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A Choreography of Living Texts: Selections from the ARST Oral History Project

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Abstract

Oral history projects about rhetorical studies contribute to transdisciplinary histories by creating living texts that reflect the dynamism of scholarly cultures. Through interviews conducted at the twentieth anniversary of the founding of the Association for the Rhetoric of Science and Technology (ARST), we chart the organizational and intellectual history of a field, its contributions to science studies, and its potential future directions. These digitized, archived oral histories serve as an articulation point for transdisciplinary reflection, but they also represent an important strand of digital humanities work that creates living texts and keeps them open for future articulations.

In a recent *Rhetoric Review* symposium, Andrew King celebrates a renewed sense of a useable past for contemporary rhetorical study characterized by “a wonderful eclecticism of method and a kind of healing of the breach between effective discourse and beautiful discourse that acted as a Berlin Wall between critics in English and those in [C]ommunication” (qtd. in Enos et al. 368).¹ One example of this renewal is found in the rhetoric of science, technology, and medicine (RSTM), a subfield of rhetorical studies long characterized by cross-disciplinary conciliation and methodological pluralism. *Rhetoric Review* has showcased RSTM scholarship by English and Communication scholars from its earliest issues (see Halloran; Zappen;

Crismore and Farnsworth), to its most current ones (see Sidler; Heifferon; Gross; Hallenbeck; and Wickman). Together these works reflect a remarkable diversity of approaches to rhetorical scholarship on STM issues that remains coherent through shared objects of study. The twentieth anniversary of the Association for the Rhetoric of Science and Technology (ARST) was an appropriate time, then, to reflect on the useable past of RSTM scholarship, to identify some of its contributions, and to imagine future directions for scholarly inquiry in this area.

During the annual ARST preconference at the 2012 meeting of the National Communication Association (Orlando), RSTM scholars were asked to meditate on “What’s in Our Repertoire” and “Horizons of Possibility” (Keränen, “Conspectus”). To accompany the formal preconference activities, ARST president Lisa Keränen asked us to record oral histories with founding and influential figures attending the preconference. These are important “thread ends” that “enter contemporary intellectual discussions through texts preserved over time that find their way into our discourse and thought” (Simonson 25). These thread ends have a unique digital presence now, as the interviews are published at <http://www.youtube.com/arstonline>.² Alongside the oral history videos and the special issue of *POROI* that emerged from the preconference, this essay participates in the ongoing task of documenting transdisciplinary histories of rhetoric (Gehrke; Keith) while orienting new scholars to the field and extending conversations about the future of RSTM.

Recorded oral histories generate “living texts” that reflect the dynamism of a useable past by providing context and detail often missing from the official minutes of an organization or the published research of a field. Of course, oral history projects inevitably contain polyvocality and divergent accounts, disagreements over fact and value and emphasis, as well as significant gaps and loose ends that resist being tied. In listening for recurring mentions of key themes and formative events, we see ourselves as choreographing fourteen influential figures in the field of RSTM into a coherent narrative while allowing for improvisation and solo performances. Derived from the Greek *khoreia* (“χορεία”), meaning “dance,” and *graphrein* (“γράφω”), meaning, “to write,” choreography refers to the art or approach of creating and arranging performances. Choreography organizes the creative interplay of people, stories, and movements in order to represent and reproduce meaning across time and space. As an orientation toward analysis, then, choreography metaphorically describes the processes of selecting and organizing snippets from oral history interviews in meaningful, memorable, but decidedly partial ways. The beauty of choreography is that it invites rechoreography: Future choreographers can complement, critique, or recast our selections and organization of the interview material.

This essay examines the interview material by emphasizing memorable moments in the history of the organization, the contributions of rhetoric to the broader field of science studies, and future directions for RSTM scholarship. In the first section, we turn to firsthand accounts and candid recollections that chronicle the genesis of ARST. Then, we examine what rhetoricians contribute to the science studies by focusing on how a rhetorical sensibility provides, first, tools to understand invention through textual analysis, and second, an orientation toward the civic that emphasizes questions of agency. Finally, we discuss possible future directions for the subfield before closing with a reflection on how digitized and publicly archived oral histories represent an important strand of digital humanities work.

Forging an Association: The Prehistory and History of ARST

Rhetoricians from both Communication and English departments have long conveyed interest in science studies. However, as Carl Herndl points out, for many years nobody knew exactly what rhetoric of science (much less rhetoric of technology or medicine) was: “[There was] a lot of smart interesting work being done but with no core intellectual project” (13:30).³ Although there are notable publications from the early 1950s, the beginning of the rhetoric of science, technology, and medicine is often linked to the influence of Thomas Kuhn, the “rhetorical turn” in the 1970s, and scholarship in the late 1980s and early 1990s by Jeanne Fahnestock, Carolyn Miller, John Campbell, John Lyne, and Greg Myers, among others, (see Gross, *Starring the Text*; Harris, *Landmark Essays*; Weaver). However, with no clear disciplinary home, no central set of research questions or methods, and perhaps more importantly, no academic programs with a critical mass of scholars to coalesce and promote a cohesive field, RSTM scholars were largely isolated. It was at national conventions like the National Communication Association (NCA) conferences that these dispersed scholars came together.

When asked about the genesis of ARST, John Lyne, who was at the University of Iowa at ARST’s inception, explained:

I had for a few years been gathering a group of interested scholars together at the NCA conferences for what I called the Rhetoric of Science Visibility Project, the acronym being RSVP. We would have breakfast. Alan Gross, [William] Keith, Tom Lessl, were some of the people who were involved. This went on for several years, and then Henry Krips arrived at the University of Pittsburgh with a science interest, and with a strong rhetoric program undergirding him. He

called me at the University of Iowa and said we should start an organization, a sort of Pittsburgh/Iowa collaboration initially. And so at the next NCA, we had a constitutional meeting, and we constituted ourselves out of thin air. (6:12)

In 1992 the newly minted American Association for the Rhetoric of Science and Technology developed a constitution, elected officers, and began sponsoring panels and preconferences at NCA. (The first “A” was dropped in 2005 when RSTM scholars decided that “Americanizing” the organization unnecessarily nationalized an area of inquiry that was global.) Earlier in the year, Krips helped organize a conference to mark the genesis of the University of Pittsburgh’s new program in the rhetoric of science that drew Stephen Toulmin, Steve Fuller, and other key figures in the history and philosophy of science together with rhetoricians (see Krips, McGuire, and Melia). The relationship between scholars at Iowa and Pittsburgh was crucial in creating the momentum for ARST’s formation, an important reminder that institutional support and disciplinary sociologies undergird the formation of any field. Both John Lyne and David Depew were at the University of Iowa and part of a team, eventually including Joanna Ploeger (see “ARST Remembering Joanna Ploeger”), that started the Project on the Rhetoric of Inquiry (POROI). That faculty group ultimately “developed a graduate certificate program . . . which basically applied rhetorical criticism to science” (Depew 8:35). Still co-edited by David Depew, *POROI* serves as a key publication venue for rhetoric of science, technology, and medicine scholars.

Twenty years after the founding, memories of who exactly was present at the first ARST meeting are fuzzy, and whatever minutes might have been taken are lost to history. Lyne recalls that J. E. (Ted) McGuire, a founding member of the history and philosophy of science department at Pittsburgh, and Carolyn Miller were both there. Miller is responsible for the “T” in ARST because, as she explains, “The rhetoric of technology was different enough that it should not be presumed or assumed under the ‘S’ in science . . . [so] we ought to include technology, and now we’ve expanded to include medicine” (7:07). Leah Ceccarelli was a first-year graduate student when ARST formed, having heard about it from her mentor, G. Thomas Goodnight. She describes herself as “a fly on the wall at its formation . . . [sitting] in the back of the room to watch all my heroes talk about this new project they were going to develop” (4:32). As it turns out, graduate students played a key role in ARST’s organizational history. Following an initial burst of enthusiasm, ARST as an institution “went through a fair amount of soul searching on what it wanted its mission to be, what its common language was going to be” (Depew 7:30). After many senior scholars in RSTM served leadership roles, graduate students primarily from the University of Pittsburgh sustained the

work of the organization. Ceccarelli underlines the importance of graduate student roles in sustaining the organization: "I think that's something to keep in mind: the way that graduate students in the rhetoric of science, at Pittsburgh especially, helped keep this organization going" (8:50). Graduate student leadership was cultivated, in part, because of the sociable organizational culture of ARST.

The conviviality of ARST's culture was frequently mentioned in the interviews. For an organization founded at breakfast, it is only appropriate, then, that spirited preconference dinners keep the organization going. One of ARST's founding members, John Angus Campbell, describes the importance of carefully orchestrating meals: "The camaraderie was one of the things that I think has been characteristic of ARST from an earlier time, and to build a sense of community was certainly one of the things that I did" (5:31). Sharing meals continues to be a crucial aspect of the sociology of RSTM. As Greg Wilson attests, "One of the big draws of the preconference is if you're a graduate student or an early career scholar you're going to be sitting around in close proximity in a fairly informal environment with some really big names, some really influential thinkers, and have the opportunity to . . . forge those associations" (5:00). The longevity and success of ARST is at least partially because of these informal sites of interaction that seat senior scholars in RSTM beside new graduate students.

Today, the Association for the Rhetoric of Science and Technology nurtures interdisciplinary collaborations between science studies, English, and Communication. Partnering with larger organizations like the National Communication Association and the Rhetoric Society of America, it now hosts annual and biennial business meetings, preconferences, workshops, presentations, and panel discussions to consider science-based issues of public importance. Several memorable moments punctuate this multivenued history.

Early in the history of ARST, the entire conceit of a "rhetoric of science" was called into question by Dilip Gaonkar's presentation of "The Idea of Rhetoric in the Rhetoric of Science." During a high-profile panel session at an ARST preconference, Gaonkar indicted rhetoric as a metahermeneutic to illustrate the difficulties in turning a productive art into an interpretive lens—which illustrates how theoretical issues at play in RSTM impact the broader scene of rhetorical studies. On the one hand, Gaonkar's critique served to unify ARST scholars and led them to hone arguments about how and where rhetoric functions in science. For example, Alan Gross and Bill Keith later edited a book titled *Rhetorical Hermeneutics* that republished Gaonkar's essay alongside responses from prominent rhetoricians of science. On the other hand, some ARST scholars thought Gaonkar's critique unnecessarily preoccupied the subfield. Newer scholars at the time like John Lynch, for example, remembers:

Personally I didn't feel that sort of . . . anxiety as much myself, maybe I was just a little . . . deaf to all of the ramifications of it, I mean I was just starting out, but there was a great deal of concern and fear about, can we even talk about science from a rhetorical perspective. . . . they were very anxious about doing it and about their status within the field of rhetoric and the broader field of science studies. That anxiety has gone away I think for the most part. I think it got worked out through a lot of people's book long projects – Jeanne Fahnestock and *Rhetorical Figures of Science*, and Lisa Keränen's book [*Scientific Characters*] refigured ethos in a new key . . . and so people have realized that the rhetorical tradition is easily rehabilitated. (9:10)

Echoing Lynch's observation about the field's resilience and extending that assessment to include mention of the field's potential, Keränen explains:

I think Sonya Johnson was right when she says "what we resist persists" and so one of my frustrations as someone who really wants to propel the rhetoric of science, technology, and medicine forward and someone who believes that we have so much to offer . . . is that I feel the attention that was placed on . . . the "Gaonkar Affair," the critique of globalization and the rhetoric of science therein, really turned our attention inwards in ways that may have slowed down . . . our ability to reach out to broader constituents for our work. (5:40)

Despite Gaonkar's critique, scholars in RSTM have pushed the field in exciting directions, and other memorable ARST moments illustrate the kind of outreach Keränen identifies as crucial.

For example, in 1998 Gordon Mitchell and Tim O'Donnell organized a public debate between Patrick Michaels, a well-known skeptic of anthropogenic climate change, and climate scientist James Hansen (Mitchell and O'Donnell). This "Science Policy Forum" was later transcribed and published with commentary from science studies scholars across the disciplines in a special issue of *Social Epistemology*. In 2005 ARST invited journalist Chris Mooney to participate in a roundtable conversation about his recent book *The Republican War on Science*. Referencing the Mooney roundtable specifically, Keränen explains, "I see the times that we've really engaged politics and the way that science, technology, and medicine interface with these broader social and public sorts of issues as real memorable moments in rhetoric of science technology and medicine" (4:57). Both the Hansen-Michaels debate and the Mooney round-

table serve as touchstone moments in the history of ARST because they prompted RSTM scholars to show external audiences in academic institutions and other fields, as well as practitioners and publics, what rhetoric adds to technical fields.

“We’re Located Differently”: Rhetorical Contributions to the Study of Science, Technology, and Medicine

Rhetoricians are, as Carl Herndl claims, “located differently” (22:15). How so? In this section we offer two recurrent themes that emerged in response to our interview question “What does rhetoric add to studies of science, technology, and medicine?” One of the more widely shared responses to the question of “why rhetoric?” is that rhetorical training offers a certain sensibility that is largely lacking in technical fields themselves. Fahnestock remarks that “[scientists] understand science as persuasion, they do, but they don’t know how to unpack that” (30:50), which provides a natural opening for rhetoricians of science, technology, and medicine. A rhetorical sensibility involves, in part, an appreciation for invention and textual analysis (recognizing that “text” is a broad category) alongside an emphasis on agency that focuses on civic engagement (which should also be conceived capaciously). Put simply, rhetoricians are attuned to a view on the communicative processes underwriting science, technology, and medicine that gives them a unique set of tools for analysis and intervention, especially where these discourses interface with publics.

Rhetorical Invention and Textual Analysis

Scientists and practitioners usually focus on the declarative knowledge for their particular problems (the what) while rhetoric provides a more processual view of the history and argumentation behind scientific disciplines and disputes (the how). As Jeanne Fahnestock points out, one of the stronger cases for the value of rhetoric is its role in the history of the scientific method, particularly the scientific revolution of the early modern period. Fahnestock notes

This whole [scientific] enterprise . . . comes from the sixteenth century reform [of rhetoric]. . . . The roots of the scientific revolution are an expanded sense of probabilistic reasoning and where you can use demonstration you use it, but if you look at the difference between the way magnetism was talked about by Gilbert in 1600 versus the way it was talked about in the Middle Ages . . . it’s quite a dramatic difference. (27:45)

Other scholars have corroborated this view of scientific method as an expanded sense of probabilistic reasoning.⁴ Fahnestock's work with rhetorical figures in scientific argument offers, in her words, "a way to capture the core method of scientific argument" (29:45), and this work is now being used to frame research in cognitive rhetoric of science ("ARST Dr. Jeanne Fahnestock"; see also Fahnestock, *Rhetorical*; and Harris, "Rhetoric of Science").

This more historical perspective on scientific argument allows rhetoricians to explore how argumentation constructs knowledge and experience that shapes, as Lawrence Prelli puts it, "situational choice-making" (12:30). Prelli explains, "All discourse is generated through selection, situated selection . . . when we're confronting questions and problems, we have to make choices and those choices have consequences for what we say and what we do" (12:00). This emphasis on situated choice-making as managing uncertainty foregrounds the role of invention in RSTM, which links the field into rhetoric's traditional domain. When applied to science, technology, and medicine, the inventional dimension of rhetoric—the inevitable "situational choice-making"—allows scholars, as Prelli suggests, to "start examining the creative processes involved in making those choices. We can scrutinize the consequences of those choices in terms of what meanings get foregrounded and what alternative meanings get concealed. That's the very soul of what we do" (12:30).

Similarly, Carl Herndl argues that in bringing a more nuanced understanding of historical and material context to scientific activities, "rhetoric has a disciplinary technology for understanding change and the dynamics of change, for understanding what motivates people to take action" (22:00). According to Celeste Condit, rhetorical invention provides a lens to analyze crafted discourse: "What you have as a trained rhetorician is an awareness of all the components that go into discourse. When I read a text as a rhetorician who knows a lot about rhetoric, I see all of the pieces that are going into making that text able to do what it does" (19:15). For Condit, then, a rhetorical sensibility means focusing on the concrete and specific, "the particularities of how [rhetoric] interacts and plays" (17:53), while also maintaining a view of broader cultural influences. This bird's-eye view on the dynamics of change, and on the interplay between science and various publics, is part of a rhetorician's material position where sometimes even the most basic of concepts are useful in advancing rhetorical analysis.

As Carolyn Miller, Jeanne Fahnestock, and David Depew, among others, underline the continuing resilience of the basic appeals of *logos*, *ethos*, and *pathos*, particularly, as Miller notes, "the role of *pathos* in apparently *logos*-driven discourses" (18:30). Foundational concepts like *logos*, *ethos*, and *pathos* are recognizable enough to encourage cross-disciplinary borrowing. Of course, rhetoricians of science, technology, and medicine move beyond *logos*,

ethos, and pathos to animate the full armamentarium of rhetorical analysis. “The whole machinery of rhetoric and the entire tradition—figures, *topoi*, notions of *kairos*, and decorum, structure—the whole repertoire of rhetoric,” Randy Allan Harris notes, “is extraordinarily well suited to look at science” (16:25). Leah Ceccarelli similarly observes:

In my opinion what we have is a set of concepts and tools and perspectives, as any discipline does. But the concepts, tools, [and] perspectives we offer allow us to do close readings of texts, of the arguments within texts, and the relationships between those arguments and the response of their audiences—we have a focus on audience, a focus on immediate context. We’re good at tracking specific performative traditions or metaphors or commonplaces across time. So we’re good at looking at production influences on a text. Basically, we do really good textual analysis. (14:13)

The emphasis on argument and audience; on tracking tropes, figures, and commonplaces; and the careful examination of the production and reception of argument is a distinctive offering of rhetorical studies to the everyday processes and products of science, technology, and medicine.

Civic Intervention and the Question of Agency

Those who pursue RSTM scholarship view engagement in different terms, and indeed throughout the interviews there was a palpable concern that engagement would lead rhetoricians to become, as James Wynn put it, “PR people for scientists” (21:36). Some RSTM scholars express ambivalence about the idea of taking rhetorical scholarship to broader audiences because of differences between the communication norms of technical communities and of rhetorical communities. In tracing this tension through her teaching work, Carolyn Miller admits this dilemma “inhibits me a bit from feeling comfortable in taking our work to scientists and to the public and saying here let me intervene, let me improve something that’s going on” (20:05). Other scholars eschew intervention under the sign *rhetoric*, preferring more broadly recognizable terms like *communication*. On this point, David Berube observes, “I think government and industry should listen to what we have to say. But for that to happen we’re going to have to make a conscious effort to rebrand ourselves . . . [because rhetoric is] too esoteric for them” (46:30).

RSTM scholars that intervene in controversies must navigate the norms of both science and democratic governance, a tension that John Angus Camp-

bell captures well: “How can we maintain representative government, which affirms the rhetoricity of science, [but which] also [respects the] professionalism and integrity [of science]? . . . These are not issues that can be settled by a formula. They are issues that will be settled by performance” (11:25).⁵ ARST members acknowledge this dynamic. “I think one of the things [rhetoricians] recognize,” explains James Wynn, “is that there are patterns of argument that emerge, and maybe by recognizing that and having a history of it, . . . we can facilitate science [debates] . . ., and make transitions between different ways of doing science, or thinking about science” (13:00). As Lynda Walsh asks rhetorically: “Isn’t this why we do the rhetoric—instead of the history or philosophy—of science? . . . I also want to step in and help when [science] rolls over a group of mothers or ranchers without looking or without stopping” (2). This civic edge of intervention, rhetoric’s historical *telos*, is being reasserted in research, outreach, and, increasingly, pedagogy (see for example Moscovitz and Kellogg; Wolfe; Zerbe).

The dynamic conversations around civic interventions also spark potent debates about the question of human agency in an increasingly computer-mediated world. For Lynch and Kinsella, a rhetorical study of technology is “about how agency is reconfigured by the rhetorical strategies that attend the steps in inventing and disseminating a new technology,” and these studies help us “resist the move to technological determinism” (4). The theoretical move toward viewing technologies as agents is increasingly ubiquitous, and as Wynn and Walsh note, recent controversies over climate models and data visualizations “highlight the ways in which knowledge making—and as a consequence agency—is being shifted beyond human actors as computers and computerized processes assume an increasingly important role in the process” (3). Yet others are wary that this rethinking of rhetorical agency diminishes rhetoric’s traditional wheelhouse: a focus on the inventional capacities of human agents. This pushback is conveyed in the oral histories. For example, Ceccarelli, asserts that while the critique of rhetoric’s focus on the ideology of human agency is widely acknowledged, it is an emphasis for which other scholars in science studies turn to rhetoricians:

I think we should adopt an ideology of human agency. That’s one of the things we have to offer. Not in every case. Not stupidly. But with a recognition that the human agent isn’t the hero of the story, that there are influences upon the human agent from the audience, from the culture. I think what we do have to offer is a recognition of how that human agent has invented discourse to persuade an audience. (19:38)

The rich theoretical debate in ARST scholarship about the question of agency is important because it shapes methodological approaches, objects of study, and value structures for science and rhetoric alike.

RSTM scholars intervene in a range of specific contexts. Citing Ceccarelli's recent work on "Manufactured Scientific Controversy," Lisa Keränen remarks, "I very much appreciate recent work in rhetoric of science that tries to help further discourse around particular issues This goal of laying out some possible discursive moves to counter [manufactured controversy] is a really useful track for rhetoric of science scholarship in general" (18:25). Lynch, noting the increasing valuation of communication in medical contexts, positions rhetoricians of medicine as uniquely "able to engage those medical and scientific audiences, those practitioners who recognize that they need help in engaging people" (18:30). David Berube, who has cultivated an audience for his work that includes government agencies, identifies a number of entry points for rhetoricians of STM to improve public discourse, including "exposing to rigorous analysis the claims and counterclaims made by proponents and opponents. Exposing parties with special interests for their hyperbole, government promoters for their overenthusiasm, and even civil advocacy groups for fear-mongering" ("Constructing" 4). Each of these individual agendas illustrates, at least in part, the capacity of individual and collective agents to assess and influence the network of forces constellating around science, technology, and medicine.

Future Directions for the Rhetoric of Science, Technology, and Medicine

In her introduction to the Spring 2013 special issue of *POROI* produced in the wake of the twentieth meeting of ARST at NCA, Lisa Keränen suggests four interrelated areas of future directions for RSTM scholars: the tension between scholarship and engagement, broadening the academic and public stakeholders of our work, theoretical orientation, and method ("Conspectus" 4-6). We see similar themes in the Oral History Project. Although the "wish list" of future areas of research includes important topics like international studies, visual rhetoric, digital communication technologies, "fringe" science, cognitive and neurorhetorics, sustainability, and health and medicine, two vectors cut across these areas of inquiry to suggest direction for future RSTM scholarship.

New Models of Engagement

The profound influences of new technologies, rising debates over issues of health and medicine, and proliferation of ecological crises are creating new exigencies for rhetorical engagements in scientific inquiry. Dealing

with the uncertainties inherent in these postnormal sciences necessarily requires adapting rhetorical theory and thus opens up new opportunities for public engagement by RSTM scholars. Herndl and Cutlip argue that RSTM is “shifting from a modern and humanist disciplinary focus to a non-modern and post-human focus. This shift includes a change in our dominant theory of realism, our understanding of agency, and the location where we do our work” (2). As a founder of the Patel College of Global Sustainability at the University of South Florida (USF), Carl Herndl established an “Institute for an Applied Rhetoric of Science and Sustainability.” This problem-driven, rather than department-organized, college and institute focuses on four areas of work: science policy, citizen participation, modeling, and data visualization, and are meant to embody the position that “[RSTM scholars] should move from talking about science to doing science” (Herndl and Cutli 7). While Herndl acknowledges there will always be room for historical scholarship and while there’s an important pedagogical component in any conception of engagement, he argues that problem-based interdisciplinary collaborations are the “newly pressing” area of growth in RSTM studies. This new positioning will require a new set of practical and applied skills that have not been emphasized before in rhetorical studies and will change some of the career trajectories of young RSTM scholars into applied practitioners (Herndl 30:00).

Lynda Walsh sees the same changing institutional landscape Herndl does, but not the same location for the rhetorician. She argues “[rhetoric’s] insistence on *kairos* over categories, on people over ideas, [on] insouciant interdisciplinarity, [on] myriad methods both humanistic and non-humanistic—these now appear to be positioning rhetoric as a touchstone” in the newly reformed, problem-based university structure (3). Wynn sees potential in the metaphorical positioning of the engaged rhetorical scholar as a “marriage broker” who negotiates relationships between scientists and publics. He admits, “[While] it’s very comfortable to be on the side of the public or on the side of the scientists . . . the fact is to really serve both parties we have to be in the middle, [which] is a really tough position to be in” (23:00). Despite the difficulty of this role as intermediary, improving public communication of science, technology, and medicine remains vital. As Ceccarelli observes, extending RSTM engagement requires more work: “We have no established apparatus to facilitate the translation of that most valued academic work to the empowered stakeholders who could benefit from it” (“To Whom” 3). Others note that the Internet opens up a variety of publishing opportunities (both scholarly and popular), and Judy Segal notes, “As researchers and writers we are very fortunate to have these kinds of venues” and should take advantage of them (31:35). Indeed, discussion about how to take advantage of opportu-

nities in a digital age to engage publics on science, technology, and medicine issues will likely proliferate future RSTM engagement possibilities in unpredictable but exciting ways.

Embracing Mixed-methods

ARST is a methodologically pluralist community. Although committed to the rhetorical tradition, scholars are hybridizing social science theories and methods to encourage inventive collaboration “in ways that leverage our uniquely rhetorical contributions” (Scott, Segal, Keränen 3). Keränen, for example, argues that RSTM scholars are shifting “towards incorporating more social scientific methods, but again under a humanist and broader ethical critique” (23:00). She predicts rhetoricians will begin to form teams in order “to tackle some of these projects that are larger scale . . . that allow us to contribute to some of the more pressing 20th century concerns—climate and health being chief among them” (23:50). David Berube reminds us that part of being a successful transdisciplinary scholar means having to “know the science” you’re studying, and bringing that to the rhetoric community, while also bringing a rhetorical sensibility to scientific and governmental communities (22:00).

Transdisciplinary work often requires traversing methodological divides. Wilson underlined the growth of mixed-methods in RSTM scholarship, suggesting how ethnographically oriented research allows him to be “in a [scientific] community and . . . bring cultural theories to bear, not just rhetorical theories” (36:40). In this regard, Judy Segal noted a “dissatisfaction of some, especially young, scholars with rhetoric itself as a methodology because it is so amorphous” (16:51). Indeed, methodological eclecticism may be demanded by the complexity of the issues RSTM scholarship uncovers. In reference to her own early research on medical rhetoric, Segal remembers, “I had a revelation at the end of writing my dissertation which was that all of this analysis that I did meant something about the culture of medicine and about not just textual rhetoric but a larger, cultural, discursive professional rhetoric” (1:14). The value of rhetorical training as a critical sensibility is the ability to make sense of abundant streams of information and divergent expertise that comprise “bigger, slightly more amorphous topics” (1:36).

Conclusion: Oral Histories and the Digital Humanities

Our choreography of the ARST Oral History Project interviews unfolded in three movements. First, we reviewed ARST’s origin to identify the enabling conditions of the organization and the features of the organizational

culture that allowed it to thrive. Second, we examined what rhetoric adds to the study of science, technology, and medicine. And, third, we identified future directions for RSTM scholarship. Across each previous section, the voices of ARST scholars provide exemplars for how new scholars might shape their own talk about the value of RSTM studies in everyday conversations about the field. In this manner, the ARST Oral History Project is a case study in how voices, stories, and memories come to constitute a field and a professional identity. In closing, we make visible some of the stakes associated with producing and evaluating oral histories in order to consider the implications for the expansion of academic expression, outreach, and recognition into digital humanities projects.

One of the questions that we often received from colleagues who we told about the ARST Oral History Project was “Are you going to be able to get a publication out of it?” The question, of course, is posed with the best of intentions by colleagues who are wisely advising us to attend to the dominant, established reward structure of the academy. However, the question, in its presumption of “publication” as a traditional, blind, peer-reviewed journal article, occludes emergent, digital modes of publication. For digital projects the traditional prepublication peer review is displaced in favor of postpublication review, throwing into question many of the metrics traditionally used to evaluate scholarly work. A project like this might well be perceived as service or creative work that while potentially interesting does not produce “new” knowledge or is less intensive than traditional standards of research. This latter claim is especially tendentious. Collaborative work can be time-consuming, especially given the technical demands of creating digital artifacts. As most scholars who have worked to produce digital artifacts can attest, “The creation of images, Web sites, digital tools, or software for teaching and research may in some instances be far more labor-intensive and collaborative than the creation of text-based work” (MLA Guidelines).

But are the oral histories that we have published “research”? Do they produce new understandings, important insights, or new lines of research? We answer in the affirmative. First, these interviews make visible an intellectual history that would otherwise be kept largely sealed in the memories of early ARST participants. As part of a larger effort at documenting the transdisciplinary history of rhetorical studies, these interviews preserve important moments in the ascendance of a subfield. Moreover, it is a digital archive that is available for further study and analysis, potentially opening up new lines of research that are difficult to predict now. As the American Council of Learned Societies notes in their report on the importance of digital scholarship, “Humanities and social science research has always required collections of appropriate information, and throughout history, scholars have often been

the ones to assemble those collections, as part of their scholarship" (7). The task of creating digital collections for others to subsequently study has migrated from its twentieth-century home primarily in the library and information sciences to disciplines across the contemporary university. The digital dimension of the ARST Oral History Project provides open access that is crucial for underresourced academics and interested citizens around the world. Whereas scholars used to have to travel to an archive in a physical location, now the archive can "travel" via the Internet.

We are gratified to see the interviews already being used in unforeseen ways. One scholar is developing a website that blends the interview videos, RSTM citations, and news accounts from recent science and technology controversies into a user-friendly interface that will allow the public and journalists to connect to the deeper research on the subject. Another scholar volunteered to conduct an interview with Alan Gross, an early ARST scholar not at the 2012 preconference, using our interview protocol ("ARST Dr. Alan Gross"). Still other scholars let us know that they have used the video in classes, suggesting a host of pedagogical purposes for the interviews to further blur the lines between research and teaching. We hint at these possibilities not to toot the horn of our specific project but to show how the construction of digitized, publicly accessible oral history archives funds a range of scholarly endeavors. There are, of course, still questions about evaluating oral histories as a species of digital humanities scholarship that exceed the scope of this article. We hope that the ARST Oral History Project might serve as one of many examples that helps scholars develop metrics for evaluating oral histories more generally. This is, no doubt, a tricky conversation to have, but an important one as more scholars leverage the expressive capacities of digital media.

Part of our goal in publishing this companion piece to the oral history interviews is to orient new scholars to the subfield and to continue conversation about the past and future of RSTM scholarship. Another goal has been to demonstrate the utility of digital artifacts in relation to the value and exposure of scholarship across diverse audiences. Prominent RSTM scholars like David Depew suggested the need to expand our scholarly audience to include members of diverse publics and technical, scientific, and medical professions: "Clearly the media environment is changing and if you want my advice . . . about where to go . . . I really think we need to really, really ramp that up, the digital presence of [ARST]" (11:28). The voices represented in this essay are indelibly tied to images and sounds online, a pairing that suggests how digital artifacts lend accessibility and longevity to messages that may otherwise only reverberate within the walls of the academy. Because of the possibilities oral histories offer to inform and convene a diverse set of stakeholders, to communicate scholarly impact across multiple publics, and to encourage

(trans)disciplinary crossover, we suggest that digitally archived oral history projects be favorably compared to more traditional modes of scholarly contribution, with different, but no less rigorous, standards for evaluation

Notes

1. The authors thank *RR* reviewers John Campbell and Michael Zerbe, and Nathan Johnson, Lisa Keränen, and Jessy Ohl for comments and suggestions on this manuscript.
2. For more details on the preparation and execution of the ARST Oral History Project, and for a list of the questions at the center of the interviews, see Damien Smith Pfister, "Reflections on the ARST Oral History Project," *Prosechó*, 9 March 2014. Web. 10 March 2014. Participants in the Oral History Project interviews at NCA included David Berube, John Angus Campbell, Leah Ceccarelli, Celeste Condit, David Depew, Jeanne Fahnestock, Randy Harris, Carl Herndl, Lisa Keränen, John Lynch, John Lyne, Carolyn Miller, Lawrence Prelli, Judy Segal, Greg Wilson, and James Wynn. Participants were selected in advance based on their confirmed invitation to attend the twentieth anniversary meeting of ARST held as a preconference before the ninety-eighth Annual meeting of the National Communication Association in Orlando, Florida. Our data, therefore, represent a convenient sampling of ARST affiliates. In one sense this type of nonprobability sampling can be viewed as a limitation; in another sense it serves to help hone in on a particular subset of rhetoricians, a subset that can be described as "communication-friendly" and that readily attend conferences (sometimes outside of their home disciplines) in pursuit of RSTM connections. We thank Pfister's undergraduate research assistant Carrie Adkisson for her diligent work in editing the interviews.
3. Full citations for all sixteen oral history interviews are included with our references and exact quotes are time stamped in-text to facilitate easy retrieval from the video or audio sources.
4. For example, Heather Graves argued that Bacon's inductive method appropriated Roman and Early Christian versions of rhetorical theories of invention that collapsed the distinctions between dialectic and rhetoric ("Rhetoric" 46–61).
5. This quotation has been modestly edited with the approval of the speaker.

References

- American Council of Learned Societies. *Our Cultural Commonwealth*. Online, accessed October 18, 2006.
<http://www.acls.org/cyberinfrastructure/ourculturalcommonwealth.pdf>
- "ARST Oral History Project—An Interview with Dr. Alan Gross." *ARST Oral History Project*. Online, accessed March 4, 2013.
<http://www.youtube.com/watch?v=KXCZiYVroLc>
- "ARST Oral History Project—An Interview with Dr. Carl Herndl." *ARST Oral History Project*. Online, accessed October 13, 2013.
<http://www.youtube.com/watch?v=5VDvIGDVfT0>
- "ARST Oral History Project—An Interview with Dr. Carolyn Miller." *ARST Oral History Project*. Online, accessed October 13, 2013.
http://www.youtube.com/watch?v=Pz_rN8g8WN0
- "ARST Oral History Project—An Interview with Dr. Celeste Condit." *ARST Oral History Project*. Online, accessed October 13, 2013.

- <http://www.youtube.com/watch?v=ROaDs8UiaHc>
 "ARST Oral History Project—An Interview with Dr. David Berube." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=mw3tI5AAGn4>
 "ARST Oral History Project—An Interview with Dr. David Depew." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=feYONSJfC9c>
 "ARST Oral History Project—An Interview with Dr. Greg Wilson." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=aatFSIV9TAw>
 "ARST Oral History Project—An Interview with Dr. James Wynn." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=QEYiTIJWZ-aQ>
 "ARST Oral History Project—An Interview with Dr. Jeanne Fahnestock." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=MieW09xyjPM>
 "ARST Oral History Project—An Interview with Dr. John Angus Campbell." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=a37RIdZfb4w>
 "ARST Oral History Project—An Interview with Dr. John Lynch." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=dJkzRyBT8E>
 "ARST Oral History Project—An Interview with Dr. John Lyne." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=YrvxKepIUVU>
 "ARST Oral History Project—An Interview with Dr. Judy Segal." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=HLzXgvtz0nA>
 "ARST Oral History Project—An Interview with Dr. Lawrence Prelli." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=8JTonNg7JcU>
 "ARST Oral History Project—An Interview with Dr. Leah Ceccarelli." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=gYw3Nrzl6cQ>
 "ARST Oral History Project—An Interview with Dr. Lisa Keränen." *ARST Oral History Project*. Online, accessed October 13, 2013. <http://www.youtube.com/watch?v=SKEavgRilo8>
- <http://www.youtube.com/watch?v=Wlvj19JelPU>
 "ARST Oral History Project—Remembering Joanna Ploeger." *ARST Oral History Project*. Online, accessed October 15, 2013.
- "ARST Oral History Project—An Interview with Dr. Randy Harris." *ARST Oral History Project*. Online, accessed October 13, 2013.
- <http://www.youtube.com/watch?v=mNW5yUvW-is>
- Berube, David M. "Constructing Texts in Fringe Science: Challenges in Propaedeutics." *POROI* 9.1 (2013): 1-7. Online, <http://dx.doi.org/10.13008/2151-2957.1162>
- Ceccarelli, Leah. "Manufactured Scientific Controversy: Science, Rhetoric, and Public Debate." *Rhetoric & Public Affairs* 14 (2011): 195-228.
- . "To Whom Do We Speak? The Audiences for Scholarship on the Rhetoric of Science and Technology." *POROI* 9.1 (2013): 1-5. Online, <http://dx.doi.org/10.13008/2151-2957.1151>

- Crismore, Avon, and Rodney Farnsworth. "Mr. Darwin and his readers: Exploring Interpersonal Metadiscourse as a Dimension of Ethos." *Rhetoric Review* 8.1 (1989): 91–112.
- Enos, Richard Leo, et al. "Symposium: Interdisciplinary Perspectives on Rhetorical Criticism." *Rhetoric Review* 25:4 (2006): 357–87.
- Fahnestock, Jeanne. *Rhetorical Figures in Science*. New York: Oxford UP, 1999.
- Gaonkar, Dilip. "The Idea of Rhetoric in the Rhetoric of Science." *Southern Communication Journal* 58 (1993): 258–95.
- Gehrke, Pat. *The Ethics and Politics of Speech: Communication and Rhetoric in the Twentieth Century*. Carbondale: Southern Illinois UP, 2009.
- Gross, Alan G. "Presence as a Consequence of Verbal-Visual Interaction: A Theoretical Approach." *Rhetoric Review* 28.3 (2009): 265–84.
- . *Starring the Text: The Place of Rhetoric in Science Studies*. Carbondale: Southern Illinois UP, 2006.
- Gross, Alan, and William Keith. *Rhetorical Hermeneutics: Invention and Interpretation in the Age of Science*. Albany: SUNY P, 1997.
- Graves, Heather Brodie. "Rhetoric and Reality in the Process of Scientific Inquiry." *Rhetoric Review* 14.1 (1995): 106–25.
- Halloran, Michael. "The Birth of Molecular Biology: An Essay in the Rhetorical Criticism of Scientific Discourse." *Rhetoric Review* 3.1 (1984): 70–83.
- Hallenbeck, Sarah. "Riding Out of Bounds: Women Bicyclists' Embodied Medical Authority." *Rhetoric Review* 29.4 (2010): 327–45.
- Harris, Randy Allen. *Landmark Essays on Rhetoric of Science: Case Studies*. Mahwah, NJ: Erlbaum, 1997.
- . "The Rhetoric of Science Meets the Science of Rhetoric." *POROI* 9.1 (2013): 1–12. Online, <http://dx.doi.org/10.13008/2151-2957.1158>
- Heifferon, Barbara. "The New Smallpox: An Epidemic of Words?" *Rhetoric Review* 25.1 (2006): 76–93.
- Herndl, Carl G., and Lauren Leigh Cutlip. "How Do We Act?: A Praxiographical Program for Rhetoric of Science, Technology, and Medicine." *POROI* 9.1 (2013): 1–13. Online, <http://dx.doi.org/10.13008/2151-2957.1163>
- Keith, William. *Democracy as Discussion: Civic Education and the American Forum Movement*. Lanham, MD: Lexington, 2007.
- Keränen, Lisa. "Conspectus: Inventing Futures for the Rhetoric of Science, Technology, and Medicine." *POROI* 9.1 (2013): 1–9. Online, <http://dx.doi.org/10.13008/2151-2957.1167>
- . *Scientific Characters: Rhetoric, Politics, and Trust in Breast Cancer Research*. Tuscaloosa: U of Alabama P, 2010.
- Krips, Henry, J. E. McGuire, and Trevor Melia, eds. *Science, Reason, and Rhetoric*. Pittsburgh: U of Pittsburgh P, 1995.
- Lynch, John A., and William J. Kinsella. "The Rhetoric of Technology as a Rhetorical Technology." *POROI* 9.1 (2013): 1–6. Online, <http://dx.doi.org/10.13008/2151-2957.1152>
- Mitchell, Gordon, and Tim O'Donnell. "Editor's Introduction." *Social Epistemology* 14 (2000): 79–87.
- Mooney, Chris. *The Republican War on Science*. New York: Basic, 2005.
- Moskovitz, Cary, and David Kellogg. "Primary Science Communication in the First-Year Writing Course." *College Composition and Communication* 57:2 (2005): 307–34.
- MLA Guidelines for Evaluating Work in the Digital Humanities and Digital Media. Online, accessed October 18, 2006. http://www.mla.org/guidelines_evaluation_digital

- Scott, Blake, Judy Z. Segal, and Lisa Keränen. "The Rhetorics of Health and Medicine: Inventive Possibilities for Scholarship and Engaged Practice." *POROI* 9.1 (2013): 1-6. Online, <http://dx.doi.org/10.13008/2151-2957.1157>
- Sidler, Michelle. "The Rhetoric of Cells: Understanding Molecular Biology in the Twenty-First Century." *Rhetoric Review* 25.1 (2006): 58-75.
- Simonson, Peter. *Refiguring Mass Communication: A History*. Champaign-Urbana: U of Illinois P, 2010.
- Walsh, Lynda. "Horizon Myths." *POROI* 9.1 (2013): 1-3. Online, <http://dx.doi.org/10.13008/2151-2957.1154>
- Weaver, Richard M. "Dialectic and Rhetoric at Dayton, Tennessee." *The Ethics of Rhetoric*. Chicago: Regnery, 1953. 27-54.
- Wolfe, Joanna. "Rhetorical Numbers: A Case for Quantitative Writing in the Composition Classroom." *College Composition and Communication* 61:3 (2010): 452-76.
- Wickman, Chad. "Rhetoric, *Technê*, and the Art of Scientific Inquiry." *Rhetoric Review* 31.1 (2012): 21-40. Online, accessed April 18, 2012. <http://www.tandfonline.com/doi/full/10.1080/07350198.2012.630953#.U9KVg2OaeY8>
- Wynn, James, and Lynda Walsh. "Emerging Directions in Science, Publics, and Controversy." *POROI* 9.1 (2013): 1-5. Online, <http://dx.doi.org/10.13008/2151-2957.1156>
- Zappen, James. "Francis Bacon and the Historiography of Scientific Rhetoric." *Rhetoric Review* 8.1 (1989): 74-88.
- Zerbe, Michael J. *Composition and the Rhetoric of Science: Engaging the Dominant Discourse*. Carbondale, IL: Southern Illinois UP, 2007.



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