

*Mapping Networks of Support for the Zapatista Movement: Applying Social Networks Analysis to Study Contemporary Social Movements*

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*“Social Movements in complex societies are disenchanting prophets.*

*Contemporary social movements are prophets of the present. What they possess is not the force of the apparatus but the power of the word. They announce the commencement of change; not, however, a change in the distant future but one that is already a presence. They force the power out into the open and give it a shape and a face. They speak a language that seems to be entirely their own, but they say something that transcends their particularity and speaks to us all”.*

*(Alberto Melucci 1999:1)*

The structure of global communication has been undergoing a quiet sea-change. It was once reasonable to assume that communication among those in different nations would naturally be channeled through a hierarchy of institutions, through patterns that had been established over centuries and at great social cost. Though there were certainly examples of decentralized global grassroots organizations, these were placed at a significant disadvantage due to the logistical apparatus available to states and to corporations.

In the sweep of a decade the situation has changed drastically. The Zapatista movement has been called both a model social movement on the one hand, and the first instance of Net warfare on the other, views that are both equally accurate (Ronfeldt et al 1998). While it is widely recognized that the Zapatista movement has been particularly successful because of the networked nature of its effort, few have clearly charted what such a network might look like.

The research presented here is an exploratory attempt to analyze the main characteristics of the global social networks of solidarity that support the Zapatista movement in cyberspace. The purpose of this study is to create a tentative map of the Zapatista network on the Web that can help us to illustrate some of the ties, roles and strategic alliances that have been built within and around the movement worldwide. By doing this, we hope to understand the composition of the Zapatista's social network, as that network is reflected in hypertext structures. Given the central role of the Internet to the social structure of the movement, we argue that a map of network connections is, in effect, a map of the social and organizational relationships that constitute the most significant part of the Zapatista movement. A careful examination of this hyperlinked network of websites provides a unique insight into the character of the Zapatista's phenomenal success.

### **New Communication Structures**

Since the end of the cold war, power has been redistributed among actors that until recently had no significant presence in the international public arena. This redistribution of power, together with the development of new communication technologies, has led to a "reweaving of the political fabric of international and national dialogue, upsetting the traditional balance of power in the creation of domestic and foreign policy" (Clever 1998:2).

Two factors have triggered this reorganization. The first and most important of these is globalization, which has fostered a relative decline of the power of states while nourishing the rise and strength of non-state actors (Mathews 1997). Along these lines, De Angelis (2000) argues that the globalization of world trade and production has increased interdependency among international actors, and concurrently helped to draw together the needs and aspirations of a variety of hitherto separated groups and individual actors across the globe. Second, and in concert with the first factor, a telecommunications revolution has facilitated the exchange of information among underrepresented groups in society and has opened alternative spaces wherein these groups can make their voice heard by the international community.

Manuel Castells (1997) argues that the trends towards globalization and informationalization created by networks of wealth, technology, and power are transforming our world. They are enhancing productivity, driving cultural creativity, and increasing the communication potential within a global civil society. Most importantly, they are setting the stage for a new form of collective action for the information age (Melucci 1996).

Mathews (1997) argues that new decentralized communications networks have led to fissures in the international structures of power, fissures that have been exploited by new actors on the global stage. There has been a tremendous growth in cross-border networks among non-governmental organizations (NGOs), including the hundreds that mobilized against the North American Free Trade Agreement (NAFTA) during the 1990s and those that gathered in Seattle to protest the secrecy of the World Trade Organization in 1999 (Mathews 1997, Cleaver 1998). Such cross-national networks not only bypass national government policymakers, they often work directly against their policies, particularly the so called neo-liberal reforms.

Fundamental to these efforts is the need of social movements to seek alliances with others, and to make the struggles of other movements their own. The fight of one becomes the fight of all; their terrain of struggle transcends national boundaries and acquires instant global scope (De Angelis 2000, Cleaver 1998, Schulz 1998). Although the struggle against structural reforms and globalization has evolved since the 1980s, the development of information technology in the last decade has further facilitated communication among members of this international network of social resistance. The effective use of communication networks has broadened the scale of action for these movements empowering their struggle internationally and opening new spaces—what might be called “virtual publics” (Jones and Rafaeli, 2000)—that move beyond the exchange of information to facilitate shared culture, coordination, and solidarity (Cleaver 1998, Schulz 1998). Many have noted that nascent virtual organizations supported by the Internet and related networks have the potential to become the vanguard of a technological globalization that will bring about a global citizenry (Rheingold [1993] 2000, *Der Spiegel* in Froehling 1997). These new networks represent a spirit of interaction that is unique; they “speak a language that seems to be entirely their own, but they say something that transcends their particularity and speaks to us all” (Melucci 1996:1).

### **Zapatistas and the Net**

The most widely cited example of the way that the new dynamics of social networks interplay is the Zapatista movement in the southern state of Chiapas in Mexico. On January 1, 1994 an army of about 3,000 indigenous peasants united under the banner of *Ejército Zapatista de Liberación Nacional* (EZLN), took up arms and occupied seven towns in Chiapas (Schulz 1998). This uprising was provoked by an urgent need to fight together against the extreme

poverty that had deterred the social and economic development of indigenous communities in Mexico.

The date the Zapatistas decided to take these towns by force was the same day that NAFTA took effect. What makes the Zapatista movement unique from a historical perspective, and what makes it a model of participatory efforts towards social change, has been its extensive use of the Internet as a tool for global mobilization. By January 3, 1994, two days after the uprising, Subcomandante Marcos—the figurehead of the movement—was online. Marcos became the first hero of the Net and his “Lacandona jungle address became the locus of a global news agency whose dispatches were written by guerrilla combatants themselves” (Halleck 1994:30).

There are some scholars, particularly Cleaver, who argue that the EZLN has played no direct role in the proliferation of the use of the Internet. Rather, the efforts towards the building of the network of support in cyberspace were initiated, and actually are maintained, by others, particularly those in the western world that support the Zapatista movement (Cleaver 1998). However, all agree that the Internet played a crucial role as a catalyst to disseminate information about the indigenous struggle in Chiapas around the world and opened the space for the creation of networks of transnational support, whether through direct use by the Zapatistas or through intermediary networks that existed primarily in computer-rich countries (Cleaver 1998). “In an age of information and knowledge, the adoption of the Internet fosters new opportunities to share common experiences, transcending local political powers” (Meyrowitz 1994).

Castells (1997) writes that what was different about the Zapatistas was the use of information technology to build an international network of solidarity. As Schulz (1998) points out, global interactive communication has enabled the Zapatistas to link up with individuals,

groups and organizations—particularly in the industrialized world. This cross-national solidarity has been of crucial relevance to the Zapatista's continued survival, because it has encouraged international support of the movement, while at the same time strengthening their position with the Mexican government. Similarly, Cleaver (1998) argues that the evolving computer networks supporting the Zapatista movement are providing the backbone or nerve system for increasingly global opposition to the dominant economic policies of the present period. For this reason, he explains, it is not an exaggeration to speak of a "Zapatista Effect" (p.622).

If the structure of the Zapatista movement is what makes it unique, it is important to investigate it from a structural perspective, describing the movement in terms of the relationships among its constituent elements. Given the degree to which the Zapatistas have made use of the Internet, it represents a natural target for investigation. Hyperlinks provide a direct measure of relationships among documents on the World Wide Web, and possibly an analog for other structural relationships among the core Zapatista movement and other movements around the world.

### **The Network as a Strategy**

Representatives within the Zapatista movement have made clear their strategy is to exploit new communications technologies to create global relationships. The Zapatista movement encompasses a participatory process for social change, one that is concerned as much by ideas of social equality, freedom, and participation in decision-making, as it is by those of economic opportunity, women's rights, and reduction of poverty in indigenous communities. These aims extend not only to Mexico or Latin America, but around the world. In the "First Declaration of Reality," Subcomandante Marcos states:

The new distribution of the world excludes “minorities.” The indigenous, youth, women, homosexuals, lesbians, people of color, immigrants, workers; the majority who make up the world basements are presented, for power, as disposable. The new distribution of the world excludes the majorities. (quoted in De Angelis 2000: 23)

By diversifying the discourse of struggle, the Zapatistas have become an icon of social resistance and an example to follow for social change. Even though the movement has underscored its grassroots in the fight for indigenous rights, self-determination, and autonomy and cultural preservation in Mexico, their fight has become a call for justice and economic opportunity for all those underrepresented and exploited around the globe.

Another crucial strategy for the Zapatistas’ effort towards increasing their network of support was organizing the “International Encounter for Humanity and Against Neoliberalism,” which took place in a small town called La Realidad in Chiapas, Mexico (Schulz 1998). This “intercontinental meeting” attracted thousands of activists who gathered in La Selva Lacandona hoping to open a multicultural dialogue and to form an international alliance to fight against the inequities of globalization and neoliberalism (Schulz 1998, Cleaver 1998, Froehling 1997). Schulz (1998) defines this strategy as part of the “communicative praxis” of the Zapatista movement, which refers to the construction of meaning, projects, visions, values styles, strategies and identities with and against one.

Cross-national solidarity facilitated by the use of the Internet has empowered and strengthened the Zapatista Movement and has allowed its survival. This is the main reason we argue that in order to understand the structure of this transnational social network, it is necessary to analyze the deep architecture of its network of support. These networks are an unusual

phenomenon; they are at the same time decentralized within the broader spectrum of the structure but they perform specific roles within their surrounding networks. Despite their specialization, the complexity of these social networks allow for an interaction that is far less influenced by differences in gender, class, or race than interactions in other media might be (Froehling 1997).

Harry Cleaver (1998) argues that at the grassroots level, the Internet is being used to promote international discussion and connections that link struggles and often bypass the nation state. Cleaver describes three examples in which these interlinking movements are facilitating dialogue and are creating an alternative niche in cyberspace. First, he argues that the Internet facilitated the spread of information around the world about *indigenous experiences* in seeking alternatives to create a culturally, linguistically, and ethnically heterogeneous democratic sphere. These experiences, he notes, were successful at building networks among a diverse array of indigenous people at the local, regional, and international level. Second, Cleaver explains that the *environmental network* is another highly elaborated sphere in cyberspace. It links environmental movements with indigenous environmental practices. This relationship has allowed for a more developed explanation of the relationship between indigenous culture and the natural environment, and a slow merging of these networks of communication. Finally, Cleaver discusses the inclusion of a *women's network*. Triggered by the drafting of the "Revolutionary Women's Law" by indigenous women, many women's networks have established connections directly with indigenous women in Chiapas and have played an active role in circulating information about the Zapatista Movement.

Following a similar path, Markus Schulz defines the Zapatista's "social network capacity" as one of the key elements for the success of the movement and spreading international support. Schulz's article is probably the most comprehensive study of the Zapatista movement



from the network perspective. The social network capacity, Schulz (1998) argues, has made the Zapatistas less reliable or dependant on their internal military organization than on the support they receive from individuals and associations that are explicitly not part of the EZLN.

Furthermore, the Zapatistas proposed the formation of an “Intercontinental Network for Humanity and Against Neoliberalism” that was intended to create links of resistance and communicative access among and within the social actors of this international network. Schulz argues that globalized interactive communication has enabled the Zapatistas to link up with heterogeneous individuals and organizations, particularly in Western countries, that organize on behalf of the Zapatista cause. These have become crucial for the movement because they have bolstered their position with the Mexican Government. The author concludes that the Zapatista insurgency can be thought of as a new type of transnational social movement emerging in the global order to counter globally defined threats and the shrinking of national political action spaces.

### **Social Networks Analysis and Hyperlink Analysis**

Social network analysis seeks to describe networks of relations, trace the flow of information through them, and discover what effects these relations have on people and organizations (Garton, Haythornthwaite, and Wellman 1999). Social network analysis has emerged over the last century as a method of discovering patterns of exchange and relationships among groups. Early work can be found among social psychologists examining the emergence of “cliques” and anthropologists concerned with systematically describing the structure of tribes (Scott 2000). Those interested in social networks have developed a set of tools, many adapted

from graph theory, to help uncover and characterize these networks (Galaskiewicz and Wasserman 1993, Wellman and Berkowitz 1989).

With the advent of information technologies and computer-mediated communication, social network analysis has seen a resurgence. As people make greater use of computer networks to fulfill social needs, these computing networks are themselves clear indicators of communication structures within a society—or as Barry Wellman has suggested, “computer networks are inherently social networks” (2001). We proceed, then, with the assumption that a map of the communication network is roughly isomorphic to the structure of relationships among the users (Garton, Haythornthwaite, and Wellman 1999; Wellman 2001; Scott 2000).

The network perspective seems ideal when studying newly networked organizations, and as we have seen many scholars take this overall perspective to help explain the structure of NGOs and their use of the Internet. Fewer operationalize this construct and examine the computer networks that undergird these larger social networks in anything more than a superficial way. There are a number of potential empirical applications of social network analysis that would help to elucidate the structure of social movements, including those that map the connections between organizations (Diani 1992).

The World Wide Web provides a ready source of such networked information. Exchanges over email and on listservs provide more dynamic information, but the World Wide Web has several advantages. Unlike other applications of the Internet, it is largely public and easily accessible. In addition, the structure of the web, though changing, evolves far more slowly than other linkages might. As a result, we can obtain a “snapshot” of sorts of the current relationships between organizations, based upon the relationships between their web sites.

Since establishing a hyperlink is a conscious social act executed by the author of a web site, we may assume that some form of cognitive, social, or structural relationship exists between the sites. As web site authors create web sites, they naturally tie their own efforts to allied ones through hyperlinks. Without knowledge of the content of these communications, a complete picture cannot be drawn. Nonetheless, important descriptive work can be done using the structures of interconnection alone. As Adamic and Adar phrase it, “you are what you link” (2001). Surveys of web masters and other work indicate that hyperlinks represent reasonable approximations of social relationships (Jackson 1997, Kling 2000).

At a large scale, this web of linkages provides an indication of the “landscape” of related movements. These structures, which are not apparent to the casual web surfer, only come to light under an analysis of larger web linkages. A number of attempts to describe this structure have appeared in the literature of various fields under the terms “hyperlink analysis” or “webometrics” (Adamic and Adar 2001, Björneborn and Ingwersen 2001, Brunn and Dodge 2001, Halavais 2001, Halavais 2000, Kim 2000, Kleinberg 1999, Park 2002). While there are an established set of tools in social network analysis we may draw from, how these measures relate to the web remains an open question.

### **Crawling the Zapatista Web**

The questions at hand are relatively straightforward, as indicated by the discussion above: How do websites related to the Zapatistas interact with a larger network of NGOs? Have they served as a catalyst for larger networks of NGOs? Several measures used in social network analysis can be of help in addressing these questions. Given the size of the sample, the first step is categorizing the results into cohesive subgroups, based upon co-linkage structures. The

approach is similar to that used in citation analysis of scholarly literatures. By examining these subgroups, we should be able to provide a “map” of sorts of how the larger community of organizations are related.

This may also provide some indication of the role of Zapatista-related sites in this network, by indicating the “central” domains, those which appear to be closest to the largest number of other domains. A concentration of links to one domain or group provides us with one measure of centrality, but not a complete picture. We can also measure “betweenness,” to identify domains or subgroups that are most likely to be passed *through* even if they do not necessarily have a large number of links to them directly. Such observations of the structural position of web sites have already found a place in the techniques used by search engines like Google that determine the most “influential” site among a group by measuring the hyperlink structure surrounding it (Henzinger 2001). Using a similar approach, we can identify the central domains within this network, and those that act as important intermediaries. We may also undertake a similar analysis using the groupings of tightly knit domains to determine which of these *groups* plays a central role in the network.

Collecting hyperlink data from the World Wide Web raises special challenges. Although a number of approaches have been taken to gather samples, we decided to snowball sites from the *Ejército Zapatista de Liberación Nacional* (<http://www.ezln.org/>) web site, which can be considered the most important public organ of the Zapatista movement. Making use of a custom web crawler<sup>1</sup>, we collected the first 250 pages of the EZLN site, and coded target sites to determine whether they, too, were activist NGOs. For the purpose of this coding, websites of “activist NGOs” were defined as those that were (a) clearly non-commercial, (b) non-governmental, (c) indicated that they had a particular social mission, (d) had a significant and

obvious “real life” component or membership that was engaging directly in activism. This would exclude, for example, the “Open Directory Project” which contains links to many NGOs but is not an activist organization by this definition<sup>2</sup>. Additionally, in order to disambiguate these sites, we examined only those with unique domain. Thus, if an NGO was hosted by a commercial enterprise, or by a university, it would not be included. While these restrictions may have excluded valuable organizations, in practice we found this to be a reasonable approximation of extant NGOs and grass-roots groups with a web presence.

The web crawler remained within these specified NGO sites, and crawled only the first 250 pages of each domain in turn. Data was collected for activist NGO sites within a radius of two hyperlinks from the EZLN site. Ideally, the “complete” network of activist NGOs would be collected; that is, any activist NGO site that was connected to the EZLN site by any number of hyperlinks. Given that such a collection would require a considerable (indeed, an indefinite) amount of time to crawl and analyze, the present study established the two-link radius as an arbitrary limit. In total, about 100,000 pages were crawled, and several million hyperlinks recorded at the end of 2001. These data were collected and sorted by domain name, for a total network of 392 domains. For the purposes of doing a network analysis, the hyperlink data among these 392 domains were arranged in a square, asymmetric matrix, with elements of the matrix indicating the total number of hyperlinks from each domain to each other domain.

### **Teasing out the structure of the Zapatista’s social network**

As noted above, two manipulations of these data are required in order to answer questions about the organization and importance of particular domains to the larger region. First, while examining the interactions of over a thousand domains remains difficult, we can gather

many of these domains into cohesive subgroups, and then examine the interaction among those groups. Second, we can look both at the original data and this derived network to determine the importance of local domains or groups to the entire network.

There are a number of ways of grouping network data. These might be roughly divided into those techniques that come from graph theory, and those that are applied to clustering non-network data. Cluster analysis—which belongs to the latter category—allows us to more easily make use of the information regarding the number of links between two domains. Since the 392 nodes are already a simplification of a much larger network structure (which includes many pages in each domain), it is important that we retain as much data as possible. When measuring the strength of these ties, a standard hierarchical clustering provides us with a more workable set of groups, especially if it is clear that the clusters generated by an analysis of the hyperlinks are in some way explicable in terms of qualitative groupings.

A total of 83 (21%) of the domains are peripheral, linked weakly to a single domain that is more central to the network. Just as very few hyperlinks unite this group with the whole; it is difficult to find a common topical thread among these domains. Indeed, several organizations are directly related to the Zapatista movement (e.g., the *Comité de solidarité avec les peuples du Chiapas en lutte* in Paris), but exist in this peripheral region because they lack strong hyperlinked connections with more core groupings. Most of these are smaller organizations, more than half with a Latin America focus. There are, however, some anomalies, like “Doctors Without Borders,” which may appear at the periphery merely as an artifact of the limited sample.

If we cluster the network to the point at which every member has, on average, no less than two links to each other member, and we exclude clusters with less than four domains, we are left with thirteen core groupings, as listed in Table 1. Note that the divisions are not as

cohesive as the labels might make them out to be. Domains with sites that mainly treat women's rights may be found throughout most of the groupings, and even the Zapatista Information includes the "Amazon Watch" and "Oil Watch" web sites. While a content analysis might not group these domains together, the strong linkage patterns make clear that they are closely related. These groups make up the core 40% of the network, and as noted above are considerably more interconnected than the other domains crawled.

[Table 1 about here]

A second grouping, labeled "Zapatista Global Support" is closely linked to the "Zapatista Information" group, but tends to contain sites that are based outside of Latin America, in languages other than Spanish, and contain more general impressions of the struggle, as opposed to more current news and information found in the "Zapatista Information" group. Most of the remaining groups have been identified by an overarching label that describes the makeup of their constituent domains in broad strokes<sup>3</sup>.

Having reduced the original sample to a more manageable set of groups, we may also reach some understanding of how these groups are interrelated. Figure 1 shows the relationships between the 13 subgroups. Note that although quite distinct from one another, there is a strong relationship between the two directly Zapatista-oriented groups and the largest grouping, that of domains that generally treat human rights issues. An examination of the links surrounding these three large groups provides a more visual depiction of the relationship suggested qualitatively by a number of researchers who have described the Zapatista network. While the sites that are directly related to the Zapatista network may not link the global networks of NGOs together, the

secondary tier of Zapatista-related websites do perform this bridging function, drawing together disparate social movements. Visually, this can be seen in the strong sets of linkages from the “Zapatista Global Support” node to other subgroups in the network. Of particular interest is its function as the group most closely linked to the women’s rights cluster.

[Figure 1 about here.]

We can gauge this level of centrality more directly by analyzing the linkage structures among the groups. The simplest way to look for centrality is to look for the groups that have the highest “in-degree,” or links leading from other subgroups to that subgroup. The “Zapatista Global Support” is clearly at the lead here, with a total of 339 links from other groups leading to it. The “Human Rights” subgroup, by comparison, is the second most popular destination, with 227 links. These two groups also produce the largest number of outbound links, 305 and 263 respectively. Of course, we might expect this level of linkage, given simply the size of these subgroups and the domains they contain. If we find the proportion of outdegree to indegree, we are able to see that the “Grassroots Media” group is the “stickiest,” being the target of more than twice as many links as it has outbound, while the “Guatemala” subgroup neatly reverses this relationship, and is the target of half as many hyperlinks as there are links from the subgroup to other destinations. All of these measures compare the subgroups only to their neighbors, without providing an overall picture of the network.

Lin Freeman (1979) described two measures that help to ascertain centrality of points to the entire network: “closeness” and “betweenness.” The first of these provides an indication for each node of a network of how far it is, roughly, from all of the other points. The second indicates the necessity of passing *through* a given point when moving from one node to another



on the network. These provide us with some good indicators of the importance of a given node to the entire network. Unfortunately, they do not take into account the strength of given connections, the number of hyperlinks<sup>4</sup>. Therefore, measuring closeness in this case is facile. Both of the Zapatista subgroups are connected to every other subgroup, leading to the highest possible closeness. When we measure the betweenness of the subgroups, we find that “Zapatista Global Support” (17.4; using UCINET, Borgatti, Everett, and Freeman 2001) is the greatest bridge, followed closely by the “Zapatista Information” subgroup (15.8), with peace groups taking the third position (9.9).

[Tables 2 and 3 about here]

More detailed information can be derived by examining the original 392 domains, rather than the network of subgroups. Tables 2 and 3 list the domains with the highest measures of closeness and betweenness. In the case of sites that are most central to the network (i.e., have a high degree of closeness), it is clear that they aim to reach large audiences, and in some cases do so directly through the web. Several of these (LANIC, La Neta, and Nodo 50) provide wide links to related organizations and act as hubs for the larger network. Within the collected network<sup>5</sup>, the EZLN site and other Zapatista-related sites clearly play an important role. When we look at measures of betweenness, we find a very similar list. However, in this case, the LANIC domain is far and away the most important site for connecting the network together; its betweenness proportion is greater than the next ten sites combined. Note also the presence of the Association for Progressive Communication, an organization which aims to “advocate for and facilitate the

use of information and communications technologies (ICT) by civil society . . .,” (“Our Work” 2001) an objective born out in their position within this network.

### **Conclusion**

Overall, we find strong support for the widely averred claims that Zapatista-related sites are central to global NGO networks, and help to bind them together. Were the Zapatista-related sites removed from the network examined here, the resulting network would consist of a much more balkanized set of websites, groups that might link only through the most circuitous of paths, if at all. Setting aside the content of these sites, it is clear that the Zapatista movement has had an impact on the structure of an important region of the web.

Clearly, the greatest limitation of the study presented herein is one of scope. While over 100,000 pages may seem like a large number, it does not accurately represent the larger space of the NGO networks. How far would be enough? As we collected this sample, at each step we evaluated activist NGO sites that were linked to the current crawl. This number begins to shrink at about 1500 NGOs, however, the network of hyperlinks becomes increasingly sparse as the number of sites increased. Nonetheless, a much larger sample would represent a useful network not only for the purposes described here, but to help answer other research questions. Naturally, there is the possibility that there exist NGOs that do not link to a single other NGO web site. Given the sites that have been included in this relatively small crawl, however, it seems such sites are not plentiful. Certainly, the role of hyperlinks in online discourse among activists merits further investigation.

In a recent interview, Gabriel García Márquez asked Marcos about the place of literature in his life. He replied that as a child he came to think of language “not as a way of communicating but of building something”<sup>6</sup>. Many have written about the networked and virtual movements that the Zapatistas epitomize. If we are to discuss these networks as social fact, as something being built through discourse and action, we must do more than acknowledge their presence. We must tease out their structure and make sense of how they are used. Until they are made clear, they remain a part of the sublimated structure of social movements, an ideology rather than a practice.

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## Notes

1. A web crawler, sometimes called a “spider” or “robot” collects pages from the internet by automatically following and recording hyperlinks. It is commonly used, for example, by search engines that are indexing the content of the World Wide Web.
2. They may not agree with this assessment. The page defining the project (<http://dmoz.org/about.html>) shares a number of rhetorical devices we might associate with an NGO. Nonetheless, when applied to the sites that made up the collected network studied here, these criteria were relatively unambiguous.
3. Two of these require some clarification. The four domains listed under “Guatemala” seem to be interlinked mainly because of their activities in that country. The “Miscellaneous” domains appear to be linked only because they share a web design company.
4. There are certainly measures available to determine centrality based upon the strength of measures (e.g., Bonacich's influence measure), as well as those that more clearly disaggregate indegree and outdegree centrality. Future analysis would certainly benefit from a more extensive analysis of these properties. Given the aims expressed here, and the fact that this may further emphasize already expressed bias (see the following note), we plan to do this only with a larger sample of sites.
5. Naturally, there is a danger here that we are finding precisely what we collected. We would expect the EZLN site to be at the center of a sample that began collection with the EZLN site. Early indications suggest that, not surprisingly, centrality of the EZLN and related sites decrease as a wider net is cast. Nonetheless, this provides some

indication of the role of these sites within an arbitrary “distance” of hyperlinks from the EZLN site.

6. “De una u otra forma adquirimos la conciencia del lenguaje como una forma no de comunicarnos sino de construir algo. Como si fuera un placer más que un deber. Cuando viene la etapa de las catacumbas, frente a los intelectuales burgueses, la palabra no es lo más valorado. Queda relegado a un segundo plano. Es cuando llegamos a las comunidades indígenas, cuando el lenguaje llega como una catapulta.” (Márquez 2001).

**Table 1: Clusters of highly interlinked domains**

Label	# of Domains	Example domains
Zapatista Information	18	EZLN, FZLN, Laneta, CIEPAC
Zapatista Global Support	23	Accion Zapatista (at U. Texas), The Irish Mexico Group, Labor Net, Nodo 50
Cultural Exchange	5	International Service for Peace, Global Exchange, Afrocubaweb
Latin American Focus	8	Partners for the Americas, National Council of La Raza, Aspira Organization
Women & Development	11	Sisterhood is Global Institute, Women Action Network, HIVOS, Synergos
Human Rights	22	Human Rights Watch, Amnesty International, Human Rights in China, International Gay and Lesbian Human Rights Commission
Women's Rights	22	Women's World Summit Foundation, Instituto Social y Politico de la Mujer, Equality Now
Peace Groups	19	Witness for Peace, Center for the Advancement of Non-violence, Radio for Peace International
Health & Family Planning	7	Fundacion Mexicana para la Planificacion Familiar, GIRE, North American Women's Education Resource Center
Guatemala	4	Rights Action for Central and South America, Guatemalan Human Rights Commission/USA
Grassroots Media	4	Paper Tiger Television, Adbusters
Trade Issues	10	Global Trade Watch, Bretton Woods Project, Central and Eastern Europe Bankwatch Network
Miscellaneous	4	Refuse and Resist, Revolutionary Association of Afghanistan Women

**Table 2: Domains with greatest “closeness” (>1.164).**

Latin American Network Information Center
Zapatista Network of Pittsburgh
Amnesty International
Human Rights Watch
CIEPAC
EZLN
Global Exchange
Green Net
La Neta
Nodo 50
School of the Americas Watch

**Table 3: Domains with greatest “betweenness” (>1200).**

Latin American Network Information Center
Zapatista Network of Pittsburgh
Human Rights Watch
Amnesty International
Green Net
La Neta
EZLN
Association for Progressive Communication
Global Exchange
Nodo 50
CIEPAC

