustrated the expectation of a global audience was an important aspect to Occupy Wall Street's early development. In addition, the Occupy movement sees an audience that is active and engaged; the 99% potentially includes just about everyone other than the 1% who are to blame of societal ills. As a headline in the third edition of the Occupied Wall Street Journal reads: "The Whole World Isn't Just Watching," reminding readers that "Occupation is Participation." This mode of *politics as participation* is simultaneously geographically-rooted and performed for, and consumed by, (actual) audiences globally. New media enable activists generate new linkages to exchange information, as well as re-appropriate corporate-owned channels, such as Twitter and Facebook, for diffusing movement messages, opening new mechanisms for the development of alternative publics.

It becomes crucial to look at the channels through which information flows through networks to begin to answer the *how* questions posed by Tufekci (2011) as to the ways in which new media are changing the dynamics of collective action. Place-based movements reinforce each other as they learn from the successes (and failures) of other activists around the world. Yet, as the findings in this study suggest, linguistic divides are a challenge which must be overcome. In addition, the structural linkages confirm that importance of the social media platform Twitter as a *mediated public sphere* for the transnational information exchange. Occupy Wall Street appears to have learned from the 15M movement as it entered a new post-occupation phase. It seems to be following the Spanish movement's example of developing national coordinating structures and to be forming around specific issue strands. While these movements present symbolic challenges to the definitional power of elites, questions remain as to what types of information is exchanged and how effective they be over the long-term in addressing widespread social grievances.

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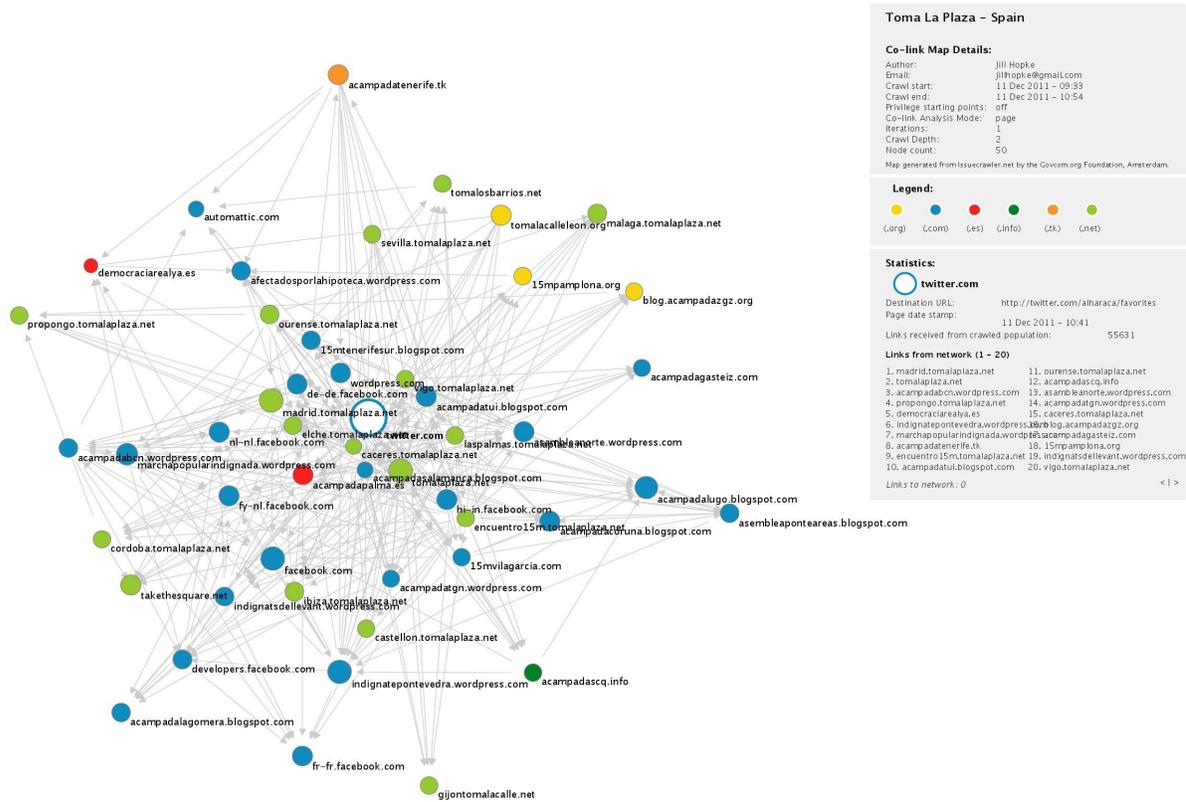
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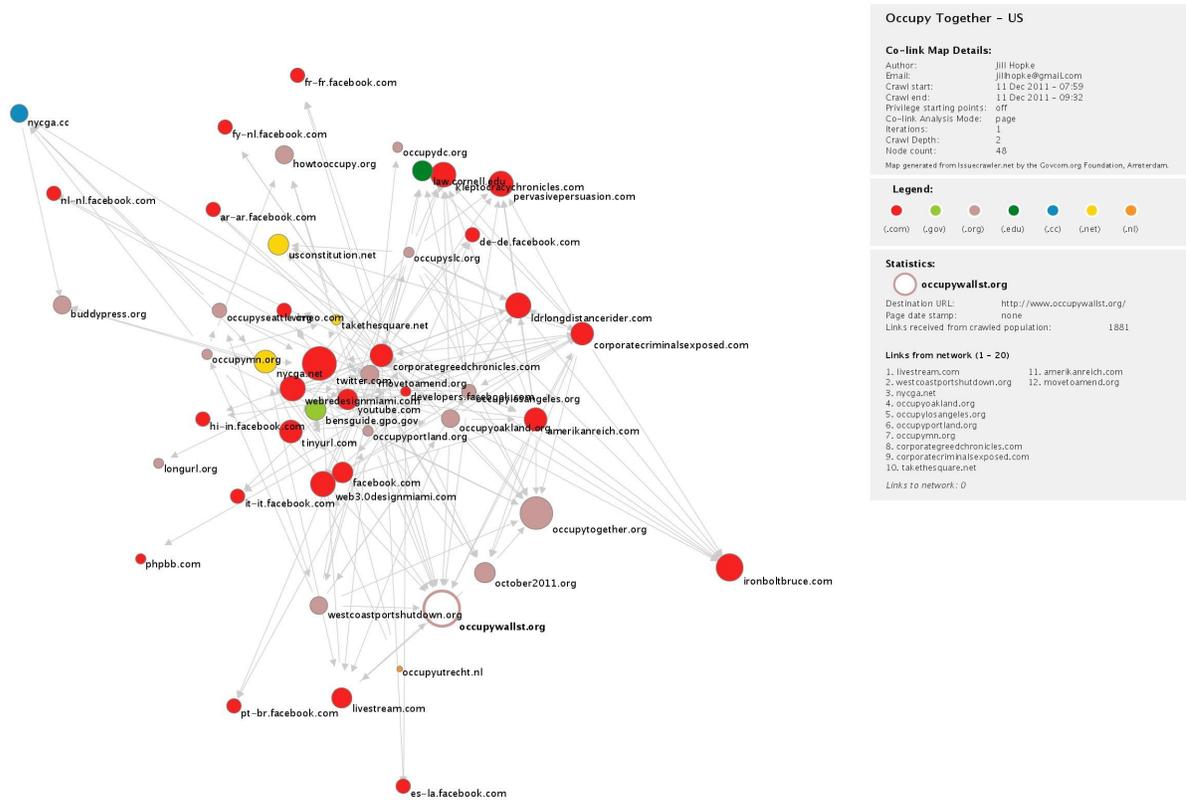
**Table 1:** Network Structure Summary Statistics

	#15M – Toma la Plaza	#ows – Occupy Together	Squares Around the World – Take the Square	#GlobalChange
Nodes	144	159	104	78
Edges (in-degree and out-degree)	1443	807	450	253
Average degree	9.497	7.421	4.457	5.013
Directed density	0.070	0.032	0.042	0.042
Average clustering coefficient	0.126	0.055	0.062	0.075

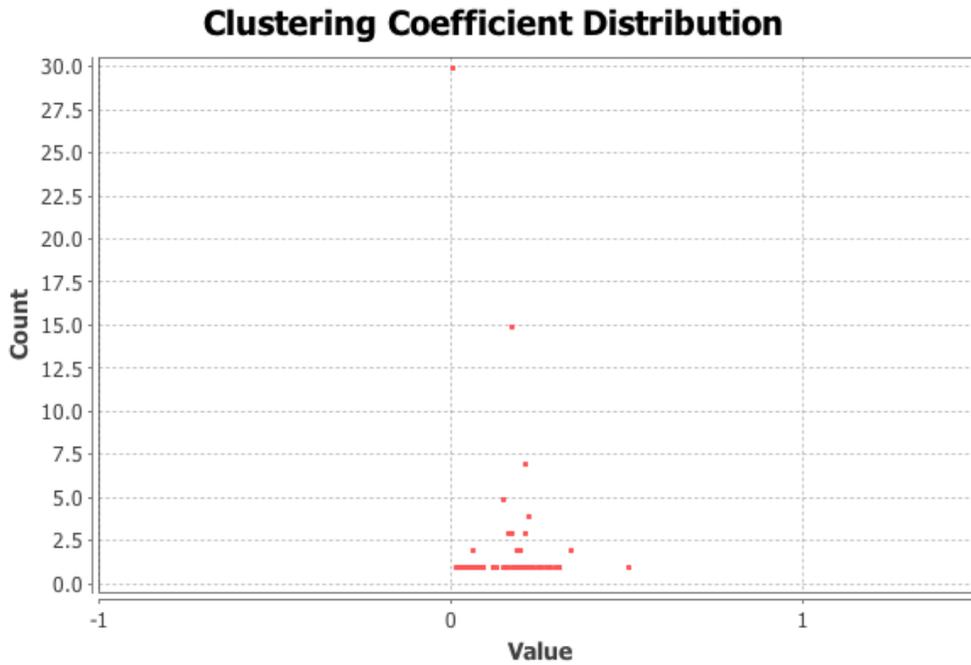
**Figure 1:** The Spanish 15M network as depicted by Issue Crawler based on 72 starting points from the coordinating *Toma la Plaza's* listing of local and global movements. As a colink visualization, it includes websites that are linked (inlinks or outlinks) to at least two sites in the original listing of 15M groups. The node size is based on the relative number of incoming and outgoing links within the network.



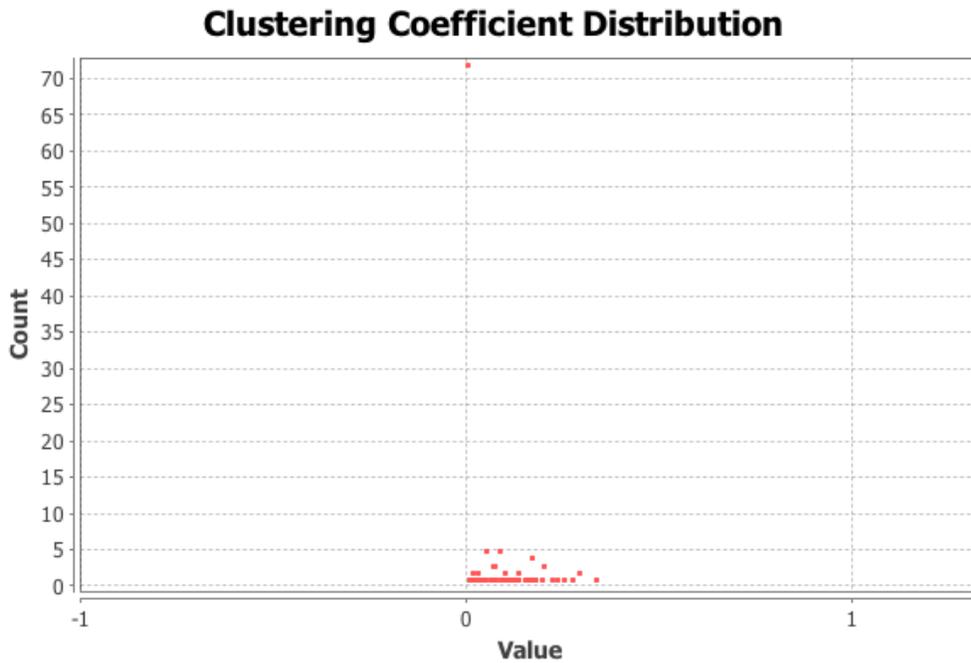
**Figure 2:** The U.S.-based Occupy network as depicted by Issue Crawler based on 87 starting points from the coordinating Occupy Together listing of local occupy groups on its “Actions and Directory” page (excluding Facebook pages). Note that this network includes groups based outside of the United States, such as Occupy Italy and Occupy Amsterdam. As a colink visualization, it includes websites that are linked (inlinks or outlinks) to at least two sites in the original listing of Occupy groups. The node size is based on the relative number of incoming and outgoing links within the network.



**Figure 3:** Clustering Coefficient Distributions for the 15M and Occupy Networks

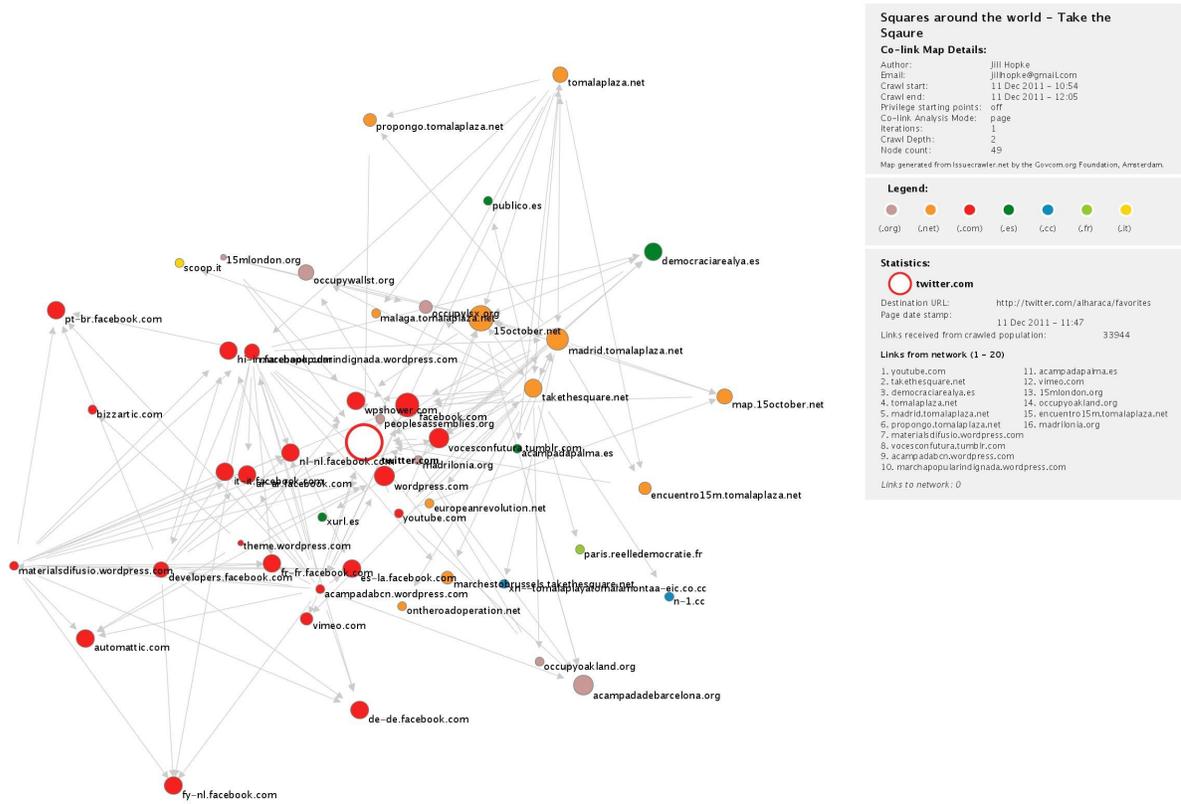


The clustering coefficient distribution for the 15M network. Note that the count scale is 0 to 30.

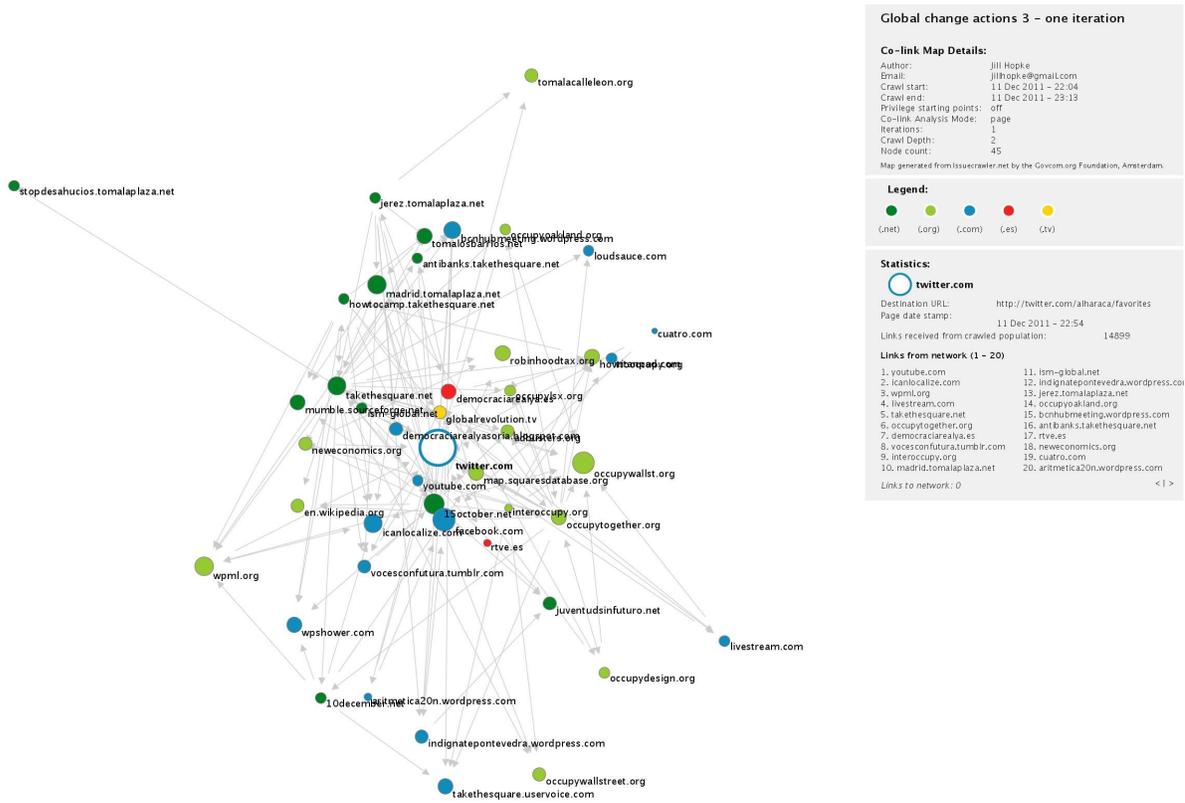


The clustering coefficient distribution for the Occupy network. Note that the count scale is 0 to 70.

**Figure 4:** The Spanish-based Take the Square network as depicted by Issue Crawler based on 36 starting points from the Take the Square’s “Squares Around the World” listing of local groups. As a colink visualization, it includes websites that are linked (inlinks or outlinks) to at least two sites in the original listing of Occupy groups. The node size is based on the relative number of incoming and outgoing links within the network.



**Figure 5:** A depiction of the global linkages between the two social movement spheres in Spain and the United States, as rendered by Issue Crawler based on 21 starting points from listing of main activist organizations (see Appendix A), along with the “actions” or “events” pages on each site. As a colink visualization, it includes websites that are linked (inlinks or outlinks) to at least two sites in the original listing of Occupy groups. The node size is based on the relative number of incoming and outgoing links within the network.



## **Appendix A: Main Activist Twitter Accounts and Websites**

### ***Spain:***

Take the Square  
@takethesquare  
takethesquare.net

Democracia Real YA!  
@democraciareal  
www.democraciarealya.es

Toma la Plaza  
@acampadasol (Madrid)  
madrid.tomalaplaza.net  
tomalaplaza.net

No Les Votes  
wiki.nolesvotes.org

### ***United States:***

Occupy Wall Street (New York)  
@OccupyWallStNYC  
@OccupyWallSt  
@NYC\_GA  
www.occupywallst.org  
www.nycga.net (New York General Assembly)

Occupy Together  
@OccupyTogether  
www.occupytogether.org

### ***Global:***

United for Global Change  
@15octobernet  
www.15october.net

Anonymous  
@anonops  
anonops.blogspot.com

Adbusters Magazine  
@Adbusters  
www.adbusters.org/campaigns/occupywallstreet