

SUSTAINABLE DIGITAL CONTENT MODEL DEVELOPMENT FOR A SMALL
ORGANIZATION USING NETWORK ANALYSIS

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ABSTRACT

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There is already an established, growing body of work dedicated to the study of digital writing practices within organizations; however, it is less common to find examples of this work focused on small, resource-lean organizations that are not “writing centered.” Such organizations pose unique problems. Due to pre-existing conditions, these organizations may be unable to keep their digital content current and relevant to their audiences, resulting in missed opportunities for growth. The examples used throughout the thesis result from qualitative research conducted at the Michigan State University Student Organic Farm (MSUSOF) coinciding with a website redesign project. Interviews and a collaborative design process were conducted to gather certain types of information. Stories and practices from the MSUSOF provide a backdrop as this thesis explains an emerging sustainable content model in three steps: First, the pre-existing conditions that lead to an untenable website are explained by means of actor-network theory. Second, specific examples are explored in detail through an activity theory based approach that reveals how circumstances intertwine to make increasingly complex obstacles. Finally, some ideas are offered for moving an organization towards a sustainable content model.

DEDICATION PAGE

Thank you to my wife, Dana, my daughter, Dia, and my daughter-to-be, Jolie, for their love and patience; and to my parents for their eternal support and reminders that I have come too far to give up now.

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PREFACE

This is a study of digital content production at the Michigan State University Student Organic Farm. The research at the Farm informs an overall look toward the problem of sustainable content and non-writing-centered organizations. An emerging sustainable content model is also examined.

This thesis is structured around an agricultural metaphor. The metaphor is applied in part because of the research location, but also because it works. Bonnie Nardi has famously compared content models to ecosystems, so the farming metaphor is not such a stretch. The metaphor will unfold as you read. It is meant to be light-hearted, yet poignant. Hopefully it is not heavy-handed.

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CHAPTER 1: AN ECOSYSTEM IN PERIL

Over the past twenty years, digital content platforms have evolved from simple pages of text and hyperlinks into multifunctional networks: a hybrid of publishing platforms, content repositories, images, databases, and social connections. With the explosion of low-cost, or free, interactive Web-based applications, an organization can author digital content and incorporate cutting-edge features into their websites at little expense, and with only limited technical experience necessary. Web 2.0-style applications encourage users to alter their behavior, from passive data consumers into re-mixers and creators. For professional communicators, these statements are not groundbreaking. However, many organizations are still struggling to bring their content into this new era -- particularly smaller non-profit organizations whose primary work is not writing-centered. For many organizations, the Web is still regarded as a separate world; one that requires a high level of specialized knowledge in order to act as a content creator. Often these organizations have websites with outdated content, broken links, and content uploaded in proprietary formats that limit search functionality. Even if the organization has cultivated a robust community of action in the offline world, failing to do the same in a digital environment will likely impair the organization's effectiveness, as citizens conduct more of their lives online. Without a website or other digital presence an organization risks missing out on continued growth.

A sustainable digital content model would ensure that a website never falls into disuse. The website does not necessarily have to be at the cutting edge of technology to be

sustainable. Some organizations may find that hosting their own website would be less effective than developing a strong presence through social media applications like Facebook or Twitter. Given that digital content is increasingly distributed through third party applications, a clearly articulated content model becomes ever more important for an organization as its authors create, publish and track content across devices. It is impossible to create a one-size-fits-all content model because every organization is unique in terms of how and why work gets done. With the plethora of communications choices available (from social networking options to open source content management systems like Drupal or Joomla) there is certainly a sustainable content solution for every type of organization. Despite this, many organizations still struggle with websites that are rarely updated and serve their constituents poorly; sites that are un-sustainable. One such example comes from the Michigan State University Student Organic Farm (MSUSOF). In 2006, I developed the first website for the MSUSOF as a volunteer. The following is a summary of that experience that other Web professionals (communications specialists, professional writers, information architects, content managers, etc.) may find familiar.

An organization has enlisted you (paid or unpaid) to develop a website. You work diligently to define their communications needs and build a product that can serve the interests of the organization. There is great excitement within the organization leading up to the site launch. After a few months, you check in to find that no one has updated any content and the initial excitement has dissipated as everyone returns to other

priorities. My experience developing the first iteration of the MUSOF website was a disappointment, leading me to question what went wrong.

Interestingly, the MSUSOF has a robust offline network of passionate stakeholders, so presumably a website would have been easy to sustain. It would seem that the inability of the MSUSOF to support digital writing did not stem from the overall health of the organization. While it is reassuring that non-writing centered organizations can be successful at meeting their goals without the benefit of robust digital content there may be a future cost if digital content is not supported. When an otherwise thriving organization presents a crumbling façade of outdated content to those who use its digital interface, it can create the impression that the organization is struggling offline as well. Additionally, time and money invested in a failed website can be disheartening for an organization. It expends limited resources, and may lead to reluctance within the organization to make future attempts at digital content development for fear of a second failure.

The MSUSOF was started in 1999 by a small group of students passionate about learning and practicing a particular type of growing and has evolved into a thriving community. Activity within this community takes place in fields and classrooms, extending into campus dining halls and the kitchens of customers from the surrounding area. This is very physical work with measurable results. Writing, though, may be just as vital to their success. Writing can help to build purpose, providing context for the work

done in the fields and classrooms, and insert the story of the MSUSOF into the network of the organic food movement.

For many people, including potential students and community members, their first and sometimes only encounter with the MSUSOF is through the website. They may never meet face-to-face with the students who work in the greenhouses. What they see on that website isn't just a representation of an organization; it *is the Student Organic Farm*. From within the organization, the connection between Farm and website isn't as strongly viewed. Organizational actors are familiar with daily farm activities, as well as relationships among MSUSOF stakeholders. For actors, the organization is a complex place that cannot be completely embodied in a digital form. Perhaps in the best circumstances they may view the website as a reduction, or essence of the entire organization. In general, they see the website as a brochure; a glossary for the uninitiated. So, from one perspective (external) the website and the organization are the same entity. From the inside looking out, the website is more like a tool; a mediating artifact between members and non-members.

The parallax of website as organization versus website *representing* organization exists because the website is not a single text, but a network; a collection of actors, tools, content, users, and more, that are aggregated together for moments in time. The network is messy – it looks different to every actor, depending on their place in it. Thus an interesting question emerges: What might a sustainable digital content model look like for an organization whose main focus is not writing-centered?

This thesis will explore the question of a sustainable content model for non-writing-centered organization based on a detailed analysis of the Michigan State University Student Organic Farm. The exploration begins with a description of the culture and history of the MSUSOF followed by analysis of the failed content model. Next, critical areas for improvement are identified and the complexity of each situation is examined. Finally, implications of an emerging sustainable content model are discussed. The research conducted at the MSUSOF was based on conversations with stakeholders as well as community design meetings to discuss a redesign of the website. Their new website has since launched in January 2011, and although still early, there are signs of improvement during the first four months: over 300 pictures have been uploaded and tagged into image galleries; and, over 50 unique “farmer profiles” have been created. More important, however, are the potential lessons learned that may be applied to other organizations. Tools are needed to dig out these lessons, and the two particular tools I will draw on most frequently are actor-network theory and activity theory. Actor-network theory is used to aid in understanding the messy structure of the original content model. Therein we begin to see what made it difficult for stakeholders to take ownership of the website. Later, activity theory is used to trace network disturbances identified by actor-network analysis. The tracing takes us deeper into the need for a complex support system to integrate a sustainable digital content model.

CHAPTER 1.1: PLOTTING THE MICHIGAN STATE UNIVERSITY STUDENT ORGANIC FARM

When farming or starting a garden, the logical place to start might be to set the boundaries of your field and become familiar with the terrain. Likewise, an important part of any writing project is to locate the outline of the rhetorical space you will occupy. Before diving into problems and solutions it may be helpful to understand the type of organization that provides the examples to be examined. Workers at the MSUSOF don't spend their work hours sitting at a computer. Composing texts happens in the field, literally, as workers track crop yields and planting schedules. In this scenario, while digital content may help support their mission, it is not a full-time focus and so developing a sustainable digital content model is not an explicit priority within the culture of the organization. The MSUSOF has three strengths in particular that indicate an ability to be successful in sustaining content. The three things are a strong community, an intentional identity achieved in part through writing, and a set of specific communications tasks.

Strength Number One: A Strong Community

A "community" is notoriously difficult to define. There is an implication of boundaries and rules for inclusion or exclusion. Fortunately in the case of the MSUSOF the community is relatively well-defined. Members may be categorized in one of four basic roles: Staff, which are MSU employees; Student crew, who are paid workers; Organic Farmer Training Program (OFTP) students; and Community Supported Agriculture (CSA) members, who pay to receive a weekly share of produce. Writing for the original website

was limited to farm managers, who place content updates at a lower priority than most other tasks. This organization is relatively small, without the compartmentalization of departments and specialty employees that might characterize larger companies. The result is that individuals must fill multiple roles. This alone sets the stage for difficulties when approaching tasks outside of one's area of expertise. This is a challenge that larger organizations may not have to face. For example, "workers in business settings are commonly supported by appropriate technologies, useful information, and helpful human collaborators; however, knowledge workers in communities often have little of this support" (Grabill, 2007). I would argue that the MSUSOF functions more like a community than a business in this comparison. The same may be said of other small organizations and non-profits. Businesses can afford to bring in state of the art technology, contract with appropriate professionals, and dedicate workers to specific tasks. Small non-profits must adopt a do-it-yourself approach, where workers function in a wide variety of roles simultaneously and the ability to hire contractors is more limited.

The strength of this community lies in their enthusiasm, further demonstrated in the next section regarding intentional identity. For the students and staff, the farm becomes a hub of work and social life. This personal investment can and should be leveraged in a digital content model.

Strength Number Two: An Intentional Identity

The MSUSOF is a part of the Michigan State University campus; however you might not guess that if you were dropped in the middle of one of their fields. Stand at the heart of

campus and you will find yourself immersed in the stereotypical symbols of Western academia: ivy-covered brick buildings, manicured lawns, a botanical garden, a bell tower. Green and white aluminum signs help create the official MSU identity. To find the MSUSOF, you will need to travel South, past the main campus, into the agricultural fields. Tucked away behind the Horticulture research buildings, visitors are greeted by a hand-made placard with the words “Student Organic Farm” carved into the wood. Twin birdhouses top the signposts set amongst a flower bed. The dirt path continues back to a row of half-cylinder shaped passive solar greenhouses covered in heavy plastic sheeting. There’s no red barn or silo. These hoop houses are the new look of small-scale agriculture, allowing for crops to be grown in all four seasons without the use of any heating sources other than sunlight -- even in the dead of Michigan’s deep freeze winter. The lack of official University signage is intentional. Although the MSUSOF benefits from connections to the University in general -- and Horticulture department in particular -- there is a specific effort to remain a student organization true to its founding.

Interestingly, environmental graphics are even more prolific here than on the main campus. There is a hand-painted map of the farm. Murals depicting themes of food and community are painted on walls. At the entrance to the work house, where the farm crew begins and ends their day, a hand-lettered sign reads:

*“Welcome to the work house. The work house is the hub of the
Student Organic Farm - Where we gather to start work, post &
discuss priorities & weekly harvest lists, prepare food, keep*

records, & relax. Please feel free to write notes, post events, share news & generally COMMUNICATE! Make yourself at home and please clean up after yourself - if you start a task see it through to its end. This is a special & important space for many people - enjoy it & give it your love. Many Thanks."

Certainly this organization understands the value of writing and they employ written artifacts strategically to build and sustain their community.

Inside the work house one wall contains a row of storage cubbies, each with a small hand-painted sign bearing a farmer's name. This is where they leave their personal belongings during their work shifts. The space is mostly open, with a pair of picnic tables near the middle. It's warm inside, even in the winter, comfortable and reminiscent of a clubhouse or tree fort.

Students and staff at the MSUSOF have written the story of the farm into the place they inhabit to create a specific rhetorical space in which they teach and work. There is a strong sense of community identity at the farm that reflects their awareness of the value of writing and its ability to center individuals around a collective mission. However, the wonderful community-building that happens at the farm failed to translate onto their website. Attempting to understand why may reveal potential solutions for building a sustainable content model.

Strength Three: Specific Goals that Digital Content can Address

Finally, the Farm is primed to develop a sustainable content model because they have specific goals that will be aided through an improved website. First, they need digital tools to recruit students into their Organic Farmer Training Program. Second, they need to communicate with Community Supported Agriculture (CSA) members. CSA members are an important part of the MSUSOF community. Keeping them connected to the organization helps secure the cash-flow necessary to maintain the facilities, staff and crops. Finally, they have an interest in seeing their organization networked with similar groups. By way of example, the farm manager has a goal of keeping the website ranked in the top three Google search results for the term 'organic farmer training' alongside other high-profile organic agriculture programs.

Organizational Success

A lot has changed at the Farm since 2006, when msuorganicfarm.org first launched. Current students have a much greater aptitude for using technology compared to four years ago. The farm also has more customers and produces more food. Organic farmer training has become an even more desirable skill set in agricultural workplaces, so interest in the program is growing. Outside the farm, Web users have much higher expectations for digital content. They expect a great amount of information and the ability to communicate with organizations via digital means. From both inside the farm and outside the farm, pressure was mounting to do something about the old website.

In 2010, they were ready for a redesign with the three specific goals above as a target objective. I had maintained a connection with the Farm to assist with required Web updates when necessary. As a result, they turned to me for assistance in redesigning the website. We began to plan a redesign process centered on open, collaborative design meetings, so all SOF students, staff, steering committee members, and volunteers could attend. The design meetings would cover three target phases: 1) Identify needs; 2) Develop a visual identity; and 3) Discuss implementation.

Collaborative Design Phase I: Identify needs

The first goal was to identify the tasks stakeholders hoped to accomplish via the website. My hope was that a discussion on this topic would increase stakeholders' understanding of the website's potential to fulfill rhetorical goals of the organization and allow individuals to offer input as to how they could benefit from participation in the website. Among the needs identified, OFTP recruitment was high on the list, as well as to provide answers to commonly asked questions, and gather form responses for sign up lists. This phase also addressed ways that individuals hoped to benefit from the website. For example, student farmers acknowledged that the quality of the website would reflect on their learning experience, for better or worse, and that potential future employers may judge the quality of their experience based on a visit to the website. Farmers also noted that being able to manage their own profile and post pictures from the farm would bring positive benefits, allowing them to personally articulate their interests and role at the farm.

Collaborative Design Phase II: Address presentation

The second phase of design meetings determined site structure and visual identity. During these meetings, the plan from phase one was presented and approved. Then, a structure of site pages and features was worked out collaboratively to build navigation menus and organize content. Discussion in regard to the visual identity provided a number of ideas which were mocked-up and presented. Through collaboration, a site template was developed.

Collaborative Design Phase III: Discuss implementation

We established a division of labor using informal methods similar to the way daily farm duties are divided during their morning stand-up meeting. I presented the areas of the site that would need work and whoever was interested could volunteer for that job. Other students offered resources and assistance where available, for example, when one student volunteered to work on the CSA sign-up information, another student offered that she had taken pictures during CSA distribution that would be useful. Another important point related to this conversation was the necessity to make digital content more physically visible in the context of the farm by improving wi-fi connections and placing computers in the workhouse.

Moving Forward

By working with a large group of people I hoped to create a sense of communal ownership -- that this was not *my* project but *their* website. My goal was to be directive only when necessary. For example, I could answer questions in regard to what

technologies were available and discuss the feasibility of specific ideas (e.g. “How easy would it be to post pictures from an iPhone?”). In general, I tried to keep these conversations as barrier-free as possible; making it clear that, technologically, anything was possible. It was up to them to decide what, and how, they wanted to write. Management and staff were primarily concerned with making sure recruitment documentation was up-to-date and easy to maintain. Additionally, they wanted to make sure that there was access to information that addressed common calls to the farm: Directions to the farm, CSA sign ups, and general information resources related to organic growing. Students suggested the ability to create photo essays of the farm, post videos, and write using mobile devices. Previously, content updates had to wait until after activity in the fields concluded and could be entered in at a desktop computer, usually off-site. Students now want the ability to post to the website using text messages and to post pictures using mobile phones.

The collaborative design meetings were very useful to plan the site structure and determine what technologies should be implemented (e.g. building a system for mobile content uploads). The meetings also helped those at the farm gain a better sense of how a website is put together, what content could be there and how content can be used. However, a series of four meetings would not be enough to instantly change the culture of an entire organization. These meetings primarily addressed the development of tools to be made available to the network. Further thought and planning would be needed to address how tasks would be divided between actors, determine the rules of use and integrate digital content work within the community

CHAPTER 2: THE INGLORIOUS LEGACY OF THE WEBMASTER

With all that is going right at the MSUSOF it seems that a sustainable solution should be available. Yet the original website iteration never took root in the organization. One major hurdle to adoption may have been the level of digital content authoring abilities found at the Farm at the time of the website's inception, along with the relatively high level of skills required to use the 2006-era content editing tools. These two issues combined to create a perfect storm of dysfunction. In the subsequent years, the baseline skills of users and the usability of available tools have converged considerably. Still, a problem remains because a mental model has infused the organization that continues to prop up the idea that digital content authoring – or knowledge work -- is complicated, specialized, and off-limits. This model can be thought of as the webmaster model.

An array of academics predicted that knowledge work would penetrate the roles of workers in a wide array of fields. Robert Reich described an economy shifting away from a manufacturing base and toward a basis of knowledge and skills, or symbolic-analytic work (Reich, 1993). Similarly, Johndan Johnson-Eilola discusses the importance of knowledge workers in the workforce (Johnson-Eilola, 2005), and Lawrence Lessig has proselytized the age of remix culture (Lessig, 2004). Writing, working, and living in digital spaces become everyday practice across economic and social spheres. To expect workers at small non-profits to participate in a digital content model should not be an entirely new concept. Clearly, workers have the experience and

knowledge to do so. The problem, it would seem, is the way that this work is modeled within the organization. It is a problem that stems from past websites based on static HTML structures. Despite the development of robust, highly usable, and easily installed content management systems, the static methodology still seems to pervade many organizations. Static HTML websites tend to be based on a content model dependent on a single individual: The “webmaster.” The webmaster represents an outdated position of authority that persists in organizations unwilling or unable to establish control over their own digital content resulting in an almost mythological status being ascribed to the webmaster.

In professional design circles the term “webmaster” has been eclipsed by more modern titles such as “information architect”, “information designer”, or “web developer.” Colloquially, however, “webmaster” is still very much in-use. As of November 10, 2010, a Google search of the word “webmaster” provided 166,000,00 results, lead by websites offering “webmaster resources” and employment websites detailing the job responsibilities of the webmaster. Pay attention to the footer section of websites and the term still shows up as a link to contact technical assistance, via wording similar to “Need help? Contact the webmaster.” The word webmaster is intended to describe a type of worker; one who is responsible for the functionality of a website. However, it could also be used to describe a content model, demonstrating the relationship between an organization and their website. The problem with a webmaster-centric vision of a website is illustrated by the actor-network diagram (Figure 1). Actor-network theory will be discussed in detail later.

The webmaster-centric model is typical of static HTML websites. In the early days of the World Wide Web until the development of easily installed content management systems (e.g. WordPress) and Web 2.0 technologies (circa 2003), static HTML websites were the norm -- especially for smaller organizations. Static websites require a certain amount of specialized knowledge to update because the content is embedded within the code. Additionally, improperly written code could result in a broken website. As a result, access to HTML files was generally restricted to the webmaster, resulting in a workflow contingent upon webmaster involvement with every content change. Webmaster-centric content models can negatively affect content-writing in a number of ways:

- Updates are delayed, contingent upon the webmaster's schedule;
- Writers must compose in environments extracted from the actual context in which the content will appear;
- The webmaster acts as the final gatekeeper, attributing power to the role greater than anyone else in the organization.

For smaller organizations that may not have an internal actor with advanced HTML knowledge, the webmaster may not be available when needed. A Web-based content management system (CMS) should be able to overcome these technical difficulties, putting organizational stakeholders in direct contact with the website and content writing access. If the website and CMS are appropriately developed, the organization should be able to add multimedia elements and edit content with relative ease compared to a static HTML model. However, in the case of the MSUSOF, and presumably other

organizations, even the implementation of a CMS hasn't been able to overcome the webmaster mindset; a mindset that has completely perverted how organizations view their relationship to digital content. It is time, similar to Roland Barthes' critique of the author function, to call for the death of the webmaster.

In his essay, "Death of the Author," Roland Barthes condemns literary criticism that interprets text based solely on guessing at the author's intended meaning. His point is that such a closed-minded interpretation denies alternative readings that may be equally legitimate, and closes down the power a reader has in making meaning: "To give a text an Author is to impose a limit on that text, to furnish it with a final signified, to close the writing" (Barthes, 1977). Although Barthes is aiming his critique at the interpretation of literary works, I would argue that a symmetrical critique could be made of the webmaster's role in the creation of digital texts. Like literary texts, digital content is also authored, but in the case of websites that serve non-profit organizations, individual voices are usually hidden by a writing style that speaks for the organization, attributing all writing to the organization, rather than giving individual writers specific attribution -- an approach that stems from analog content like brochures, flyers, posters, and other items that rarely include authorial attribution. The webmaster-centric model of digital content maintains this style of writing, by allowing the webmaster-gatekeeper to neutralize all individual authorship in writing and prevent direct writing in the web environment. Instead, writing happens offline and passes through the webmaster. As with an approach to literary interpretation that holds an author's intention in unassailable

terms, a webmaster-centric content model excludes knowledge, skills, and creativity that non-webmasters may offer.

As someone who has held the job title of webmaster, I can attest to the awe with which many in an organization regard the ability to manipulate code. For those without a good understanding of how websites work, it probably does seem like magic. At first glance this type of webmaster-centric model may seem innocent - simply a convenient way to move content online without everyone in an organization needing to be trained in HTML coding. However, the ability to manipulate code has no bearing on content knowledge, ultimately becoming a disservice to the reader/user because of the additional distance it adds between information providers and information users. As Barthes writes, “in ethnographic societies the responsibility for a narrative is never assumed by a person but by a mediator, shaman or relator whose ‘performance’ — the mastery of the narrative code — may possibly be admired but never his ‘genius’.” In the society of the webmaster, it is exactly the mastery of a “code” that is praised as genius when in reality it is the ability to compose useful text that should be admired.

Of course, Barthes is talking about literary writing and the relationship between “Author” and reader is very different when discussing digital content, the webmaster, writers and website users. Barthes’ linguistic interpretation of the author puts forth the notion that authorship is a function that only exists in the very moment of composing the text; the exact context of writing will never reoccur and thus “meaning” is lost upon the passing of that moment. In other words, the authorship is a snapshot of a moment in time,

capturing a certain context -- not an eternal, universal truth. As time and context continue to shift, there is room for the reader to find new meanings for the text. In regard to digital content readers, interacting with post-Web 2.0 style sites that encourage user contribution, there are, arguably, no longer clearly defined boundaries between the roles of author and reader, as the reader is possibly just as likely as the original writer to contribute to the text. Digital writing is about conversation, not dictation, so digital texts remain in a state of constant authorship. As with an author de-centered approach to literary criticism, a webmaster de-centered approach to digital content implies that meaning is constantly deferred; texts are multi-voiced, and never closed. Among the influences cited as destabilizing the illusion of the author, Barthes includes Surrealism for, among other reasons, "accepting the principle and the experience of several people writing together" (144). Surrealist writers apparently experimented with writing literature in groups. The use of the word "accepting" is notable, indicating that collaborative authoring was inevitable. Indeed, three decades after "Death of the Author," digital texts epitomize the notion of multiple people writing together. Websites are a collection of hypertextually linked pieces of writing presented as a single text, where any number of authors -- millions in the case of Facebook -- engages in composing interwoven texts; texts where authorial intent is constantly shifting and being undermined or contrasted by intentional and arbitrary juxtapositions of text. Some may argue that Facebook and other massively multi-user sites are more akin to "places" than "texts." Although a valid visualization, the comparison to texts is still useful, especially according to Barthes' definition that "a text is made of multiple writings, drawn from many cultures and entering into mutual relations of dialogue, parody, contestation, but there is one place

where this multiplicity is focused and that place is the reader, not, as was hitherto said, the author” (148). What better example of this than a website, where the text as it was authored by the organization can be changed by user/reader contributions, and where texts from other sources may be juxtaposed at any moment. If such a text is the goal of a sustainable content model -- and I argue that it is -- then the persistence of a system centered on the webmaster function is quite obviously out of character, because multiple points of view cannot flow freely through a single gate-keeping entity. Barthes continues that “a text’s unity lies not in its origin but in its destination. Yet this destination cannot any longer be personal: the reader is without history, biography, psychology; he is simply that someone who holds together in a single field all the traces by which the written text is constituted” (148). Therefore it is not only ill-conceived, but utterly impossible for an organization obsessed with control over their content to find success by the readers’ measure - which should be the only measure that matters. An organization must relax its managerial grip over every element of content and embrace multi-voicedness.

Barthes takes his view to an anti-theological bent, stating that by removing the author from literature, and viewing all writing on a plane to be “ranged over” (147) rather than “pierced” (147) may seem an extreme position to impose on something as seemingly simple as a website for a small non-profit group. It is in fact probably not the place to debate “God and his hypostases—reason, science, law” (147). But it can be said that, metaphorically, the God-function of the Author, and also of the webmaster, should be

considered a negative influence on the development and sustainability of a digital content model.

Barthes concludes his essay by stating:

“We are now beginning to let ourselves be fooled no longer by the arrogant antiphrastical recriminations of good society in favour of the very thing it sets aside, ignores, smothers, or destroys; we know that to give writing its future, it is necessary to overthrow the myth: the birth of the reader must be at the cost of the death of the Author” (148).

I think that Barthes can be aptly paraphrased to sum up the shift in thinking that organizations must confront in order to build sustainable content models:

We will not let ourselves be fooled any longer by the arrogant counterproductive edicts of good *code* in favor of the very thing it sets aside, ignores, smothers, or destroys; we know that to give *digital* writing its future, it is necessary to overthrow the myth: the birth of the writer/reader must be at the cost of the death of the Webmaster.

Good code is, of course, helpful. A well-coded structure is much more likely to work properly across viewing devices, show up in Internet search results, and degrade gracefully as technology advances. However, rather than making coding or designing

the central activity, it is *writing* that must be centralized. Equally important is to *consciously* plan and create a digital content model, rather than merely react to urgent needs. The following chapters utilize network analysis in the context of the Michigan State University Student Organic Farm. First, the original, webmaster-centric content model is deconstructed, followed by an exploration for a sustainable replacement.

CHAPTER 2.1: TRACING ESTABLISHED PRACTICES

Before a field is ploughed one only considers the growth at the surface – consider this the user interface of the field. In general, you will only have to concern yourself with the growth visible above ground. But when it comes time to till the soil, suddenly buried rocks and tangled roots can become quite problematic. Most obstacles will be removed, but some may need to stay. Similarly, with content producing organizations, old systems of operation must also be taken into account before you are able to ‘plant’ a new set of practices. Although the past system may have yielded insufficient results, there was still an established system. An old system may be overturned, but its influence can persist. Understanding the past practices of the organization will pay dividends later.

When an organization’s work does not rely solely on writing, it may be difficult for workers to identify the action of writing as necessary to their mission, even though writing does occur every day. Perhaps this is because the notion of writing is commonly portrayed as a romantic, literary endeavor undertaken by a solitary author. However, writing also includes record-keeping, memos, planning documents, and other genres of writing associated with doing business. These texts may be useful to a wider audience than those within the organization would believe. For example, MSUSOF staff members are often approached by professors or students from other universities, interested in learning how they might start their own student farm. Access to historical planning documents would certainly be beneficial to interested parties. The danger of neglecting writing is that the organization’s public-facing persona may become out of sync with the

reality of the organization. Webmaster-centric content models privilege technology over communication and -- like Barthes' opinion of author-centric readings that close texts -- a webmaster-centric model implies that once a website is posted to the Web, it is "finished." There is an implied finality. Networks, though, are not static. Their existence is constantly re-articulated as activity occurs. To reach a sustainable content model in these organizations, the conceptual separation of working and writing must be bridged. Bonnie Nardi and Vicki O'Day urge professional communicators to "move beyond the human-machine dyad, expanding our perspective to include the network of relationships, values, and motivations involved in technology use" (Nardi & O'Day, 1999, p. 30). Approaching digital writing analysis as a study of activity integrated within the network of an organization includes understanding goals, power structures, values and motivations at both the organizational level and the individual level. Studying digital content writing as part of a network allows for the examination of problems as they occur *between* actors rather than the somewhat fruitless practice of simply placing blame on either the system or its users.

Two particular network theories will be used to discuss digital content writing at the MSUSOF: Actor network theory, and activity theory. Actor network theory will be applied to examine the current, unsustainable content model that exists at the MSUSOF. Actor network theory is useful for understanding the ad-hoc network that formed as actors built the first iteration of the MSUSOF website. Later, activity theory will be used to consider how contradictions in the network might play out through potential solutions, and the affect on digital content writing at the MSUSOF.

CHAPTER 2.2: ACTOR NETWORK OF THE MICHIGAN STATE UNIVERSITY STUDENT ORGANIC FARM WEBSITE

Actor-network theory began with the work of Michel Callon and Bruno Latour as a framework for investigating social-technical events. Unlike the technocratic belief that technology directs society, actor-network theory renders society and technology as parts of a whole -- “Technology is society made durable” as Latour wrote (Latour, 1991). This is an important difference to note in relation to the development of sustainable content models. Additionally, actor-networks can be understood as “spliced” in nature (Spinuzzi, 2008), meaning that one actor enrolls other actors, gathered to accomplish a specific action. There is an acknowledgment that these networks can be ad-hoc and will persist as long as necessary but are not indelible. Each actor brings a different relationship to the problem, defined by their particular motivations and additional networks in which they participate. The content model at the MSUSOF is very much an ad-hoc network; little conscious planning was spent to envision how content would be sustained on the website. Instead, the website was envisioned as the final product. The webmaster-centric content model is a byproduct of website building, although convenient at the moment of its creation, it is not a consciously planned sustainable outcome. The content model remains invisible within the organization. There is no formal process for content review or updating. So, the ad-hoc nature remains; the connection between actors at the MSUSOF and the webmaster re-forms as necessary to make required changes.

The original MSUSOF website, msuorganicfarm.org, was launched in 2006. My involvement with the MSUSOF actually began earlier in the year as a volunteer interested in learning about organic growing practices.. The farm manager, acting on behalf of the MSUSOF steering committee, expressed the desire for a simple website to post application documents, program descriptions, and basic information, plus a blog to post time-sensitive information. Written content would be provided to me, as well as page and menu hierarchies. My role was to establish page templates, write the HTML and PHP code, and post the files to web hosting server space provided by the University. The first iteration of the MSUSOF website was built using a combination of HTML and the WordPress blogging platform (WordPress had not yet developed into a full content management system at this time). A number of template mock-ups were submitted to the steering committee. They chose a favorite and provided additional design change requests. The layout was simple and included a large number of photos per page to showcase the aesthetics of the farm. Photos were coded into the template and so could not be changed via a content management system. It was conceived that photos could be updated by simply saving over the old file with a new file of the same name. This website was launched in the summer of 2006 after a design period of approximately three months. The nature of this project could best be described as oriented toward the goal of producing a website, with little regard paid to the content model or workflow. As a somewhat inexperienced freelance designer, I assumed that it was the responsibility of the organization to find a way to make updates in the future.

The structure and content were determined by the SOF steering committee, with most of the writing done by the farm manager. Content and instructions were then passed to me in the form of Microsoft Word documents. After the site was posted, I was put in contact with a student farmer who had volunteered to be responsible for updating the content. There was a computer in the farm office already configured with HTML editing software. Over the course of two or three meetings, I trained the student on the layout and structure of the website; how to add blog posts with the WordPress interface, modify HTML documents, and upload files to the server. Over the course of time, fewer and fewer updates were made by the farming student, and after his graduation all content changes were sent to me via email to be posted to the site. The blog received very little use, and saw only three posts added over the course of four years. Although the site *looked* simple, it was very difficult to keep updated without a fairly high level of familiarity with HTML and web server management. There was no planning in place to examine sources for on-going content updates, nor a formal schedule for updating. In short, there was no planned content model.

Although the SOF stakeholders engaged in activity at the farm were passionate about their work, this enthusiasm failed to carry over to digital content. The issue of necessity is debatable. CSA members had indicated an interest in receiving communications electronically instead of by paper, and the site was used to post recruitment documents which were used successfully. There would appear to be a need for the MSUSOF to publish content. Judging from the physical space of the farm it would be safe to assume that there are actors willing to put time, thought and effort into creating content, but

activity was blocked by a system that required webmaster intervention at every step.

Figure 1 shows an actor-network diagram of digital content related work at the MSUSOF. It reveals the connections that formed as actors came together to build and publish the website. This network was not conceived of in the long-term to function as a content model, though that is what has happened. The diagram shows a striking disconnect between students at the MSUSOF and the website.

Based on my experience at the farm, a number of questions were raised: Was I to blame for building a “bad” website? Was the farm staff at fault for failing to learn how to use the site? Was the steering committee over-involved? Under-involved? These initial questions seemed to direct blame without providing answers. A more useful line of inquiry might be to understand how content writing could be better supported, both by the website and within the organization, in order to facilitate in a digital context the same level of active engagement and creativity that occurs in the physical space of the farm. Instead of viewing the organization’s objective as “building a website,” the objective should be specific to the mission of the organization: i.e., to communicate; to recruit; to educate; to interact; to write. Two main challenges have complicated the way digital content is passed to the website. The first is the way in which the network is organized by the farm manager. The second is the way in which tools have been black-boxed by the webmaster. First, an analysis of the way the network was established and continues to function.

Actor-networks are formed through a three-step process called Translation (Callon, 1986). In the first step – Problematization -- a focal actor enrolls other actors, and establishes itself as an obligatory passage point (OPP), thus positioning itself as absolutely essential (Callon). In the second step – Interessement -- the other actors must agree with the establishment of the focal actor. The final step – Enrollment -- occurs when the other actors accept the interests described by the focal actor. Figure 1 would make it appear as though the webmaster is the focal actor. No content is published to the website without the webmaster's aid. In other networks, the webmaster may truly be the focal actor, however, in the example of the MSUSOF, the farm manager enacted the first step of translation by enrolling other actors, including the webmaster. After all, no content would even be submitted to the webmaster without the farm manager's directive. Acting as the primary content writer, the farm manager also maintained the connection between the steering committee and the webmaster. Thus, the farm manager became the focal actor. However, the farm manager that formed this ad-hoc network left the MSUSOF shortly after the website was launched. The new farm manager assumed the primary responsibility of re-enrolling actors to make required changes to content. However, without the previous experience and commitment of the prior farm manager, this ad-hoc network became even more chaotic.

The second challenge facing this content model has to do with the role of the webmaster and the way tools have been black-boxed. Actor-network theorists use the term "black box" to describe systems and processes that are hidden from other actors in order to simplify work (LaTour, Callon, Spinuzzi). Black boxing is generally meant to

streamline overly complicated, repetitive processes. When complex information and relationships are black-boxed they can be dealt with on a superficial basis, without every actor having to encounter the complexity with every interaction. When a website uses a content management system, the HTML and CSS layers are black-boxed. They can be edited when needed, but for the most part do not have to be dealt with. Certain types of interactions can also be black-boxed. Expert actors play the role of a black box in some organizations. For example, the webmaster becomes a black box, or shortcut, for getting content added or changed on a website. As a result, when making content changes, other actors become increasingly subject to whatever practices the webmaster establishes; i.e. a limitation on multimedia content, layouts, colors, formatting, length, location, links -- the potential limitations are many. The ability for the non-webmaster actors to innovate is limited. Note that often the webmaster may present these to the author as *technical* limitations rather than practical decisions. In this case, the webmaster has essentially “black-boxed” a large chunk of the digital writing process, creating a disconnection between actors as writers and the text that they attempt to produce.

Returning to Figure 1, the lighter color boxes represent those who act as part of the MSUSOF network. The boxes at the center represent the webmaster, connected to the MSUSOF network primarily via the Farm Staff Content Coordinator, who is an individual MSUSOF staffer in charge of applications and other documents available on the website. The darker color boxes represent tools or content-creating actions that take place at the farm, which may or may not be already connected to the website.

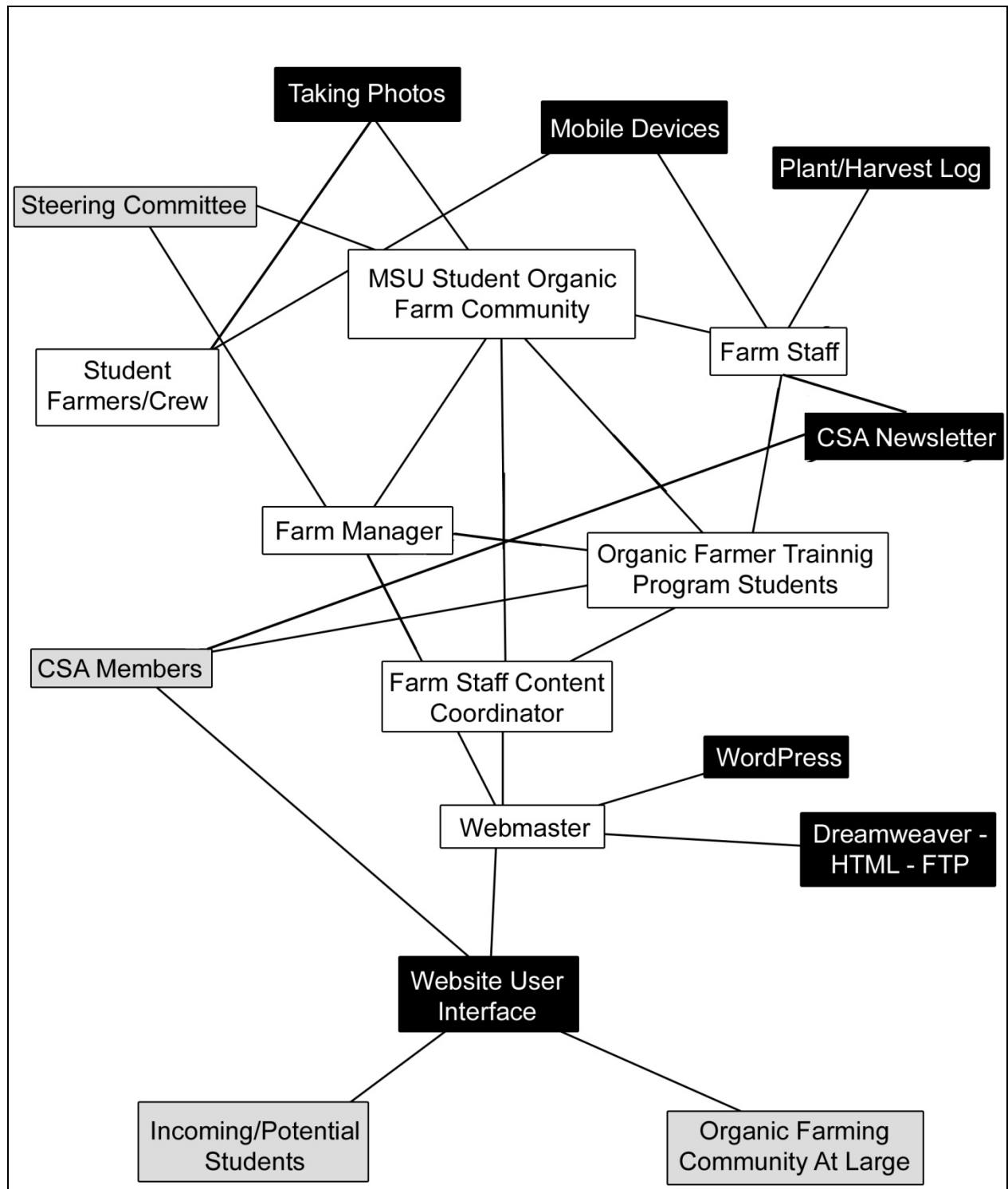


Figure 1: Actor-network diagram of Michigan State University Student Organic Farm

The central problem visible here seems to be that the webmaster function has black-boxed too much of the content writing process. Actors do not have access to content writing tools and so are disenfranchised from digital content. In the physical space of the farm, actors are free to assemble with paint and supplies to build their environment. They make signs, furniture and more -- without each composing moment being interrupted by a moderator. Destabilizing the webmaster-centric content model appears to be essential for establishing a sustainable digital content model. Actor-network theory has provided a framework for visualizing the network, which was previously invisible to stakeholders within the organization. Re-articulating the network to solve the problem of sustainability requires planning to accommodate writers -- something that was absent from the original website design process which focused action only toward the goal of a finished site.

Notable observations from Figure 1:

- **Webmaster-centric:** All content additions/changes must pass through webmaster
- **No allowance for ad-hoc innovation:** MSUSOF staff hands off completed content to webmaster without direct access to website writing tools
- **Gaps between experts and non-experts:** Webmaster prevents MSUSOF from using tools, MSUSOF restricts content writing to select individuals with rigid approval process
- **Lack of documentation:** There is no tool/process to share knowledge for using the system

- **Content creating activities (darker boxes) are disconnected from website:**

Changes only happen when essential information becomes outdated or incorrect

- **External designer is leaned on heavily for critical content updates:**

Webmaster does not interact regularly with activities at the farm

- **No access to authoring environments within work environments:** Physical content creation tools reside outside of area where most farm work happens

- **Website not visible to workers during day-to-day operation of SOF:** Farm students and staff report few interactions with the content

The content model would be somewhat more manageable if the content management tools were not black-boxed by the webmaster function. This would, at least, allow the actors to add content into the model as they go about their other responsibilities at the farm, instead of having to re-form between the webmaster and actor due to intermittent contact. The website should not black-box the entire content writing process. Instead, the website should allow a writer to organize actors to solve new problems as they occur. A content management system can black-box the complex parts of the code. This would also help to provide safeguards against content being slowed down by a focal actor by distributing content writing responsibilities across the network.

Actor-network analysis brings into focus certain questions that, if answered, may clear a path to a sustainable content model may become visible: How can organizational stakeholders take control of the content? What does the MSUSOF want to accomplish with their content? How can an accurate picture of their work/organization be portrayed?

How can the content model become visible and meaningful to actors on the farm? The answers should be sought throughout the organization, with a chance for additional input, and become part of the daily organizational culture in order for true meaning to be realized.

These questions are not best answered through the theoretical lens of actor network theory. Moving forward requires the intentional reshaping of the network at the MSUSOF. As mentioned previously, actor network theory is particularly useful for examining ad-hoc networks created as actors conduct task-specific work. It would be more helpful to switch to a theoretical perspective that allows one to predict how changes in the network might reverberate throughout an organization. In the following section, activity theory will be used to better understand how actions within the organization can be directed to create a sustainable content writing environment.

CHAPTER 3: ACTIVITY THEORY APPLIED TO THE REDEVELOPMENT OF THE MICHIGAN STATE UNIVERSITY STUDENT ORGANIC FARM DIGITAL CONTENT MODEL

After initial preparations a farmer might next take measures to prepare the soil. On a factory farm this might be the time to spread chemical fertilizers. Organic farmers might use natural fertilizers or compost. Professional communicators would view this point in their production cycle as a time to determine what areas are in need of the most improvement. In either scenario the goal is to create the best environment for future success. Without the benefit of chemical analysis, the best we can hope for is to understand relationships and activities to pinpoint problem areas.

While actor-network theory focuses on ad-hoc networks based on actors assembling to solve specific problems, activity networks represent entrenched, ongoing relationships. Activity networks can be thought of as “woven” as opposed to “spliced” (Spinuzzi). However, this does not mean they represent stable, unchanging relationships. Activity theory acknowledges contradictions as drivers of change. In respect to digital content models, an actor-network might demonstrate the work of writers who coordinate their work to address a specific need, for example, to produce documentation for new members. Activity theory is more useful for understanding how actors and organizations interact, in general, over a period of time. The development of activity theory is commonly understood as having three distinct periods tied to the work of Vygotsky, Leont’ev, and Engeström, respectively. The first generation refers to Vygotsky and the subject of mediating artifacts (tools). The drawback of the first generation is that it was

focused solely on analyzing the actions of an individual. In the second generation, Leont'ev expanded the theory to account for collective action in addition to individual action. The third generation of activity theory, based on the work of Engeström, is beneficial for understanding areas of symbolic-analytic work, including websites. In the third generation, Engeström has taken a view that could be more similar to actor-network theory, in that activity theory has been opened up to account for multiple activity networks intersecting around a particular action. This is similar to actor-network theory in that it accounts for the complexity of intersecting networks and spheres of influence (see Figure 2).

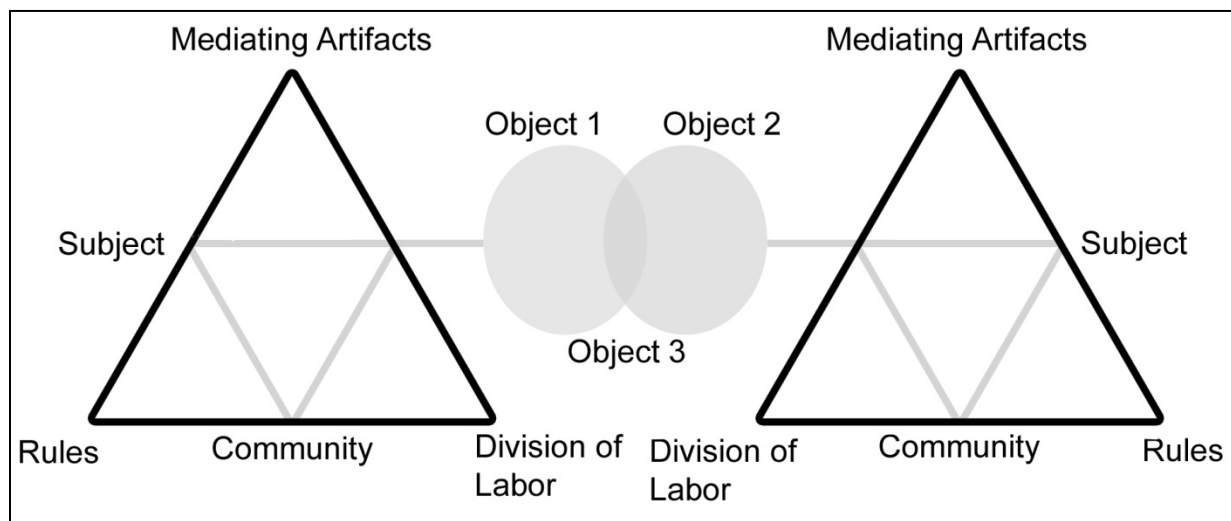


Figure 2: Activity system diagram (Engeström)

Activity theory is useful for redeveloping the content model at the MSUSOF because of its ability to account for social and political influence in networks. Because activity occurs in repetitive cycles, certain behaviors that already occur at the farm might be harnessed to supply digital content. Activity theory can help to identify those cyclical

behaviors. It may also help to locate possible tensions that prevent activity from translating into the content model. For example, when a crop is harvested, the yield is weighed and details are written in a log book. This is an activity that would provide timely, useful content for the MSUSOF website. Rather than a simple list of crops that are planted at the farm, the website could store exact planting and harvesting dates of each varietal, including photo documentation; providing a more detailed historical record of the harvest as well as give website users a more detailed understanding of what's happening at the farm. However, the tools that are currently used to record this information (paper and pen) prevent the content from connecting directly to the website. As a result, to connect this activity to the content model would require a change to the tools in use. Additionally, the organization would need to develop an appreciation for the benefit of using a content management system. Both options would require a significant change in the crop logging process. Activity theory strives to show the interconnectedness among subject, tools, rules, community, division of labor, and object.

Applying activity theory to the development of a website is not a new or unique application. Palmquist, Kiefer and Salahub note that "viewing the creation of the Writing@CSU Web site and its Writing Studio as the creation of a tool -- or, perhaps more accurately, a set of tools -- allows us to understand it as a historically situated project that produces outcomes that serve as tools in related activity systems (e.g. supporting instruction in a writing class, educating students in a composition program, supporting the professional development of writing instructors)" (Palmquist, Kiefer, &

Salahub, 2009, p. 13:8). It is common, as Palmquist has done, to situate a website as a tool in an activity system -- meaning that the website and its associated technologies mediate individual actions as they work toward an external outcome (i.e. writing instruction, in Palmquist's case). It is important to note this understanding of the *website as the tool* and the *outcome as a larger rhetorical goal*. During the planning and building of the website, the website is the desired outcome, and the tools are used by the designer/developer to code the site and make graphics, or perhaps word processing software or even meetings used by the organization staff to write content. Ultimately, Palmquist et al remark that the website can be studied "as an activity system in and of itself, and ... as a collection of tools" (13:8). Widening the focus of the theoretical lens can accommodate both means of understanding. Palmquist shows that a website is both an activity system *and* a tool. However, I argue that the focus should be broadened further still to bring the entire organization and its connections to other networks into view. A narrow focus on an activity system shows a set of interactions that are fleeting in nature. Time, motivations, content and contexts perpetually shift. As a result, an individual will likely never take the same action twice just as, as the saying goes, you can never step into the same river twice. Or, to return to Barthes, "linguistically, the author is never more than the instance writing, just as I is nothing other than the instance saying I." (Barthes, 145) On some level, the term "website" is just a shorthand way of locating where actions take place, but the experience of the website is different for everyone who accesses it. For a developer, the website is an outcome. For a stakeholder publishing an e-newsletter, the website is a tool. For a user asking a

question on a web forum, the website is a community. Each of these iterations is valid and should be considered when changes to the content model are considered,

The remainder of this chapter discusses some examples of potential changes to the MSUSOF content model are discussed in detail, using activity theory as a basis to demonstrate that what may seem like simple changes in the network (introducing new tools, changing subject accessibility) can result in extreme consequences throughout the network. By gaining the ability to understand nuances at the beginning of the change process, potential problems can be identified and addressed early-on, resulting in a greater likelihood that changes will be adopted across the organization.

CHAPTER 3.1: INTEGRATING THE CONTENT MODEL WITH ALREADY-OCCURRING WORK

The design meetings produced a number of actionable items related to tool development. These items often began as tool-centered discussions but soon expanded, revealing the complexity of the tasks at hand. The issues often touched on nodes of the activity network diagram (object, rules, division of labor, etc.), exhibiting contradictions in the current network and thus impetus for possible change. A student's suggestion for a mobile device-accessible authoring tool yielded a particularly relevant example.

During the first collaborative design meeting, one student asked whether it might be possible to use mobile devices as content writing tools. This suggestion piqued significant interest in the room, because smart phones and handheld devices with wireless Internet connectivity could be used to submit photos, text, or video while working in the fields. The conversation became more excited as others suggested ways that such a tool could be used. For example, another student suggested that a photo of the weekly CSA share could be posted before each pick-up, rather than the current solution: a text list of all the vegetables available during the year. Or, if a disease or pest were found in a crop, a photo could be uploaded so others at the farm could know what to look for and how to fix the problem. Mobile content writing tools seemed as if they might help solve the recurring problem that desktop authoring tools were only available in the farm staff offices, away from where most activities took place. As a result,

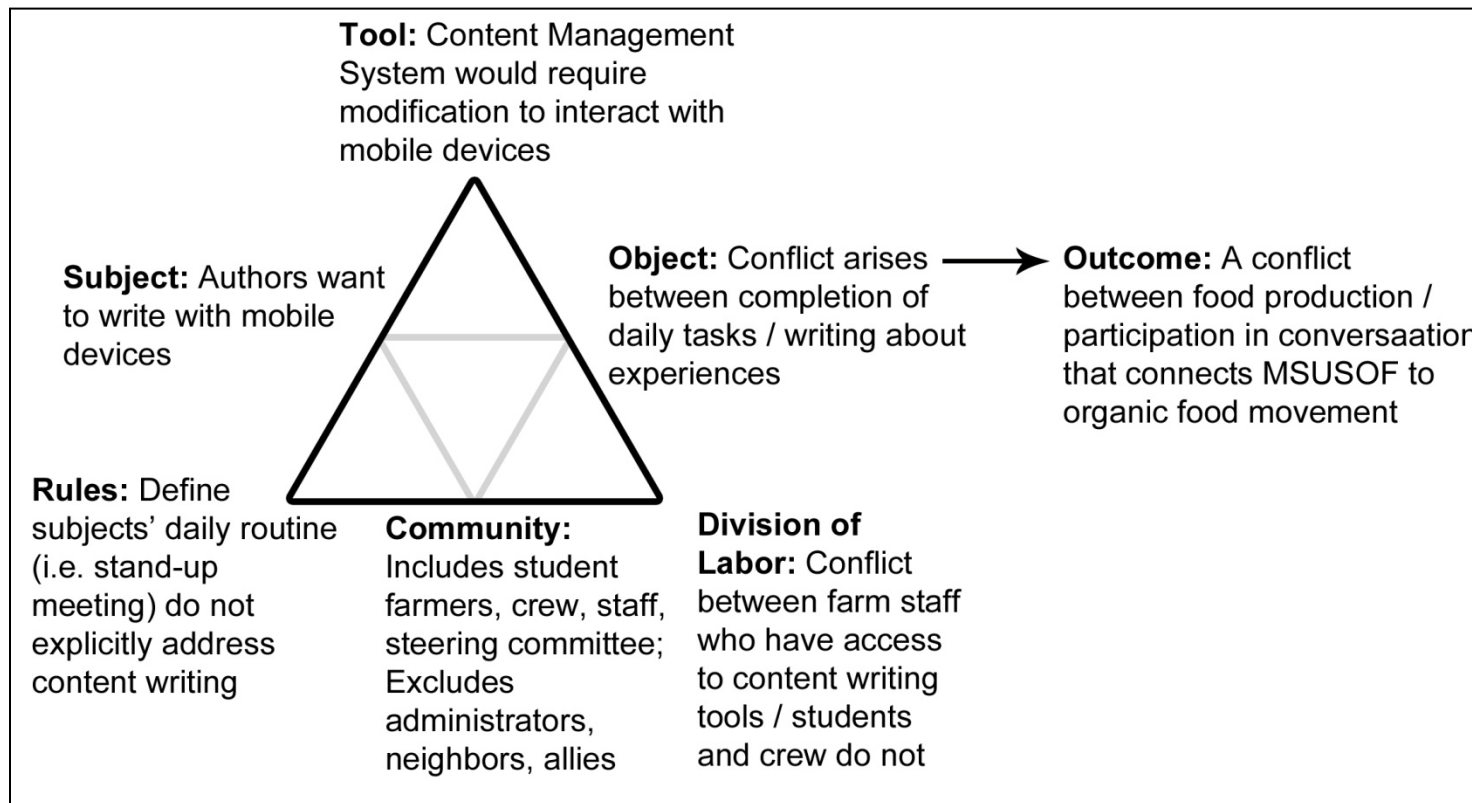


Figure 3: Activity theory diagram - mobile device-accessible authoring

authoring always happened after the fact. Yet a mobile authoring tool alone would not be a panacea.

The farm manager had previously stated: “If I see someone sitting at a computer it means they’re not doing their job.” Taken literally, if the student farmers were weeding a beet field and one farmer paused, pulled out a mobile phone and started to shoot video of other farmers working, this would not officially be “sitting at a computer.” However, the effect might be the same in the eyes of the farm manager. The conflict springs, I think, from the division of labor. Farm management has, in the past, been ultimately responsible for the website. Virtually all of the text content on the website had been authored by the management. To let student farmers (most of whom only spend 18 months learning and working at the farm) post multimedia content would upend the division of labor. The management has a number of reasons, both practical and political, to be concerned about others adding content. The practical concerns center around conduct issues (i.e. appropriateness) and the possibility that an individual may not want to be recorded or have their actions posted online. Politically, the concern is that posts could be taken out of context and displayed as a referendum on how the farm is managed. These are legitimate concerns, but should not be insurmountable if the result would ultimately benefit the organization. This brings us to two remaining points of conflict, relating first to rules and finally to the object.

There are specific rules at the farm, explicit and implicit, that govern how actors behave. At the beginning of each work day, farmers assemble in the workhouse and the farm manager conducts a stand-up meeting to outline the tasks for the day and divvy up assignments. Instructions for each task are explained as needed. From the start of each day, a worker has a template for their actions for the entire work day. These rules ensure smooth, consistent operations at the farm along with scheduled times for lectures and demonstrations. At this point the farm has no such structures for governing content writing. Since most of the content has been authored or approved by the manager, as the focal actor, there has been no need to make the rules visible to actors across the organization. Mobile authoring would require conscious inclusion of rules to determine when, where and how mobile content should be posted.

Finally, the object must be revisited. This example has uncovered how innovation of a tool can quickly be ensnared in a tangle of complex issues. Even a simple discussion of mobile authoring as a possibility has revealed potential conflicts in the division of labor, rules, and community. Another conflict may underline all of these, relating to how the object of the organization is expressed. It is one thing to say, academically, that the farm should do work to advance a broad, sustainable food movement. There is a compulsion to do so out of sheer self-interest. How do actors do this on a daily basis? In part by teaching and learning. After completion of the program, these students will become practitioners of organic farming practices. Although true, it is easy for the overarching object to be lost in the day-to-day object of completing chores, delivering food to CSA members and dining halls, feeding chickens, dealing with a pest outbreak,

and any other number of things that need to be done. Documenting these activities on the website, on a daily basis, for actors from other networks to use as resources seems like it would serve both short-term and long-term objectives. In the short-term, writing might help ensure tasks are completed and can provide a record for later review, in case repetition is needed. In the long-term, making this information public endows the activity with energy to influence other actors and networks.

Providing mobile friendly access is a function of the content management system, and so in activity theory would be considered an improvement to a tool. But to merely provide the capability to make mobile uploads may not ensure adoption. The farm manager's quote doesn't only apply to sitting at a computer. The more striking point is that writing content is not culturally accepted within the organization as part of a student farmer's job. Even if it is not the primary function of their role, one would think that representing the farm in a positive light should be encouraged. Regardless, this is a problem with the division of labor in the organization. Determining who should be responsible for sharing content on the website is a major point that needs to be addressed. Additionally, this problem overlaps with the notion of community and rules. Actors at the farm should have an understanding of what is or is not acceptable for posting to the website and how the MSUSOF should be portrayed. Identifying mobile access as a potential solution to provide quick, in-the-field posting capabilities is simple enough. Implementing such a practice requires far more caution and dedication.

Implementation focuses on the way tools are chosen and incorporated into the existing structures of an organization. Although the tools may be technical in nature, it is important to view their implementation through a social lens to ensure their adoption. When designing with community, there are six motifs worth keeping in mind. The first four were prescribed by James Scott, the final two have been added by Jeff Grabill (Grabill, p. 93):

- “1) Take small steps: Moving in small steps will allow quick shifts in direction accommodate stakeholder input and will keep the process moving forward, with stakeholders engaged, rather than waiting to release changes en masse.
- 2) Favor reversibility: Assume that not all innovations will be necessary or accepted. Do not make one innovation absolutely critical to the vitality of others
- 3) Plans on surprises: Assume that unforeseen issues will arise and be ready to adapt;
- 4) Plan on human inventiveness: As people act with tools they will find new problems to solve, or solve old problems in new ways. Encourage this innovation and be ready to incorporate changes.
- 5) Plan for/with concrete subjects to avoid modernist, reductions of humans: Real interaction with stakeholders will trump whatever expert opinion might be made on an idealized persona;
- 6) Create metis friendly institutions. It is ultimately the abilities, skills and enthusiasm of stakeholders that will determine the successful adoption of the content model.”

Planning an implementation strategy with these six concepts in mind will help to adapt to needs. At the MSUSOF, implementation has historically been the biggest hurdle to achieving a successful digital content model.

One potential solution for the MSUSOF may be to use a genre-based approach to establishing routine practices. Lisa Drush has proposed that North American genre theory might be translated into a reflective tool to analyze the implementation of a new genre within an organization (Drush, 2009). She argues that genre theory “has proven tremendously useful to both workplace and classroom writing researchers who aim to clarify the ways that recurrent text forms reflect and constitute workplace and disciplinary norms” (14:3). Drush believes that “serious, long-term engagement with an innovation” is essential to ensure successful implementation and that genre theory as an analytical tool improves the chances that “appropriate innovations are implemented ... by helping the organization to scrutinize some of its preexisting norms” (14:3). She provides four points of analysis using genre-informed analysis. First, it’s a “lean methodology” that can be used either by outsiders or a team within the organization via pilot periods that allow for reflection and revision of the innovation as part of the implementation process. Second, she proposes the use of a “genre inventory” to simplify the genre theory. One can have information for decision-making by checking the progress of an implementation against this inventory. Third, due to the built-in reflection and revision period, genre-informed analysis allows for new experience and practice to be built in immediately. Fourth, it is a flexible analysis tool that empowers

both innovations and organizations to influence and make decisions regarding how the innovation functions.

Drush draws on Mikhail Bakhtin's concepts of centripetal and centrifugal forces.

Centripetal forces represent an official plan – the intentionally planned manner for content writing to occur (Bakhtin, 1981). Centripetal forces are represented in Drush's genre inventory tool by the "intended" category. Centrifugal forces emanate from users actions to satisfy their own needs. Compare this to what is referred to in activity theory as "contradiction." Contradictions occur when the expectations of a system come to loggerheads with historical practices users might bring in from experience in other systems or ad-hoc innovations created on the fly. Contradictions are seen as the impetus for change of a system; they have a transformational power.

Drush applies her vision of genre-informed analysis to discuss the way that students and teachers at Tech Year implemented a new digital storytelling program (Drush, 2009b). One of the strongest points of genre-informed discussion is the vocabulary to discuss what happens when users of a new innovation have expectations informed by experience with another type of writing to inform their behavior with a new system. Sometimes what the designer needs to do is not cater to the exact expectations of the organization but to educate and work with the organization to make sure the innovation is adequately implemented by the organization and woven into their culture. In the Tech Year example, "both the students and their teachers were accustomed to approaching these [digital storytelling] texts from the more familiar framework of critique and

analysis, so their preparatory discussions and writing were not conducive to the new activity of crafting a digital storytelling script with a pleasing narrative arc” (Drush, 2009b, pg.186)

Using Drush’s genre inventory tool, data collection is guided by four categories: Textual substance and form; cognitive discourse/practices; social practices; and material practices. These four categories provide a robust analytical framework that takes into account, correspondingly: themes, topics, structure, media, etc (i.e. the components of the popular definition of genre); followed by mental process and skills used to produce texts; third, who is involved in activity and the social roles that individuals and groups take are considered; and finally physical space, tools, and time are all considered as having an impact on the implementation of new textual practice.

Finally, Drush discusses what happens when “divergences” occur between planned implementation and actual results. Drush offers a few places to check for problems. First, look for “endemic discrepancies between intentions and reality;” if there are many discrepancies, she suggests, the most likely culprit is friction between “existing organizational norms” (Drush, 2009, pg.14:11) and the expectations for new practice meaning that the new practice may just be an unsuitable solution given the particular problem and the particular organization.

CHAPTER 3.2: IMPROVING THE ORGANIZATION'S WRITING DISPOSITION

One of the most critical threats to sustainability that the MSUSOF faces is the issue of devoting worker time to maintaining content. As mentioned previously, the blog that was enabled as part of the original website build saw less than five posts in the four years the site was active. During the collaborative design meetings it was decided that the blog should be eliminated. Time constraints were blamed for the lack of posting to the blog, however there may be other causes. The bigger problems seemed to be a lack of content strategy and a lack of authors.

Like distributed node networks, the more actors enrolled in a network, the more durable they become. In this way, they are not solely dependent on a single node in the network. The current content model suffers from a lack of actors involved in the network. Involving more actors in the network would not only strengthen the viability of the MSUSOF website but could also help to connect with other networks in other communities. For example, the MSUSOF may see itself as part of a larger agricultural movement interested in promoting sustainable, organic practices. By giving program graduates who have gone on to other careers access to writing tools via the website, the MSUSOF not only gains more people working to make their website a timely,

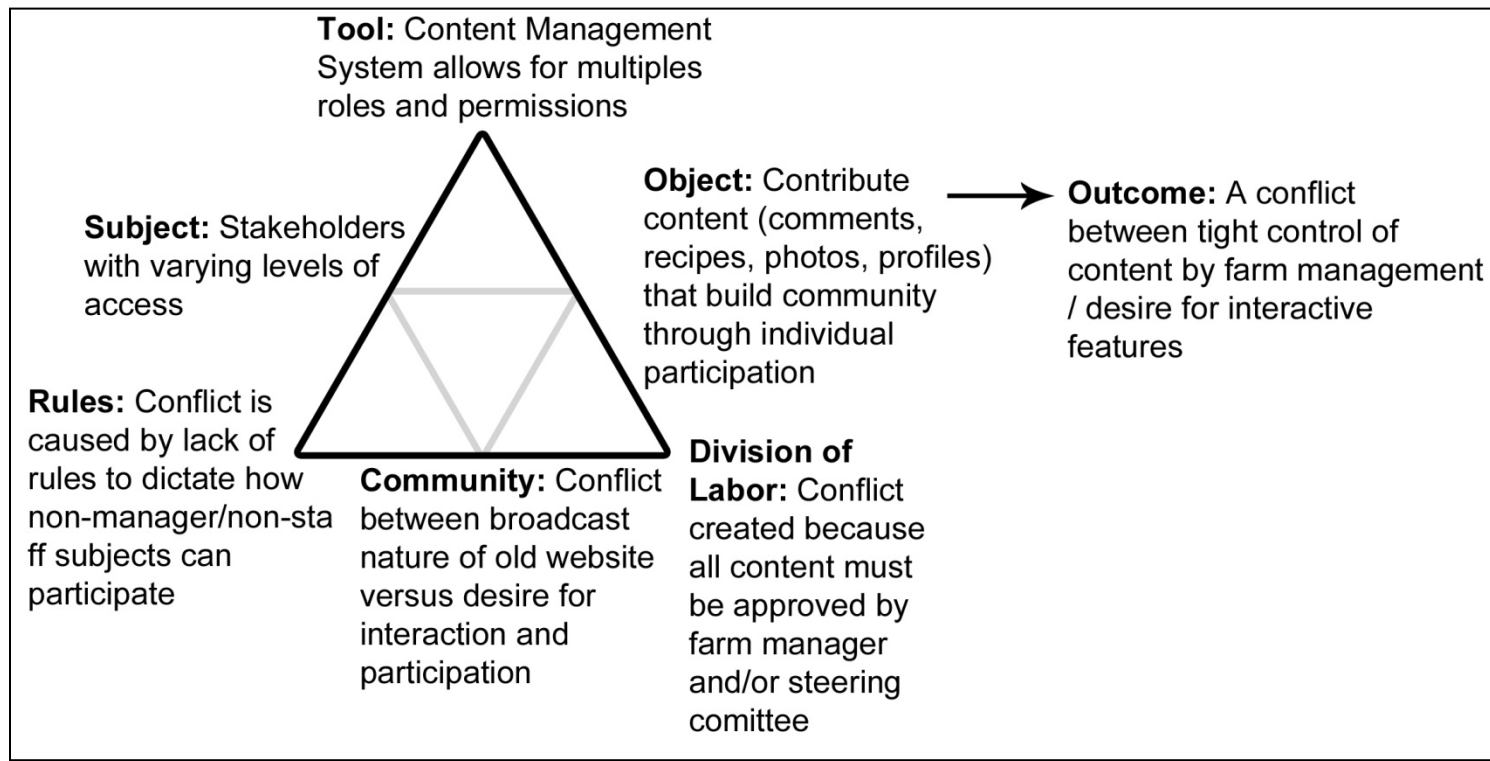


Figure 4: Activity theory diagram - increasing participation in writing activity

information-rich environment but also strengthens the reputation of the organization and ties the farm into the larger sustainable food movement. To do the opposite limits the MSUSOF website as representative of an organization run only by the top-level managers and steering committee isolates the content and limits connections. Isolation is unsustainable and goes against the very nature of networks: “An activity system does not exist in a vacuum. It is but a node in a multidimensional network of activity systems” (Engestrom, 1992, p. 13).

MSUSOF staff and farmers are not merely learning to grow vegetables. Each and every one of them is at the MSUSOF because they identify with a broader part of the sustainable agriculture movement. These underlying motives are what inform the content writing at the MSUSOF and should inform how the website looks and operates. Given the earlier analysis of the physical space that makes up the student organic farm, one would expect to find their website to have a similarity of robust community involvement. Among the reasons that their website has failed to grow as a place of engagement is that the SOF organization has not pursued systematic practice of writing as a part of their mission. On the farm, it is easy to feel that with every strike of the shovel, every planting, every footprint is an act of building a community around a sustainable food movement. Likewise, every keystroke and photo upload on the website should move the organization in the same direction. But contributing to the website isn’t viewed as part of their mission. Digital content is still believed to be separate from their “real work.”

For some, the problem seems to be that they associate digital writing as a technological endeavor, rather than a communicative practice. Technical expertise and access to technology are often believed to be specialized powers that must be accessible only by an elite few. Francis Bacon's vision of New Atlantis imagined an elite social class with access to science and technology who advised the rulers. This may be because the system is webmaster-centric, preventing even those who run the organization from creating content without the aid of an expert. In other circumstances, stakeholders may intentionally exclude themselves from the responsibility of writing content by believing that the technical complexity is beyond their control. A third possibility is that upper-level management may be reluctant to grant content writing access to the average worker because they don't believe they have the proper authority or knowledge to speak on behalf of the organization. That power to shape, steer and influence an organization's direction is reserved and blocked from those who have a legitimate stake in what happens. This separation of discourse and technological access creates a passive audience rather than active participation (Simmons & Grabill, 2007); Such disenfranchisement is a fast track to an unsustainable content model.

Decision-making is driven by science and technology -- spending more time talking about choosing a content management system than deciding what content needs to be managed -- rather than centering on writing actions (Blyler, 1999).

The concepts of narrative and communicative action each have the potential to help improve an organization's disposition about writing. Communicative action, as proposed by Habermas (Habermas, 1981), can be an alternative to a webmaster-centric content model "based on consensus among equals leading to the 'creation of communication without domination' with a focus not on 'technical problems' but instead on interaction" (Blyler, pg. 201). Habermas believes that communicative action is a path to emancipation: A freedom from purposive-rational action, which focuses on scientific and technological dogma, and strives for dialogue. Or, conversations rather than dictations - although Habermas acknowledges that it is impossible to reach a total state of "non-authoritarian and universally practiced dialogue" (Habermas, pg. 314).

In communicative action, actors are not preoccupied with only individual success, (Blyler) meaning participants are enacting communication in pursuit of a larger goal; success of the organization, social change, etc. For example, when the farm manager acts as focal actor, in actor-network terms, the resulting decisions about digital communications are made based on his, and steering committee, interests; not necessarily on what is best for the MSUSOF community. However, because emancipation is not fully realizable we must be realistic in building non-competitive ways for individuals to achieve personal goals. Allowing individual authors to receive direct acknowledgement for their efforts seems like a possible solution.

Habermas's contention that science and technology dominate societal narratives is visible in webmaster-centric content models and the idea that a website could ever be

finalized. Posting code does nothing in and of itself. To achieve usefulness or meet a goal, writing actions must take place. As an example, companies are often willing to pay for professional search engine optimization, paying large sums of money for improvements to be made that will allegedly jump the site higher on a list of search results. Yet the same company may be staunchly opposed to investing in qualitative user research that would help them write better content. In this case, gaming a search system is perceived to be more beneficial than creating personal connections, presumably because the former can produce quantifiable results while the latter cannot. To truly improve sustainability, writing digital content must be understood as an essential action, powered by organizational stakeholders, as part of a network.

Communicative action is admittedly a theorized ideal that may be difficult for organizations to embrace. Crafting a compelling, consistent narrative for the organization is a real way to enable communicative action. When access to writing tools is open, and agency is provided to many stakeholders, there is the danger for the mission of the organization to be lost or distorted. Community rules must be established implicitly in order to create a shared vision. Narratives create a centripetal force, making “actions and their unity compatible, [narratives] manage the multiplicity that comes from splicing together actors in an assemblage” (Spinuzzi, pg 48). A mission statement is an example of narrative content. The visual design (colors, images, etc) can also contribute to how actors contribute to the narrative. Perhaps the decision made at the MSUSOF to use a custom page header and template instead of the typical University template will set a tone that affects how profile descriptions are composed.

Johnson-Eilola wrote that “where previously work was enmeshed in a social context – and learning how to work involved a process of education over time – work is now increasingly fragmented and flattened. Learning how to work is shrunken and decontextualized so that only the most functional aspects are visible at the surface. In effect, the interface is not simply a tool, but a structure for work – a set of forces articulating a specific form of work, a set of forces articulating work.” (Johnson-Eilola, pg. 51) Establishing the organization’s narrative and infusing it into the digital content model can help to re-enmesh the social nature of work. So that instead of composing a string of words and sending them out into a technological ether, workers can instead compose interrelated texts and respond to one another, collaborating to make something that is ultimately more sustainable and compelling. The ultimate goal, as Johnson-Eilola states, is to “envision contexts in which technologies are integrated into humane, empowering, and ethical activities and relationships” (70).

CHAPTER 3.3: ESTABLISHING DIGITAL WORKFLOWS

Another emerging contradiction to explore results from a desire, on one hand, to use technology to reduce the time that staff spends on repetitive, information-based tasks, while on the other hand is a reluctance to adapt previously established workflows.

Three examples related to this conflict were observed. One such instance is the desire to develop a Frequently Asked Questions page on the website. Farm staff commented that they commonly reply to phone messages and e-mails that seek the same type of information. Staff requested that a Frequently Asked Questions page be provided to either circumvent repetitive questions by placing the most commonly sought information in one “easy to find” location, or to make their replies simpler, by directing the questioner to the FAQ page of the website. FAQ sections are notoriously difficult to maintain and their usefulness is subject to debate. However, if a FAQ section is to be used, it is commonly considered good practice to provide website users the means to ask a *new* question. Farm staff explicitly denied this feature, hoping to cut down on contacts rather than invite new questions.

A similar discrepancy between simplification and reluctance to change practices has appeared in the way individuals sign up for the CSA waiting list. Currently, there is a link to email the CSA manager and request to be added to the waiting list. The list is then managed as an Excel spreadsheet. Farm staff would like to eliminate the frequency of repeated email messaging required to gather all of the individual's information. To achieve this, two solutions were proposed. First, the email link could be replaced with

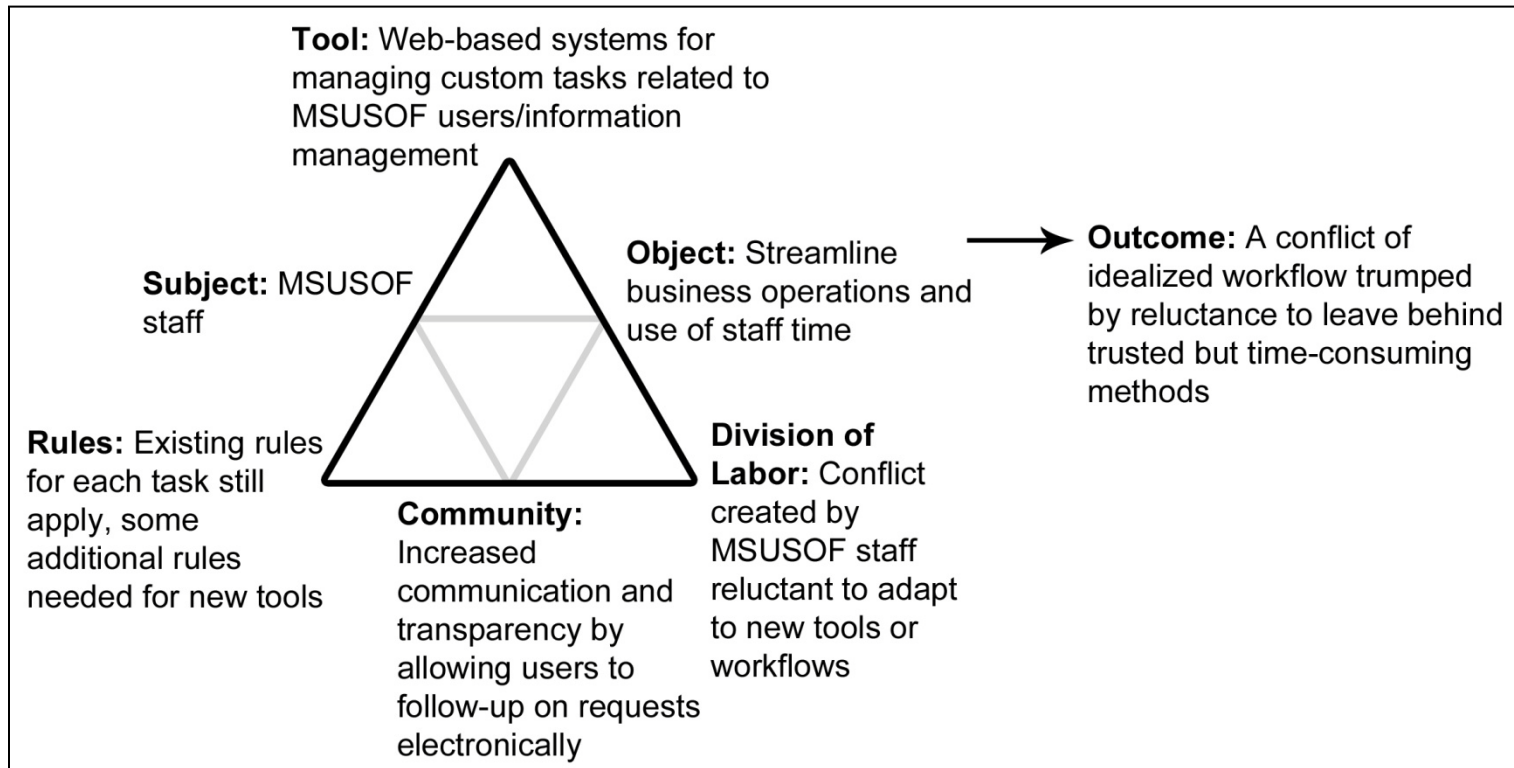


Figure 5: Activity Theory Diagram - integrating new workflows

an HTML submission form. A well-designed form would gather the appropriate information from the individual and send it to the CSA manager without the need for repeated e-mailing. The CSA manager could then move the information into the Excel spreadsheet. This solution was not ideal, because of the need to manually place information into the spreadsheet. So, to unify the steps of data collection and data storage, a Web-based solution was proposed that would store form submissions as entries in the content management system, accessible only to farm staff, that could be manipulated in the CMS (re-ordered based on priority, marked as accepted, flagged as 'payment-needed', etc.). Moving the entire CSA management into a Web-based format would require significant changes in workflows and the tools used to complete tasks. However, it would achieve the goal of automating more aspects of the process.

The third conflict related to the desire for features and a reluctance to adapt practices is the ability for website users to sign up to volunteer using an interactive calendar. This example is very similar to the previous example, in that a farm staff actor maintains a calendar in an offline format and would like to eliminate the multiple phone/e-mail contacts required to sign up a volunteer to a specific time slot. The ideal scenario for the volunteer coordinator would be for data to flow from the website into his current calendar system without any manual intervention on his part. This is not a practical solution to build, however the entire volunteer management system could be created in the Web-based CMS fairly easily.

Two common threads link these examples: First, current practices require a large amount of manual data manipulation; second, automation would require massive changes in the tools used to manage the data. Viewed in an activity theory context, this problem appears to originate in the tools node, with some cross-over into rules, in regard to how staff responds to incoming requests. The reluctance to adapt work practices to accommodate new tools seems to spring from a confusion surrounding the use of the website as an interface for data management. This change in interface affects not only the tool in use, but the context in which work is done. “The interface is not simply a tool, but a structure for work – a set of forces articulating a specific form of work, a set of forces articulating work” (Johnson-Eilola, pg. 51), and changing to a web-based interface makes the work, potentially, much more public. The examples above demonstrate a shift that would bring the subjects (user and staff members) closer together and possibly reveal the staff member’s work to scrutiny by other actors at the farm or to the end-user. Hesitance to adopt web-based methods may also be a result of general unfamiliarity with the website. Currently, requests come in directly to the farm staffer’s email or by a phone call. Although the website can trigger email messages, having to log in to manage the data may seem like an extra inconvenience if the farm member is not already using the website on a regular basis. This matter should be easily overcome via explicit rules-setting and appropriate documentation of the web-based system. However, this does demonstrate a wider-reaching problem with integrating the website into everyday activity at the farm.

The activity theory framework offers a utility for exploring connections between actors, tools and rules, and reveals areas of conflict. It should be understood that activity theory does not by its nature offer solutions to conflict. Additional theories may be combined with the framework provided to attempt to solve problems within the network. The following section explores some possible ways to extend activity theory in order to find practical solutions to network conflicts.

CHAPTER 4: ADDITIONAL TOOLS TO HELP TEND A SUSTAINABLE DIGITAL CONTENT MODEL

It is important to remember that the network presented in this paper is a dysfunctional network. The current body of network theory tends to deal predominantly with how networks are formed and maintained, but offers less in the way of manipulating pre-existing networks. There is an underserved need to develop strategies to deal with problematic networks. It would be interesting to find replicable behaviors or commonalities that can be used to improve unstable networks. This thesis has presented a network in a dysfunctional state and attempted to identify where flaws in the structure have created a failure to thrive. At this point, a dose of instinct and imagination might help to picture how other practices might influence a dysfunctional system in the attempt to increase sustainability. This section will touch on three concepts that could be joined with network analysis to further explore working with: network transparency; cognitive mapping; and user-centered design.

CHAPTER 4.1: NETWORK TRANSPARENCY

The key to solving a dysfunctional network, particularly in the case of the MSUSOF, may be to find strategies that make sustainability visible; meaning that the website's component relationships are apparent, acknowledged and receive the necessary attention needed to continue. The goal might be to make the work visible in a structured way, more similar to an activity theory diagram than the disheveled actor-network shown earlier. Using the metaphor of a farm, imagine if farmers lacked the visual data needed to sustain their crops. It would be impossible to check progress, find pests, and determine when to add fertilizer. Farmers also require training and specialized knowledge to take corrective actions based in the available data. One can imagine that making content sustainability visible requires a multifaceted approach. Frequent planned evaluation periods, as used by Drush (2009) to measure genre implementation, offers one possible solution.

Network theory offers many advantages when studying a network from a theoretical point of view. However, it does little for actors within the network as they go about their tasks. One possible approach to make sustainability visible may be to follow the example set by Drush in developing the genre integration approach; doing for network theory what Drush did for genre theory via multi-staged implementation analysis. In such multi-staged implementations, change is introduced in small increments, allowing actors to check for compatibility along the way. This approach is paralleled by Scott and later Grabill when offering advice for designing technologies for communities. Their advice is to move in small steps, favor reversibility and build a metis friendly community.

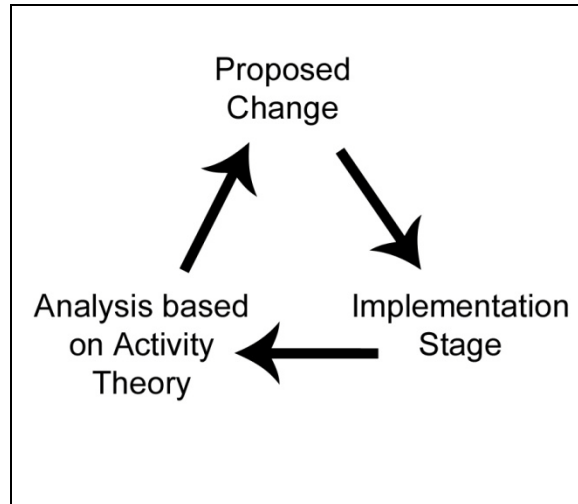


Figure 6: Analysis based on activity theory

A network-based implementation analysis could provide the benefits of activity theory's holistic approach combined with real world steps that actors could use to check progress and make changes when needed in the network. One could imagine such an approach to the problem discussed earlier of introducing mobile content writing. A small group of actors could be selected to test the system, by granting access to the MSUSOF Twitter account to each person. Updating Twitter via mobile device is a widely supported activity, so very little customization would need to take place to enable the technology. In this first step toward implementation, updates could simply be made to Twitter without integration into the website. After the initial test period concludes, the Web team and test group could meet to review the content that had been posted to Twitter. The activity theory framework could be used as a template for discussion, each node serving as the basis for a line of questioning. In the example of mobile content devices, such a discussion might look like this:

- How were testers affected by the change? (e.g. Did it positively or negatively influence their normal productivity?)
- What was the outcome of the test? (e.g. Was useful information shared or documented?)
- Were the tools used appropriate? (e.g. What changes could be made from a technological standpoint?)
- How did rule affect the test? (e.g. Were there existing rules that hindered the test? Should additional rules be added?)
- How was the community affected as a whole? (e.g. Was the community positively or negatively influenced? Were new members enrolled through the outcomes of the test?)
- Did the division of labor appropriately support the tested actions? (e.g. Should more/fewer/or different actors be assigned this task?)

This type of activity theory based dialogue sets the stage for small step implementation followed by analysis. After the dialogue is concluded, follow-up actions could be determined, either by retesting with changes, moving forward to increased implementation, or abandoning the change altogether. Thus, the process might become cyclical (see Figure 6).

CHAPTER 4.2: COGNITIVE MAPPING

Stakeholders may need to have a better conception of their relationship to the organization's digital content -- in other words, to find their place in the network. In working with the MSUSOF, one of the benefits provided by the webmaster is the ability to understand the relationship between individual nodes of text. It may be beneficial for a stakeholder to form a cognitive map of the text of the website. Network theory is available to communications professionals to study activity, but might there be a stripped down or black-boxed version useful to other actors? Such strategies have been shown to be effective for writers as they mentally plan and compose text (Flower & Hayes, 1981). Being able to "cognitively map" one's place in information spaces (Johnson-Eilola, pg. 70) is necessary to compose and interact with digital content. Thus, the ability of an organization to build a sustainable content model begins with a disposition toward writing that acknowledges writing as action that moves the narrative of the organization forward.

Within an organization, workers face multiple tasks that must be prioritized based on internal and external motivators. For example, one task might be more interesting to a worker, but another may be necessary to help others in the community complete their own tasks. In 1981, Flower and Hayes proposed a cognitive process model of the composing process. The model is a flowchart of mental processes based on their research with experienced writers at work. The cognitive process model is yet another way to demystify the authoring process without oversimplifying it. A look at the model

(Figure 7) shows that writing is a complex, non-linear thought process.

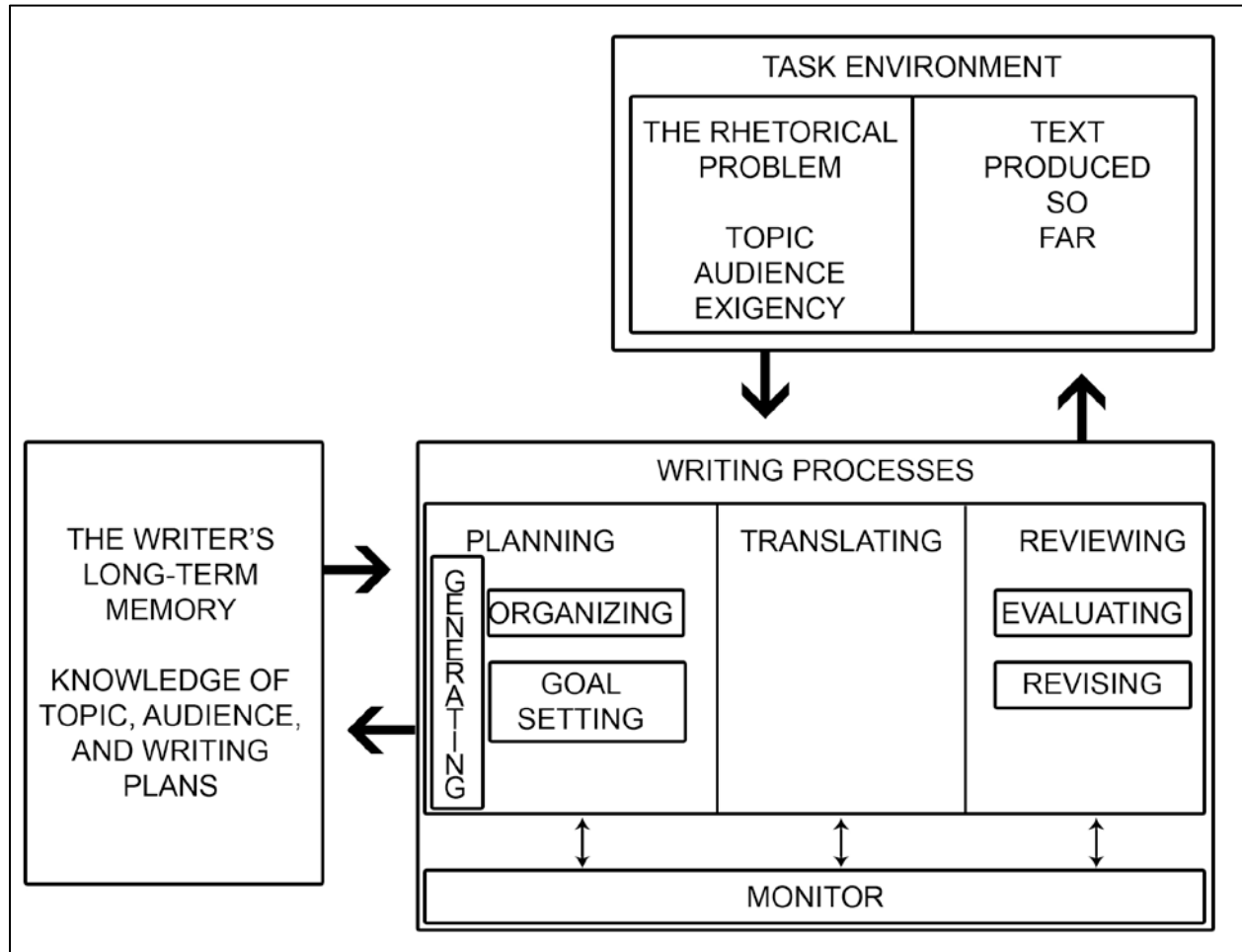


Figure 7: Cognitive Process Model of Writing (Flower & Hayes, 1981)

Flower and Hayes hoped to debase the popular notion of writing as having distinct phases (research, draft, edit, etc.) and show instead that there is a constant shifting between mental modes (Flower & Hayes, *A Cognitive Process Theory of Writing*, 1981). Despite the ongoing debate surrounding the current validity of the model, it is still illustrative of some key concepts: the framing of the task at hand, the personal experiences the author brings to the process, and the constant self-monitoring and re-

composing. This model reveals (or at least can be used as a foundation to discuss) the internalization of writing while avoiding the generally criticized assumption “that human cognition can be modeled as a computer program” (Kaptelinin & Nardi, 2006, p. 16). The Flower and Hayes model was conceived for single-author situations, while the digital writing process gains further complexity due to its multi-voiced nature. Still, fewer conflicts may arise between the motives and goals of writers and the actions in which they engage when practice is both regularized and meaningful to the writer (Palmquist). Writers must be supported as they work. They have individual goals and motives; they require access to information about their “writing assignment;” they must be provided a clear definition of an organization’s goals and audience; they require a map of the text composed so far; and the freedom to call on their individual knowledge and goals. Such information needs to be set by the organization. The Flower and Hayes model shows the complexity individuals bring to an already busy activity network. As part of a sustainable content model, writers will need to have the ability to work autonomously and collaboratively, as well as receive assurance that their work is valued and credible. To internalize a cognitive map of the website networks could be crucial.

CHAPTER 4.3: USER-CENTERED DESIGN

This thesis has portrayed unsustainable content models as entities overly concerned with technology, control, and limiting access to all members of the network. The proposed alternative centers the content model on writing and increasing the number of writers who have access to composing rights. For anyone familiar with user-centered design concepts, and Robert Johnson's work in *User-Centered Technology* (Johnson, 1998), it may seem that the same argument is being made. There is a similarity; both posit that system-centered design is unsustainable. There is also a key difference, in that user-centered design makes a strong case for the need of expert designers to gather data based on user-research, analyze the data, and present an expert solution. This thesis assumes that community stakeholders will have an equal footing with designers in how the system that supports the content model is built, as far as what and how action is supported. User-centered design assumes that when the "right" decisions are made, the system will be successful and sustainable. This thesis presents a far more complex situation where implementation is based on embeddedness within the organization, and requires flexibility in trying as many different methods as necessary.

As Spinuzzi (Spinuzzi, 2003) points out, user-centered design often builds up designers as heroes, rescuing the helpless users from the pitfalls of complicated system design. This does nothing except perpetuate the experts/non-experts dichotomy. Instead, models of collaborative design should be considered to involve users directly in the building of the system and maintain their ability for invention down the line. User-centered design literature has developed methods that may be useful to designers

working with organizations. Likewise, this thesis may provide useful insights to designers who find difficulties when working with organizations.

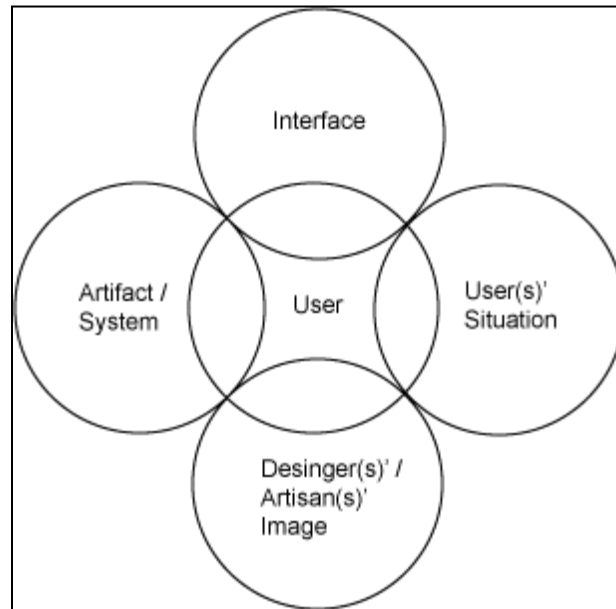


Figure 8: User-centered design (Johnson)

Johnson's model of user-centered design (Figure 7) shows an approach far more broad than the models produced by activity theory. As shown, User-centered design does not take into account nuanced relationships among stakeholders. However, user-centered design does have a strong, active community extending its implications and many texts and strategies that may be useful to professional communicators who seek to improve the sustainability of a digital content model.

CHAPTER 5: AN EMERGENT MODEL

Sustained or stagnant, digital texts are manifested via multiple relationships. Like relationships, websites are complicated; constantly in danger of falling apart.

Technology, rules, and community help to hold together the relationships, but ultimately, websites are only sustained through consistent, applied effort. It would be dangerous to assume that an absence of existing willpower to work hard at content writing means that there is no need to publish this content and make it available -- dangerous, because a decision to do nothing has significant, if unintended, consequences. To remove oneself or one's organization from a community of practice is purposeful isolation. It is possible that there are political reasons to make that decision, but it is a decision that must be made consciously, not simply because it would require too much effort to do otherwise.

The problem then becomes shifting the culture of non-writing organizations to pro-writing organizations. Doing so will take sustained effort from within the organization and a willingness to question existing practices. This includes giving up over-reaching top down control of content. Stakeholders from across the spectrum of the organization should be allowed access to appropriate tools to shape and sustain content.

Additionally, these tools should include analytical practices to ensure that writing is transparent and that there is consistent means to rework unsustainable practices. The text must never be considered "closed." This returns the discussion to Barthes, who might once again remind us that:

“We are now beginning to let ourselves be fooled no longer by the arrogant antiphrastical recriminations of good society in favour of the very thing it sets aside, ignores, smothers, or destroys; we know that to give writing its future, it is necessary to overthrow the myth: the birth of the reader must be at the cost of the death of the Author” (148).

The new society we seek to empower is one of meaningful content writing practices embedded within the culture of an organization. It would seem that to build a sustainable digital content model requires a sustained effort *throughout* an organization. There is probably not a 100% universal system to support such effort. However the experiences shared in this paper help to inform some potential guidelines for support. Characteristics include:

Community Extension: Digital content should be an extension of the existing community. You can’t create a new culture and demand adoption by the community.

Identifiable Goals: Having a set of task-oriented goals to build around will make the design process start with items most everyone can understand. It also gets the peccadilloes out of the way early and allows you to transition to higher level interests and new functionality.

Rhetorical Clarification: Be sure that the 'big-picture' is clearly stated so everyone knows why digital content is important to the organization.

De-centralized Power: Routing all content updates through one or two people hinders progress and inhibits all stakeholders from feeling a sense of ownership. All parties should feel empowered to contribute.

Appropriate black boxes: Overly technical exercises, such as HTML editing, should be taken out of the way as often as possible. Accessing content writing tools, however, should be easy.

Integration with daily practices: Whenever possible, make content writing part of tasks that are already occurring, using tools that don't remove the actor from the task at hand. Tools that users already understand will lead to quicker adoption.

Writing-positive disposition: Not all organizations need to be writing-centered, however they should all be writing-positive. Taking a short pause to post to the website should never be viewed as 'not doing work.'

Workflows to support innovation: Workflows need to be available and transparent so actors know the process necessary to contribute content. At the same time, the organization must recognize that workflows will have to change as attitudes, as well as technology, evolved.

Finally, what I consider the most important belief to be adopted by an organization in regard to a digital content model is flexibility. There should be an attitude within the organization that the website is never done; that the types of content created, and the means to create, are always changing. This I believe will help to be the gap between website as *representative* of an organization versus website as organization. Hopefully this can help lead to a third option in the future: Website as part of an organization.

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