

## Horizon Myths

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It's one of the oldest and dirtiest tricks in Socrates's book: after he has spent hours wielding the dialectic to carefully demolish his interlocutor's reliance on traditional wisdom, after he has brought that man inexorably to *elenchus*, he turns over his hand and out flies some outrageous myth—a chariot at the mercy of two lascivious winged horses, a cave full of shadow puppets, you know.... This move always seemed to me like such a cheat: after all, wasn't Socrates's mission in life to goad Athenians to leave behind the old *muthos* and come to know themselves through the rigor of his modern *logos*? Why did he resort in the clinch, then, to just-so stories? But then it dawned on me that at the *elenchus*, at the horizon, when all our old paths draw together to a point and disappear, it's not logic that persuades and inspires us to push through into the unknown: it's myth.

So now I am going to play the mythic Socrates to the dialectic that Harris and Ceccarelli have constructed via their respective calls to increased disciplinarity and increased engagement. Indeed, as I read their position papers, I heard several of the old myths of our young field being quietly and effectively demolished—such as the myth that we're activists simply because we study activists; the myth that studying "emergent" fields and technologies somehow excuses us from applying a rigorous method to those cases; the myth that Classical concepts must be irrelevant to rhetoric of science because they shaped and were shaped by another *kairos*.

I for one do not mourn the death of these old myths. With Harris, I think the greatest challenge facing rhetoric of science in the next decade is method. And I'm unabashedly enthusiastic about cognitive approaches to rhetoric. I've argued for the Classical *topoi* as cognitive constraints, inventional habits that can be used to distinguish the argument styles of different STEM fields. And my default method, filter theory, turns *topoi* into a constraint satisfaction game that can model audience reception and is amenable to "hardening" up via computational and neurological modeling. I think cognitive methods have tremendous promise and are right in line with cutting-edge work in the digital humanities. But they also raise some questions. Would taking a cognitive tack in rhetoric of science mean losing our anchorage in social studies of science? Would it mean greater isolation from calls to engagement like Ceccarelli's? I'm all for an explanatory cognitive theory of rhetoric of science, but say such a thing were achievable—would it increase our traction on climate change or GMO debates?

On the engagement side, I wholeheartedly endorse Ceccarelli's exhortations. Isn't civic engagement the reason we do the rhetoric—instead of the history or philosophy—of science? I know it's why I do. Of course I want to know everything about how language glues science together and keeps it rolling. But I also want to step in and help when this beautifully efficient juggernaut steamrolls over a group of mothers or ranchers without looking and without stopping.

I'm not sure our scholarship in our flagship journals should be taken as a reliable indicator of how often we step in. Our research articles are written to and for each other; often, as Ceccarelli acknowledges, our citizenship takes place outside the page. For instance, a single sentence in my study of the Mexican gray wolf reintroduction (*Written Communication*, 2009) alludes to my work with project administrators, but it doesn't and can't represent the hours I spent going to scoping meetings and corresponding with administrators about my findings and recommendations. Nor do I think we want to send junior scholars the message that all of their research articles need to wind up at the stasis of action; we don't want to devalue the important spadework that needs to be done at lower stases so that we can be in a position to recommend courses of action. Despite these caveats, Ceccarelli is undoubtedly right that we need to come up with a system and a forum for marshaling our spadework into bulwarks from which we can see other publics, and they can see us, and we can start to cooperate on projects.

But visibility creates its own problems, as we can witness in the enormous political pressure placed on many of our colleagues in science communication. Let's say we did manage to put together that explanatory cognitive theory of rhetoric of science. Let's say we operationalized it so that we could predict the positions of stakeholder groups and the outcome of public science policy debates with 95% accuracy. Without a doubt we'd hold seats on every government advisory committee from the ATF to the USDA. But is that really what we want, to be integral to the national science-policy machine? In our quest to be useful to our polities, is it our ultimate goal to help scientists persuade the public to do what they want?

This is the dialectic that I read in the "Horizons" position papers: how do we achieve greater disciplinary rigor without losing our civic edge, and how do we make ourselves a public resource without becoming a tool of hegemony? It puts me in mind again of Socrates, who refused to serve in the government or retreat to a patron's estate to write books, who instead wandered around the polis scrounging free dinners and prodding his hosts' full bellies with the sharp stick of the dialectic. Like Socrates, I don't have a synthesis to offer to the dialect of disciplinarity and engagement in rhetoric of science, but I do have a myth:

A few years ago, NASA convened an invitation-only conference to discuss geoengineering proposals to mitigate global warming. One proposal was to deploy giant space mirrors between the sun and the earth to reflect back some of the sun's rays; another was to spray tons of particulate matter into the ionosphere to simulate a volcanic eruption and scatter sunlight; a third was to spray hundreds of thousands of gallons of sea water into the sky to make a sort of cloud umbrella for the earth. NASA representatives nodded and ruminated: some of these proposals

were intriguing and not too expensive. Then, Jim Fleming stood up to present. Jim, an atmospheric physicist turned historian of science, presented archival evidence on mid-century weather control efforts that revealed that most of the solutions being proposed at the conference had already been tried—and had failed miserably at massive public expense and environmental cost. Jim's impression was that his testimony convinced NASA to table some of the more radical proposals.

I'm not sure why I found this story so compelling when Jim told it in a bar in Potsdam: I haven't yet unpacked all of the myth's logical implications and consequences. But can I imagine a rhetorician, independently supported by an ARST fund for civic engagement, serving and bringing our collective learning to bear on a state water control board or a national ethics review? I can. The realization of such a myth would require a dramatic reworking of the ways we're used to working. But isn't that what horizons are for?