

## Members of Congress Websites: Diffusion at the Tip of the Iceberg

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### ABSTRACT

How do Members of Congress manage the opportunities that the Internet offers? Here we present the initial results from interviews with 100 Congressional offices about their decisions regarding how to use official Member websites. Strikingly, we find that there are relatively few efforts by offices to evaluate what constituents want or like on their websites. Further, we find that diffusion occurs at the “tip of the iceberg”: offices often look at each others’ websites (which are publicly visible), but rarely talk to each other about their experiences or how they manage what is on their websites (which are not publicly visible). We also find that there are powerful extra-organizational influences on Member websites, most notably, vendors and the Congressional Management Foundation.

### Categories and Subject Descriptors

J.1 [Administrative Data Processing]: especially in Government and J.4 [Social and Behavioral Sciences]

### General Terms

Management, Measurement, Human Factors, Theory.

### Keywords

Information Technology, Congress, Diffusion, intra-, inter- and extra-organizational influence, online practices.

### 1. RESEARCH ASPIRATIONS

How do Members of Congress use the Internet? Ten years ago, about half of the Members only had quite rudimentary official websites. Today all Members<sup>1</sup> have websites, with a wide range

<sup>1</sup> When we use the term “Member” we generally are referring not to particular individuals but to the Member’s office-- the small organizations (~20 individuals) that Members of Congress are titular heads of.

of content design and functionality. Why do some Members have certain types of content and functionalities and not others? Further, what are the processes by which Members, collectively, learn from each others experiences?

Congress offers a promising setting to study collective learning about a new technology because of the decentralized nature of the institution and the large number of actors. Further, this is a particularly important setting and a particularly compelling potential use of technology. The Internet has the potential to transform our democracy—a potential that has begun to receive substantial scholarly attention (e.g., Mayer-Schoenberger and Lazer 2007). This attention has focused on the potential transformational effects of the technology on civil society, and, in the political realm, how the Internet might transform political discourse. Researchers have devoted little attention, however, to how the Internet might transform existing institutions for connecting citizens to elected officials. This relationship is the fundamental building block of a representative democracy, and it has come under increasing strain as our country has grown from a few million to a few hundred million; as congressional districts have swelled from a few tens of thousands to well over six hundred thousand; as the number of matters the state is involved in has multiplied; and as policy problems have grown more complex.

Contemporary Washington politics is now almost exclusively the domain of entrepreneurial legislators, highly trained committee staff, legal counsel, agency heads, lobbyists, and expert policy analysts. Today, it is difficult for interested citizens to even understand the policy process, much less have their voice heard in it (Hecl, 1974; Lupia & McCubbins, 1998). As a consequence of this and other trends, citizens have become increasingly disengaged from the work of Congress. The Internet offers a set of tools that might help to arrest this trend, and to fundamentally alter the level of participation of citizens in the consultative process with their Representatives.

A well-designed Internet strategy by Members of Congress can provide citizens with information useful for understanding a policy as it develops, while also allowing citizens to interact more symmetrically with both their Member of Congress and with each other. Wisely used, the Internet can re-connect citizens and Congress – and virtually lower the geographic distance between the Member in Washington and his constituents in the district.

In this paper, we first explain the theoretical foundations of the diffusion process and particularly focus on intra-, inter- and extra-organizational influences that have an impact on the internal decision making processes. After that we explain our methodological approach and show the results of our qualitative data analysis. The paper concludes with a discussion of the impact of our research on the existing literature and recommendations for eGovernment research.

## 2. COLLABORATIONS

The foundation of the “Connecting To Congress” project is a collaboration among researchers at three universities (Harvard, Ohio State, and University of California) and the Congressional Management Foundation (CMF), Washington DC. CMF is a small nonprofit organization devoted to improving the management of the institution of Congress. With the support of the Pew Foundation, they issued a series of influential reports on the use of the Internet by Members of Congress. As an organization, they have remarkable insight and depth of connections into the institution.

## 3. COLLECTIVE LEARNING PROCESSES THROUGH DIFFUSION OF INNOVATION

How do individuals or organizations learn from one another? Consider the decision by a researcher to use a particular piece of research-related software. That decision will in part be driven by their own experiences about what worked and did not work, but also be affected by a variety of other factors, notably, the experiences of colleagues, the recommendations of relevant professional organizations, and the received wisdom in relevant publications. Similarly, the use of new technology by an organization will reflect some combination of its own experience and knowledge, and its capacity to learn from what others have done and is widely accepted.

One important thread of research relevant to thinking about collective learning is the large literature on the diffusion of innovation. Adoption of innovative organizational practices is defined as “the process by which an innovation is communicated through certain channels over time among the members of a social system” (Katz/Levin et al. 1958; Rogers 1995:5). This describes a special type of communication in which the messages are concerned with new ideas for organizational practices; it denotes the flow or movement, sometimes also called “spread,” of an innovation from a source to an adopter by means of communication and information dissemination (Strang/Soule 1998:266).

Diffusion studies have a long history in different research fields. Classic studies include Ryan & Gross’s (1943) analysis of the diffusion of hybrid corn, Hargerstrand’s (1967) study of the diffusion of the telephone and tests for tuberculosis involving the destruction of cattle in rural Sweden, and the findings of Coleman

et al. (1966) about the diffusion of drug prescriptions among physicians in US cities. These studies are focused on the spread of an innovation through communication channels, the role of mass media and professional change agents, and interpersonal interactions among the adopters.

## 3.1 Conditions for Contagious Diffusion Processes

Social learning can occur as a rational decision to copy successful practices, as boundedly rational imitation of strategies that appear to be successful because others are using them, or even as faddish adoption without evaluation of the benefits (Abrahamson 1991; Marsden/Friedkin 1993; Levitt 1998). Greve (1998) argues that easy observability of the adoption is one important condition of adoption through contagion. This idea also fits into Rogers’ notion of diffusion: innovations are spread through communication and observation of other adopters’ behavior (Rogers 1995; Rogers 2003).

Later adopters who try to reduce the uncertainty by waiting until others have made positive or negative experiences about the innovative practice need information about the benefits and costs of adopting, such as performance outcomes. Successful organizational practices can only be contagious and spread when they receive attention through visibility (Greve 1998: 970). Seeing other actors adopt attracts the later adopters’ attention to the practice so that they are more likely to adopt it themselves or at least engage themselves in information exchange relationships with earlier adopters.

Moreover, the organizational practice must be situated in a relevant context for the potential adopter. He must be able to recognize that the innovation has a high relevance for his own practice (Kiesler/Sproull 1982). This means that the adopter must have a certain degree of similarity to the early adopters in order to draw parallels and be able to see the benefits of adoption for their own individual context. In the context of the Internet diffusion process, all actors have a high degree of organizational similarity, and their formal positions are similar. Differences result from their informal positions and roles, and from the individual attributes of age, tenure, and party membership.

In situations of uncertainty and ambiguity, actors are unfamiliar with appropriate actions and responses to innovations. They tend to obtain guidance by comparing their own behavior and attitudes with those of a reference group of other similar actors (Erickson/Jacoby 2003). Attitudes and behavior are confirmed or reinforced when they are shared with the reference group and might be changed or adapted when there are discrepancies. A reference group is characterized by the possession of information about the attitude or behavior of another actor. This information can be generated through interpersonal visibility as a condition of reference group behavior and social control. The informational basis of influence may also exist in the absence of direct interpersonal relationships such as face-to-face interactions between individual actors. Members of a reference group show socially accepted behavior that is safe to imitate and usually are early adopters who have the ability due to their powerful position to influence other actors. Early adopters are usually called “opinion leaders” (Mahajan/Peterson 1985). These opinion leaders are powerful enough in an organization to attract organizational

awareness and direct the fashion or tastes of others toward adopting an innovative practice (Abrahamson 1991). The perceived value of imitated innovation emerges more because of its symbolic or emotional value than because of its efficiency.

### 3.2 Isomorphic Diffusion Processes

Particularly relevant is the research on institutional isomorphism. Isomorphism is defined as a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions (DiMaggio/Powell 1983:149). Later adopters learn about an innovation and adjust their behavior accordingly. The concept of isomorphism integrates network concepts and institutional theory and describes organizational actors in processes of coercion, mimesis, and normative influence. This efficient-choice perspective claims that later adopters follow earlier adopters because they assume the innovation to be efficient (March 1978). The assumptions underlying the efficient-choice perspective are a) that intraorganizational actors can choose to adopt an innovative practice, and b) that the organization itself sees the innovation as being effective (Abrahamson 1991:590). A result of these underlying assumptions is that actors are seen as rational decision makers who are able to make rational choices based on information about earlier adopters' experiences and their own assessments of consequences and benefits.

In this paper, we focus in particular on the power of mimetic processes. Especially in the context of changes in technological standards or major organizational changes, the costs of rejection are higher than the costs of adoption. The actual outcome or the value of an individual practice might not be known to potential adopters, so that information is not available for their decision process. Sometimes the value of the innovative practice might be too difficult to measure. This is often the case with intraorganizational practices (DiMaggio/Powell 1983; Bikhchandani/Hirschleifer et al. 1992; Davis/Greve 1997; Greve 1998). Mimetic processes are encouraged by uncertainty as a powerful force of imitation, for example, when organizational technologies are poorly understood, when organizational goals are ambiguous, or when the environment creates a symbolic uncertainty (Cyert/March 1963). For some actors, it is therefore socially and economically safer to mimic the behavior of other organizational actors in their social context (Galaskiewicz/Wasserman 1989).

Social network effects on the innovation diffusion process are also called the bandwagon effect. These are positive feedback loops by which increases in the number of adopters create stronger bandwagon pressures, and stronger bandwagon pressures, in turn, cause further increases in the number of adopters (Abrahamson/Rosenkopf 1997). An important factor in explaining bandwagon effects is the structure of social networks. Through these networks, potential adopters of innovations find information about these innovations through their social ties — those who can convince them to adopt these innovations.

A common explanation of adoption or rejection is the fashion or fads perspective (Thompson 1967; DiMaggio/Powell 1983). Explanations using a fad perspective argue similarly to the fashion perspective that adoption and diffusion arise in change situations with high rates of uncertainty. Management fads are management practices that appear if they are positive in nature but that also soon disappear. The focus here is on the imitation of

innovative practices by group members. This imitation comes about through social interaction, communicated knowledge about an innovation, or economic interests (Abrahamson/Rosenkopf 1993). Individual characteristics of the adopters themselves, in particular, are used to explain their behavior. The adopters imitate those skills that they lack themselves but see as advantageous when other actors use them. The more actors in the same organization adopt an innovation, the more it becomes taken for granted that it is a normal or even legitimate practice for a potential adopter to adopt the innovation as well (Abrahamson/Rosenkopf 1993). Studies that explain imitation through communication networks argue that actors tend to imitate those who are proximate to them, either geographically or in their interaction frequency (Burt 1987; Galaskiewicz/Wasserman 1989).

### 3.3 Aggregating problem solving

How institutions harness the unique problem solving abilities of multiple individuals/organizations is one of the key questions in understanding institutional adaptation. Here our core question is to understand the ways in which Congress pools the experiences of Congressional offices vis a vis the use of the Internet. We break this down into three subsidiary research questions.

- (1) *How do offices learn about which of their practices are successful and which are not successful?*
- (2) *How do offices learn from other offices? In particular, how do they learn which of the practices of other offices are successful and which are not successful?*
- (3) *What institutions outside a set of offices have a major impact on aggregating information, provide incentives for certain practices, and set the normative environment?*

The first question focuses on feedback from the environment— e.g., do offices gather data on constituent preferences? Do they track what information surfers look at, and what proportion of hits are from the district? This information, potentially, feeds back into the broader informational ecology of Congress, through the retention/non-retention of certain practices and content, as well as informal interpersonal conveying of collected experiences between offices. Finally, what role in aggregating information do the institutional and organizational structures both within and outside of the institution built to support Members?

## 4. METHODOLOGY

### 4.1 Data Collection

We conducted interviews with the Congressional staff person who had primary responsibility for the official Member website for 100 Members of Congress. These offices were recruited by the Congressional Management Foundation; due to the challenges of office cooperation, the sample was constructed purposively to be roughly reflective of the body as a whole (Table 1 compares key descriptives for the body as a whole to the sample).

**Table 1. Sample/House Comparison**

Comparison of Sample and House		
	Sample	House
MC Democrat	62%	47%

Comparison of Sample and House		
	Sample	House
MC Republican	38%	53%
MC Female	22%	15%
MC Male	78%	85%
MC Freshmen	11%	9%
MC term (average)	5.65	4.5
Median district income	\$51,050	\$43,318
Average District % urban households	81%	67%
District % Bachelors Degree (average)	25%	24%
<i>Region of country</i>		
Northeast	15%	19%
South	33%	36%
Midwest	22%	22%
West	29%	22%

The sample we interviewed represents districts that are notably more urban, affluent, and Democratic than the House overall. We are currently evaluating the robustness of our results by examining whether the under-represented offices in our sample systematically differed from the over-represented offices.

We conducted semi-structured interviews (protocol available upon request), where each interview lasted about 45 minutes. The interviews were transcribed and each statement in every interview coded in an iterative process using the qualitative data analysis program NVivo. Figure 1 shows a simplified overview of a portion of our coding scheme:

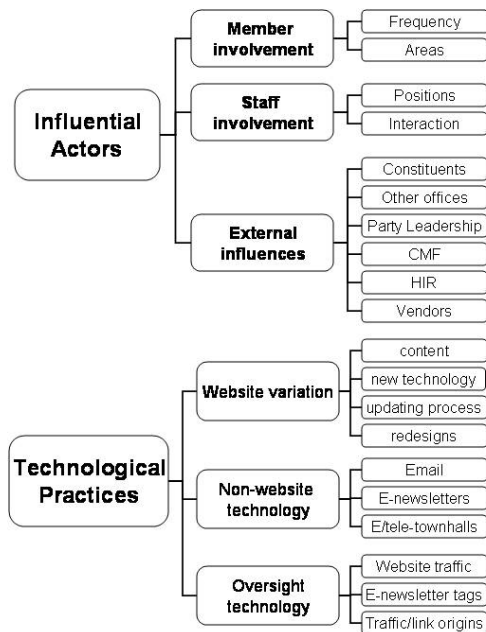


Figure 1. Coding Scheme

The results we present here represent the distillation of the content about diffusion and learning processes from the first 48 interviews.

## 4.2 Functional Setup of Members of Congress’ Offices

The House of Representatives offers a unique setting for understanding the opportunities and obstacles to effective use of information technologies in the public sector. Congressional offices function as 440 small, functionally identical, and independent public organizations (Salisbury & Shepsle, 1981). As one staffer we interviewed stated:

“There’re 435 small businesses here, and each ‘CEO’ can do what they want.”<sup>2</sup>

The advantage of studying collective problem solving among Congressional offices is that they come close to a theoretical ideal of a large set of essentially identical organizations that are in a position to learn from one another. They thus provide a “sensitive” instrument with which to examine social learning processes.

## 5. RESULTS

Our analytic interest is how the system pools together the experiences of various offices use of their official websites. Viewing the Member’s office as the relevant locus of decisions about how to use the website, we split our analysis up into (1) environmental feedback; (2) inter-office (network) flows of experiences; (3) extra-organizational influences on practices and content.

### 5.1 Environmental Feedback

To what extent do offices (1) proactively assess what their target audience for the website (generally, constituents) wanted from the website; and (2) ex post assess whether their website was hitting the target?

There was strikingly little effort by offices to proactively assess what constituents wanted. In fact, only a single office indicated any type of research into what their constituents wanted:

We ... sent out a survey to about 40,000 constituents... asking whether podcasting was a feature they’d use, and whether televideo conferences, online town halls, all [that] stuff, what did they want. What should our very limited resources be devoted to. The website was one of the top ones, without a doubt. Podcasting, in contrast, had a very limited response....

Similarly, few offices had systematic ways of examining what on their websites was working. Some indicated an informal process of e-mail and the like provided useful feedback about the website:

Constituents are pretty good about letting you know when there’s a mistake on the website. ...So, from my perspective, if that’s the bar, we’re doing okay. [W]e don’t get complaints from seniors who say... it takes too long to download and with most everyone being out of dial up, era, I think that’s less of a problem.

<sup>2</sup> There are 435 voting Members, and 5 nonvoting delegates.

Few offices reported looking at easily available data on what parts of their site were getting hits, although often with a note of regret. For example:

“This is going to sound bad, I haven’t been very good about keeping up on checking the stats and those types of things.”

Even those offices that reported tracking what parts of the website get hits did not examine the data carefully, as this one exchange highlights:

[Q: Do you look at what pages on your website get the most hits?]

We do.

[Q: Do you do anything with that?]

We, used to do it more, I actually need to find out. (Sigh)

*Observation 1: Offices seek and receive relatively little systematic feedback from constituents regarding their websites.*

We now turn to inter-office information flows.

## 5.2 Inter-office Influences

The reason why organizations copy each other is because often if one organization has had to confront a problem another will have confronted and dealt with that problem successfully before. Examining what other organizations are doing thus may provide a quick shortcut for an organization. Social learning among offices is potentially quite powerful, because Congressional offices, far more than most private entities, are confronting similar problems and constraints. There is thus particular potential in copying what other offices are doing. As one interviewee stated:

“I was not in the business of trying to reinvent the wheel. I just wanted to... go out and steal the best ideas I could from other people.”

To what extent did offices look at each other for information? There are two pathways by which offices may affect each other: interpersonal communication and passive observation. The particular set of practices we are studying are, by their very nature, in significant part public. Member websites are readily observable to all other offices, and viewing what particular other offices are doing is quite cheap and convenient.

We would view what is visible to all on the Web as the tip of the iceberg. Member websites involve not just what is observable on the web, but a set of experiences (e.g., failed experiments that are no longer on the website) and practices underlying what is on the website. These experiences are only accessible interpersonally—by talking to someone in another office, and engaging in a give and take about their management practices and experiments. The following interviewee illustrates both search practices--

We looked at every single website.... We probably had [a list of] the top 30 sites. I individually contacted every single one of those offices, and found out, who do you use for your website, who does the upkeep of it, who designed it, got all of the specifics of it....

This particular individual used a search at the tip of the iceberg to guide their search under the water’s surface. This particular case represents the search strategy of a small minority of offices. Notably, no offices reported talking extensively to other offices about internal processes (e.g., how to get content on the website;

what content to put on the website, etc.); interoffice communication was largely focused on identifying vendors, where the following two Congressional staff are typical:

We’ve looked at basically every other member site there is.... [W]e picked out the ones we liked the best, and I contacted their staff, and we found out who their... vendor was.

[M]y goal was to find examples of really excellent congressional websites that were both easy to use, informative, and... visually attractive, technically advanced, and eye catching in general.... The firm that we ended up using was a firm that, office after office came back saying we’ve had a great experience with them.

Interestingly, while most of the individuals we spoke with indicated that they looked at other websites on occasion, they did not actually talk to other offices. The following individual represents the modal response:

I didn’t talk to other staff members. I definitely looked at other Members’ sites very carefully and tried to, to see what, what they were doing that might work for us.

In short, search (and diffusion) largely takes place at the tip of the iceberg—offices looking at each others’ web practices, but not talking to each other frequently, and when they talk to each, rarely delving into issues beyond vendor-related issues. We do not have a definitive explanation for this. This may be partly because offices do not look at each other as prime sources of best practices, as one individual explains:

[Q: Have you talked to other people around the Hill who are running their websites] I haven’t really, because, to be honest with you, there aren’t a lot of people who really know web design that well.

Further, it may be that every office is so idiosyncratic that lessons regarding management practices are unlikely to be successful. As one individual states, “[E]very congressional office just runs... their organization... in their own way.”

Unsurprisingly, only a tiny fraction of the individuals we spoke with reported looking at every other website in Congress. Where did offices focus their attention? Some staff reported randomly browsing other Members’ websites. Many were more purposive, looking at websites that had received an award from the Congressional Management Foundation (see discussion regarding CMF below):

There are member sites that are good, and CMF has given them awards... So [I] look at their website, see what they’re doing right, and what we could emulate.

A smaller group reported looking at salient other Members, e.g., from nearby districts, or of prominent Members:

We [looked] at all the neighboring congressional districts... as well as leaders in Congress...: Nancy Pelosi, the Hoyer site, Denny Hastert.... So we copied a lot of... the best ideas from other websites.

The emulation process begs the question: How do you know when you are looking at a good website? How do you know what is a good practice on any website? There are virtually no available objective data on “success” or “failure”—e.g., approval/disapproval numbers from constituents, traffic etc. The

general criteria used by staff was based on their own subjective experience of a particular website—as one individual stated: “[Y]ou know a bad one when you see it, and you know a good one when you see it too.” Further, the very presence of a feature on websites was an endorsement, as reflected in the reasoning of one staffer, “It was obvious everyone had a kids page, so we should definitely have a kids page....”

We would also note that sometimes practices were emulated simply because they solved a technical problem that an office was trying to solve, where presumably it was clear whether the solution in question worked or not. How this particular staffer, who was trying to figure out how to podcast, learned from another website is a case in point:

[T]here was no ... huge database of website to explain how to do [podcasting] on the Internet... The Committee on Government Reform figured out how to do it... I just looked at their source code and... deciphered how that's done just by studying the code and understanding... the way it's structured.

Obviously, in the case of technical issues like this, it is easy to evaluate whether the solution of a particular website works (e.g., is it possible to play the file on an iPod).

**Observation 2:** *There is substantial emulation among offices of web-based features, but relatively little interpersonal communication of experiences.*

**Observation 3:** *With respect to the emulation process, there was substantial variation in the thoroughness of offices in evaluating what others were doing.*

**Observation 4:** *There is relatively little basis for making objective evaluations as to the success of other websites.*

### 5.3 Extra-Organizational Influences on Websites

Within the Congressional system, but beyond the offices, what are the influences on Congressional websites? We identified two important types of influences: the parties, and the Congressional Management Foundation (CMF). We discuss each in turn.

#### The Power of the Parties

Earlier analysis of websites from 2003 suggested that Republicans had systematically better websites than Democrats, as judged by “grades”. This may have reflected a residual of the high priority that Newt Gingrich put on technology; further, JC Watts, a Republican Member from Oklahoma and part of the Republican leadership from 1998 to 2002, reportedly put a high priority on Member websites. Our interviews suggest that while the perception (especially among Democrats) persists that Republicans put a high priority on Member websites, in fact the Democratic party made websites a high priority after Pelosi became minority leader. Thus, for example, under Pelosi Democrats put a lot of energy into developing the website, HouseDemocrats.gov:

[Pelosi] put together a task force and we were able to come up with HouseDemocrats.gov, which her staff puts a lot of time and effort into, and the Social Security Calculator. And when they came up with that they sent it out to all the Democratic offices and said here's how you do it. There

were very easy instructions on how you put it up on your website.

The Democratic leadership thus provided a set of links and materials for Democrats through HouseDemocrats.gov, as well as particular items for Democrats to place on their website (the “Social Security Calculator” was remarkably popular among Democratic websites). Further, the Democratic caucus provided a customized analysis of every Democrat’s website, as this Democratic staffer describes:

[A] couple of months ago the Democratic caucus... audited everyone’s website. And told you what they thought was wrong with formatting, or telling you what rules you might have accidentally broken.... So that was a very... individualized report.

The caucus thus plays a particular role in conveying to Members how to utilize new web-related innovations. The following interviewee works in the leadership, talks about their role in conveying lessons about online video and e-newsletters.

[someone from leadership] I was one of the first to get video up and running on my website.... I took the initiative.... We held a large meeting..., and I spoke and told them... it's really easy and everyone needs to do it.... And... at six months I was helping offices left and right copy that function.... We did it more recently with... e-newsletters... saying... you've got to do them. Such an easy, great, cheap way to reach all your constituents...

In 2006, the Democrats have also played a key role in pushing online townhalls, in part by centralizing and subsidizing online townhalls, in part by publicly demonstrating their by making them all available through the Democrats.gov website:

[T]he online town hall was done through the Democratic office. It's cost prohibitive for every office to have their own online townhall run on their own.... So... that's all centralized through the Democratic office.

The Democratic caucus also played an important role in conveying the party’s message via the web. Thus, for example, unsurprisingly, the audit that the Democrats conducted in part had a party-oriented tilt:

[The] survey was more focused on the party message than it was on the individual site. ... So... if we had a link to the Appropriation’s Committee website, but not the Democratic Appropriations website, then we had points taken off because we should have been linking to the Democratic site...

The Democrats also more directly pushed for certain content and messages on Member websites. Unsurprisingly, the election was playing a big role during this period; as one interviewee (from September 2006), a particularly important objective was to convey a fairly unified message for the Fall election:

[T]he Democrats in July and August rolled out their message platform. It's called *A New Direction for America*. The main thing was one sheet, a description of what the new direction for America was. And the leader’s office encouraged Members to put it up on the website....

More generally, leadership plays a role in providing content to offices, as this staffer makes clear:

If you look at our website, there's something about veterans on there right now which came basically straight from Pelosi's office. There's also something about cuts to college loan programs, which is another email that was sent to us.

Strikingly, by comparison, the Republican leadership played a far less important role vis-a-vis their Members. Most staff were not negative about the conference, but even those who had apparent confidence that there was useful information to be found there did not look, as these two Republican staff convey:

I never once spoke with [the Republican conference] about developing our website... I'm trying to think. I'm sure at some point in time they... provided examples of different types. I can't remember any specifics... but I'm sure if I did they would have given me great tips. But I didn't.

The] conference does a really good job... putting out... best practices.... [Q: To what extent have you gotten insights?] Not much.

Other staffers were less positive regarding what the party had to offer:

[T]he Republican Conference will send out stuff electronically to us.... I've had this conversation with [them], like ninety-five percent of what you send me is useless. It's too broad. It wouldn't work in my district anyway.

In short, during the period of our interviews, it is clear that the Democrats were more proactive in providing both form and content for Member websites than Republicans, and that they had a real impact on Democratic websites. We would note that the relative importance of the party to Democrats as compared to Republicans in part reflects the relative popularity of Democrats as compared to Republicans during this period. In particular, while Democrats were trying to nationalize the election of 2006, Republicans were trying keep races local. That is, identification with the Democratic party was clearly a plus and with the Republicans a minus in 2006, and this almost certainly affected party strategy and Member receptiveness during this period.

**Observation 5:** *The parties are potential aggregators of experience and supplier of web-related practices and content.*

**Observation 6:** *During 2006, the Democratic conference was substantially more effective at conveying practices and content to its Members than the Republican.*

#### The Congressional Management Foundation

CMF also had a powerful impact on Web practices among Members, through its annual reports, and most importantly, through its "Golden Mouse" awards to the best websites. The golden mouse awards were based on a detailed set of criteria that CMF developed, in part based on focus groups it conducted, in part in consultation with staff on the Hill. In part the influence came through the construction of a set of norms as to what Members were supposed to do on their websites—the explicit identification of recommended practices. Thus, for example, many staff, given the responsibility for their Member's website, began by consulting the CMF report:

I basically took the CMF book from a couple years ago [to] see what the Golden Mouse winners were doing, and used those techniques.

The second theme that came up repeatedly was that the Golden Mouse award created a competitive environment among the offices to win the award in 2006, as the statements by the following two staff make clear:

I think, if we don't get at least a silver, it's off with my head. [laughter]... Powerful people, they like to compete with other old powerful people, and then show their little awards.

[K]nowing that, the whole Gold Mouse thing was going to be coming around again I wanted to make sure that anything that we did for the Congressman was going to be very, very content rich, very, very content driven, and as one or two click friendly for a visitor as possible.

#### Vendors and HIR

The final critical influences on Member websites are (1) House Information Resources (HIR), and (2) vendors. HIR provides essential IT support to the House. As part of that support is hosting of Member websites, as well as basic consulting on design. Thus, as one staffer states:

[T]hey provided... a number of templates [from which to choose].

Those templates are somewhat constraining for some offices, which can either choose to design their website in house, or to go to a vendor. While some go the former route because of the greater level of control (e.g., "we prefer to have the ability to put something up right away."), it is clear many offices go the vendor route. Interestingly, a small cottage industry of firms have sprung up to offer web services to Members, where those firms are divided along Democratic and Republican (e.g., one firm is called "Right click") lines.

The options the vendors offer is somewhat constrained, presumably because it is cheaper to offer a limited set of options, and in part because they are using off the shelf software designed for commercial purposes. As one individual noted:

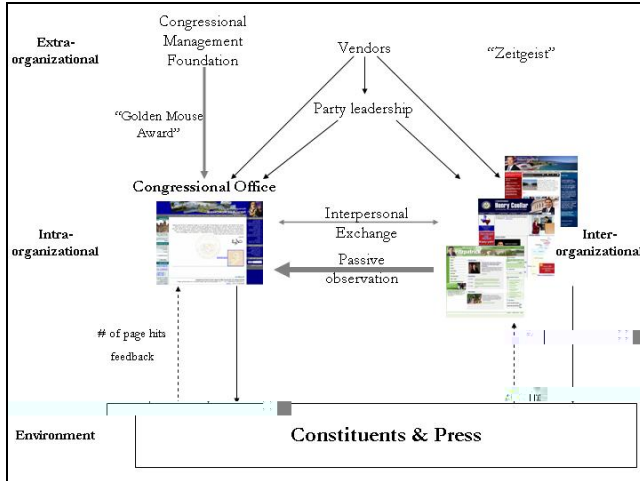
Looking at some of the other companies, it sounded like they were trying to sell us more of like a template of like, what a website would look like, instead of... just completely designed to us, and how we wanted it.

**Observation 7:** *Vendors play a critical role in aggregating experiences and standardizing practice through their provision of services to multiple offices.*

**Observation 8:** *CMF plays a critical role in aggregating experiences through its reports, and in standardizing practices through its reports and sets into motion a competitive process with its Golden Mouse awards.*

## 6. DISCUSSION

Figure 2 summarizes the set of influences on Congressional Web sites.



**Figure 2: Influences on Congressional Web sites**

As a new technology passes among organizations it necessarily passes through an experimental phase of great uncertainty, with substantial variety of practices, and then a consolidation phase, where practices are homogenized. Congressional use of official websites is an intrinsically important subject, because they are a manifestation of the broader issue of how technology might strengthen our democracy, in this case, through bolstering the connection between representatives and represented. Further, Congressional online practices can be seen as laboratories for digital government in general, where a large set of functionally identical government organizations struggle to learn how to use this new technology.

Our research has focused on this process of diffusion, and highlights a number of troubling patterns. First, there is relatively little feedback into the system regarding success and failure. A necessary condition for effective information aggregation within a system is for there to be significant amounts of information to aggregate. Second, there is relatively little interpersonal knowledge sharing regarding experiences within the institution. Instead, there is a reflective mimicry process, with subjective evaluation of others' visible practices.

Less troubling, but significant, are the important roles played by the parties, vendors, HIR, and CMF in providing incentives for certain practices ("coercive isomorphism") and in constructing expectations as to what is appropriate to be on Congressional websites ("normative isomorphism").

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