

FOUR PARADIGM SHIFTS AND A FUNERAL

The Demise and Rise of the TC Profession in the Wake of Web 2.0

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Any exploration of professionalism with regard to professional communication must involve the broader context and scrutiny of the status and significance of *professions* within industrialized societies. Here we find four shifting paradigms in which previous models of communication, technology, and economics collide with newer ones. This article explores those paradigm shifts and their significance to professionalization in technical communication. We argue that, within globalized, technologically-enhanced societies, the place of the technical communicator is problematized, even compromised, by *create and share* tools of Web 2.0. We discuss four paradigm shifts impacting the role of technical communicators as professionals:

--Shift #1. Production of information: From producers to consumers to *prosumers*

--Shift #2. Flow of information: From broadcast to network.

--Shift #3. Mediation of information: From Web 1.0 to Web 2.0 to Web 3.0.

--Shift #4. Locales of information: From local to global/from private to public.

Keywords. Professional communication, Professionalization, Web 2.0, Web 3.0, Wikis, Twitter, Facebook, Cloud computing, Prosumers, Consumers, Amateurs, Read/write Web.

The king is dead;

Long live the king.

What lies ahead for the profession of technical communication (TC) in the era of Web 2.0 technologies? How will technical communicators distinguish themselves from *amateur* document producers, those who readily use Web 2.0 technologies for



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production and sharing? As the job market shifts to utilize lower cost, part-time employees, how will Web 2.0 technologies, available to anyone who can use them to make and distribute documents, affect the profession of technical communication? These questions are on our minds as we attempt to prepare TC students for a profession that is rapidly changing. Such questions must be discussed if we are to understand the possibilities for the future of technical communication as a profession and if the pedagogy is to do its job, preparing students for the field.

What exactly is Web 2.0? The term was officially coined in 2004 by Dale Dougherty, a vice-president of O'Reilly Media Inc., who identified key elements of internet technologies that make up this trend: enhanced user participation and movement away from mere user of Web content—downloading things from the internet—to contributor and sharer of content on the Web. Web 2.0 is the plethora of tools harnessing the power of the crowd, and creating rich user experiences in social-networking sites, video sharing sites, wikis and blogs. Twitter, Facebook, Flickr, and YouTube are channels where everybody's talking, producing and consuming content. Web 2.0 has changed the Internet and is impacting the field of technical communication.

While Web 2.0 technologies are not the only driver of change, we find their role significant enough to be brought into the conversation about change in the professionalization of our field. Thus, our study first reviews and contextualizes current literature concerning the professionalization of technical communication, especially as much recent literature calls for changes in the way technical communication identifies and promotes itself as a profession. Then, our study shifts to a cultural analysis of the profession, as we believe that any exploration of professionalism in our field must involve the broader context and scrutiny of the status and significance of professions within industrialized societies. We identify four shifting paradigms in the culture of communication and discuss their significance to the professionalization of technical communication.

This article argues that within globalized, technologically-enhanced societies, the place of the technical communicator is problematized, even compromised, by create and share tools of Web 2.0. What will be the result of this compromise, only time will tell. We do not profess to have all of the answers, but we do attempt to construct some understanding of the impact of Web 2.0 technologies on the profession of technical

communication. The article suggests ways that the profession might proceed, how it might reposition its identity and value, and create a new space of professionalization within shifting paradigms. We envision a space in which professional technical communicators reposition themselves in relation to Web 2.0 technologies as knowledge managers who will likely work with experienced users of Web 2.0 tools—both in-house and freelance—users who function as document producers. Such repositioning acknowledges trained technical communicators in their roles as decision-makers and managers, roles in which their expertise as knowledge creators—synthesizers of data into knowledge—and communication facilitators is valued and recognized. Thus, technical communicators differentiate themselves from the plethora of Web 2.0 amateur and semi-amateur document producers, those workers who stand to become a greater presence in technical communication, as they surely already are.

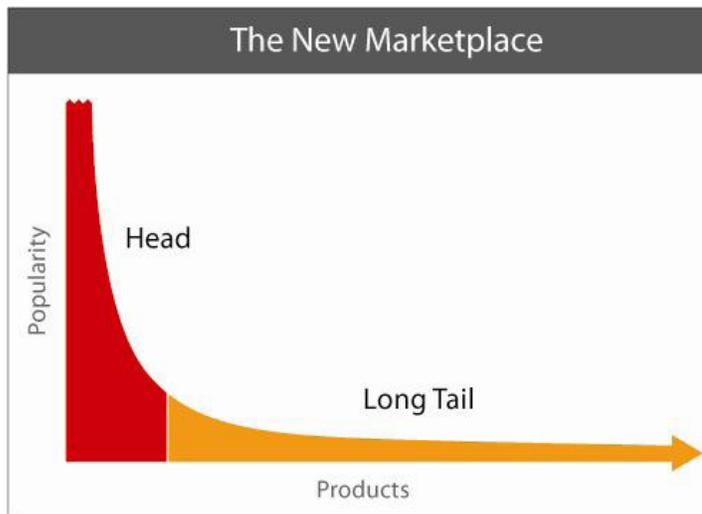
Such a move builds on the line of thinking among TC scholars, researchers and professionals who already acknowledge the more expansive function of technical communication beyond document production (Anschuetz & Rosenbaum, 2002; Faber & Johnson-Eilola, 2002; Mirel & Spilka, 2002; Slattery, 2007). This repositioning of the profession may require a funeral, that is, letting some old ideologies die in order to see the profession rise again in a new shape, one not uninfluenced by the old, but certainly one taking on a life of its own in the current multi-stage theater of information management, knowledge production, and document dissemination.

In this expansive vision of the profession, an economic term called The Long Tail deserves some attention. In a 2004 article in *Wired* magazine, Chris Anderson describes the effects of The Long Tail on current and future business models (in 2006 he published *The Long Tail: Why the Future of Business is Selling Less of More*). The concept involves frequency distribution, and has been studied by statisticians since at least the late 1940s. In essence, the low distribution and inventory costs of businesses like Amazon.com, eBay.com and Netflix allow them to realize significant profit by selling small volumes of many products to many customers, instead of selling large volumes of a few popular items like traditional brick and mortar stores. Web 2.0 consumers who shop at Amazon.com, where they have influence over things like choice and price, is the customer demographic called The Long Tail.

Given a large population of customers, substantial choice, and negligible stocking and distribution costs (typical of Amazon.com and Netflix), businesses will see the buying pattern of people create a power law distribution curve, or Pareto distribution, as in Fig. 1. The Long Tail suggests that high freedom of choice will create a certain degree of inequality. The head will be comprised of the traditional brick and mortar business model—i.e., selling lots of a few items—whereas the long tail will expand with the Web 2.0 environment to offer even more freedom of choice and potential for profit.

Figure 1

The Long Tail in general business environments



Source: <http://www.longtail.com/about.html>

If we think of technical communication in terms of The Long Tail, encompassing both head and tail, then technical communicators with a college degree and high-level skills stand to form the head of the process, while working with the multitude of Web 2.0 document producers, who form the long tail of information gathering and composition. This concept will become more evident in light of the upcoming discussion about shifts in information gathering, knowledge production, and product dissemination in the era of Web 2.0.

Literature Review

While technology is a mainstay in the field of technical communication, much of the literature of the past decade on the professional status of technical communication concerns how, not just technology, but also document production and, more significantly, knowledge building and information management, comprise the work of technical communicators (Davis, 2001; Spinuzzi, 2007; Anschuetz & Rosenbaum, 2002; Slattery, 2007). Davis (2001) sees technical communicators as more than just “tool jockeys,” and believes that the professionalization of TC is undercut by overattention to crafting and the tools of technology. She notes, “We must complete the evolution from craftsperson to professional” (p. 139). A change in the way technical communicators portray themselves—as technicians using computer tools or as creators and visionaries of computer-facilitated tasks, as translators of information or as voices in the design process—can make a difference in how technical communicators are perceived as professionals (Davis, 2001; Porter 2001).

TC scholars also agree that technical communication has been experiencing an identity crisis as well as a crisis of credibility (Spilka, 2002; Faber & Johnson-Eilola, 2002; Davis 2001). The profession’s historical uncertainties about its value, worth and place, however, could provide the impetus for reform. Writes Spilka (2002), these uncertainties “could reflect our . . . struggle to come of age, to evolve into something more permanent, credible, and valued, namely a profession” (p. 97). How exactly that professionalization might happen is up for debate, but Spilka (2002) goes on to suggest a strategy. First, embrace the diversity that characterizes technical communication (p. 97). The field is filled with people doing all kinds of work that falls under the label of technical communication, from document construction to web site design, to usability testing and usability management, to project and marketing management. Second, establish a vision of what we want the profession to be and then create a set of goals to get there. Finally, organize a consortium of diverse members to plot a path to achieve the goals (p. 97).

Talk among TC scholars is that TC lacks the qualities of a profession (Anschuetz & Rosenbaum, 2002; Faber & Johnson-Eilola, 2002; Schriver, 2002; Johnson, 2004). They are concerned that the field is characterized by the products technical communicators create—manuals, websites, reports—and that the value of technical

communication is based on products. Faber and Johnson-Eilola (2002) note that “[w] hereas production is the key feature of the industrial economy, knowledge is the key feature of the information economy,” and the problem for TC is that we have defined ourselves through the making of products, not knowledge (p. 137). Anschuetz and Rosenbaum (2002) present examples of technical writers and editors who moved out of document production jobs into management and strategist positions. One technical communicator whom they interviewed had moved from Technical Writer to Associate Partner for Technology, one from Technical Editor to Usability Lab Manager, and one from Senior Technical Writer to Business Operations Strategist (pp. 151–56). Like Spilka and Mirel, they advocate for expanded roles in design and management of information and knowledge for technical communicators. High level activities, such as *manage*, *leverage*, and *build*, have entered the vocabulary when describing what technical communicators really do. As Web 2.0 tool jockeys—amateurs in the field who populate the “long tail” of production—take on the more technical tasks of document production, professionally trained and, perhaps, future certified technical communicators can be acknowledged in these high-skill roles of manager and producer.

How can this transition be accomplished? Key here is the need for some deep thinking about the work of technical communicators, a reenvisioning of the leadership roles available, a visionary approach to repositioning the TC professional in industry, and rearticulation of the value of technical communication as a profession. Mirel (2002) advocates active involvement in change. Spilka (2002) echoes that sentiment:

To resolve the current identity and credibility crisis, we need to make both external and internal changes. In addition to engaging in external organizational politicking and strategic positioning, we need to modify our internal collective consciousness to leverage our diversity rather than bemoaning that our lack of consensus to date is some kind of tragic flaw that we might never be able to overcome. (p.101)

Thus, technical communicators must first see their full potential as participants in decision making and then market their higher level skills.

One problem in the reconfiguration of value and position within TC, write Faber and Johnson-Eilola (2002), is that TC does not have the academic programs or professional practices in place to facilitate this new professionalism (p. 141). They

recommend what they call a hybrid corporate/academic pedagogical interface to facilitate the practice of higher-level thinking and management skills following the business school model of on-campus interfacing with industry. A relationship between TC and industry can provide TC students with firsthand practice in creating solutions to business problems, say Faber and Johnson-Eilola (p. 143). They believe that this direct integration of academia and industry “emphasizes the importance of knowledge flow between academic and corporate sites. It also emphasizes the move to knowledge-based work in corporate settings” (p. 145). Such collaboration could be beneficial to TC.

The marriage of academics and industry on campus strikes fear in the hearts of some, however. Writes Johnson (2004), “[t]he most obvious danger is that universities will become the “servants” of private interests [industry] and lose an essential element of the “academic freedom” which has been a hallmark of higher education for the last two centuries” (p. 111). Notwithstanding, Johnson recognizes that industry understands knowledge as a commodity, one that technical communicators are particularly poised to deliver and direct. He writes,

[f]or technical and scientific communicators the fact that knowledge is now a commodity to be invented, designed, and eventually marketed holds great promise for our profession. After all, technical and scientific communicators have always been the inventors and distributors of either their own or someone else’s knowledge . . . we are those information managers and knowledge specialists (pp. 113–14).

What Web 2.0 Means to the TC Profession

Web 2.0 functions both as ideology—political, economic, neoliberal—and realm of commodification and, as such, greatly impacts the TC profession. As a way out of the *new economy* crisis in 2000, says social theorist Fuchs (2008), new ways of securing investment in Internet-related business had to be found. Other scholars also view Web 2.0 in market terms. Writes Scholz (2008), “[I]ike with any bubble, the suggestion of sudden newness is aimed at potential investors.” Reips and Matzat (2007) go so far as to suggest that Web 2.0 might be “an overblown marketing attempt” (p. 1). These comments lead us to believe that it is likely that Web 2.0 was created to function as

marketing strategy. They also lead us to think that, as a major player in the market, Web 2.0 is here to stay.

Rauch, Morrison and Goetz (2010) acknowledge the changes brought about by Web 2.0 technologies, and have looked closely at how those changes manifest in the workplace, namely in writer-customer interaction, customer troubleshooting, information sharing, globalization, accessibility, documentation methods and delivery, and faster product development. Interestingly, most all of these concepts are part of the technical communication profession. What we understand about Web 2.0 is this:

- Web 2.0 is more than a set of cool gadgets, sexy technologies, and social networking. It has, at its heart, powerful ideas that are changing the way people interact.
- Web 2.0 blurs the line between producer and consumer, between expert and amateur, and has shifted attention from access to information to access to people. New kinds of online resources—social networking sites, blogs, wikis, and virtual communities—allow people with common interests to meet, share ideas, and collaborate in new ways.

It is this blurring of the lines between expert and amateur that problematizes the TC profession. The chief executive of the Chartered Institute of Library and Information Professionals (CILIP) makes this point (McKee, July 2009):

In a web 2.0 world, the “closed shop” model of professionalism is dead in the water. The fundamental transition of the “information society” is a transition from traditional forms of authority to a much greater focus on community: on collaboration and personalisation with traditional barriers broken down. For a Web 2.0 model of society, we need a Web 2.0 model of professionalism – not just in our use of technology but in our culture and ways of behaving.

Problematic is the reality that what was once hailed as an empowering and liberating process of production and dissemination of information has resulted in a restructuring of labor designed to cut costs. Web 2.0 usage, among other things, engenders free or amateur TC labor. For every TC communicator who has a degree, there likely is an outsourced TC communicator who does not. For every TC communicator

who works for a moderate wage, there likely is an amateur who is willing to work for less—or for nothing—as we shall see in the following discussion of paradigm shifts in the culture of communication.

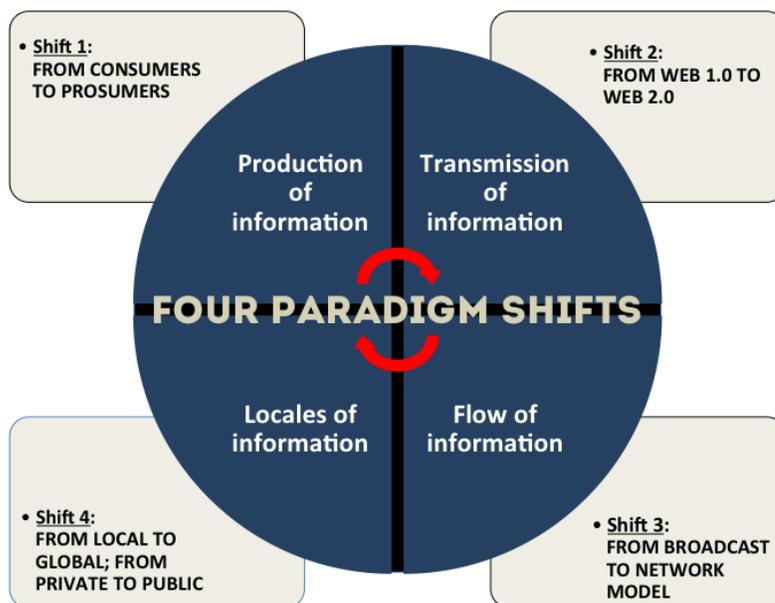
Four Paradigm Shifts

Before Web 2.0 technologies were introduced mainstream, ways of producing information, mediating it, broadcasting it, and storing it were already in flux. Following is a discussion of four shifting paradigms in which previous models of communication, technology, and economics collide with newer ones (see Fig. 2).

Shift 1: From Producers and Consumers to Prosumers—Production of Information

According to Gibbons, Limoges, Nowotny, Schwartzman, Scott, and Trow (1994), Western industrialized societies are passing from Mode 1 knowledge (academic, disciplinary, university-based) to Mode 2 knowledge generation (interdisciplinary,

Figure 2
Conceptualization of paradigm shifts



multi-institutional, performative). The production of knowledge in industrialized Western nations trends toward breaking the barriers between academic research and applied research, the world of universities and industry and government, as well as other traditionally separate disciplines. The hybrid academic/industry concept touted by Faber and Johnson-Eilola (2002) is well established, particularly in areas of science and business. It is important to note, however, that the interdisciplinary nature of Mode 2 knowledge production does not necessarily engender a democratic process. For example, in the economics of Wikipedia, what passes for a democratic process of information production—everyone gets to contribute through use of Web 2.0 tools—is far from truly democratic, considering that Wikipedia has a locked down system of editing—which is probably a good thing. Another, more insidious, problem is that Facebook’s profit model is built on ownership of its users’ free labor as well as on users’ production of value. Facebook members build their own pages that are subject to market scrutiny and advertisements.

Consumers who produce their own goods for sale or use by others is not a new concept. The term *prosumer* is generally attributed to Alvin Toffler (1980) who argued that prosumption was predominant in preindustrial societies in cottage industries—the “first wave.” Cottagers produced, consumed, and sold the goods they produced at home. This economy was followed by the “second wave” of marketization, industrialization, and its factory concept, which he says drove “a wedge into society, giving birth to what we now call producers and consumers” (p. 266). Contemporary society, in Toffler’s view, is moving away from the aberrant separation of production and consumption towards a “third wave” of once again both consuming and producing, which, in part, signals the reintegration of the “prosumer” (p. 265). Witness again the Facebook phenomenon in which members produce their own pages and consume other Facebookers’ pages. The trend seems clearly moving toward putting consumers to work—turning them into prosumers—as either unpaid or underpaid employees.

What results is the Pro-Am, or professional-amateur—a seeming oxymoron—who transgresses the boundaries of producer and consumer and participates in adding value to the thing produced and consumed. Leadbeater and Miller (2004) define the Pro-Am:

A Pro-Am pursues an activity as an amateur, mainly for the love of it, but sets a professional standard. Pro-Ams are unlikely to earn more than a small portion of their income from their pastime but they pursue it with the dedication and commitment associated with a professional. (p. 20)

We know Pro-Ams as *geeks*, *nerds*, *hackers*, and *enthusiasts*. They are also sometimes retired professionals. They are a “new social hybrid,” write Leadbeater and Miller (2004), who note, “[t]heir activities are not adequately captured by the traditional definitions of work and leisure, professional and amateur, consumption and production” (p. 20). Pro-Ams contribute to fields such as astronomy, sports such as golf and tennis, music and, of course, computers and technology. They produce goods and services which they also consume and “create a sense of identity for themselves through consumption” (p. 22). A Pro-Am in the theater might spend weekends attending theatre camps and performing there.

How do Pro-Ams affect the nature of production and consumption in the area of technical communication? For one thing, as Leadbeater and Miller (2004) note, “[c]omputer programmers who are part of the open source movement buy computers, not just to play games, but to write better software for others to use” (p. 22). In addition, the open source characteristic of Web 2.0 technologies allows and, indeed, facilitates computer enthusiasts—and anyone with computer abilities for that matter—to write documents, design graphics, and create websites for a fee and from the comfort of their home. What today’s Web 2.0 technologies do for them is make their jobs much easier and give them access through open source platforms to many more customers and consumers. Leadbeater and Miller (2004) believe that “[t]here are going to be more Pro-Ams in more walks of life and they are set to have a significant influence on society: socially, politically and economically” (p. 20). Thanks to Web 2.0 technologies, Pro-Ams may now more readily compete with trained professionals.

In discussing Pro-Ams, it is appropriate to address TC freelancing. While some TC freelancers may be trained professionals, others may not be. Freelancing may draw from the Pro-Am group. In a small study of freelance technical communicators targeting the influence of corporate culture on perceived value of their work, Brady (2011) interviewed TC workers, dividing them into two groups, 1) those who had more access to corporate culture information—the high-CCS group—and 2) those

who had low exposure to the culture of the business for which they worked—the low-CCS group. In the area of perceived confidence in creating satisfied customers, the high-CCS group reported an 81.8% success rate, while the low-CCS group reported a comparable 80% rate (p.177). One difference in communication styles, however, occurred regarding real-time—phone, in-person—versus asynchronous—email, texting—communication methods. Brady reports that “although e-mail/text was the primary means of communication for the high-CCS group,” (63%), every respondent in that group (100%) also used some form of real-time communication (p. 187). In contrast, 90% of the low-CCS group said that e-mail was their major mode of communication and 60% reported using any real-time method. Asynchronous communication for the low-CCS group did not seem to affect their opinion of their work as satisfactory. This study suggests, as does the cultural study by Leadbeater and Miller on the potential economic effect of Pro-Ams, that freelancers less exposed to corporate cultures but enabled by electronic tools, stand to impact the profession of technical communication.

It is, perhaps, within this very dynamic that the expertise of the technical communicator trained in rhetoric, analysis, and information management can emerge as a professional distinct from the Pro-Am. In information intensive industries, technical communicators can find a place as, not just information producers but, more significantly, as information brokers with the skills to structure, mediate and transmit information into knowledge.

Shift 2: From Web 1.0 to Web 2.0—Transmission/Mediation of information

Like radio in the 1920s or television in the 1950s, computer-mediated information transmission lines in the 1990s were touted as empowering, enlightening, and energizing technologies. But soon after, they too were folded into existing circuits of corporate commodification. The question becomes, who gets to mediate information, transform it into knowledge, and transmit it to the world?

LinkedIn is a Web 2.0 site devoted to professional networking with 42 million members worldwide (reported in 2009). Its content is currently translated into four languages, but a mid-2009 survey asked its members, the prosumers of the site’s content, whether they would be willing to volunteer to translate the site into other languages.

That is, they were asked to do the work of translating for no pay. Translating is a highly skilled, well-paid profession. LinkedIn is a profit-making organization, and one way of increasing its profitability is to reach a larger audience through more translations of its content and to get members to do that work for them—members already do such work as uploading information about themselves, for no pay. LinkedIn is far from the only Web 2.0 site to attempt this exploitation. Google asked a number of illustrators to provide free art work for its browser, Chrome. Facebook asked for volunteers to translate explanatory language on its Web site into over 20 languages.

The reaction to such actions has sometimes been strongly negative, and it is an indication of the struggle between capitalists and prosumers over the process of prosumption, especially as it exists on Web 2.0. In the LinkedIn case, respondents were asked what nonmonetary incentives they would prefer (e.g., an upgraded LinkedIn account, or no incentive “because it’s fun”). Many said no to the choices provided, with one LinkedIn participant writing that he would prefer cash. LinkedIn and other Web 2.0 sites defend such actions by saying that the exposure they are offering contributors could lead to paid work. Some members see the merit in this argument; one translator remarked on it as a great opportunity to market her skills and abilities.

Where does the work of the technical communicator fit in this new model of brokering information and transmitting knowledge? Technical communicators both produce information, in the form of manuals and other documents, and they also produce knowledge. As we think about the expansive role of technical communicators and their work as “more than just makers of communication deliverables” (Mirel & Spilka, 2002, p. 94), then we can more readily envision the role of technical communicators as knowledge disseminators in a knowledge economy. If skills in writing are “at the heart of the knowledge economy” (qtd. in Swartz & Kim, 2009, p. 219), and we believe that they are, then we must think about the role that rhetoric plays in knowledge production.

The trained technical communicator understands the role of rhetoric in the process of mediating information and transforming it into knowledge. But in what space does one create rhetoric and who gets to enter that space? Swartz and Kim (2009) tell us, “[t]he places and *kairoi* associated with technical communication are being reshaped by information and communication technologies, by near ubiquitous connectivity, and by more robust networking capabilities that have facilitated the creation of an expansive

information space” (p. 212). Web 2.0 technologies have helped expand the space onto which technical communicators can exert their rhetorical expertise, a skill which is both desired and required by industry of all types. In fact, such a skill is more or less mandated by web technology. As Spinuzzi (2007) has noted:

when we are all potentially in contact with each other, across organizational and disciplinary lines, we must persuade more people coming from different domains—not just our superiors and coworkers, but also service providers, contractors, customers, and amateur enthusiasts of relevant communities. Stakeholders multiply, as do the connections between them (p. 272).

Technical communicators are particularly poised to succeed as rhetoricians in the digital age. As Slattery (2007) reminds us, “the profession of technical writing straddles technological and rhetorical skill” (p. 314). Thus, the trained technical communicator stands to benefit from Web 2.0 technologies that open new spaces and new valuations for rhetoric.

Technical communicators function, not only as rhetorical strategists, but also as curators of knowledge. They have the know-how to manipulate, manage, distill and explain information—to create a knowledge product. Curating and mediating are value-added elements of the profession. O’Keefe (2009), in discussing the *friend or foe* concept of Web 2.0 in relation to technical communication, sees Web 2.0 technologies as offering “an opportunity for technical writers to participate as “curators” – by evaluating and organizing the information provided by end users.” She notes:

[t]echnical writers are accustomed to being the gatekeepers for product information. They carefully organize product documentation, online help, and other user assistance for their readers. Compare this to the chaos of the Web, where content is splattered across blogs, forums, wikis, and the like with little or no organizational scheme.

O’Keefe recognizes the value of user-generated information on the Web, saying it can be authentic, passionate and specific, but adds that it generally is not comprehensive, edited or curated. As more and more information comes to industry from end-users, the work that technical communicators do—manage data and turn it into useful

knowledge—will be an increasingly valued skill, and one that stands to reposition the technical communicator in the professional world of industry. Web 2.0 is our friend.

Shift 3: From Broadcast to Network Model—Flow of Information

In a broadcast model, those who control the distribution channels often profit more than the creators. Think of record labels, newspapers, or the six o'clock evening news. We are now, however, in an era of networked flows of information fueled by Web 2.0 concepts, which has changed the distribution of information.

As a result of the multi-directional distributive aspect of Web 2.0, much content, nowadays, will be first encountered away from the domain which perhaps originated it. With this dislocation of source comes the threat of information degradation. But to a large degree, the nonhierarchical nature of the Internet protects it against such failures, providing adequate means of self-correction. Says Gilmore (qtd. in Elmer-Dewitt, 1993), "The Net interprets censorship as damage and routes around it." But as soon as communication begins to move one way only—generally from top to bottom—these self-regulating and self-correcting features are disabled. Cyberneticists know that one-way, hierarchical, or top-down (i.e., nondemocratic) communication channels do not behave intelligently because, as Boulding (1966) observes:

there is a great deal of evidence that almost all organizational structures tend to produce false images in the decision maker, and that the larger and more authoritarian the organization, the better the chance that its top decision-makers will be operating in purely imaginary worlds.

Effective communication runs both ways. Attempts at restricting data flow—in the form of censorship, for example—not only suppress information, but also disrupt the dissemination of correct information. In technical communication, dissemination of incorrect information can mean the difference between life and death (e.g., in the medical profession, engineering).

Who controls—in the sense of giving it direction—this flow of information? Cloke and Goldsmith (2002) argue that managers do, but on borrowed time:

Managers are the dinosaurs of our modern organizational ecology. The Age of Management is finally coming to a close . . . Nearly unnoticed, a far-reaching organizational transformation has already begun, based on the idea that management as a system fails to open the heart or free the spirit. This revolution is attempting to turn inflexible, autocratic, static, coercive bureaucracies into agile, evolving, democratic, collaborative, self-managing webs of association. (p. 3)

Cloke and Goldsmith (2002) advocate self-managing teams as teams that are, by their very nature, “webs of association” (193). Shirky (2008) also finds value in self-governing groups. He views the “social software” of Web 2.0 as an alternate and empowering tool for amateurs because of its ability to create groups of knowledge producers in which multiple heads can be better than one. He also finds value in knowledge produced without the constraints of institutions. He writes: “we are living in the middle of a remarkable increase in our ability to share, to cooperate with one another, and to take collective action, all outside the framework of traditional institutions and organizations” (20-21). Conversely, Keen (2007) writes:

[t]he Web 2.0 revolution has peddled the promise of bringing more truth to more people – more depth of information, more global perspective, more unbiased opinion from dispassionate observers. But this is all a smokescreen. What the Web 2.0 revolution is really delivering is superficial observation of the world around us rather than deep analysis, shrill opinion rather than considered judgment. (p.16)

Technical communicators of this century can straddle this philosophical divide. They can embrace the advantages Web 2.0 tools provide for sharing and collaborating data and at the same time position themselves as the arbiters of that data, as the ones whose job it is to execute “deep analysis” and “considered judgment” to create knowledge out of the plethora of voices on the Web.

Technical communication is, in its distributive nature, team-driven. Technical writers and editors often collect the documented expertise of their collaborators and, as Slattery (2007) puts it, “stitch together assemblages of source information which they weave into new documentation” (p. 324). The role of the technical writer, in this instance, is artist of the vision of the final document, arbiter of the rhetoric of the piece. While Web 2.0 enables construction and dissemination of documents that may never

pass through a final arbiter, nevertheless, a place for the technical communicator as manager of information exists where curating and arbitration is needed.

The distributive nature of technical communication and the particular skills of the technical communicator make the profession particularly suited to work within the Web 2.0 flow of information system. Just as it is the skills of curating and decision-making that enable technical communicators to mediate information, so it is their expertise in technology, analysis and management that enables them to succeed in working with the complex flow of information and texts that comprise the Web 2.0 workplace. Slattery (2007), in his study of the work of technical writers for one business-to-business technical documentation firm, found that, in the distributed nature of the work at that institution—writers from various areas contributed texts from which the technical writers generated documents—“documentation is not so much written as it is assembled—a pastiche of contributions from multiple individuals” (p. 315). In his study, Slattery calls attention to, not only the large number of texts that the technical communicators in this business dealt with, but also the large number of organizations participating in the construction of the documents, as well as coordination with the IT department on generation of, access to, and retrieval and manipulation of texts and data. Further, TC professionals must, not only collaborate on data acquisition and collate information, they must also manage the whole process. Says Slattery, the “writers are experts in soliciting expertise from others and instantiating it in the end product document” (p. 319).

Such expertise should be the focus of the profession as we move forward. Slattery (2007) reminds us of a clear danger in focusing too closely on technology for the future of the profession: “There is the additional concern that if our expertise is merely technological, sea changes in the ease of use of that technology might threaten narrowly defined technical writing positions” (p. 323). Savvy Web 2.0 users are already challenging use of technology. Technical communicators who can execute and manage a balanced, free flow distribution of information stand to succeed in a Web 2.0 environment.

Shift 4: From Local to Global; From Private to Public—Locales of Information

In the 1970s, loosely coupled transnational alliances of information producers began to coordinate local markets, regional governments, global capital, and sophisticated technologies. In the 21st century, writes Shirky (2008), “[m]ost of the barriers to group action have collapsed . . . We can have groups that operate with a birthday party’s informality and a multinational’s scope” (p. 48). But can we? In the early days of computers, everyone shared access to a large mainframe. Later, Steve Jobs and Bill Gates put computing power in the hands and on the desktops of the individual. Today, with the advent of cloud computing (Web 3.0, or centralized storage sites of information), we are about to return much of this computing power to central locations.

Amazon.com has a centralized storage site, as do other large, corporate entities. As industries refocus on centralized systems of information structuring, management and storage, they will value employees with the skills to manage and synthesize. Further, as brick and mortar industries follow suit to centralize control of their information, more opportunities can arise. As Davis writes in 2001, “[t]he technical communicator with a degree in the field is widely becoming the preferred employee in industry” (p. 83). Thus, facilitating relationships with industry in TC pedagogy, the hybrid academic/industry relationship advocated by Faber and Johnson-Eilola, has the potential to be an auspicious move for the profession in the age of Web 2.0/3.0.

Another clear impact on technical communication regarding the shift from private to public involves globalization. As Starke-Meyerring, Duin and Palvetzian (2007) note, technical communicators “increasingly work in globally distributed teams, directly engage diverse customers and other stakeholders in digital networks, and experience the influence of local and global policies, agreements, and corporate practices on their work as well as on their roles as citizens” (p. 167). As such, technical communicators draw on, not only their technology, managerial, and rhetorical skills, but also on their cultural communication skills to interact with constituents across geographical boundaries and cultures. Further, technical communicators who work for transnational corporations must be equipped with keen contextualization skills in order to negotiate content from the standpoint of cultural difference. As Collier and Toomey (1997) note, technical communication is not just a process of gathering and presenting

information and persuading, but rather it “is a process shaped by the contexts in which it occurs” (p. 3). Contextualization takes on new significance as a skill in globalized networks of information.

Faber and Johnson-Eilola (2002) recognize the significance of globalization and knowledge production on the field of technical communication: “In the context of global competition, the ability to create and access new knowledge, share that knowledge throughout the company, and then leverage that knowledge into new products and services becomes more valuable than the ability to simply manufacture a product ... Knowledge is the key feature of the information economy” (p. 137). The domain of international commerce provides fertile ground for the technical communicator to create and foster skills that establish the profession in a global economy.

Web 2.0 and the Future of TC

Rheingold (2002) predicts that tomorrow’s fortunes will be made by those businesses that find a way to profit from changes in communication technologies. First, of course, companies will have to understand those technologies, and this understanding goes beyond knowing which buttons to push. It begins with understanding that a profound paradigm shift is underway, has been underway, changing the way people think, interact, govern, buy/sell, create, work—simply put, changing the way we conduct our lives. Rheingold observes: “As with the personal computer and the Internet, key breakthroughs won’t come from established industry leaders but from the fringes, from skunkworks and startups and even associations of amateurs. *Especially* associations of amateurs” [his italics] (xiii). Thus, technical communication can profit from the inventors and creative artists hawking their wares on the Internet. Collaboration with the Pro-Ams and tool jockeys just seems like a good idea. In doing this, however, technical communication must also let go of its past pigeon-hole image as document producer, and reposition itself in terms of more diverse services: management, decision making and knowledge production.

Significantly, technical communicators stand to prosper in the globalized economy amid the Internet start-ups and skunkworks by being savvy cross-media communicators. That is, they can show professional versatility as print and non-print professionals, as intelligent rhetoricians and conscionable managers, as well as

culturally aware and intelligent decision makers. Writes Klink (2000), “[d]espite the current popularity of multimedia computing, and the suitability of visual language to an online environment, the future of effective communication does not lie solely in electronic realms.” He adds, “there is a growing demand for creative people who are experienced at working with a variety of media types.” A wide variety of skills, executed professionally and creatively, is needed now, perhaps more than ever, as business and industry embraces Web 2.0.

We return to our view of emerging Web 2.0 technologies in TC playing a role in the cultural, as well as economic “long tail of production.” We see professional technical communicators of the future engaging a multitude of amateur and semi-professional communicators, interacting and sharing information through Web 2.0 tools. Future TC professionals will do this with ease as Web 2.0 is part and parcel of their world. We have no doubt that such practitioners will compete against, and engage amateurs in creativity, speed of dissemination, connectivity, and sharing of resources. But unlike some of those presenting as amateurs, trained technical communicators will have a body of other skills that they have gained in the classroom—rhetorical, analytical, contextual, creative, and cultural. These skills will form the base of professionalism, the “head” of the knowledge production process. Such skills will inform the trained technical communicator’s production of knowledge and will be applied to the “long tail” of the production process where information is supplied by any skilled technician. Anyone can produce new or sexy or different products using Web 2.0 tools, and anyone will. Thus, in this multi-dimensional, sharing, free and daring process of creating knowledge, a host of exciting possibilities opens up.

How can future technical communicators carve out a space as knowledge workers in a globalized, hybridized, and increasingly centralized environment? How can they establish and maintain professionalism in the face of prevalent amateurism? O’Keefe (2009) suggests that technical communicators consider the following:

- Acknowledge the value of, and read, online communications such as blogs, forums, and wikis.
- Fix mistakes found in online discussions, and edit pertinent wiki pages, being sure that you understand the wiki’s culture.

- Make known your company affiliation (create a pseudonym if you prefer not to use your name).
- Accept that you are no longer necessarily the gatekeeper of the company's information, but think of yourself as curator of the company's information and make it accessible and useful.

As often as not, it will be the quality of the product, the accuracy of information, and the degree of professionalism in construction, contextualization, and dissemination that will make the professional technical communicator stand out in the crowd that is Web 2.0.

CONCLUSION

Wellman and Gulia (1999) claim that just about everything that happens in face-to-face interactions also happens online—it just happens differently. Let us remind ourselves what Web 2.0 aims to achieve: the construction of a global social net where business news, information, videos, and viral ads zoom through the *people net* and stick for a moment to a couple of eyeballs before zooming on to the next knot in the matrix. How the academy and the profession react to the influx of Web 2.0 tools, users, and contributors will be a big part of how we professionalize the field. Cooperation is essential. Opportunities should also be taken to distinguish the trained technical communicator from the Web 2.0 Pro-Am, to publicize and legitimize the skills of trained communicators with the end goal of licensure or certification. Should this proposal sound elitist, let us add that, done in the spirit of democracy, recognizing that we all work together in *the long tail of production*, such a move could enhance technical communication as a profession.

Web 2.0 is upon us, has been for years. It is already morphing into Web 3.0—the semantic Web—and with this evolution will come, not only more challenges to TC, but also more opportunities. Are we ready for the (r)evolution? ■

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