

A neurocognitive ontology of rhetorical figures

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With enough improvement in Rhetoric we may in time learn so much about words that they will tell us how our minds work.

—I.A. Richards
Philosophy of Rhetoric (1936, 91)

Rhetorical figures are neurocognitively motivated linguistic pairings of form and function. I will report on an ongoing project that is building and populating an ontology of figures that expresses all of these dimensions as an integrated knowledge representation, with a public web interface.

Rhetorical figures are neurocognitively motivated. The famous Four Master Tropes—Metaphor, Metonymy, Synecdoche, and Antithesis¹—are the linguistic projections of neurocognitive affinities that have been studied since Aristotle, and that have substantial contemporary support from cognitive science: respectively, Similarity, Correlation, Meronymy, and Contrast. All other tropes can be plotted in these terms as well. The schemes, too, are projections of neurocognitive affinities which also have support from contemporary cognitive science, such as repetition, symmetry, proximity, edge detection, and relative position.² What have conventionally been called *figures of thought* align with intention, a function of, in psychological terms, Theory of Mind.

Rhetorical figures are linguistic. Tropes are semantic. Schemes are phonological, morphological, lexical, and syntactic. Figures of Thought are pragmatic.

Rhetorical figures are form / function correlations. In Jeanne Fahnestock's (1999) terms they epitomize lines of argument. Take the famous John F. Kennedy / Theodore Sorenson aphorism:

And so, my fellow Americans: ask not what your country can do for you—ask what you can do for your country.

This expression epitomizes the central argument of Kennedy's inaugural address, the address that forecast the Peace Corp, to reject an ethos of entitlement and embrace an ethos of duty because of antithesis (a trope of opposition) and antimetabole (a scheme of reverse repetition) buttress each other in concert with the semantic parallelism of mesodiplosis (medial lexical repetition), the pivoting modal verb complex, *can do*.

The project I will report on is a computational ontology (a database organized on principles of knowledge representation) of hundreds of instances of figures captured from public domain sources, categorized by neurocognitive affinity, linguistic domain, and rhetorical function, structured in the Web Ontology Language (which, for mysterious reasons, is abbreviated as OWL), and I will demonstrate a website displaying those instances in these terms.

References

- Richards, I.A. 1936. *The philosophy of rhetoric*. Oxford: Oxford University Press.
- Fahnestock, Jeanne. 1999. *Rhetorical figures in science*. Oxford: Oxford University Press.
- Harris, R.A. 2014. The fourth master trope, antithesis. CSSR.
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¹ As Harris argued at CSSR 2014, irony is miscategorized as a Master Trope (indeed, as a trope at all), and antithesis is the best fit as the fourth Master Trope.

² Harris argued at CSSR 2015, with respect to figures of lexical repetition, for several affinity/figure affiliations.