

Antimetabole and its friends

*You only need two tools in life — WD-40 and duct tape.
If it doesn't move and should, use the WD-40.
If it shouldn't move and does, use the duct tape.*

—Doxa (see Stafford 2013)

1. The problem

Antimetabole is renowned as a symmetrical figure. *The symmetrical figure. Par excellence.* The notational shorthand for antimetabole is the highly symmetrical formula, ABBA. Yet, here is an utterance that accords with the essence of virtually all definitions of antimetabole—we can take Richard Lanham's as the prototype, “inverting the order of repeated words” (1991: 184)—which has a very low symmetry quotient indeed:

1. You hear about constitutional rights, free speech and the free press. Every time I hear these words I say to myself, 'That man is a Red, that man is a Communist!' (Dubremetz 2017a)

We have our As and our Bs. A = *hear* and B = *free*, if you're still looking for them. They don't stand out. But, precisely because they don't stand out, #1 doesn't look very antimetabolic, nothing like #2, or the Alexandre Dumas chiasmic parade-example, #3:

2. There are only two kinds of men: the righteous who think they are sinners and the sinners who think they are righteous. (Dubremetz 2017a)
3. [T]ous pour un, un pour tous. (Dumas 1849:129)
All for one, one for all. (Dumas 2010:80)

In fact, Computational Linguist, Marie Dubremetz, who develops algorithms to search texts for rhetorical figures and sees figuration as a “graded phenomenon,” ranks #1 dead last in her list of the 3000 instances of antimetaboles, giving it an antimetabolic grade of 0.01%.¹ In contrast, #2 is ranked first, with a whopping antimetabolic grade of 99.77% (Dubremetz 2017b), and #3 would probably hit 100%. She doesn't provide a measure for the Dumas instance—probably because it would be off the charts. Like most everyone else, she uses it definitionally (Dubremetz and Nivre 2015:23, 2016:47).

¹ Dubremetz (alone and with her colleague Joakim Nivre) most frequently uses the term *chiasmus* to refer to the figure antimetabole, not an uncommon practice in the rhetorical tradition. There are, in fact, multiple chiasmic figures, depending on the constituents which are reversed (Harris and Di Marco 2017). But antimetabole is perhaps the most pivotal, certainly the one in closest alignment with Dubremetz's definition of *chiasmus*, and overwhelmingly the one most represented in her instances.

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Most of us would agree with Dubremetz, if not the numbers, certainly the relative 'purity' of #2 and #3 against #1. The question I want to answer in this paper is why? The answer highly implicates symmetry.

The duct tape I will use is a small brace of other rhetorical figures, the friends and frequent travelling companions of antimetabole: mesodiplosis, isocolon, and parison; along with its second-cousin, once removed, antithesis. The WD-40 is an approach that takes bare-bones definitions of the figures, like Lanham's, more seriously than rhetoricians have tended to do, including Lanham. I will get there through an apparent detour into computational figure detection.

2. Definitions, instances, algorithms

When you go looking for curated figures, under the heading of *antimetabole* (or *chiasmus*, or commutation, or any of the welter of synonyms and partial synonyms for *antimetabole*), you will find examples like of #2 and #3. You will never find examples like #1.

When you go looking for definitions of figures, under the heading of *antimetabole* (etc.), you will find definitions like

- A. [W]hen two discrepant thoughts are so expressed by transposition that the latter follows from the former although contradictory to it, as follows: "You must eat to live, not live to eat." Again: "I do not write poems, because I cannot write the sort I wish, and I do not wish to write the sort I can," Again: " What can be told of that man is not being told; what is being told of him cannot be told." Again: " A poem ought to be a painting that speaks; a painting ought to be a silent poem." Again: " If you are a fool, for that reason you should be silent; and yet, although you should be silent, you are not for that reason a fool." ([Pseudo-]Cicero 1954 [c87 BCE]:325-327; *Ad Herrennium* IV. xxviii)
- B. [A] sentence inverted, or turn'd back; as, if any for love of honor or honor of love &c. That as you are the child of a mother, so you may be the mother of a child. (Blount 1654:9)
- C. A Figure, when we invert a Sentence by the contrary; which is variously repeated, and as it were turn'd upside down ... As, a Picture is a dumb Poem: and a Poem, a speaking picture. He is a man among women and a woman among men. (Bland 1706:44)
- D. *Antimetaboles*; in change repeat again
With men as gods, with gods, men. (Turner 1771:10)
- E. *Changing by Contraries*
Antimetabole at effect will strain
And words and terms revers'd employ again.
Examples
A poem is a speaking picture; a picture is a mute poem.
Zion shall a lamentation make
With words that weep and tears that speak. (Langley 1853:91)
- F. The order of the words is reversed in each member of the antithesis. ...
"Be wisely worldly, but not worldly wise."-QUARLES.
"A wit with and a dunce with wits."-POPE. (de Mille 1882:99)

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- G. [R]epeats in an inverse order words that have the same sound or sense, for the sake of explanation, distinction, or qualification. ... Woe unto them that call evil good and good evil.—Isa. v. 20. (Hervey 1873:585)
- H. [A] figure by which the speaker inverts the order of words, or phrases when repeated or subsequently referred to in a sentence — e.g., "If e'er to bless thy' sons, my voice and hands deny, these hands let useful skill forsake, this voice in silence die."—Dwight. It is also a contrast by parallelism in reverse order, as " We live to die—we die to live." (Ruffin 1920:140)
- I. [W]hen two sentiments differing in themselves are so transposed that the latter springs from the former though contrary to the latter in this way: "You must eat to live, not live to eat." (Daniels1934:24)
- J. [W]here two or more words are repeated in inverse order: Music to hear, why hear'st thou music sadly? (Vickers 1988:492)

Some definitions, however, attempt to encode some element of the symmetry into the definition.

- K. A mutual exchange between two sentences or clauses of their constituent words in such a way that each word occurs in the place and with the relationships possessed by the other. (Dupriez 1991:46)
- L. [A]t least two terms from the first colon change their relative places in the second, appearing now in one order, now in reversed order. In the process of changing their syntactic position in relation to each other, these terms change their grammatical and conceptual relation as well. (Fahnestock 1999:123)
- M. [T]he repetition of words in successive clauses, but in transposed grammatical order (e.g., "I know what I like, and I like what I know") (Shapiro 2017:203)

Dubremetz, for her part, has a very conventional definition.

- N. [A] rhetorical figure involving the repetition of a pair of words in reverse order, as in "all for one, one for all" (Dubremetz and Nivre 2015:23, 2016:47).

So, where, you ask, do the Antimetabolometer readings come from? Instances #1, #2 and #3 all satisfy definition equally—which is, after all, a binary definition, with a simple on/off, in-the-pool/out-of-the-pool, either/or criterion. Either there is a pair of words repeated in reverse order or there isn't.

Dubremetz belongs to a small tribe of computational figure-hunters (see also Gawryjolek 2009; Gawryjolek et al. 2009; O'Reilly & Paurobally 2010; Hromada 2011; Strommer 2011; Java 2015; Lawrence et al. 2017). Figure hunters, like all corpus linguists and data scientists everywhere, are constitutionally nervous about false positives. They fret about precision (how many successful identifications have they made) and recall (how many false attributions have they avoided). The ideal for them is 100% precision, 100% recall.

Now 100% precision is easy if you just throw everything into the pool. If you identify every sentence in *The Three Musketeers* as an antimetabole, not only will you successfully label #3 an antimetabole, you won't miss any others either. The problem, of course, is that you also label #4 as an antimetabole.

4. Le premier lundi du mois d'avril 1626, le bourg de Meung, où naquit l'auteur du *Roman de la Rose*, semblait être dans une révolution aussi entière que si les huguenots en fussent venus faire une seconde Rochelle. (Dumas 1849:5)

On the first Monday of the month of April, 1625, the market town of Meung, in which the author of *Romance of the Rose* was born, appeared to be in as perfect a state of revolution as if the Huguenots had just made a second La Rochelle of it. (Dumas 2010:7)

That's bad recall, a false positive. On the other hand, you can get 100% recall if you screw down your definition really tightly. Hromada (2011:87), for instance, has a very tight definition of antimetabole: three consecutive words, of which the first and third are repeated in reverse while the second one stays where it is.² That safely returns #3, while excluding #4. Recall is great. No false positives. But precision is a problem, because you don't get #2 either (since the antimetabole in #2 has a wider scope than three consecutive words). In short, computational figure detection algorithms trade-off between precision and recall, usually by adding a bunch of ad hoc conditions.

Dubremetz's innovation in the figure-hunting game park is the notion of gradation. She sees figures not as binary notions but as scalar ones; hence, her Antimetabolometer. Intuitively, this makes a lot of sense. If #1 is an antimetabole, it doesn't look like as *much* of an antimetabole as #2 or #3; certainly not as *good* an antimetabole as those other two.

Her ranking algorithm builds in several other factors, beyond the reverse-lexical-repetition definition. For instance, she deducts points if any of the reversely repeated words are different lexical categories. But she gives extra points if any of the words *no*, *not*, *never*, or *nothing* are present. These criteria seem pretty arbitrary, having no connection to the standard definitions or to her own. But she extracts them from a collection of prototypes, curated by rhetoricians over the millennia, like these two famous ones:

5. You must eat to live, not live to eat.
6. Ask not what your country can do for you. Ask what you can do for your country.
(Kennedy [& Sorenson] 1961)

In both of these the same word categories flip—verbs in #5, nouns in #6 (albeit one of them is a *pronoun*)—and both contain the word *not*. All the talk about symmetry does not escape Dubremetz's notice, either, which she assumes should manifest in more than the reversed word repetitions. If antimetabole "is the figure of symmetry," she notes "we should see that in the syntax." (Dubremetz & Nivre 2016:49). So, she rewards the 'symmetrical switching' of grammatical roles.³ This condition is paydirt. In #2, *righteous* is a subject, *sinners* a complement in the first colon; then the roles switch in the second. In #3, *tous* is a subject, *un* a complement,

² Hromada does not provide a prose definition, giving it rather in the following formalism:

$\langle W_A W_B W_C \dots W_C W_B W_A \rangle$

So, for #3, the assignments would be $W_A = tous$, $W_B = pour$, and $W_C = un$.

³ Actually, she punishes the failure to flip grammatical roles, but in a graded system that amounts to the same thing.

in the first colon, and the roles flip in the second. In #5, it's a main verb and an infinitive that flip, and in #6, it is again a subject and a complement.

She follows a similar procedure for epanaphora and epiphora, working from a definition and building in conditions based on clear-cut prototypes from the collections of rhetoricians. Once again, all of this is in line with rhetorical intuitions. The examples of rhetorical figures that have been curated by rhetoricians are not run-of-the-mill instances, but the *good* instances, the *best* instances, the *clearest* instances, of the figures they are meant to exemplify. There are, then, other examples, less good, less clear, of these figures available, ones that don't star in manuals of rhetorical figures. And rhetoricians regularly evaluate figures in their critical work. Jeanne Fahnestock, for instance, quotes the following passage from Darwin:

7. There is another obscure point, namely, whether the *sounds* which are produced under various states of mind determine the *shape* of the mouth, or whether its *shape* is not determined by independent causes, and the *sound* thus modified. (Fahnestock 1999:125; her italics)

She laments "the looseness of the syntax here" and characterizes #7 as "a loosely worded antimetabole" (125-126). So, it's not the best or the clearest, not canonical, not likely to be curated as exemplary, not destined for a high score from Dubremetz's algorithms; but, an antimetabole still.

Is antimetabole a scalar phenomenon? Are there gradations of rhetorical figures? If so, what do we do with all of our baggy, leaking definitions?

First things first.

3. Figures are Cognitive

Rhetorical figures are form-function pairings. The form is what gives them their salience, their aesthetic value, and their mnemonic stickiness. Figures activate neurocognitive affinities for these effects. We have, in a sense, neurocognitive receptors that these affinities hail. This is well understood, virtually a truism, for a handful of tropes. We are fundamentally drawn to similarities, which is why metaphor, similes, conceits, allegories, and the like are so prevalent in our daily talk and potentially so powerful in our more crafted rhetorical performances. We categorize, reason, and perceive in terms of oppositions; ergo, antithesis and irony. We endemically make correlations and natively understand meronymy; hence, respectively, metonymy and synecdoche.

But the same is true of schemes. We are tuned stimulus repetition. Our thinking is carried out through repetitions (and variations) of neural firing patterns. If we want to remember an address or the name of our spouse's boss, we repeat it over to ourselves, lighting up the same neural pathways recurrently. Hence: plocé, polyptoton, consonance, assonance, synonymia, isocolon, parison. Our perceptions are especially attentive to edges and boundaries. Our detection of physical edges visually and what neuroscientists call 'auditory temporal edges' aurally in speech and music is particularly sensitive. That's why repetitions cluster at the beginnings and endings of linguistic constituents: epanaphora and epiphora, lexical repetitions at clause and phrase boundaries; alliteration, consonance at the beginnings of words; rhyme, syllabic repetition at the ends of words. We find symmetrical faces and bodies more attractive than asymmetrical faces

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and bodies, symmetrical symbols more harmonious, symmetrical architecture more soothing. Hence, antimetabole (and other chiasitic figures).

We are pattern detectors, and we are neurocognitively disposed to some patterns over others. Rhetorical figures are linguistic configurations that assume those preferred patterns. That's what gives them their salience, their aesthetic value, and their mnemonic stickiness. The functions rhetorical figures serve are somewhat trickier to get at, but they clearly arise out of communicative need. For instance, humans live in a world of social and physical relationships, so we need to talk about reciprocity (A does something to / feels something about B; B reciprocates); and in a world of social and material status, and one of sequential order, so we need to speak of precedence priority (more on this later) as well as irrelevance of rank or of sequence (A sometimes precedes or follows B, and vice versa; A and B are of exactly the same worth; or respective worth doesn't matter in some categorization or them, or in some operation we perform on them). Those communicative functions (reciprocity and irrelevance of rank/sequence) mirror a kind of conceptual symmetry. If A loves B and B loves A, A and B symmetrical in terms of love. If A exerts precisely as much force on B as B exerts on A, they are symmetrically matched in terms of force. If it doesn't matter whether A comes before B or B comes before A, their rank or sequence is symmetrical). You have, of course, noticed the immediately preceding flurry of antimetaboles.

Antimetaboles are particularly good at expressing reciprocal force and reciprocal states:

8. If you press a stone with your finger, the finger is also pressed by the stone. If a horse draws a stone tied to a rope, the horse (if I may so say) will be equally drawn back towards the stone: for the distended rope, by the same endeavour to relax or unbend itself, will draw the horse as much towards the stone as it does the stone towards the horse.
[Siquis lapidem digito premit, premitur & hujus digitus a lapide. Si equus lapidem funi allegatum trahit, retrahetur etiam & equus aequaliter in lapidem: nam funis utrinq; distentus eodem relaxandi se conatu urgebit Equum versus lapidem, ac lapidem versus equum]. (Newton, 1803 [1687]: 1.15; 1687: 13)
9. Women are changing the universities and the universities are changing women. (Greer 1988: 629).
10. I helped my neighbours and my neighbours helped me. I made bread for my neighbours and my neighbours made bread for me. (Pinker 2013)

Antimetaboles are equally good at expressing irrelevance of order:

11. Thus the expression "men and women" is, conventional meanings set aside, equivalent with the expression "women and men." Let x represent "men," y, "women;" and let + stand for "and" and "or," then we have
$$x + y = y + x, \quad \dots$$
an equation which would equally hold true if x and y represented numbers, and + were the sign of arithmetical addition. (Boole 1854: 23)
12. An operation * is commutative iff $a * b = b * a$ for all a and b in X. (Stoll 1961:78)
13. Imagine you and me, me and you. ("Happy Together," Bonner and Gordon 1967)

The missing link between form and function is what Cognitive Linguists call iconicity, what Pierce called 'diagrammatic form.' Something about the form of antimetabole resembles

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something about the function it serves. That something is not hard to see. In fact, the familiar formalism for antimetabole, ABBA, gives us the identical elements side by side, which suggests an equality of 'weight;' they are in balance. Reciprocity expresses a balance of relationships. Irrelevance of order expresses a balance of worth or sequence. *Balance* and *symmetry* are near synonyms, just in different perceptual domains (balance is proprioceptive, symmetry is visual). Notice, however that ABAB would also express balance. What the reversal of order adds is, on the one hand, bidirectionality; on the other, dual directionality. Reciprocity expresses a bidirectionality of forces or feelings. Irrelevance of order expresses dual directionality--two directions, each of which cancels the other out, makes the other irrelevant.

All this, I am painfully aware, looks like abstraction run amok in the decorative world of rhetorical figures, and perhaps like it borders on obsession, so let's bring in the friends.

4. The friends

Our prototype antimetabole, #3, is not *just* an instance of antimetabole. It is actually quite dense figuratively, instancing isocolon, parison, and mesodiplosis as well. Isocolon is phonological parallelism (i.e., the same syllabic count and the same prosodic contour in two or more cola): *tous pour un* has the same syllabic count and prosodic contour as *un pour tous*. Parison is syntactic parallelism (i.e., the same syntactic structure): *tous pour un* is a Noun Phrase with one noun and an embedded Prepositional Phrase, also consisting of a single noun; *un pour tous* is a Noun Phrase with one noun and an embedded Prepositional Phrase, also consisting of a single noun. Mesodiplosis is medial lexical repetition: *pour* is medial in both cola. The same figural overlap is true for instance #2, and, with some variations, of instances #8 - #13.

One of those variations signals an important pattern, the presence of *not* in both #5 and #6, because it represents another figural friend of antimetabole; maybe even a cousin. Antithesis is a trope (all the other figures we have considered to this point are schemes), so it implicates semantics, the semantics of opposition.⁴ Lanham's definition is typically minimalist: "conjoning

⁴ Categorizing antithesis as a trope is somewhat controversial. Many rhetoricians define it as a scheme and define it in terms beyond just semantic opposition. Fahnestock, for instance, says one gets an antithesis "when two parallel phrases or clauses feature words that an audience would recognize as opposites" (2011:232), a highly representative position going back to the ancients. Every definition recognizes the *sine qua non* of semantic opposition or contrast for antithesis, but a majority of them include the requirement for parallel phrasing. I have asked you into this rather pedantic seeming note, however, not just because I regard the antithesis-as-scheme tradition to be wrong, but because I believe it to be wrong-headed in exactly the way that has given rise to the confusions we have seen with antimetabole: antithesis has a pair of friends, isocolon and parison, the schemes of parallelism. They co-occur so frequently and so effectively with antithesis that some rhetoricians have made the presence of them criterial to the definition of *antithesis*. I expand this argument considerably in a forthcoming paper (Harris 2018), but it comes down to Occam's razor. Why would one require that the figure of antithesis have all the properties of isocolon and all the properties of parison, but then say that those figures are not present in a given instance? If, rather, you admit they are present in a given instance, why put them into the definition of antithesis, when you can get them for free? Once you eliminate (the

contrasting ideas" (1991:3). Both #5 and #6 express highly contrastive ideas, opposite ideas. The two cola in each instance are antithetical.

The two figures, antimetabole and antithesis, have a natural affinity for one another,⁵ which returns us again to iconicity. Opposition and reversal are highly similar concepts, synonymous in many contexts, so the reverse order of an expression is a natural way to express semantic opposition. Notice, too, that antimetaboles like #5 and #6 up the oppositional ante. They do not just present two opposed alternatives. They present two mutually exclusive options in moral terms. Kennedy, for instance, effectively proposes replacing an ethos of entitlement with an ethos of responsibility, and the old Socratic saw says that eating for sensual pleasure is morally bankrupt; one must, rather, eat for nutritional maintenance.

The presence of antithesis in these upsets the formal symmetry slightly (the negation interferes with both isocolon and parison) and the conceptual symmetry entirely. The two cola in each example are radically asymmetric in semantic terms, which increases the hortatory force dramatically. Not only must one eat to live, one *must not* live to eat. Ontologically, these are not exclusive. One can both enjoy the pleasure of eating and also adhere to a diet of optimal nutritional and caloric requirements. But Socrates, in this instance, makes those alternatives morally exclusive.

We can see now, too, why Dubremetz found words of negation to correlate with antimetabole. In effect, she is searching for (and ranking) antimetaboles that co-occur with antitheses. Her other apparently arbitrary criteria make similar sense. Her interest in 'symmetrical switching' of grammatical roles correlates with parallel syntactic structure (one can only flip subjects and complements, for instance, if both cola have a subject and a complement). In effect, she is searching for (and ranking) antimetaboles that co-occur with parison. Her deduction of points for a change of lexical categories is a way of ensuring that both relevant words in the antimetabole are the same category (e.g., both are nouns or verbs or adjectives), contributing to the probability of parison. Parison, in turn, increases the likelihood of mesodiplosis and of isocolon. We remember now, as well, that Hromada's very strict definition of antimetabole mandated the presence of mesodiplosis (in the formalism ABC ... CBA, B is mesodiplosic).

We can also make sense of the definitions we looked at. The *Ad Herrenium* (A) definition, for instance ("discrepant thoughts are ... expressed by transposition"), seems to implicate both antithesis and parison, as does the Bland (C) definition ("invert a Sentence by the contrary"), and Langley's (E, "Changing by Contraries") implicates antithesis, while De Mille's (F) definition references it directly ("The order of the words is reversed in each member of the antithesis"). The definitions that build in symmetry (K-M) all include criteria that implicate

properties of) isocolon and parison from the definition of antithesis, you are left with a definition very much like Lanham's.

⁵ In fact, the opposition/reversal dimensions of the two figures are so much in synch that rhetoricians have sometimes categorized antimetabole as a subtype of antithesis, such as Quintilian, who says "[a]ntithesis ... may also be effected by employing that figure ... known as antimetabole" (9.3.85). See Fahnestock (2011 128-131) for a historical survey of such treatments.

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parison, most fully in Fahnestock's (L, "[i]n the process of changing their syntactic position in relation to each other, these terms change their grammatical and conceptual relation as well").

The recognized presence of these other figures also enhance, or clarify, the functionality of the instances. Irrelevance of order, for instance, depends heavily (but not entirely) on mesodiplosis. The expression of the principle of commutation, as the clearest example, only works because of the medial presence the same operator (as precisely explained by #12). Reciprocity is best expressed through the same predication, only in reverse, made more natural with mesodiplosis and parison.

5. Conclusion

So, my answer is no: antimetabole is *not* a scalar figure. Lanham's bare-bones inverting-the-order-of-repeated-words definition is all we need, which means that #1 is every bit as antimetabolic as #2, #2 every bit as antimetabolic as #1. Give them both a score of 100%. But that doesn't mean they are every bit as salient, memorable, aesthetically pleasing or functionally effective.

If we adopt an atomistic approach to figuration, where rhetorical figures are understood as unique and (in principle) independent linguistic configurations, we can explain the effectiveness of #3 and #2 and the rest of the canonical antimetabole instances, over the relative ineffectiveness of #1, not on the basis of the 'amount' of antimetabole present or even the 'goodness' of the antimetabole present, but on the overlapping presence of mutually reinforcing figural friends.

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