Where's the Rhetoric? Broader Impacts in Collaborative Research

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Last year, I called on my fellow rhetoricians of science to begin a conversation about our public outreach (Ceccarelli,2013). We often examine the discourse of scientists, so scientists are frequently the publics who would most benefit from what we discover. But scientists are unlikely to read our disciplinary journals. So how can we ensure that our work reaches the very people who could put it to the best use?

This year, Jean Goodwin gathered some scholars who have been down in the trenches with scientists, pursuing funded research that has as its explicit goal the improvement of scientists' public discourse. If anyone has productive experiences to relate about how to reach out to scientists with our most important findings, it would be these embedded rhetoricians. In their papers, they offer us a number of fascinating insights about the benefits and challenges this kind of collaborative work holds for rhetoricians. But what I am going to focus on in my response to their papers is what Goodwin calls the matter of "the wedge." What can we do to get scientists to recognize the value of what we do? How do we get them to let us in the door, so to speak, so that we can pass along our most important findings to them?

I have to admit that I am not fond of the metaphor of "the wedge." To many scientists, it connotes the Discovery Institute's strategy of manufacturing scientific controversies about the theory of evolution, calling to mind a leaked internal document by that name announcing that the tool of intelligent design was being used to split the dominant trunk of science at its weakest point (Center for the Renewal of Science and Culture, n.d.; see also Center for Science and Culture, 2006; Johnson, 2000). If we rhetoricians of science want scientists to listen to us with open minds, we would do well to avoid talking about our outreach strategy in such destructive terms. Rather than talk about a wedge, or even a foot in the door

(which makes me think of an obnoxious door-to-door salesman), I think we would do better to use the same language that scientists use when they talk about this sort of thing. We need to figure out how can we ensure the "broader impacts" of our research.

So what are our broader impacts? At the risk of bringing up a sore subject, I should point out that getting scientists to recognize the value of rhetorical scholarship requires that we rhetoricians first agree that rhetorical scholarship has something valuable to offer. As Dilip Gaonkar showed us twenty years ago, there is some persistent uncertainty on that matter, at least in some quarters of the discipline (Gaonkar, 1993). Before you protest that we have moved beyond our Gaonkar-inspired hand-wringing days, just reflect for a moment on the papers presented at the 2013 preconference for the Association for the Rhetoric of Science and Technology. There was some very good research presented that day, but few if any rhetorical concepts were used. Most of the speakers at the preconference felt the need to go outside the field for theory or method. In fact, this borrowing of concepts and scholarly approaches was so marked that a historian who joined us as a respondent for a panel on the rhetoric of the vaccine debate, Mark Largent, found it necessary to offer the disclaimer that he was having difficulty assessing our work because unlike us he does close readings of texts. Jamie L. Vernon, a scientist who served as my fellow respondent to the papers on collaborative research, told us that he finds our work valuable because he believes that we (a bunch of scholars of the humanities) are fulfilling the call of the National Academy of Science for work on the *science* of science communication, and that "the emerging emphasis on treating science communication as a scientific endeavor bodes well for rhetoricians." These comments make me wonder if we scholars of rhetoric are effectively communicating what it is that we are most qualified to contribute to the study of science.

What is it that the embedded rhetoric scholar can offer to scientists that those scientists cannot get from scholars in other areas of research like the social scientific subfield of mass communication known as science communication, or the well-established science studies domains of history and philosophy of science, or sociology and anthropology of science? According to Alan Gross what we rhetoricians offer is a perspective and a set of tools that focuses on the texts of science as persuasive communication (Gross, 1996). Jeanne Fahnestock recently answered that question in a similar way, saying that rhetoricians have a distinctive sensibility and analytic vocabulary to examine the inventional choices that scientific rhetors make (Fahnestock, 2013).

Lawrence Prelli agreed, locating the distinguishing feature of rhetorical analysis in the "case study" where the disclosure of "selections made and discarded" reveals "situated, contextual meanings not accessible to de-contextualized, more abstract, modes of analysis" (Prelli, 2013). As he reminds us, "content analysis, interviews, and ethnography do not distinguish what rhetoricians bring uniquely to cross-disciplinary projects." So with these accounts of what rhetoric is (and is not) in the front of my mind, I examined the reports of our embedded rhetoricians to see how they conveyed the special expertise of our field to the scientists with whom they worked.

Kenny Walker started out by offering a characterization of the rhetorician that is somewhat different from the one I was considering; according to him, the rhetorician holds "expertise in deliberation and decision-making under conditions of uncertainty." Because scientists do not have an understanding of the different types of "public and political uncertainties" and how they "emerge from technical uncertainties" to critically shape civic epistemologies, it is the job of the rhetorician to trace "the translations of uncertainties and mark how they condition communicative frameworks and situated choice making within a particular kairos." Walker thus agrees with Gross, Fahnestock, and Prelli that rhetoricians have a special ability to reveal something that others might not see, but the specific nature of that ability is centered on the management of uncertainty. I have to admit that the specific contributions that Walker has made to the projects on which he works are not entirely clear to me from his report. I have no doubt that he offers illumination to the scientists with whom he works; as he affirms, environmental scientists across his campus "continue to acknowledge the fresh perspectives and innovative ideas rhetoricians are bringing to the table." But I look forward to engaging him in a lengthier conversation about what those particular ideas are, and more importantly, how he effectively conveys them to scientists. As he indicates, "Sometimes what you have sticks, sometimes it doesn't." It would be nice to hear more about what he does to encourage the former over the latter. I suspect that he does not convey the rhetorician's expertise to scientists at the high level of abstraction that he has used to convey it to us. To "articulate how rhetoric can contribute to public science communication projects in practically useful ways that are not contributed by other disciplines," as he agrees we must (paraphrasing Keränen, 2013), I think it would be helpful if we talked more about how to translate our insights into a language that can be understood and appreciated by those scientists.

Jean Goodwin's project aligns more closely with the vision of rhetorical inquiry set out by Gross, Fahnestock, and Prelli. She offers rhetorical pedagogy as her contribution to scientists, with the development of curricular materials for case studies in ethical communication. Despite the unfortunate acronym of her project ("TRCS"), the rhetorician does not offer simple tricks for more effectively communicating to the public. Rather, the rhetorician concentrates on ethics because "normativity is what rhetoricians do best," and she concentrates on case studies because that is what we do best as scholars of the humanities. Case studies are what most rhetoric journal articles are designed to report, and what our scholarly books most often collect. TRCS is designed to help scientists adapt to *particular* cases, thus giving them the capacity to handle similar future cases that come up. A teacher can change one thing in the case, and show the students how that altered set of conditions changes what counts as a proper response. Scientists are thus taught that ethical communication cannot be imagined as a generalized theory, but must be recognized as a grounded practical theory, instantiated in the particular. That is rhetoric's unique contribution to the project.

Or is it? Other fields in the humanities, as well as law and medicine and education, rely on the case study, and the study of ethics is considered by most to be the domain of philosophy. As much as I love the project that Goodwin describes, I fear that it is not her contribution of rhetorical inquiry to the case studies that will end up getting the accolades for the broader impacts that are likely to result. The philosopher and the education expert are likely to take the most credit for those benefits.

But there is another contribution that Goodwin mentions, a very specific one that might illustrate what rhetorical analysis has to offer to the scientist. She points out that in one of the case studies (the *Midwest Climate Statement*), she is tracing how the scientist-drafters of a text "fell into three different groups, each with its own definition of the rhetorical situation—audience, exigence, and constraints." Because the statement "integrated the goals of these diverse perspectives," it "was resilient against a range of skeptical challenges." The rhetorician thus provides the close reading that allows scientists to see this integrative rhetorical strategy, and maybe adopt it themselves in future texts of a similar nature.

Sara Beth Parks, in her work as an embedded rhetor in a giant National Science Foundation grant project, offers yet another perspective on what our field of study has to offer. She says her expertise with rhetoric gives her special value to scientists because it allows her to be a "communication generalist." Rhetoric of

science, because it tends to mix methods and theories from various fields of science studies, prepares her to work from "a birds-eye view." She "can make global sense of communication and collaboration breakdowns where many faculty and staff only see the individuals at fault," and she can "provide or identify shared objects, ideas, or values that serve to start and restart conversations." This is all very promising, although I do wonder to what degree her approach can be called "rhetorical" if it is identified as a "communication generalist" approach. Is it rhetorical inquiry that allows her to see the big picture and convey it to the scientists with whom she works, or is her broad vision the result of various other scholarly communities who have written about such things as "activity systems" and "boundary objects" and methods of social scientific "audience analysis"? I would have a better sense for the answer to this question if I had a better illustration of what exactly she is telling scientists. I need this kind of specificity if I want to match her success in my own collaborations with scientists. The conversation we rhetoricians of science still need to have is about *how* we have successfully conveyed our rhetorical insights to scientists (not just *that* we have done so), so that we can model best practices in rhetorically designing our future attempts to persuade our colleagues across campus of the value of our work.

John Rief acknowledges that rhetoric can be seen as a "method of analysis" that focuses attention on language use and as a "therapeutic" tool for improving communication, but more importantly, he says, it should be seen as "an orientation to the coordination of theory and practice in the generation of a variety of approaches" to solving problems. In other words, like Parks, he sees rhetoric as an overarching transdisciplinary attitude, a generalist point-of-view that allows the self-identified rhetorician to "integrate the activities of multiple researchers and practitioners with very different approaches." The need for integration is high in transdisciplinary domains like heath care, so researchers from other fields are eager to claim the position of project coordinator, but "how communication practices affect such integration has not been a focus" of scholarly attention yet, "leaving the door open for rhetoricians to take up the task." This is a heady vision, one that Rief admits is as yet unrealized and one that has the potential to offend those who refuse to accept our claim to being the "master art." "The power of rhetoric to connect disparate elements of the healthcare system will need to be demonstrated," perhaps by his current project. I must admit that my own vision of rhetoric is closer to Goodwin's, in which the classical tradition of rhetorical pedagogy is adapted to the careful analysis of particular cases. But I

am open to hearing more about how Rief's architechtonic vision of rhetoric works to help scientists, and how they respond to his directorial efforts. I look forward to hearing what he has to tell us about his experiences down the road, especially how scientists respond to his ordering efforts and the degree to which his contribution is recognized as the contribution of a rhetorician, rather than a philosopher or organizational communication scholar.

Caroline Gottschalk Druschke, because she uses methodologies that are not standard for the rhetorician, such as "qualitative interviews and statistical analysis," makes me wonder to what degree the insights that she offers to the scientists with whom she works are actually *rhetorical* insights. She claims that rhetoric as an approach to scholarship "complicates and contextualizes" the scientific perspective with "depth" and "nuance." But it seems to me that the most intriguing discovery that she reports, about the relationship between scientists and fisherman, is attributable to her work as an ethnographer rather than to her training as a rhetorician. Her experience as an embedded rhetorician using social scientific methods makes me wonder to what extent an "engaged science" model of collaboration might lead to a scientization of rhetorical inquiry, and if so, what might be lost in the process.

Gottschalk Druschke encouragingly reports that her colleagues in the sciences, once educated about what the field of rhetoric can do, "are often enthusiastic, supportive, and grateful collaborators." But she does not report to us what she tells them about the field of rhetoric when she is educating them, or what language and arguments she uses to establish a role for rhetoric "in the practice of science more generally." That is the conversation I hope we still can have.

What I did not hear from any of the funded rhetoricians of science on the panel was a story about how they introduced particular rhetorical concepts or theories to scientists to illustrate what worked or did not work in particular cases, and whether that introduction of concepts was accepted or rejected by the scientists in question. But maybe they chose not to talk about this because they knew better than to try such a heavy-handed approach to translating the results of our research to our scientific publics.

My experiences with outreach, which have been more brief than theirs, consist of a few unfunded lectures and short essays directed to scientists. These talks and editorials have attempted to instruct scientists by summarizing the findings of rhetorical studies of their discourse. The most recent of these attempts was at a conference on

science communication that was attended mostly by scientists. In my talk on the public rhetoric of science, I introduced some concepts from the rhetorical tradition, including litotes, hyperbole, hedges, metaphor, and metastasis, and I summarized a number of case studies by rhetoricians of science that used these concepts (Von Burg, 2012; Ceccarelli, 2011; Ceccarelli, 2013; Archer, in press; Coleman, 2013). I framed the conclusion of each case study as advice to the scientists in the audience. For example, Von Burg shows that scientists can use litotes when faced with a charge that an exaggerated Hollywood movie tars all scientists with offering hyperbolic advocacy. My approach to communicating the broader impact of this work to the communities who would most benefit from hearing about it was to focus on a small number of particular cases, and to make the take-home message of each case clear, with a final slide summarizing each concept and its potential value in helping scientists recognize how to improve their public communication should they find themselves in similar situations.

So imagine my surprise when the person who organized the conference asked me the first question: “So what would you tell scientists to do to improve their communication?” I just looked deadpan at him for a moment, then gestured up to the “take-home-message” slide still up on the screen. Somehow I had not given him what he had expected. Maybe he was looking for the “avoid jargon,” “use readable font on your PowerPoint,” and “work on delivery” type of advice that Goodwin tells us that she is always expected to provide. Or maybe the problem is deeper than that; maybe I was employing the deficit model of communication on my audience, assuming that if I just explained my specialty area in simple terms they would gain the knowledge that would allow them to immediately recognize its value and significance.

After hearing from these four enterprising rhetoricians of science who are working closely with the scientists they study and beginning to reflect on their communication practices with those scientists, I am left with a variation on the question I raised last year about our public outreach. Can we introduce scientists to specific concepts and findings that are uniquely rhetorical, and in so doing, have a positive influence on those scientists? Who has done that successfully, and with what concepts and findings? Or is this the wrong question to ask: Is there another way that we should be thinking about what rhetoric is and what its broader impact should be? Walker, Goodwin, Parks, Rief, and Gottschalk Druschke are all rhetoricians committed to spreading the good work of our discipline outside our insular disciplinary community. I was excited to hear about all of their projects and I look forward to hearing

more about how they all turn out. As these embedded rhetoricians continue their work, I hope the conversation will continue about best practices for engaging scientists with public outreach that ensures the broader impacts of our research.

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