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Response to Jack, Singer, and Abeles

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My thanks to Jack, Singer, and Abeles for a stimulating paper that invites us to think more deeply about the methods of rhetorical analysis. I am also grateful for the invitation to offer some observations on their work as they each show the applicability of the figures of speech to discourses on three very different subjects, and as collectively they challenge a verbal/material dissociation in our understanding and application of the rhetorical tradition.

Recent aerial photos of southern Ontario farmland show a proliferation of wind turbines across the landscape that could be described by an analogy with the figure *ploche*, the seemingly random repetition of a word or phrase that constantly reasserts its presence. The windmills repeat in the same way, and Jack has given us examples of humans using the patterned repetition of *epistrophe* to make sense of their threatening propagation.

Epistrophe is one of a host of famous figures (or schemes) specifying repetition at fixed positions in a series of predications, thus imposing parallelism. These are tools of emphasis and text-organizing figures, but they are also eloquent in their spareness and powerful in their persuasiveness. As Jack points out, the *epistrophe* is the verbal epitome of induction, of supporting a generalizing conclusion through multiple examples sharing the same predicate and hence the same property (see e.g., “My well is lost,” etc.). Physically, there had to be more than one jar of muddy water from more than one well contiguous to a turbine to establish the pattern.

There is a lost aspect of rhetorical theory covering the kind of materially based verbal argument that Jack brings to our attention. In the hybrid rhetoric/dialectic of the 16th century it is called the expository syllogism, from the Latin *exponere* meaning to exhibit or display as though holding or pointing to something for the audience to see. Melanchthon offers the following example in his 1547 textbook: This thing is *zinzibar* [ginger]/ This thing heats the ventricle/ Therefore *zinzibar* heats the ventricle (1547, Eiiir). The

demonstrative *this* in the subject is the point of contact between language and the physical object.

Singer takes the verbal *incrementum* into the world of the visual. Both verbal and visual *incrementa* work by building on accepted hierarchies that organize related or repeating items, less to more or more to less. They often anchor what Perelman and Olbrechts-Tyteca call a double hierarchy argument where the rhetor uses an accepted hierarchy to argue another into place. A verbal pain scale can use the increasing “degree” modifiers available as “thought grooves” in a language to signify increasing pain: e.g., no pain - mild pain - moderate pain - severe pain - excruciating pain (Sapir, 1949, p. 217). Since language barriers render such verbal scales useless, a wordless visual scale would be highly valuable. Visual *incrementa*, read left to right in the west, often rely on the increasing size of the same object. None of the standard visual pain scales that Singer samples use size increase as there is no plausible image to use. Other visual options include repeating a monocolored icon while increasing saturation, left to right, or changing its color using an assumed color scale from cool (blue) to hot (red). The “faces” pain scale is another option, deploying a presumably universal sequence of increasingly disturbed facial expressions.

The rogue visual scales that Singer offers would probably not work without the accompanying verbal tags. But they do capture Singer’s point that an individual’s experience of pain cannot really be captured on any of these scales—it is likely to be intermittent, cyclical, migrating. The rogue scales then are not meant to standardize the way most scales, visual or verbal, are intended to. Instead, playing off the norming scales, they serve individual expression and resistance to institutionalized attempts to standardize experiences.

Abeles’ methodological hook is the trope metonymy. Following Burke, he describes the recent development of CRISPR-cas9 genome editing techniques as an instance of a metonymic process, turning a natural agent into an instrument or technology. This agent-to-instrument “crossing over” has happened often in the history of the sciences, as the anti-microbial properties of certain molds led to penicillin or the Taq polymerase from thermophilic bacterium enabled PCR (Polymerase Chain Reaction). Metonymies as tropes involve replacements, (e.g., place for activity, *Washington for the federal government*), and the option of substituting instrument for agent is a common one. This substitution involves switching grammatical roles, agent/nominative with

instrument/ablative in inflected languages. Even English with its cumbersome prepositions allows such verbal and conceptual migrations from one function to another. But making CRISPR [acronym for a descriptive phrase] or the cas9 enzyme an agent in the first place was itself a grammatical decision anterior to its metonymic morphing. The source bacterium could as easily be an agent and the gene-cutting enzyme its instrument. So why the grammar sets off in one way rather than another is an intriguing anterior question, a matter for transitivity rather than figural analysis.

There is a further oddity. Key passages from the CRISPR literature that Abeles has quoted as instrumentalizing CRISPR also feature predictable passive constructions: the CRISPR-cas system may be exploited (Barrangou, 2007); it could be exploited (Makarova, 2006); the Cas9 endonuclease can be programmed (Jinek, 2012). The implied agents here are of course the scientists who actively developed a gene-editing technology from the naturally occurring process. It is all but impossible to remove human agency from language to achieve an unmediated account of the physical world.

The theme of resilience across the three contributions is particularly appropriate in connection with materiality. (And literally in materials science *resilience* is the well-known property of any material to rebound to a previous shape after deformation.) The material resilience or even resistance of the physical world that scientists deal with has been an emphasis in recent RSTM scholarship. Scholars are uncomfortable with merely verbal analyses of scientific discourse as somehow missing the toe-stubbing essence of the scientific enterprise.

But there need be no sharp either/or between the material and linguistic as the analyses by Jack, Singer and Abeles demonstrate. Scientific discourse attempts to account for the physical world; the physical world need not cooperate. We expect results from scientific arguments (predictions, technologies), but many discursive attempts fall by the wayside (Fahnestock, 1999/2002, p. 43-44). The figures, defined in the rhetorical tradition as linguistic structures, are instruments of such attempted constructions. They are at bottom descriptions of resilient patterns in language, but our pattern-seeking brains attempt to impose order, whether the input is verbal, aural, visual, or material/experiential.

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