Rhetoric, neuroscience, and cognitive resilience

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)

0. Caveat

I preface this paper with the observation that it is not an instance of rhetoric of science, neither of theory nor of criticism. It is allied, rather, with the science of rhetoric; more specifically, the neuroscience of rhetoric. It is not about the rhetoric of technology so much as rhetoric as a technology, a cognitive technology; not rhetoric of medicine so much as rhetoric as medicine, or therapy.

I apologize for the transgression. My only excuse is that I think this is an important line of research, and if I can present it at ARSTM, where can I present it?

1. The background

I have a neighbour, just into her seventies. She walks with her dogs past my yard frequently, and when I am out doing yard work, she infallibly asks me, with a mischievous grin, "Are you working hard, or hardly working?"

My neighbour is fighting against Alzheimer’s Disease, fighting against the erosion of her memory and her Self, and she is using rhetorical figures in the battle.

Another anecdote. My father's early education, in the 1930s, was in a one-room school house in northern BC with very limited resources. A lot of his learning was oral, with a big emphasis on narrative poetry--Tennyson, Kipling, Robert Service. Flash forward seventy-five years. He is a shuffling, mumbling, slump-shouldered old man who can barely communicate. I bought a book of Robert Service and began reading to him.

There are strange things done in the midnight sun
By the men who moil for gold;
The Arctic trails have their secret tales
That would make your blood run cold;
The Northern Lights have seen queer sights,
But the queerest they ever did see
Was that night on the marge of Lake Lebarge
I cremated Sam McGee.

(Service 1907)

I was looking for any kind of acknowledgement, but his face was slack. He was very hard of hearing, too, which made the whole idea ludicrous. But I was sitting alongside him, and he was

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looking at the book. He hadn't read anything in years, but he took it out of my hands and started running his finger along, under the lines, nodding. He did that to the end of the page, but when he turned the page, he turned two at once. 'OK,' I thought. 'He was just engaging in some muscle-memory ritual. He has no idea what he is looking at.' But he turned the page back, put his finger under the correct line, and followed it through to the end of the poem.

Like my neighbour, he was using rhetorical figures as way to fight his dementia, not the direct conversational resistance that she is putting up, but as a way to clear away a little of the fog for a few moments by reaching deep into his pre-dementia memories for linguistic nuggets of isocolon, alliteration, rhyme, and assonance, patterns of cognitive resistance.

2. Introduction

We have known for a long time that rhetorical figures are both neurocognitive phenomena and linguistic structures of resistance to the fragility of memory, to the vagueries of attention, to the presence of noise, internal and external.

Rhetorical figures are linguistic configurations with particular signatures corresponding to cognitive affinities. They have been catalogued and studied for millennia along several linguistic and semiotic dimensions. In this paper, I am concerned exclusively with the type of figure known as schemes.

Schemes are figures of formal salience, linguistic configurations that attract notice because of the structure of their signifiers (representamens, signantid), such as rhyme. While the salience of schemes does not seem to decay into invisibility as it does for tropes (for instance, with 'dead' metaphors and metonyms), ordinary language is full of them. With rhyme, for instance, we find such words and phrases like as *rolly-polly, hoi polloi, nit-wit, eye in the sky, drunk as a skunk, fun in the sun; red sky in morning, sailors take warning*).

The history of schemes shows their cognitive resistance. They were not named and catalogued (so far as we know) before 5th century BCE Greece, but instances of figures are recorded much earlier in ways that indicate that one of their chief functions was to resist message degradation; that is, to optimize the signal to noise ratio. In pre-literate societies, there are few external technologies to fight the cognitive vulnerabilities of individuals and of cultures—no notebooks, no writing system, no smart phones, only the individual's internal storage system, and their social reinforcements (which in turn depended on the internal storage systems of other individuals). Rhetorical schemes aided the individual retention, and cultural transmission, of history, technology, political arrangements, aesthetic artefacts, ethical and practical maxims.

We still do this. I don't know how accurate its predictions are, but the maxim "red sky in morning, sailors take warning; red sky at night, sailors delight" is a heuristic for making weather-based plans. It contains rhyme, of course, but also parison and isocolon, as well as the trope, antithesis. (Tropes have a role to play in cognitive resistance as well, culturally and individually, but they are less tractable theoretically, so I set them aside for now.)

The great pre-literate Homeric epics are densely figurative for just these signal-to-noise reasons (Rubin 1995). The greater compatibility of certain linguistic (and other) patterns with neurocognitive architecture, the greater facility an individual will have for combining them into larger patterns, the greater retention of instances that include those patterns, the greater the
propagation of those instances, and, therefore, the greater the cultural resistance to the degradation of the signal. Cultural resistance depends on multiple individuals retaining and propagating information.

Cultural noise includes such events as death, illness, migration, hostility. The more people who remember "red sky," the greater its chance of making it to the subsequent generations, travelling to new locations with a population, entering into cultural artefacts, and so on.

Individual noise includes such events as pain, fatigue, mood-altering molecules, environmental distractions, and so on, in addition to our concern here, cognitive decline. The more robust "red sky" is—the more consonant with cognitive predispositions for categorizing, allocating attention, reasoning, and aesthetic pleasure—the more likely it is to lodge in memory, to more easily retrieved it will be, the more often it will be spoken, and the more naturally and automatic will be its articulation (i.e., the articulatory motor programs will more be 'stronger' with more 'exercise'). It is their cognitive properties that make the figural units of oral poetry readily available to the bard, and instances like "red sky" readily available to individuals in a society.

The cultural and the individual are in a feedback loop: the more frequently an instance is spoken, the more culturally entrenched it is; the more culturally entrenched it is, the more frequent individual reinforcement is. Which brings us to dementia, and my neighbour.

Dementia is a cluster of syndromes with linguistic implications.\(^1\) It presents language-related cognitive impairments severe enough to affect an individual’s ability to function in daily life, from minor levels of lexical-search difficulties that hinder or preclude conversation to more severe levels of incapacity, where even identity-defining memories, such as the names of one’s children; Alzheimer’s Disease is the most common form of dementia.

We have no idea how schemes arose, though most of us believe they are not the product of conscious invention. That is, while individual rhyming instances, like fun in the sun and red sky in morning are personal creative inventions, the notion of rhyme is not a personal creative invention. Just as we believe metaphor is what you get when you add language to a mindbrain that works analogically, antithesis is what happens when you add language to a mindbrain that works contrastively, so too is rhyme what you get when you add language to a mindbrain that functions through repetition, antimetabole happens you get when you add language to a mindbrain that responds to symmetry; and so on. If rhyme and antimetabole can be said to be invented, so too were morphemes invented, and grammatical roles, and the sentence.

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\(^1\) Like most cognitive syndromes, dementia is not uniform, and I am collapsing much variability for the sake of, I hope, useful generalizations. In that spirit, Dementia is a clinical diagnosis reflecting the presence of cognitive impairment severe enough to affect an individual’s ability to function in daily life, primarily noticeable in activities implicating memory, with significant linguistic correlates. Dementia can be caused by a variety of conditions, including degenerative diseases, stroke, depression, and head injury, but the most common cause of dementia is Alzheimer Disease, a progressive, degenerative disease of the brain (Alzheimer Society of Canada, 2010; Tyas & Gutmanis 2015).
Rhetorical schemes arise from, and play to, the neurocognitive substrates of language, as mapped against the communicative of our species.

What makes schemes different from 'just' language, the kind of language that grammarians and linguists generally care about—subject-verb agreements, denotation, conventional syntax—the aspects of language that comprise the ground against which figures stand out? Nothing that is hard and fast, but loosely it is their appeal to those neurocognitive substrates.

Much of language seems arbitrary, a notion best known currently in Ferdinand de Saussure’s doctrine of the arbitrariness of the sign, the mutual irrelevance of the signifier and the signified, but known to linguists back at least as far as the Stoics. There is no apparent relation between words and concepts, between structures and meanings—most potently demonstrated by comparing the different words, morphologies, and syntax of different languages that reference the same or highly similar things. The signifiers dog, Hund, pero, & chien have very little in common, but they all signify the same class of yappy, hairy quadrupeds in the world.

The doctrine of arbitrariness is perhaps overgeneralized in linguistics, but as rhetoricians we certainly know it has very little purchase on rhetorical figures. Schemes are not arbitrary. Schemes are motivated. Schemes are motivated by the way signifiers play to neurocognitive affinities.

That is what makes figural instances more salient, memorable, and aesthetically pleasing—not that those notions are easily separable—and, therefore, what makes them especially prominent in discourses where a strong signal to noise ratio is important.

My neighbour’s frequent question (and related variants), is such an instance:

1. Are you working hard, or hardly working?

This utterance is culturally entrenched as a blue-collar cliché, familiar among construction workers, road crews, factory workers, and so on. Individually, it is entrenched in my neighbour with Alzheimer’s Disease. Burke famously called such cultural colligations as this, as well as poetry at large, "equipment for living," mechanisms for "arming us to confront perplexities and risks" (1941:61). He meant something rather different by it, but in the context of dementia we can see that the cognitive features of such colligations, and of poetry, can arm us against the perplexities and risks of cognitive decline.

We rhetoricians recognize the formula underlying 1 as chiastic, a class of figures that repeats linguistic constituents in reverse order. Its most famous instance is perhaps by Alexander Dumas:

2. [T]ous pour un, un pour tous. (1849:129)  
   All for one, one for all. (2010:80)

Our "working hard" example (1) is actually quite tricky in rhetorical terms. It is not an antimetabole, for instance (as is 2), because only one word repeats, working. The hard/hardly alternation of 2 looks like polyptoton, but the polysemy shows that there is more going on: hard can be paraphrased with something like steadily or diligently; hardly can be paraphrased with something like barely or very little.
I emphasize this fact to make a point about the *form* of 1. The meaning shifts and lexical relations are intricate, two things that give people with dementia particular difficulty. My neighbour does not retain and deploy this phrase because of its lexical sophistication so much as because of its form, which we can perhaps see more clearly in an acoustic representation (Figure 1).

![Figure 1: An acoustic representation of a typical formulaic expression used by someone with mild Alzheimer's disease](image)

Figure 1 only represents a loose correlation between the speech sounds (symbolized by letters) and the related acoustic signal, but it is close enough to make the point. In particular, notice the two highly similar clumps corresponding to *working*, and the similar syllabic nuclei with the two instances of *hard*. There are specific, identifiable reasons *why* this expression is a formula in blue-collar registers: it appeals to certain neurocognitive affinities, which make it both mnemonic and pleasing (or witty). The expression manifests two instances of repetition (*working* and *hard[ly]*)*, perhaps the deepest and most basic affinity. The expression also manifests a sequential contrast (reversal), another deep affinity, and something we might call, metaphorically, an acoustic symmetry.

Like all such formulas, I has internal patterns that make it more memorable, and memory is a crucial factor in dementia.

People with dementia often speak in such formulae. It is one of the best-known characteristics of their speech, with estimates at 24% (Van Lancker Sidtis & Rallon 2004). Kelly Ann Bridges and Diana Van Lancker-Sidtis (2013) define formulaic language in this context as comprising “fixed expressions that are known to the native speaker, and includes idioms, proverbs, speech formulas/conventional expressions, expletives and pause-fillers” (5). Attested examples include:

3. Am I glad to see you girls.
4. As a matter of fact, ...
5. Don’t call us – we’ll call you.
6. Likewise, I’m sure.
7. He snores to beat the band.
8. They must be worth their weight in gold.
9. Throws somebody a dirty curve.
10. To err is human, to forgive divine. (Van Lancker Sidtis & Rallon, 2004: 222-232)

It won’t take long for a rhetorician to notice the patterns here, even if most of us sometimes take a long while to come up with some of their canonical names, but here’s a quick run-down:

Hyperbaton: 3 (*Am I*)
Assonance: 3 (*am, glad*), 4 (*a, matter, fact*), 6 (*likewise, I’m*), 9 (*dirty, curve*)
Consonance (excluding alliteration): 4 (of, fact) 5 (call, we’ll), 8 (they, worth, their)
Alliteration: 3 (glad, girls), 7 (beat, band), 8 (worth, weight; they, their)
Mesodiplosis: 5 (2 x call)
Epanaphora 10 (to)
Parison: 10 (2 x V_{inf} < Adjective)

There is more figural activity here, of course, including a few tropes the antimetalepsis of 5 (‘you call us’ / ‘we call you’—like #1, a chiastic figure), the metaphor of 9, and antithesis of 5, but also the easily overlooked effects of lexical repetition. The mesodiplosis of 5 and the epanaphora of 10, in particular, give us alliteration and rhyme, since the repeated words necessarily begin with the same consonants and end with the same syllables. Schemes can sometimes entail other schemes in this way, which is almost always ignored in the discussion of figures but shows how the subcomponents of something like lexical repetition (namely, phonological repetitions) contribute to the cognitive resilience of the relevant utterances.

Again, speaking in what researchers tag with labels like idioms, prefabrications, fixed expressions—even, occasionally, schemata—is a well-known feature of dementia speech, with occasional explanations like about lowering the cognitive burden or compensating for a decline of memory, since one preassemble block of speech is assumed to be easier to retrieve than a bunch of component words. In rhetoric, this fact correlates with what we know under Kenneth Burke’s label of collaborative expectancy. A pattern, once known or felt, demands its own completion.

But there is little to no attention paid to why particular colligations cohere into such formulae. Formulaic speech very frequently manifests affinities, which is precisely what makes them more robust against cognitive decline. Their prosodies are often roughly ‘musical’ or ‘poetic,’ with parallelisms and symmetries, and music is perhaps the most resistant signal structure we know against cognitive memory loss; the resilience and ameliorative effects of poetry are less well known, but my Sam McGee anecdote illustrates them nicely, and they are beginning to gain clinical and research attention (Swinnen 2014). The formal qualities of language, in consonance with the neurocognitive affinities to which they appeal, are the primary reason why some colligations are more persistent in dementia speech.

To no one’s surprise in this audience, I am sure, dementia research has not turned to rhetorical figures for an account of why the formulae emerge in the first place, why they lodge in our memories, and what features support their ready and recurrent retrieval, and their more fluent articulation. But there are answers here, of a sort I will sketch out.

3. Neurocognitive affinities

Some of the ways the mind/brain responds to rhetorical figures are more obviously neurological, some are more obviously cognitive—to the extent we can separate those notions—hence, the somewhat pretentious term, neurocognitive affinities. But the idea is that "because of some 'universal' appeal" (Burke 1950:58) in the material arrangement of rhetorical figures to the mental and physiological structures between our ears. What the precise catalogue of such affinities is remains to be worked out, as well as the ways in which they interact. Does affinity X carry more weight than affinity Y? What conspiracies of affinities are more robust than others?
What individual, cultural, linguistic, and pathological differences are there among the appeal of the affinities?

But a few affinities are clearly relevant to our data, such as it is (1, 3-10): repetition, demarcation, and sequential order.

While it is notoriously difficult to link most cognitive processes or inclinations to the wetware that instantiates them—some cognitive scientists even talk of an “incommensurability between the languages of neuroscience and psychology” (Kagan and Baird 2004: 100)—repetition is one phenomenon that is irrefutably common to both areas, to both ‘languages.’

We know, for instance, that neurons fire repetitively. We know that neural pathways build up by repetitions of the same firing patterns. We know that the most elemental stuff of cognition is brain rhythms; that is, highly repetitive neuronal firing patterns. We also know that when we want to remember something, we repeat it to ourselves over and over. Repetition is so obviously a matter equally of electrochemical neuronal activity and of cognitive salience that data is hardly required.

Should we seek experimental verification, however, it is easy enough to come by. Bornstein (1989), for instance, is a meta-analysis of over two hundred experiments demonstrating the robustness of the mere-exposure effect, also known as the familiarity effect—repeated encounters with any stimuli whatsoever biases people toward those stimuli. In the case of the formulaic speech, repetition not only contributes a kind of adhesion to the specific colligations (assonance, consonance, rhyme, isocolon, and ploce are all very frequent schemes in formulae), repeatedly spoken and repeatedly encountered colligations wear the neural grooves more deeply, encouraging their presence in the flow of speech. As Joan Bybee has noted, “frequency of use affects the formation of grammar” (2006:719). Rhetoricians (yours truly at least) might not be comfortable with the hegemony of the term grammar here, she is certainly right that more you hear and say something, the more predictably you will use it again.

Our cognitive and linguistic trafficking in sequential order is similarly deeply entrenched neurologically. A neural pathway, after all, is a temporal pattern, one firing activating subsequent firings in a given sequence, repeated again. We live in time and we speak in time. Linguistically, we give directions, write instructions, share recipes, tell stories, and perform a thousand other speech genres that are dependent on what comes before what, and formulae by definition are sequential patterns that become entrenched.

One can see the power of sequence in terms of general perception and categorization with the Gestalt notion of good continuation (Koffka 1999 [1935]:153-154 et passim) and in terms of rhetorical figures with Burke’s collaborative expectancy. Recall that what Burke tells us is that when we get the gist of a pattern, we “collaborate [with it] by spontaneously willing its completion and perfection as an utterance” (Burke 1950:59); that is, we complete the pattern that has been established.

Repetition and sequential order are utterly intertwined. What is a lexical repetition (ploce) but a repeated sequence of phones (or letters), a syntactic repetition (parison) but a repeated sequence of phrases, a prosodic repetition (isocolon) but a repeated intonational sequence? What is a culturally and cognitively robust lexical colligation (maxim, gnome, sententia, proverb,
cliché, prefabrication, …) but one that has been repeated often enough to become cognitively and culturally entrenched?

The notion of position, further, is part of the repetition/sequence mix, and of equally crucial importance for the neurocognitive pull of rhetorical figures. Three positions are particularly important for schemes, initial and final—that is, the “edges” or “boundaries” of figural constituents—and medial, between such edges.\(^2\)

As perceiving organisms, we need sensitivity to "edges" or "boundaries," which signal a shift in perceived objects. "[E]dge detection is one of the fundamental processes [upon] which object detection – a more complex process – is built" (Chait 2006:217). It is easy, or at least intuitive, to understand this process in visual terms. Significant changes in brightness (often abetted by changes in hue) correspond to regions of visual perception where a pencil 'ends' and the paper upon which it lies 'begins,' where the paper ends and the desk begins, the desk ends and non-desk emptiness begins. These impressions are supported by extensive neurophysiological and cognitive research, which has assigned these tasks to specific neural mechanisms (see Elder & Sachs 2004 for a summary of relevant research). Similar mechanisms are at work discriminating acoustic 'objects,' auditory sensations that correspond to discriminatory differences, a process called "auditory edge detection" or (since sound is ineffably temporal) "temporal edge detection." Maria Chait defines this process as "the neural basis of listener's ability to make sense of an ever changing, complex acoustic world."

Auditory or temporal 'objects' might seem abstract at first pass, but we need to understand and categorize temporal phenomena as the roar or a lion, the snap of a branch, the belch of an infant. If one thinks in musical or speech terms, acoustical objecthood may seem more coherent: notes, in the first place; phonemes, syllables, words, phrases and clauses in the second.

The mechanisms for edge/object detection in language are complex and conspiratorial—for instance, one of the ways we know that the sequence bingbong should be segmented bing bong is because no syllables or words in English can begin with ng, so bi ngbong is ruled out—as well as being quite language specific. But the important point is simply that language users do, naturally and easily, most of the time, perceive objects like phonemes, syllables, and words, so we perceive the relevant boundaries, the edges where one such object ends and another begins, even though the actual acoustic signal is usually one big schmoosh.

It is this tuning-to-edges that makes beginnings and endings particularly salient locales of figural action, especially in combination with repetition, giving us such figures as alliteration (phoneme repetition at the beginning of words), rhyme (syllable repetition at ends of words), epanaphora (lexical repetition at beginning of phrases or clauses) and epistrophe (lexical repetition at ends of phrases or clauses).

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\(^2\) While Richard Gregg does not consider rhetorical figures at all in his neglected (1984) classic, *Symbolic inducement and knowing*, his neurorhetorical approach has been important to my research generally and his attention to edge discrimination (33-40, et passim) was especially important for the line of research here. The actual neuroscience in Gregg’s book is somewhat dated, but the results appear to have held up.
4. Rhetorical schemes or linguistic symptoms?

Prefabricated utterances in neurocognitively affine packages are obviously rhetorical, but their rhetorical activity is not so obvious. They are not quite dead figures in the way that table *leg* is a dead metaphor and *armchair* is a dead metonym, words whose figural roots are so deep as to be completely lost. One cannot say or hear *rolly-polly* or *red sky at night, sailors delight* without their figural presence standing out from the prosaic ground. Around my family home, one could not even stumble into a rhyme, a wholly accidental collocation of word-final syllable repetition, without someone saying "you're a poet and don't know it.”

Because they are primarily material, rather than conceptual, it is hard to kill and bury a scheme. Dead or dormant tropes are like underwear or socks, obscured by other material; schemic prefabs are more like hats or facial hair, unmistakably on the visible surface.

But it would be absurd to say that such use of prefabrications in nonpathological speech is more rhetorical than the inevitable way that any act of diction or stylistic selection—saying *attorney* rather than *lawyer* or *solicitor* or *shyster*, saying *mistakes were made* rather than *we made mistakes*, and so on.

What about in the pathological context? How rhetorical are schemic prefabs with respect to dementia? There are two directions this answer can take, in terms of production and in terms of interaction or treatment. On the one hand, they are diagnostic. An increasing use of prefabrications against previous speech patterns and/or a linguistic baseline can signal cognitive impairment. That is one of several *linguistic biomarkers*, as they are called, in language performance that correlate with cognitive impairment—though I will call them *linguistic indicants* because *biomarkers* is more rightly reserved for such things as the presence of amyloid plaques or neurofibrillary tangles; that is, physiological indicants of dementia.

Linguistic indicants, for instance, include a marked decrease in unique words in a given dementia language episode. That is, once words enter an episode, they are recycled with high frequency, which means an overall lower vocabulary range. There is also a strong trend toward 'light words,' so-called because of their low 'semantic weight' (examples include *thing, place, and stuff*). But it is worth noting in this context that they are also the most frequent terms in their domains (that is, repeated more often in general discourse). They are encountered more often, and so they stay closer to the front of the neural-pathway rolo-dex (Bybee 2006).

In figural terms, boundary repetitions of sounds as well as words is increasingly common as dementia advances. Take these two examples which satisfy the standard definition of *epanaphora* (“[r]epetition of the same word at the beginning of successive clauses or verses” Lanham 1991:11):

11. I say to my wife/I say in here/and I can’t think of words (Meteyard & Patterson 2009:129)

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3 Apparently there is more to this than I originally knew, in a dementia poetry intervention, one of the participants came up with an extended version, replete with paranomasia: "He’s a poet and doesn’t know it, but his feet surely show it, cause they’re Longfellows." (Swinnen 2016:1388)
12. Lost my teddy
Lost my book
Lost my keys
Lost my bird
Lost my love
Lost my way
Lost my mind
Lost my soul (Swaffer 2012⁴)

Example 11 is classed as an error, of the sort we are all capable of committing now and again; I may already have committed several of them in this talk, and may again. But the scale goes way up in dementia. Example 12 is classed as a poem, a particularly moving one given its authorship by Kate Swaffer, who has dementia.

Taking them in turn, is 11 a rhetorical figure? Can an error be a figure? By the poet-but-don’t-know-it metric spontaneous productions are figures. By the heuristic of my RhetFig research group, “A figure is a figure is a figure” (e.g., Harris & Di Marco 2017, 2018) That is, if a piece of language fits the structure defined of a figure (as it does, of Lanham’s definition above), irrespective of external considerations (in particular, intentionality), it is an instance of that figure.⁵ Example 11 also satisfies a basic requirement of all rhetorical figures, which Groupe µ expresses as "the detected alteration of degree zero" (1981:37). That is, it stands out as a salient linguistic configuration against the ground of mundane, entrenched speech conventions (helpfully reduced to a hypothetical degree of absolute blandness by Groupe µ⁶).

What this means, of course, is that rhetorical schemes can be indexes, symptoms, of psychological states—perhaps of fatigue or distraction when ‘normal’ people make such errors, and cognitive decline when pathologies are involved. But the more crucial fact here, whatever we choose to do with definitions, is that 11 indicates that repetition is a neurocognitive affinity which is functionally correlated with cognitive resilience and that linguistic ‘boundaries’ are

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⁴ This poem has a curious citation history. I encountered it in Petrescu, MacFarlane, & Ranzijn (2014:211), with very ambiguous sourcing. I later discovered the fuller sourcing in a fascinating editorial by its author, Kate Swaffer (2016), who gave the source as Swaffer (2012), though without pagination.

⁵ Actually, what we say, synecdochally, is "a ploce is a ploce is a ploce," but you get the point.

⁶ The Groupe µ rubric does not generally present a challenge to schemes, as we have seen, since entrenched (rolly-polly) and accidental (poet/don’t-know-it) schemes register as deviations. But there is some challenge in entrenched—though perhaps not accidental—tropes, in the leg-of-a-table and spend-a-weekend line. With tropes, the cognitive motivation behind their coinage wholly atrophies, so that they appear entirely arbitrary, just another symbol. For my money, however, we can just extend the degree-zero notion historically back to their coinage. While this approach probably makes all words tropes, except for very rare instances like Murray Gell-Mann’s invention of quark (and even that seems to have some metonymic explanation in his unconscious). I’m OK with that.
locations of significant figural activity. Example 11, in short, tells us not only something about 
the speaker but also about the speech, about rhetorical figuration.

And 12? Is Kate Swaffer’s poem full of epanphora? This certainly seems an easier question to 
answer. It satisfies the two conditions we just rehearsed for 11: it fits the definition and stands 
out from a ground of prosaic speech. It also has a higher degree of artfulness and intentionality, 
so it presents none of the complications of 11. One can certainly wonder, though, to what extent 
those epanaphora are also diagnostic. The theme clearly signals Swaffer's concern with a loss of 
Self, the most terrifying fear of those who suffer from dementia, until the loss becomes so great 
that the nature of that fear dissolves. The overall form signals the trajectory of the disease, from 
rendering the daily management of material relations difficult, losing objects, to the dissolution 
of Self, as the tropes set in over the last four lines.

And the epanaphora may signal the type of repetitive behaviour that characterizes much 
dementia, returning again and again to rummage idly in the cutlery drawer, for instance, and 
perhaps the cognitive gravity that beginnings have. I am not suggesting that Kate Swaffer has not 
crafted the poem for artistic (and pathetic) effects. Rather, I am asking to what degree her 
attraction to beginnings and repetitions might be dementia related.

5. Conclusion

This paper might be more honestly called, "the intersection of cognitive rhetoric and dementia 
studies: a few speculations." But one has to start somewhere, and there is plenty of evidence that 
the neurocognitive affinities which shape rhetorical schemes can contribute to our 
understanding of, perhaps our diagnosis of, and certainly our treatment of cognitive resilience in 
dementia

I have not really offered you anything that would count as a thesis, but I have done a couple of 
things things.

I have claimed, with evidence and argumentation, that rhetorical schemes are a function of 
linguistic domains and neurocognitive affinities.

I have claimed, with evidence and argumentation, that these affinities contribute to the cognitive 
resilience, culturally and individually, of figural instances, like proverbs and clichés. And I have 
oberved that such instances show their cognitive resilience in the way their frequency increases 
in the speech of people with dementia.

And I have claimed, with evidence and argumentation (last epanaphora of the paper; promise), 
that rhetorical schemes can serve diagnostic purposes for cognitive conditions and syndromes.

I hope I have also interested you to explore the ways in which rhetoric might do some good for 
individuals with dementia.

6. References

http://www.alzheimer.ca/~/media/Files/national/Advocacy/ASC_Rising_Tide_Exec_su 
mmary_e.pdf


