Discursive Deployments: Mobilizing Support for Municipal and Community Wireless Networks in the U.S.

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Abstract

This paper examines Municipal Wireless (MW) deployments in the United States. In particular, the interest is in understanding how discourse has worked to mobilize widespread support for MW networks. We explore how local governments discursively deploy the language of social movements to create a shared understanding of the networking needs of communities. Through the process of "framing" local governments assign meaning to the MW networks in ways intended to mobilize support and demobilize opposition. The mobilizing potential of a frame varies and is dependent on its centrality and cultural resonance. We examine the framing efforts of MW networks by using a sample of Request for Proposals for community wireless networks, semi-structured interviews and local media sources. Prominent values that are central to a majority of the projects and others that are culturally specific are identified and analyzed for their mobilizing potency.

Keywords: Municipal Wireless, Framing, Broadband Wireless, Discourse, Social Movement, Wi-Fi, 802.11

1. Introduction

On September 28, 2006 The New York Times ran a story titled *Rural Areas Left in Slow Lane of High-Speed Data Highway* [3]. The story depicts the common scenario facing many residents of rural areas in the United States; local residents in these sparsely populated areas are unable to get their local telephone company to provide anything beyond a 56K dial up connection to the internet. However, this story was not about residents lobbying for upgraded service, instead they were lobbying to simply maintain their basic service with the current provider, Verizon. Like its competitors in other parts of the country, Verizon is planning to sell off over a million local telephony lines it controlled in this rural area. But interestingly, buried away at the very end of the story is a brief mention of an "alternative broadband provider" who could fill the gap using wireless antennas. The provider, who was interviewed, ends by mentioning that he is counting on getting local government support. Less than a year later, the *Navajo Times* published an article entitled, *Internet May Outpace Running Water and Power* outlining a proposed project dubbed the Internet to Hogans and Diné Grid program that aims to build a major wireless pipeline that traverses the 16 million acres land that form part of Navajo land [1]. Hogan is the term for a traditional Navajo dwelling and Diné being the indigenous word for Navajo people. In an area where only 60% of reservation homes have telephone service, and 32% lack complete plumbing, the imagined benefits of wireless connectivity loom large. As cited in a feature article in *FedTech*, Rita Pyrillis writes "The Navajo see limitless opportunities for economic development, telemedicine, distance learning, research, emergency services, language and cultural preservation—all possible through a network designed, owned and operated by their own people" [24].

What do these two stories tell us about the current state of broadband deployment? They tell us that broadband deployment nationwide is slow going, expensive and not available at all in some areas. These stories also signal how communities perceive economic development and local prosperity and well-being as being intrinsically tied to technological capabilities. In response

local governments and residents throughout the United States and abroad are deploying wireless broadband systems or Municipal Broadband Wireless that have local government support.

The market for Municipal Broadband Wireless or simply Municipal Wireless (MW) has shown radical growth since its inception and is projected to continue on that trajectory. Projections show that approximately $3.4 billion will be spent over the next four years with a doubling of the market every year [20]. In terms of actual numbers of deployments, regional and citywide networks that are in use amount to 68 with another 135 in the deployment stages (although 42 of those cities fall under the umbrella of the Silicon Valley MW project) and some 43 city hotzones (smaller sections of a city) in places like Los Angeles, Denver, Washington DC and San Antonio to name a few.

We argue that MW deployments have spread like wild fire across the United States as a collective response to political and cultural opportunities and constraints. Based on work done by researchers interested in collective action and in social movements, we develop an explanatory model to better help us understand the emergence and growth of MW in the United States.

This paper follows the rich line of inquiry into computerization as social movement started by Kling and Iacono [12, 13, 14, 15]. They first argued that computerization movements (CM) were a kind of movement, not unlike other social movements, whose advocates used mobilizing ideologies to bring about social change. Specifically, proponents promoted computer use as instruments to bring about a new social order. In the early 1980s they did a high level examination of the mobilizing ideologies for urban information, artificial intelligence, computer based education, office automation and personal computing. In later work (2001) they used frames (i.e. interpretive schema) to understand how CM proponents were deeply involved in creating meaning through the "politics of signification". They specifically looked at the framing of the Internet to examine how the meaning of this network was constructed such that it created a groundswell of followers. Later work by Mueller and colleagues [19] explored the question of whether there was something that could be called a "communication information" movement by using aspects of social movement theories. They were interested in structural factors that influenced the communication advocacy groups rather than ways these groups strategically communicated with intended audiences to mobilize support. Simpson, Daws and Wood approach the work of CM through their emphasis on the "social capital" that access to technology affords, and argue that information and communication technology (ICT) "is increasingly regarded as critical for both economic and social well-being of communities" [28}.

Kling and Iacono also warn however, that "CMs generally advance the interests of richer groups in the society because of the relatively high costs of developing, using, and maintaining computer-based technologies" (p. 229,1990). They go on to ponder whether computerization movements could advance the interests of poorer groups. As this paper will uncover, social activists propose that MW as a movement can help off-set this trend by increasing access to technology to a wider social network and to some degree create a "digital inclusion" of the have-nots.

In this paper, we follow in the tradition of Kling and Iacono but are explicitly interested in understanding how communication has worked to garner the widespread support that MW projects have obtained in such a short time. We examine the discursive environment (both written and spoken) in which these projects have unfolded to understand how supporters "frame" the situation, solutions and objectives of MW. Framing, following the work of Gamson and Meyer [6] and Snow and Benford [29], is the collective processes of interpretation, attribution and social construction that mediate between opportunity and action. We use framing as an analytical lens to examine how proponents of MW have rationalized and mobilized support for wireless broadband.

The paper is organized as follows. In the next section we will review the relevant literature on social movements and collective action frames to develop an analytic lens for use in the subsequent sections. In these sections we will examine how a collective action frame is produced by analyzing Request For Proposals issued by MW project between 2005 and 2006, interviews of twenty five MW projects and a survey of approximately 100 media accounts of deployments. We end with our conclusions which posit that effective communication strategies are those that utilize a shared frame.

2. Social Movement Theories

Over the last thirty years, the study of collective action and social movements has emerged as a serious area of inquiry and theory. And while theoretical variation exists, many scholars emphasize the importance of the two broad factors that are of particular relevance to this study: a) political opportunities and constraints confronting the movement, b) the framing process or the collective processes of interpretation, attribution and social construction that mediate between opportunity and action. In the following we trace out the common underlying convictions of social movement theorists as they pertain to political opportunities and framing.

2.1 Political Opportunities

Social movement literature underscores the importance of the political environment in which a movement is embedded. This environment constitutes the set of political constraints and opportunities faced by a movement in a particular socio-historical context. Much recent work has sought to show how changes in some aspect of a political system create new possibilities for collective action [16], [34] and thereby, explain the emergence of a particular movement. Once it has emerged, the movement also interacts with the political environment in which it exists. Therefore, the structure of political opportunities is a product of interactions between the movement and its environment [18].

Others believe that political opportunity as a concept is too broad a term and argue that opportunity has a strong cultural component that cannot be explained solely by political institutions and relations among political actors [6]. Moreover, McAdam [17] argues that there are general types of "cultural opportunities" that increase the likelihood of movement activity. In particular, the likelihood of movement activity is increased when there is a dramatization of a glaring contradiction between a highly salient cultural value and conventional social practices. For instance, let us consider a highly salient value in the U.S. Perhaps one of the most cherished and touted belief is that all men are created equal. Yet, for the first half of the twentieth century white-only spaces that specifically outlawed blacks from their use were a common practice in parts of the U.S. Additionally, women in professions with male counterparts more often than not, received less pay for equal work. The glaring contradiction of equality for all on the one side and these racist and sexist practices on the other, help give rise to the civil rights and women's movement of the 1960s.

Now let us turn to the broadband wireless scenario, how does this phenomenon reveal an underlying contradiction? Numerous reports have shown that ubiquitous broadband can have positive economic and social benefits. A Gartner Group study estimates that implementation of a true broadband infrastructure would increase U.S. Gross Domestic Product by up to $500 million for the next ten years G [7]. Another report suggests that broadband deployment and usage will stimulate demand for high wage, high skill employees, creating approximately 1.2 million new jobs [23]. And the Pew Internet & American Life Project has produced a wealth of research that points to the social, cultural, and economic benefits that access to the internet has in the U.S. In many ways, the social, economic and cultural viability of communities are being linked with the future deployment of broadband access. One can safely say that broadband access to the internet is a highly salient cultural value.

But what conventional practices are in place that contradicts this value? A number of state legislatures are working to enact bills that would create substantial oversight and regulation of a municipal broadband wireless deployment. At the time of writing, over a dozen states had telecommunication related legislation that would directly impact MW is either pending or approved. These bills vary, but for the most part will require municipalities to perform due diligence by holding public hearings, holding referenda, obtaining state level authorization, providing the telecommunication provider the right of first refusal to establish a network, and in some instances prohibit municipalities from charging for wireless service. In general, these bills attempt to create an environment of oversight and regulation for municipal involvement in broadband wireless networking.

In terms of practices, in the U.S. broadband access grew by 40% from March 2005 to March 2006 [9]. However, while the rate of growth is impressive, the overall level of broadband penetration stands at only 42% of the entire population. The numbers are much lower in the

rural areas, where approximately one quarter of the residents report not having broadband access available to their home compared with urban users at 5% [2]. And income also plays a role. Households with annual incomes under $30,000 were more than three times less likely to have a broadband connection than households with annual incomes above $75,000 [9]. This might be related to the finding that the U.S. is behind many countries when it comes to broadband speeds and prices. In 2005, it ranked tenth internationally on a price-per-kilobit basis, according to the International Telecommunications Union [10]. At the end of 2005 users in the U.S. reported paying average monthly fees of $32 for DSL and $41 for cable. These statistics bear out the claim that the digital divide (the gap between those that have access to online resources and those that don't) shows no sign of closing [35]. And at the international level, the Organization for Economic Cooperation and Development (OECD) ranked the U.S. 12th in broadband penetration among 30 member nations between 2000-2005 [21]. More interesting, is that in the previous rankings, the U.S. was ranked as fourth. Therefore despite a perceived growth in broadband access in the United States, the actual rate of broadband deployment has slowed in comparison to other member countries.

What we see is that municipalities are seizing on the cultural opportunities, created by broadband deployment practices which contradict broadband needs. We propose that this opportunity has contributed to the emergence of MW as a movement across the U.S. However, in order to be successful, movements must also garner support. Social movement theory proposes framing as one potential avenue for obtaining this support. Therefore, we now turn to framing in order to better understand how this movement has mobilized support.

2.2 Framing

Framing is "meaning" work – the active engagement in the production and maintenance of meaning for constituents, antagonists, and observers. It is fundamentally about the construction of shared meaning surrounding a phenomenon of interest. More specifically, it involves the conscious effort of individuals to construct meaningful accounts in order to motive and legitimate collective action. Collective action frames are constructed in part, as movement supporters negotiate a shared understanding of some problematic condition or situation they define in need of change, make attributions regarding who or what is to blame, articulate an alternative set of arrangements, and urge others to act in concert to affect change [4].

But frames vary considerably in their ability to mobilize collective action. The frame must resonate with the intended audience in order to be effective. This resonance is affected by a number of variables, one of which is salience to its intended targets of mobilization. There are a number of dimensions that affect salience, but the most important to this study are centrality and narrative fidelity (or what others have termed cultural resonance) [29]. Centrality has to do with how essential the beliefs values and ideas associated with the movement frames are to the lives of the intended audience. Research has shown that these values and beliefs are typically arrayed in a hierarchy [38]. Given the widespread adoption of MW networks across the country, we assumed that the collective action frames developed by MW supporters were successful in mobilizing support and therefore salient. But we wanted to examine the centrality of these frames to the intended audience. In other words, what beliefs and values where espoused by the movement that proved to be successful. Based on this line of inquiry we posited the following research question:

Q1: What beliefs, ideas and values are espoused in the collective action frames put forth by MW projects individually and collectively across the U.S. and is there a hierarchy?

Narrative fidelity is another important dimension of salience. In other words, how culturally resonant is the frame to the intended target audiences. Again, given the successful proliferation of MW projects, we were interested in knowing if the collective action frames were culturally resonant and if so how. Were there local conditions or interests imbedded in the collective action frame such that it would be more salient to the target audience. Based on this line of inquiry we formulated the following research question:

Q2: What types of influence or constraints did the local cultural context have on the collective action frames?

Framing is about creating meaning and meaning is produced through discourse. That is, language (spoken and written) creates meaning. In other words, the social world in which we live is discursively constructed. Given our interest in examining collective action frames, we looked to texts produced by MW projects as well as interviews with proponents of various types and local media's reaction to these developments. Central to our analysis was an examination of the Request for Proposals that were issued by local governments across the U.S. These documents were public pronouncements to the community at large, vendors, legislators and opponents and as such reflect the shared public values of the communities that produced them. We analyze these data in the next section.

3. Methodology and Analysis

Data collection for this project began during the summer of 2005 through the winter of 2006. Data was collected at Municipal and Community Wireless conferences during that time frame, 25 in-person and telephone semi-structured interviews, and analysis of approximately 41 municipal Request for Proposals (RFP's) for wireless networks. For the interviews, we used snowball sampling. The interviewees ranged from CIOs and City Managers, to vendors and local residents. At the time of writing, there were 135 active city and regional locations that had issued RFPs [20] with some 42 falling under one RFP, therefore leaving a total of 94 possible RFPs that were publicly issued. As such, our sample contained approximately 44% of the RFPs in circulation. Approximately 100 media reports ranged from mainstream major papers to small town local papers to online reports for more select audiences.

Attendance to MW related events (conferences and meetings) provided comprehensive information on the municipal wireless marketplace as well as contacts for interviews and obtaining RFPs. RFP's were gathered through the main Municipal Wireless blog/website and from local government websites. RFP's were downloaded directly from the websites. Our sample was driven by the availability of the RFP's through these access points as well as our interest in obtaining a diverse sample.

The RFPs were coded through the dual process of open and axial coding [33]. Open coding is the process of breaking down, examining, comparing, conceptualizing, and categorizing data. The main features of open coding include inductive development of provisional categories, ongoing testing of categories through conceptual analysis and category comparisons, and the altering of current categories as others are created or eliminated [32] . After a preliminary examination of the data, approximately 30 categories emerged. These categories were organized by recurring themes and then collapsed into fewer more frequently occurring themes. The resultant themes are listed in Table 1. These general themes produced a comprehensive story about framing.

Themes 1-6 were more elusive goals or values of the local government, while themes 7-8 were technical requirements that must be met by the successful vendor. Therefore, we grouped themes 1-6 under the umbrella of "framing" and focused exclusively on these. These themes were then validated by the interviewees who asked about the main objectives of their MW project. The first four goals were certainly prominent as they discussed the benefits and/or mission of their MW network. Returning to the first research question:

Q1: What beliefs, ideas and values are espoused in the collective action frames put forth by MW projects individually and collectively across the U.S. and is there a hierarchy?

Table 1. Data Themes

	THEME (n=46 RFPs)	Frequency
1	Public Safety/City Services	29
2	Economic Development/Job Creation	28
3	Digital Divide/Inclusion – Universal Access	27
4	Enhance Tourism/Visitor Experiences	23
5	Education Initiatives	22
6	Improving City Services/Efficiency	19
7	Vendor Provides Technical Training	19
8	Vendor Provides/Supports Portal/Splash Pages	13

As mentioned before, the salience of a collective action frame will have an effect on the

movement's ability to mobilize action. Salience is dependent upon how central the particular values are to the audience. What we found in the RFPs is that particular values and ideas are clearly espoused and ranked by supporters of these collective action frames. We found that the issue of public safety has high hierarchical salience with audiences across the country. Some 63% of the RFPs indicated an interest in having public safety related services deployed on the wireless network. For instance, one city states that it would like to "provide a free wireless Internet solution for the entire 85.6 square miles of the City…and any expansions to these boundaries, and to also build a Public Safety Wireless Network based on 4.9 GHz band to support Public Safety broadband technologies" [25]. Given the build out by local governments of wireless applications and hardware for public safety services and emergency responders, an interest in leveraging the preexisting technological build out in this manner seems prudent.

However, the structure of opportunities (be they political or cultural) is a product of interactions between the movement and its environment [18]. Thinking about the highly salient value of public safety in a post-9/11 and post-Katrina environment yields interesting insights. In this environment, local governments, which have been asked to institute a range of emergency responder services by state and federal authorities without requisite funding, have framed part of their interest in wireless deployments as serving the public safety mission of the local government. *The Times Picayune*, a New Orleans based daily newspaper quoted Gordon Soderberg, an IT expert brought in after the devastation of Hurricane Katrina who stated of the city's internet system and his own groups satellite systems, "It is not a luxury, it's an imperative for saving lives and property" [26]. Moreover, in the post-9/11 environment, some form of monitoring and surveillance has become the responsibility of local governments that previously was not. At least three RFPs specifically mention their interest in using the network for surveillance of activities in their community. This perceived benefit was also frequently mentioned in local media reports. The Chapel Hill Herald in an article entitled "Chapel Hill Sees Ins, Outs of Wi-Fi," interviewed Shannon Howle, the Director of the Center for Public Technology at UNC's School of Government to respond to concerns that a municipal wireless network would be "frivolous." "While providing access for residents would be great, she said, giving police officers and other first responders mobile, high speed Internet should be the priority" [5]. Moreover, another mentions concerns with "Homeland Security" and using the network to respond to weapons of mass destruction and terrorism incidents involving chemical, biological, radiological, nuclear, and explosive. Again, seizing on this political opportunity, local governments incorporate the language of terrorism and security to make more salient the collective action frame proposed through the RFP.

Another highly salient value was that of bridging the digital divide. It is interesting to note that in the course of data collection, the lexicon of local government employees and vendors involved in MW, changed quite markedly from digital divide to digital inclusion (although term usage continues to be somewhat mixed). This was the case in both RFPs and the interviews. We can see how governments would like to frame the goal of the technology as one that addresses inclusion rather than divisions and the negative association of digital divide. Digital inclusion appeared to be focused on a more comprehensive approach to ending the digital disparities. "The City seeks to complement open access affordable wireless broadband access with social programs to promote digital inclusion, including affordable end-user hardware, training and support, and the development of community relevant content for low-income and disadvantaged residents" [31]. These RFPs required not only the transport (i.e. wireless radio hardware and software) for moving bits on and off the network but also support for the end user.

On the flip side of digital divide/inclusion were the often coupled values of creating economic development and supporting tourism. As perhaps one of the better known government wireless projects stated "The City of Philadelphia (the "City"), through the Wireless Philadelphia™ initiative, has established a goal to strengthen the City's economy and transform Philadelphia's neighborhoods by providing wireless Internet access throughout the City… while providing a greater experience for visitors to the City" [22]. Local press, particularly in smaller urban centers, often mentioned how MW would boost a communities imagined social status. An article in the Buffalo News quoted one blogger who stated "It would put Buffalo on the map" [37]. In an

editorial the Birmingham News, John Joseph echoed this equation of MW with local status and regional leadership stating "Birmingham would become one of the first major Southern cities to go "wireless," demonstrating it intends to lead, not lag, in a globally competitive environment" [11]). And finally, another interviewee, when asked about MW benefits responds: "So it doesn't have to be a huge market penetration in order to be successful… In fact one comment was "a rising tide raises all ships" and I think there's a lot of truth to that…more education and use of computers and broadband and what's available out there and…you know the expectation that everyone has broadband and the more it becomes like water and electricity and that sort of thing that's an expected service that everyone will have" [8]. For this interviewee, and others, wireless access would benefit all who were touched by it, and it was as essential to a community as running water. Without it, a community cannot prosper. The remaining two values, supporting education initiatives and improving the efficiency of city services, were also highly salient.

As the data show, there are six highly salient values or ideas that helped the MW movement supporters develop resonant collective action frames to mobilize support and ward off possible challenges. These values touch on issues of safety, inclusion, economic prosperity and education – all values that seemed to be shared across the U.S. by over forty percent of the communities. But what types of issues were not shared by the vast majority, yet proved to be important in developing resonant collective frames for specific locations? What values or ideas spoke more specifically to communities or regions? This line of inquiry leads to the second research question:

Q2: What types of influence or constraints did the local cultural context have on the collective action frames?

To address this question we focused on the outlying themes assuming that these were present because they resonated with the particular local culture. We were interested in knowing what these culturally and/or regionally specific values were and why they were salient within the local community context.

Perhaps the most notable RFP that contained a "culturally specific" reference throughout was that of a tribal community in New Mexico. In addition to invoking the commonly shared values mentioned above, this RFP makes much reference to Native Americans fears and hopes surrounding technology. It reads:

"Telecommunications capabilities are necessary to produce a more skilled and marketable workforce in Native American communities as well as increase business and investment on tribal lands. Tribal telecommunications services can also be used as a vehicle for cultural education, political participation, and inter-tribal communications…Though there is substantial tribal interest in advanced telecommunications, there is also some reluctance to embrace new technologies. Some tribal members fear that technology, modernization and connectivity will sacrifice cultural preservation, identity and core values" [27].

This type of framing strikes a responsive chord in that it rings true with existing cultural narrations that are fundamental to the identity of the local Native American residents. The RFP addresses the existing fears of losing ones cultural identity by juxtaposing it with the benefits that new technology can bring to existing traditions and cultural practices.

In response to these concerns, media accounts of these initiatives in tribal community make frequent mention of implementing MW in ways that are compatible with tribal values. Geoffrey Blackwell, director of strategic relations for Chicksaw Nation Industries and the former senior attorney and liason to tribal governments at the FCC stated,"For the Navajo Nation, you just don't do a wireless propagation model, you also have to think very carefully about how and where you touch the Earth. You don't just put a spade in the ground and erect a tower; it must be done in the Navajo way" [24].

Another goal that appeared in three of the RFPs was to "[C]reate a seamless wireless infrastructure to attract and retain young professionals" [36] and become the "most un-wired city" [30]. As one paper reported. "Wireless Internet is a convenience, to be sure. But is it part of a revolution? Communities in upstate New York and across the country see it that way. They are counting on wireless Internet to attract visitors, hold on to young people, and boost business." [37]. We think the inclusion of this value can be

explained by looking at one of the cities for whom this was a salient value: Riverside, California. Located in the shadow of Los Angeles, about sixty miles east, it has attracted residents that have been priced out of the real estate market in Los Angeles and other more coastal areas. Riverside now ranks as the twelfth largest city in California and continues to grow at one percent per year. As a growing city it is seeking to attract young professionals, who are presumably more affluent and educated, by offering an un-wired infrastructure.

Two large cities, San Francisco, CA and Houston, TX both included reference to the objective of "Network Neutrality" and this was also mentioned in the Philadelphia and Grad Rapids, MI interviews. If we step back, we see that concurrent with the data collection time period was the emergence of a nationwide "Net Neutrality" awareness and subsequently, federal bills on either side of the issue (c.f. Senate Bill 2686, 2006 and House Bill 5273, 2006). The term Net Neutrality is meant to convey the idea that broadband providers (such as cable and telecommunication companies) should be neutral toward the content and services that flow through their networks, and not charge differentially for these services. There had been much debate about allowing telecommunications and cable networks service providers to charge media service providers differentially to access "enhanced" network services. Media service providers includes the likes of giants such as Yahoo, Google and even Microsoft, but also universities, health care institutions, libraries, federal, state and local governments. If these smaller media service providers chose to provide a service that would compete with those offered by the networks, such as VoIP or IP based videoconferencing, they could be charged additionally for these services. We found clear indications in the RFPs and in the interviews that the communities and cities seemed to be very attune to the telecommunication policy environment and reacting or interacting with it very readily. The "wholesale" model, whereby the provider of the network wholesales transport to other vendors and stimulates competition, was one that several RFPs and interviewees mentioned. Moreover, they linked the idea of neutrality to one of offering local businesses the ability to compete with larger telecommunication providers. In a sense it gave them a fighting chance to compete where otherwise they could not.

The proffered narrative of being culturally sensitive, tech savvy or network neutral are all good examples of a linkage between local narratives and the efficacy of the way in which issues are framed. Indeed, given the widespread deployment of MW networks, we suggest that the cultural resonance of these salient values has affected the mobilizing potency of movement framing efforts. The proceeding analysis answered our research questions and further validated the underpinnings of framing as an appropriate methodology for understanding the efficacy of the discursive differences between diverse mobilizing efforts.

4. Conclusion

Movements emerge in order to advance the interests of their adherents by securing specifiable objectives or outcomes. In this paper we have traced out the emergence of a Municipal Wireless movement that has secured the objective of blanketing the U.S. with a pending 135 networks and another 68 that are in place in less than two years. These outcomes are certainly testament to the fact that the movement has been successful in mobilizing action. But more importantly, we have attempted to identify and elaborate the factors that affect the mobilizing potential of movement's collective action framing efforts. In particular we looked at factors that affect a frame's salience and thereby its ability to mobilize collective action by examining centrality and cultural resonance. Centrality is concerned with the alignment of salient values promoted by the movement to those of potential constituents, the greater the alignment the greater the success of the mobilization effort. And cultural resonance is the degree to which proffered framings resonate with the cultural specificity of the local context, the greater the resonance the greater the mobilizing potential for collective action. By examining those values that were most often shared, and conversely, those values that were cited only in specific proposals, we were able to register the distinct ways in which centrality and cultural resonance operate as independent, but related, factors. In this paper, the salient values of public safety, digital inclusion, economic development, education and enhancing tourism, were hierarchically organized in the framing done by proponents of MW across the U.S. Values not shared widely that struck a resonant chord locally, where those of being a tech savvy city, promoting network neutrality and attending to anxieties of the local population.

These factors are not exhaustive. Certainly, there are a number of other factors that affect the mobilization of individuals that were not examined here. It is a very dynamic and dialectic process that cannot be easily captured with any one theoretical lens. For instance, something that might be explored during this multilayered process could be how a frame that mobilizes action for some may inadvertently immobilize others. Instead, what we have attempted to contribute here is our ability to cast an analytic light on aspects of a rather embryonic technology movement that other perspectives might not be able to illuminate or fail to see altogether. We have taken a technological phenomenon and viewed it through the lens of a social movement. Not a social movement with boycotts and confrontational activities, as common understandings of social movements would bring to mind, but instead by mayors, manager and technology directors who strategically deployed frames that identified a glaring contradiction, proposed a solution and mobilized to respond to that inequity. They adeptly linked the possibility of wireless access to creation of community, and as fundamental as running water and electricity.

To date we have looked at the signifying work of movements by examining the texts that they have been produced by centralized governmental entities through RFPs, the next step might be to have encounters with the diverse local participants as they carry out their activities while working with these nascent networks as they unfold and evolve over time.

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