

Defining Periodicity in Cicero for Quantitative Analysis

An Honors Thesis (HONRS 499)

by

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July 2011

Expected Date Of Graduation

July 2011

SpColl
Undergrad
Thesis
2011
2012

Abstract

In the digital era, one trend in Classical scholarship has been towards publishing and lemmatizing Latin and Greek texts on the World Wide Web, and ever since this literature has become widely available in digital form, Classical scholarship has witnessed the undertaking and consummation of projects aiming to quantitatively analyze various aspects of literary style. But one component of style that has never been thoroughly quantified, let alone defined in such a way that would render it empirically applicable, is the rhetorical period, a circular mode of writing whereby verbal elements that begin a sentence are not grammatically and semantically integrated until the end of the construction. In this paper, I attempt to define the period in a way that will allow for its empirical application to Latin sentences and proceed to exercise its utility on five popular works of Cicero. As I do this, I encounter a handful of Latin sentence structures that do not easily conform with black and white distinctions between periodic and non-periodic, and I propose modifications to the definition that will accommodate for them in the case that future analysis of this sort should be desired. In closing, I argue for the treatment of the colon over that of the sentence as one key to a more objective set of criteria for quantifying the rhetorical period.

Acknowledgements

I would like to thank Professor Chris Shea for her generosity during my years at Ball State and subsequently. I want to thank Professor Bill Wycislo for his wise counsel and continued friendship. And finally, I am indebted to Professor Walter Moskalew, who kindly agreed to advise this project over a year ago, whose criticism and feedback have since that time been invaluable, and without whose encouragement I would have given up on more than one occasion.

Preface

When we consider the differences between the disciplines of Classical philology and modern comparative literature, one discrepancy that probably does not come to mind is the widespread public availability of Classical texts, whereas modern works are protected by copyright law for some time before they can be legally disseminated at the reader's discretion. In former times, this distinction mattered little, for even if one wanted to acquire a text that was in the 'public domain', he was more or less stuck with two options: buy it or borrow it, the same limited choices that faced him for procuring legally protected material. The average enthusiast of literature, we may presume, was not interested in passing off another's ideas for his own profit, for the initial cost to do so, i.e. the cost of acquiring and operating a printing press, was far out of his means, and so for him at least it made no difference whether or not a particular work came under the jurisdiction of copyright law.

With the dawn of the digital age, however, the difference between the availability of copyrighted and public domain material has been tremendously expanded by the publication and transmission of unprotected literature digitally on the World Wide Web. In the United States, the Copyright Term Extension Act of 1998 extended copyright protection in that country to a maximum of 95 years. But even though the scope of that statute has left plenty of room for the open publication of most of what we consider to be modern literature, some of the more notable projects aiming to collect, consolidate, organize, and publish unprotected literature digitally have had the advancement of Classical studies as their end. In 1946, Father Roberto Busa, SJ, began planning for what has become the *Index Thomisticus*, an online database and complete lemmatization of the works of Saint Thomas Aquinas. Then in 1972, a graduate student at the University of California, Irvine founded the *Thesaurus Linguae Graecae*, a research center that publishes digital databases of Greek texts as far back as Homer. More recently, the *Perseus Project* hosted online by Tufts University was undertaken in 1985 and to this day provides an ever-expanding library of Greek and Latin texts along with tools for searching, parsing, analyzing, and consulting on them with other interested parties around the globe.

Given this propensity for digitally publishing and lemmatizing Classical texts, Classical scholarship has witnessed this last century the undertaking and consummation of projects theretofore not thought possible. Whereas the eager student or scholar of today can find with the press of a button every occurrence of the word *arma* in the entire corpus of Vergil, in ages past one had to consult a concordance—assuming one existed in the first place—to help assuage some of his more pedantic philological curiosities. And since searching through literary corpora has never been so easy, one trend in Classical scholarship has been toward scientifically, i.e. empirically, describing various authors' literary styles based on the frequencies of phenomena like clausulae, word order, word choice, and rhetorical devices such as anaphora, alliteration, and homoeoteleuton.

But one component of style that has never been so thoroughly quantified, let alone defined in such a way that would render it empirically applicable, is the rhetorical period (περίοδος), a circular mode of writing whereby verbal elements that begin a sentence are not grammatically and semantically integrated until the end of the construction. Many have ventured to describe and analyze the means for attaining to the periodic style, and in the process, certain Latin and Greek authors have had their names irreversibly identified with that style of writing. But despite this convention of associating authors like Cicero and Isocrates with the rhetorical period, no one has ever shown this decisively to be the case, because no one has ever set out to quantify 'periodicity'.

In this paper, I attempt define the rhetorical period in such a way as will allow for its empirical application to Latin sentences of all shapes and sizes. I begin by looking at the rhetorical theories of Aristotle, Cicero, Quintilian, the Auctor ad Herennium, and Demetrius—five of the most formidable authorities on the period—and from there I attempt to reconcile their definitions with that of modern scholarship. Having arrived at a working definition, I proceed to empirically quantify the periodicity of five popular texts of Cicero, in light of which analysis I then discuss some of the problems encountered and deficiencies discovered in the criteria for periodicity as they have been contrived. Finally, I offer my suggestions for their improvement should future analysis be desired. In a word, what follows is an experiment in defining periodicity. For the Latin- and Greek-less, translations have been provided in-text where the meaning is

essential to the point under consideration. Unless otherwise noted, translations are my own, and I have tried to render the Latin and Greek into English in a way that faithfully preserves the grammatical structures pertinent to the discussion, with the inevitable but necessary result that the beauty of the original is undermined and the rules of English syntax often violated. For those unfamiliar with rhetorical terminology, definitions of important obscure terms are provided in the foot-notes on the pages where they first appear.

Ancient Conceptions of the Period

The many and disparate shades of meaning of περίοδος (*periodos*) are attested by its various renderings into Latin,¹ and these in turn betray the ambiguity and disagreement among ancient and modern critics over the term's precise definition. The most ancient and authoritative formulation is that of Aristotle, who defines the period to be 'a portion of speech that has in itself a beginning and an end, being at the same time not too big to be taken in at a glance'.² Aside from the anatomical reference implicit in the term κῶλον (*kolon*), the metaphor of choice when discussing the period was the hairpin racecourse, by which it was understood that the runner would turn round half-way in and return whence he began, the end marker always in view, just as the listener is steered back toward syntactic and semantic resolution of the sentence that 'at every point anticipates its own conclusion'.³

To Aristotle, sentences were either free-running (λέξις εἰρομένη) like the famous opening of Herodotus' histories:⁴

Ἡροδότου Θουρίου ἱστορίας ἀπόδεξις ἦδε,
 ὥς μήτε τὰ γενόμενα ἐξ ἀνθρώπων τῷ χρόνῳ ἐξίτηλα γένηται,
 μήτε ἔργα μεγάλα τε καὶ θωμαστά,
 τὰ μὲν Ἕλλησι,
 τὰ δὲ βαρβάροισι ἀποδεχθέντα,
 ἀκλέα γένηται,
 τὰ τε ἄλλα καὶ δι' ἣν αἰτίην ἐπολέμησαν ἀλλήλοισι.

This is a publication of an inquiry of Herodotus the Thurian,
 that neither the affairs of men might become extinct with time,
 nor their great and awesome deeds,
 those of the Greeks on the one hand,
 and those exhibited by the barbarians on the other,
 might lose their fame,
 and furthermore the reasons why they came to war with each other.

or in periods (λέξις κατεστραμμένη). Here is a Latin example of the free-running style from one of Cato's fragments:

Orat. 17 cogitate cum animis uestris:
 si quid uos per laborem recte feceritis,
 labor ille a uobis cito recedet;
 sed si qua per uoluptatem nequiter feceritis,
 uoluptas cito abibit,
 nequiter factum illud apud uos semper manebit.

Consider in your minds:
 if you do something right through work,
 the work will quickly leave you;

1 The most common translations are *ambitus*, *circumductum*, *continuatio*, *conclusio*, *circuitus*, *comprehensio*, and *circumscriptio* (Quint *Inst.* 9.4.22; Cic. *Orat.* 204; et al.).

2 *Rhet.* 1409b, trans. Roberts.

3 Gotoff (1973) 217.

4 Our MSS only quote up to ἀπόδεξις ἦδε. Aristotle clarifies that 'by "free-running" style I mean the kind that has no natural stopping-places, and comes to a stop only because there is no more to say of that subject' (1409a, trans. Roberts). In this example, the sentence may well have ended at ἦδε or the second γένηται, but it continues unanticipated at both places.

but if somehow to do something wrong through pleasure,
 the pleasure will quickly leave,
 but the wicked deed will remain with you forever.

Neither of these examples is completely devoid of suspense-creating elements which aid in the composition of periods: in the former, the first μήτε ('neither') anticipates the second just as τὰ μὲν ('some') foreshadows τὰ δὲ ('others'); in the latter each *si*-clause ('if') necessitates the apodosis that follows. Additionally, there are parallel structures that, although unanticipated by any verbal elements, may be hinted at by placing appropriate vocal stress on certain syllables. For example, by maintaining a greater stress than usual on *abibit* and the second γένηται, the speaker can insist implicitly that he has not finished speaking. Notwithstanding these periodic characteristics, however, these sentences are more or less made up of sentence fragments placed side-by-side, each without explicit anticipation of what will come next, and to describe them as periodic would therefore be to commit the fallacy of composition, ascribing to the whole what is true only of distinct parts.

In Aristotle's theory—and this was a point of contention even in antiquity—the period can be either simple (ἄφελής) or divisible into two (and only two) parts called κῶλα (*kola*) or 'members'. The simple period consists of only one colon (μονόκωλον) of a certain length, neither so short as would make the reader 'stumble' (προσπταίειν), nor long enough to be considered a speech (λόγος) by itself.⁵ Since a sentence of only one colon presumably contains no subordination, we must assume that it takes on periodicity by virtue of its rotundity, like the following example from Cic. *Att.* 1.19.9, which is framed by its predicate in periphrasis:

est enim illud senatus consultum summa pedariorum uoluntate, nullius nostrum auctoritate factum.

In this example, the placement of *factum* earlier in the sentence, e.g. like *est enim illud senatus consultum factum* or *factum est enim illud senatus consultum*, would not have provided the reader with any reason to expect the adverbial qualifiers *summa ... uoluntate* and *nullius ... auctoritate*. As it is, however, the sentence cannot end until the initial *est* ('is') is integrated into the whole by means of a participle or another adjective, and the audience will continue to listen intently until the integrating word is perceived. The difference can be illustrated in translation; consider the sentence as written, followed by a less rounded alternative:

That measure was, by the assent of the lower senators but with none of my own authority, passed.

That measure was passed—by the assent of the lower senators and not on my own authority.

This example illustrates how the careful placement of just one word can greatly affect the perception of one's literary style. It is unfortunate that Aristotle neglects to cite an instance of the periodic μονόκωλον, for we can only surmise that this is what he meant by it.

The other kind of periodic sentence discussed by Aristotle is that composed of two and only two members. Of these he cites a handful of examples, but unfortunately, they have little variety, as most attain to periodicity through the use of καὶ ... καὶ ('both ... and'), ἢ ... ἢ ('either ... or'), or μὲν ... δὲ ('on the one hand ... on the other'). Judging from his definition, every simple protasis-apodosis sentence also belongs to the two-membered period category, like the one at Cic. *Att.* 1.19.9:

tu si tuis blanditiis tamen a Sicyoniis nummulorum aliquid expresseris,
 uelim me facias certiolem.

⁵ *Rhet.* 1409b.

But if you manage by your flatteries to squeeze out some cash from the Sicyonii,
I wish you would inform me.

Here it is important to bear in mind that 'protasis-apodosis' need not refer strictly to if-then constructions, but in a more general sense, 'protasis' may refer to any proposition—be it temporal, causal, concessive, final, consecutive, conditional, or whatever—that serves to further describe or define the circumstances within which the main predicate (apodosis) is asserted as true. In this broader sense, even a personal relative clause constitutes a protasis, as it defines or describes a party related in some way to the action of the main verb.⁶ This is not to say that every two-membered sentence consisting of a protasis and apodosis is automatically periodic, for in such sentences where apodosis comes before protasis, protasis is often unanticipated. Consider these variations of the above example from Cic. *Att.* 1.19.9:

uolo me facias certiore[m] si tuis blanditiis tamen a Sicyoniis nummularum aliquid **exprimis**.

I want for you to inform me if by your flatteries **you are managing to squeeze out** some cash from the Sicyonii.

uellem me faceres certiore[m] si tuis blanditiis tamen a Sicyoniis nummularum aliquid **expressisses**.

I would be wanting for you to inform me if by your flatteries **you had managed to squeeze out** some cash from the Sicyonii.

In both of these rearrangements, apodosis comes before protasis, but only the latter is periodic, for in the former, the audience does not expect that *uolo* is conditioned on *si ... exprimis*, which comes afterward; whereas the imperfect subjunctive tense and mode of *uellem* in the latter example imply contrariety to fact, thereby assuring the audience of the conditional clause to come.⁷ Other protases, such as final *ut*-clauses ('in order that'), must be placed in the initial position if their sentence is to be periodic, since final *ut* cannot be verbally anticipated in the same way that consecutive *ut* ('with the result that') can be signaled by *sic*, *ita*, *tam*, or *adeo* ('thus, so'). Here are two more examples of protasis-apodosis combinations in which apodosis, despite coming first, explicitly anticipates protasis:⁸

Jn. 3.16 *οὕτως* γὰρ ἠγάπησεν ὁ θεὸς τὸν κόσμον *ὥστε* τὸν υἱὸν τὸν μονογενῆ ἔδωκεν.

For God *so* loved the world *that* he gave his only-begotten son.

Cic. Agr. 2.24 renouabo *illud quod* initio dixi.

I will continue *that which* I spoke of at first.

Οὕτως ... ὥστε ('so ... that') is the Greek equivalent of Latin *sic/ita ... ut*, and *illud ... quod* ('that ... which') is analogous to other demonstrative-relative combinations, such as *id ... quod* ('that ... which'), *hic ... qui* ('he ... who'), *tantus ... quantus* ('as much ... as'), or even *ποσούτω ... ὅσω* ('by as much more ... as'). The demonstratives in both of these examples, one adverbial (*οὕτως*) and one pronominal (*illud*), demand to be further qualified, and the audience having heard them will not expect sentence closure until the resolution of their qualifying clauses *ὥστε ... ἔδωκεν* and

6 Hale and Buck par. 577 n. 2 'The oldest way of expressing a Condition was doubtless by the use of the Relative (the simplest of all connectives), not by *στ*'.

7 Of course, changes in tense and mode subtly alter the meaning, as I have tried to show in the translations, but this example suffices to illustrate the point I make here.

8 Both of these examples are taken out of their contexts of much longer and more complex sentences. I am asserting only that they are periodic in and of themselves—not that the sentences of which they are parts are fully periodic.

*quod ... dixi.*⁹ Sentences like these fall under Aristotle's definition of the two-membered period because the listener 'feels that he is grasping something'—namely, qualification of the demonstrative—and feels that he 'has reached some definite conclusion' when that qualifying clause is terminated.¹⁰

Other ancient critics have also commented on the nature of the rhetorical period, including Cicero. Each of these adopts the general sentiment contained in Aristotle's definition, but many disagree as to the specifics. In particular, there was dissent over the minimum and maximum number of cola that could constitute a period, and even some of the most authoritative critics seem to give one definition only to contradict themselves in their next statement. Aristotle was neither alone nor uncontested in asserting the existence of the one-membered period (μονόκωλον), but he does seem unique in limiting it to no more than two. At least one modern scholar has attempted to reconcile this delimitation with the broader modern understanding by suggesting that the cola of Aristotle's periods may themselves contain subordination, i.e. more cola,¹¹ but this hypothesis is less plausible considering that objections to Aristotle's theory were expressed likewise by critics in antiquity that were more familiar with the rhetorical tradition than we. Apparently, some of these critics were no less perplexed by Aristotle's narrow definition, which precluded from periodicity the complex periods of Isocrates, Demosthenes, Livy, and Cicero—and these are the authors today most associated with the periodic style—on the grounds that theirs have more than two cola. Three such ancient authorities are Quintilian and the Auctor ad Herennium in the Latin tradition, and in the Greek tradition, Demetrius, author of the 2nd century A.D. treatise *De Elocutione*, 'On Style'.

Demetrius, who should not be confused with the 4th century B.C. Attic orator under whose name the treatise in question has been preserved, agreed with Aristotle on the existence of the μονόκωλον but apparently did not share his understanding of it, for at *Eloc.* 17, he cites the opening of Herodotus' history as an example—the same passage that Aristotle gives as an illustration of the free-running style. On the other extreme, he pushes the maximum to four cola, a limit considerably less restrictive but still prejudiced against many of Cicero's longer and more ornate periods. His reason for setting the bar where he does is so dismissively stated that one wonders whether it was merely an expression of the conventional wisdom of his day: syntheses of more than four cola, so he says, 'would no longer be within the measure of a period'.¹²

In the Latin tradition, Quintilian's definitive *Institutio Oratoria* and the anonymously-authored *Rhetorica ad Herennium* similarly diverge from Aristotle's dictum. Quintilian's assertions are most remarkable, as he at first affirms the existence of the simple period but proceeds to contradict himself in the very next sentence:

Inst. 9.4.124 genera eius [sc. periodi] duo sunt: alterum simplex, cum sensus unus longiore ambitu circumducitur, alterum quod constat membris et incisus.

Of the period there are two kinds: the one is simple, when one sense is brought round on a long circuit, the other consists of cola and commata.

Inst. 9.4.125 habet periodos membra minimum duo.

The period has no less than two cola.

9 Of course, not every οὕτως-clause absolutely *requires* a ὥστε clause, and demonstrative pronouns like *illud* may refer to something already mentioned or may not need to be qualified at all (for instance, unqualified *hic* ('he') in forensic speeches usually refers to the speaker's client). For these reasons, a consideration of the context is crucial in determining whether or not certain words like οὕτως and *illud* anticipate qualification. The fact is, signal words like οὕτως and *illud* going unqualified are exceptions to the norm, and in most cases, the audience will correctly assume that qualification is to follow.

10 *Rhet.* 1409a, trans. Roberts.

11 See Gotoff (1973) 219.

12 *Eloc.* 16 τὸ δ' ὑπὲρ τέτταρα οὐκέτ' ἂν ἐντὸς εἴη περιδικῆς συμμετρίας.

Perhaps we can account for this discrepancy by arguing that Quintilian does not equate *simplex* ('simple') with μονόκωλον, but if this were so, he would only be complicating the matter further by playing with semantics. For as Aristotle writes, and as most after him seem to have adopted, 'by "simple", I mean composed of one colon'.¹³ Adding to the confusion is Quintilian's example of a multi-membered period, which he takes from Cic. *Ver.* 2.5.118, and which is actually more free-running than periodic:¹⁴

aderat ianitor carceris,
 carnifex praetoris,
 mors terrorque sociorum et ciuium Romanorum,
 lictor Sextius,
 cui ex omni gemitu doloreque certa merces comparabatur.

The custodian of the prison was there,
 hangman of the praetor,
 death and terror of Roman citizens and their allies,
 the attendant Sextius,
 for whom a fixed recompense was being collected out of every groan and pain.

Not only are the various *commata*¹⁵ here strung together paratactically, but were it not for the predicate *aderat* ('was present'), which is stated only in the first but applies equally to all and thus brings them together into a syntactic unity, they would be so disparate as to constitute separate sentences. It is abundantly clear, therefore, that Quintilian's understanding of περίοδος does not comport with Aristotle's, for neither does this sentence contain a turning point (καμπή), nor is it possible to confidently predict where it will end.

Writing over a century earlier than Quintilian, the anonymous author of the rhetorical treatise addressed to Herennius discusses the colon immediately prior to formulating his definition and theory of the period (*continuatio*), which would not frustrate our inference so, if he had actually bothered to relate the two.¹⁶ Lausberg seems to think that the Auctor's statement *ex duobus [minimum] membris suis haec exornatio potest constare* ('of two [and only two] cola is it possible for this embellishment to be composed') refers to periods,¹⁷ but the limitation actually follows necessarily from his definition of *membrum* ('member' i.e. 'colon'), which 'does not express the entire thought, but is in turn supplemented by another colon'.¹⁸ In other words, the Auctor disputes the appellation μονόκωλον, but he does not address whether the sort of sentence that Aristotle meant by it (ἡ ἀφελής περίοδος, 'the simple period') should be considered periodic. Given the three examples of periods that he cites, all of which are composed of at least two cola, we can perhaps assume that it is not, though there is nothing in his definition that precludes the possibility:

Rhet. Her. 4.27 *continuatio est densa et continens frequentatio uerborum cum absolute sententiarum.*

The period is a tightly packed and self-contained concentration of words along with the resolution of complete thoughts.

Most relevant to this study are the views of Cicero, who left to us a detailed account of his rhetorical theory in a three-volume encyclopedia comprised of the *De Oratore*, *Brutus*, and *Orator*, composed respectively in B.C. 55, 46,

¹³ *Rhet.* 1409b ἀφελῆ δὲ λέγω τὴν μονόκωλον.

¹⁴ Cited at *Inst.* 9.4.124.

¹⁵ A *comma* (Gk. κομμα, Lat. *incisum*, 'slice') 'is a chopped-off piece ... which in itself (unlike the colon ...) can no longer lay any claim to completeness' (Lausberg (1998) par. 935).

¹⁶ *Rhet. Her.* 4.26-27.

¹⁷ Lausberg par. 933 n. 2; *Rhet. Her.* 4.26.

¹⁸ 4.26 *sine totius sententiae demonstratione. quae denuo alio membro orationis excipitur*, trans. Caplan.

and 46.¹⁹ When compared with the other theoreticians hitherto discussed, Cicero's treatment is the least dogmatic and most flexible, and he in fact spends more time talking about *usus* than *natura*—what a period does and when it is appropriate as opposed to what it actually is. Passages from the *Orator* especially will enable us to predict the various degrees of periodicity in Cicero's works based on their genre, but we will deal with these elsewhere. For now, suffice it to say that he does not formally define περίοδος, but gives a litany of Latin synonyms instead.²⁰ Nor does he posit a minimum or maximum limit for the number of cola, though he does give four as a good mean (*mediocritas*).²¹

Before moving on to contemporary notions of the rhetorical period, one more topic calls for our attention. Ever since the Renaissance, and especially since Zieliński, considerations of Latin prose rhythm in sentence clausulae²² have been paramount to a proper understanding of Latin style, and with good reason.²³ It is a common theme among the rhetorical treatises of the ancient commentators that rhythm (*numerus*, ἀριθμός) has a fundamental place in the conceptions of the period and the colon. In the first place, according to Cicero, the colon and period are the prosaic counterparts, respectively, to the verse and stanza.²⁴ This is why he gives four cola as an appropriate length for a typical period, as they correspond with a four-verse stanza.²⁵

Orat. 221 constat enim ille ambitus et plena comprehensio e quattuor fere senariis uersibus, quae membra dicimus.

For the full copious period consists of four verses in six feet, as it were, which we call cola.

Of course, the analogy is not exact, for the laws that govern prose rhythm are not as strict as those of verse:

Orat. 221 quamquam ... nonnumquam uel potius saepe accidit ut aut citius insistendum sit aut longius procedendum ... sed habeo mediocritatis rationem; nec enim loquor de uersu et est liberior aliquanto oratio.

However ... it sometimes or rather often happens that either one must stop rather suddenly or proceed farther ... but I have in mind a rule for the mean; for I am not talking about poetry as prose is somewhat more unrestrained.

Additionally, the rhythmical ends of cola (clausulae), should themselves be one or two precise metrical feet as if taken directly from verse. This is probably what Aristotle refers to when he writes of the period:

Rhet. 1409b εὐμαθῆς δὲ ὅτι εὐμνημόνευτος, τοῦτο δὲ ὅτι ἀριθμὸν ἔχει.

And it is intelligible because it is easily memorized, and this because *it is numbered*.

More data have been gathered on Cicero's clausulae than on any other author's, and analysis of these has enabled textual critics to make more informed emendations and choose more confidently one reading over another based on which reading's clausulae are more in conformity with the rest of the corpus. Thus we may suppose that a particular clausula

19 The idea of a unity of plan comes from Cic. *Div.* 2.4.

20 *Orat.* 204, 208.

21 *Orat.* 221.

22 *OLD* s.v. *clausula* 2 '(rhet.) the end of a periodic sentence with particular regard to its rhythm.'

23 Cf. Wilkinson (1963) 135.

24 See also Quint. *Inst.* 9.4.123 *membrum autem est sensus numeris conclusus*; 9.4.125.

25 Cf. Lausberg (1998) par. 933 n. 4 'Since the colon is regarded as the prosaic analogue of the verse ... the length of the [sc. four-membered] period corresponds to a sequence of four verses in poetry ... For this cf. The strophic structure of the sequence of Alexandrines with Corneille and Racine, where four (=2+2) Alexandrines form a sense-strophe (e.g. *Polyeucte* 1-68).'

This sentence has fully resolved its sense and syntax by *paulo loqui liberius*,²⁶ and the audience have little reason to believe that it has not ended at that point. Unless, that is, they take into consideration the unfashionable rhythm of *loqui liberius* (~ — — ~ ~), which would end the period quite inelegantly,²⁷ and which therefore gives them cause to expect more. Thus it is possible that to the ancients, the appropriate rhythm signaled the close of a period independently of sense and syntax. Which clausulae are appropriate where is, of course, a separate question over which there was disagreement, just as with the minimum and maximum numbers of cola. One may therefore ask: how can we formulate one objective definition from so many disparate accounts? For this, let us turn to scholars of the present day.

Modern Conceptions of the Period, an Attempt at Objectification

Classical scholars are not unpracticed in working with inconsistent accounts of Greek and Roman historians, philosopher, and rhetoricians. In the case of history, uncovering the truth is a matter of conflating the various texts with each other and with archaeological records while weeding out spurious inferences and dramatic hyperbolae. As for rhetoric we have seen that some of the foremost surviving authorities could not even agree on the definitions of simple terms, but unlike with history, there is no one true and correct interpretation of rhetorical terminology. Giving names to rhetorical figures only serves to furnish the conversation with tools for describing, so as long as one defines his terms and applies them consistently, the worst offense for which he can rightly be criticized is choosing an unsuitable name. Depending on the degree of specificity desired, one definition might be preferable to another; so, as was noted above, Aristotle's definition of περίοδος is too limited to describe the complex periods of Cicero. Indeed, 'he [sc. Aristotle] makes it quite clear, although scholars have not always acknowledged it, that by *periodos* he conceived of a unit of sentence structure far more restricted than the modern notion envisions'.²⁸ It goes without saying that none of the definitions so far encountered is practicable for the empirical application that we require,²⁹ which is not surprising considering that the ancients did not have the tools for numerical analysis on a large scale. That belongs peculiarly to the digital age. And so if we are looking for a definition of the rhetorical period that both captures the ancient sentiment and allows, more or less, for objective delineation between what is and what is not, we may do better to look towards those modern notions compared to which the ancient understanding is 'far more restricted'.³⁰

'Modern scholars and critics seem to have a clear and fairly consistent notion of what periodic style entails. It is a complex sentence in which both sense and syntax are held in suspension until the end of the construction when they are simultaneously resolved.'³¹ The idea that the periodic sentence ends with the resolution of sense and syntax conforms with statements of Aristotle, the Auctor ad Herennium, and Cicero:

Arist. *Rhet.* 1409b

δεῖ δὲ τὴν περίοδον καὶ τῇ διανοίᾳ τετελειῶσθαι.

The period must end with the the thought.

26 A more detailed description of the structure of this sentence follows in a few paragraphs, including an explanation of why we say that its syntax and sense are resolved only at the end.

27 Cf. Wilkinson (1963) 156. That a colon should end with a tribrach, a series of three short syllables (~ ~ ~), is neither common in, nor advocated by, Cicero.

28 Gotoff (1973) 218.

29 For example, the subjectivity of εὐσύννοτος ('easily taken in at a glance') and εὐανάπνευστος ('easily uttered in one breath') (Arist. *Rhet.* 1409b), for obvious reasons, complicates any attempt at an objective empirical test.

30 Gotoff (1973) 218.

31 Gotoff (1973) 217.

Rhet. Her. 4.27 continuatio est et densa et continens frequentatio uerborum cum absolute sententiarum.

The period is a tightly packed and self-contained concentration of words along with the resolution of complete thoughts.

Cic. Brut. 34 ipsa enim natura circumscriptione quadam uerborum comprehendit concluditque sententiam, quae cum aptis constricta uerbis est.

For nature herself through some periodic structure of words embraces and concludes the sentence, which when constrained with suitable words often even ends rhythmically.

So the periodic sentence ends with the conclusion of the thought. From this it follows that the period should 'at every point anticipate its own conclusion', for up to the point where grammar and sense are resolved, the audience can perceive that verbal or grammatical elements necessary for a coherent and complete formulation have not yet been disposed. This notion was similarly understood by the ancients:

Arist. Rhet. 1409b

ἡδεῖα μὲν διὰ τὸ ἐναντίως ἔχειν τῷ ἀπεράντῳ, καὶ ὅτι ἀεὶ τι οἶεται ἔχειν ὁ ἀκροατῆς καὶ πεπεράνθαι τι αὐτῷ, τὸ δὲ μὴδὲν προνοεῖν μὴδὲ ἀνύειν ἀηδέες.

It is pleasant because it is the opposite of the indefinite, and because the audience always think they are grasping something for themselves and that some conclusion has been reached, whereas to neither foresee nor come to an end is unpleasant.

Cic. Orat. 199 sed ad hunc exitum iam a principio ferri debet uerborum illa comprehensio et tota a capite ita fluere, ut ad extremum ueniens ipsa consistat.

But towards this conclusion the period ought to be borne from the very beginning and flow completely from its opening in such a way that coming to the end, it stops.

But is this definition objective? In other words, is the suspension of sense and syntax 'until the end of the construction' an actual feature of some sentences? And if it is, how can we tell which sentences manifest it, and which do not? Moreover, is it elastic enough to apply to the wide range of sentences capable of being called periods, or does it only manage to describe a subset of them? Let us have another look, in more detail, at one famous sentence from the opening of the *Pro Archia* and see if we cannot tell absolutely where sense and syntax are resolved:

Cic. Arch. 3 sed ne cui uestrum mirum esse uideatur,
 me in quaestione legitima et in iudicio publico,
 cum res agatur apud praetorem populi Romani, lectissimum uirum,
 et apud seuerissimos iudices,
 tanto conuentu hominum ac frequentia hoc uti genere dicendi
 quod non modo a consuetudine iudiciorum
 uerum etiam a forensi sermone
 abhorreat,
 quaeso a uobis
 ut in hac causa mihi detis hanc ueniam accommodatam huic reo,
 uobis, quem ad modum spero, non molestam,
 ut me pro summo poeta atque eruditissimo homine dicentem
 hoc concursu hominum litteratissimorum, hac uestra humanitate,

hoc denique praetore exercente iudicium,
patiamini de studiis humanitatis ac litterarum paulo loqui liberius,

et in eius modi persona
quae propter otium ac studium minime in iudiciis periculisque tractata est
uti prope nouo quodam et inusitato genere dicendi.

But lest it should seem strange to any of you,
that I in a legal inquisition and in a public trial,
although the cause is plead in the presence of the praetor of the Roman people,
most excellent man that he is,
and in the presence of a austere jury
in this massive assembly and concentration of of men am using this mode of speech
that not only with the custom of legal proceedings
but even with public discourse
is unsuitable

I ask of you,
that in this cause you grant me this indulgence, suitable to this defendant,
[and] in your case, inasmuch as I hop, not a bother
namely, that me, speaking on behalf of a great poet and most skilled man
in this concourse of the most learned of men, this culture of yours,
and finally in [the presence of] this praetor who administers the sentence,
you tolerate about the study of culture and literature to speak a little more freely
and in the role of this sort
which on account of leisure and study is most infrequently managed in trials and dangers,
to make use of this new and unusual way of speaking.

"This sentence is long, even for Cicero, and its logic is not always as clear as its syntax. For though it is not absolutely periodic (in syntax and in sense, it might have ended with *paulo loqui liberius*), every syntactic element is clearly and explicitly sign-posted, from anticipation to resolution.³² When we say this sentence 'might have ended with *paulo loqui liberius*, we mean very simply that had it ended there, it would still qualify as a complete sentence, having no grammatical construction left un-integrated and no word or words requiring but lacking qualification. In the first place, the main predicate of the sentence, without which it is not grammatically complete, does not come until about half-way in with *quaeso a uobis* ('I ask of you'). But it cannot be complete at that point because the speaker has not stated what he is asking for—that comes next. The object of *quaeso* ('I ask') is given in the form of an *ut*-clause ('that') within which a series of adverbial qualifiers (*hoc ... litteratissimorum, hac ... humanitate, hoc ... iudicium*) precede the word that finally expresses the speaker's request: *patiamini*, 'that you tolerate'. But again, the sentence must carry on because the speaker must now clarify what he wants his audience to 'tolerate'. And so finally, he reaches *paulo loqui liberius* (that you tolerate 'me to speak a little more freely'). The sentence up to this point has the form 'but lest X happens ... I ask of you ... that you tolerate ... me to speak a little more freely'. If Cicero had been done speaking with those words, no one could have accused him of improper grammar or of writing an incomplete sentence, and hence we say that this sentence 'might have ended' there. But nevertheless, Cicero continues: 'and,' he adds '[that you tolerate] me to make use of this new and unusual way of speaking'. Because the sentence carries forward farther than grammatically and semantically necessary, it is appropriate to say that it is 'not absolutely periodic'. Therefore, saying that a sentence retains semantic and syntactic suspension until the end of the construction is akin to saying that it ends as soon as it can.

32 Gotoff (1979) 110, emphasis mine.

By analyzing sentences in terms of where their sense and syntax are resolved, it is possible to determine absolutely, i.e. objectively, whether or not they qualify as periods, and so it seems that in this definition we have a starting point for empirically quantifying periodicity. However, in its current form, we find the definition in question to be somewhat ambiguous in two regards, and we propose modifying it in the following way: let us call periodic any complex sentence in which both sense and syntax are perceptibly held in suspension until the final word or element, at which point they are simultaneously resolved. The proposed changes are 'word or element' for 'end of the construction' and the additional word 'perceptibly'. In fact, these are not technically modifications, but clarifications: 'end of the construction' is a bit ambiguous and does not clearly communicate that what is being referred to is the entire sentence and not just individual clauses or constructions that give it shape; by 'element' we mean any group of (usually two or three) closely coalescing words that may be thought to constitute one semantic unit. This is usually a combination of noun and modifier, as in

Cic. *Arch.* 30 ego uero omnia quae gerebam iam tum in gerendo spargere me ac disseminare arbitrabar in orbis terrae memoriam sempiternam.

But I was of the mind that I was scattering and disseminating every I was in charge of, in the very moment of doing them, unto the world's memory eternal.

It is true that a full stop could have been placed after *memoriam* without dissolving the syntax of this sentence, and it could be argued that because this sentence carries forward farther than grammatically necessary, it is not periodic. However, to assert that such word groupings as *memoriam sempiternam* in the terminal position preclude a sentence from periodicity would be overly scrupulous, for it is not as though one reading or listening to this sentence has his expectations upset in any non-trivial way when it carries one word past *memoriam*. After all, it is the norm in Latin for qualitative attributes to come after their nouns, and besides, in this example at least, *sempiternam* is the more important word. Hence, 'final word or element'.

For a period to have its effect, the audience must know with reasonable confidence that sense and syntax are resolved where they are. Consider this sentence from Cic. *Rep.* 6.10:

post autem apparatu regio accepti sermonem in multam noctem produximus,
cum senex nihil nisi de Africano loqueretur
omniaque eius non facta solum, sed etiam dicta meminisset.

And afterward having been received with regal splendor, we continued our discussion into much of the night,
when the old man said nothing except about Africanus
and not his deeds alone, but also his words he recalled.

One might argue that the sense is not resolved in this sentence at *produximus* ('we continued') on the basis that the sentence is not at that point completed—that because the speaker is not done talking at that point, the sense is by definition incomplete and unresolved. But this is not what is meant by 'semantic resolution', and if it were, it could be likewise argued of any sentence. The fact is, sense is resolved here at three places: *produximus*, *loqueretur*, and *meminisset*; and this is not because the sentence is completed at those words (which it is not), but because the audience do not expect the sentence to continue past them and therefore cannot correctly anticipate where the sentence will end. The true ending must be clearly perceptible, hence 'perceptibly'.

Having attained to a sufficiently objective definition of what a period is, let us now consider what it does—its effects, features, and the means of achieving them. We can distinguish between the subjective and objective effects of the periodic style. Subjectively, periodic style is more pleasant to the listener because (1) his attention is aroused and then

satisfied,³³ and (2) because he can 'see' and thus anticipate the end of the sentence even though it comes to him piecemeal, word by word, clause by clause.³⁴ It is in the latter that the hairpin racecourse metaphor comes into play: the runner is better off if he can see the finish line and, like the audience, takes pleasure in his ability to anticipate his course. To illustrate what is meant by 'seeing' the end of a sentence, consider the following:

Cic. *Fam.* 5.2.4 iam illud senatus consultum quod eo die factum est ea praescriptione est ut, dum id exstabit, officium meum in te obscurum esse non possit.

Besides, the motion of the senate that was passed on that day has such a preamble that as long as it will be on record, it should not be possible for my service to you to be unknown.

One understands that this sentence must end where it does, no earlier and, except for a superfluous supplement, no later. The main clause ends at *ea praescriptione est* ('has such a preamble'), but the sentence is not complete at that point because *ea* ('such') demands to be qualified, as it is by *ut* ('that'), whose clause is resolved at *possit*. At this point, syntax is once again been resolved, but unlike at *ea praescriptione est*, it is clear that sense has likewise been concluded, for there are no more unqualified words that require a correlative counterpart. Hence this sentence is periodic because, even though syntax is resolved by *est*, semantic clarification is still wanting by virtue of *ea*'s pointing forward.³⁵

Of course, only the pleasure and intellectual foresight that one experiences in hearing such a sentence are truly subjective; the suspension of syntax and sense are objective effects or, more properly, objective features that entail an objective effect that Lausberg calls the 'provision of content'.³⁶ Cola and other sentence clauses may be combined as to retain the semantic and syntactic suspension of the sentence to which they belong in three major ways. Insofar as a clause is integrated with its head clause in one or more of these ways, we shall say that it 'relates periodically' to its head:

i. Cola, commata, and other (usually subordinate) clauses may be integrated with their head through the use of *signal words*, or words that explicitly foreshadow another clause. These are usually the demonstrative parts of pairs of adjectival or adverbial demonstrative-relative correlative words or phrases. Examples include *id ... quod* ('that ... which'), *hic ... qui* ('he ... who'), *sic ... ut* ('so/such ... as/that'), *non solum ... uerum etiam* ('not only ... but also'), *tantum ... quantum* ('as great ... as'), *ibi ... ubi* ('there ... where'), and so on. Also counted in with this group are *word doublets*, such as *et ... et* ('both ... and'), *aut ... aut* ('either ... or'), *alii ... alii* ('some ... others'), and *partim ... partim* ('partly ... partly'). These pairs are particularly useful in tying together in periodic fashion cola that are otherwise syntactically independent. For instance, in many places where two cola are paratactically and non-periodically linked by *et* ('and'), periodicity could have been attained to by introducing the first colon with another *et* ('both'), which would anticipate the second *et* ('and') and the colon initiated by it. We have seen that one sentence from *Arch.* 3 retains periodicity up to *paulo loqui liberius* but is non-periodically carried forward past syntactic and semantic resolution by *et ...*; had Cicero desired to indicate that the sentence would not end at *paulo loqui liberius*, he could have wised up the audience to the presence of another colon (*et in eius modi persona ...*) by disposing another *et* immediately after *patiamini* ('that you tolerate'). This would have retained semantic suspension at least until the resolution of the clause

33 Johnson (1971) 26.

34 Arist. *Rhet.* 1409b ἡδεῖα μὲν διὰ τὸ ἐναντίως ἔχειν τῷ ἀπεράντῳ, καὶ ὅτι αἰεὶ τι οἰεῖται ἔχειν ὁ ἀκροατῆς καὶ πεπεράνθαι τι αὐτῷ, τὸ δὲ μὴδὲν προνοεῖν μὴδὲ ἀνύειν ἀηδέες, 'It is pleasant because it is the opposite of the indefinite, and because the audience always think they are grasping something for themselves and that some conclusion has been reached, whereas to neither foresee nor come to an end is unpleasant'. This is itself an objective effect which entails a subjective experience. Clarification follows in the next paragraph.

35 In other words, if *ea* referred to something stated previously in, say, a relative clause, then there would be no reason to expect the *ut*-clause. As it is, however, *praescriptione* presumably refers to the explicit mention of Cicero in the preamble to this particular *senatus consultum ultimum*, and *ea* ('that') here is equivalent to *tali* ('such') (*OLD* s.v. *is* A.3). On account of this, the *ut*-clause is, interestingly, equally final and consecutive.

36 Lausberg (1998) par. 944

begun with *et in eius modi persona*. Here is another example of a sentence that achieves periodicity through the use of signal words:

Cic. *Catil.* 3.4 atque ego,
 ut uidi,
 quos maximo furore et scelere esse inflammatos sciebam,
 eos nobiscum esse et Romae remansisse,
 in eo omnis dies noctesque consumpsi
 ut quid agerent, quid molirentur sentirem ac uiderem,
 ut,
 quoniam auribus uestris propter incredibilem magnitudinem sceleris minorem
 fidem faceret oratio mea,
 rem **ita** comprehenderem
 ut tum demum animis saluti uestrae prouideretis
 cum oculis maleficium ipsum uideretis.

And I,

when I saw that those

that I knew had been inflamed out of the greatest madness and wickedness

were among us and had remained at Rome,

I spent all days and evenings with the intention

that I might sense and see what they were doing, what they were plotting,

so that,

even though my eloquence in your ears should convince you little on account of
 the unbelievable magnitude of their crime,

I might **so** take hold of the situation

that then at last I should provide for your welfare in your minds

when you see the crime itself with your eyes.

Admittedly, this sentence is not a full period, for it could have ended at *uiderem* ('that I might see'). Nonetheless, it is an example of periodicity through signal words, as *ut ... uiderem* ('that ... I might see') is periodically related to its head clause because it is anticipated by *in eo*, which in combination with *ut* constitutes a clear if uncommon adverbial correlative pair ('with the intention ... that').³⁷

ii. Whether or not a clause is anticipated verbally by one or more signal words, it may relate periodically to its head clause if situated entirely within it. Let us call this placing of one clause within another *bracketing*, since such clauses are commonly enclosed in brackets when their sentence's structure is visually illustrated. Here is an example of bracketing from *Catil.* 3.10:

tum Cethegus, {qui paulo ante aliquid tamen de gladiis ac sicis [quae apud ipsum erant deprehensa] respondisset dixissetque se semper bonorum ferramentorum studiosum fuisse}, {[recitatis litteris] debilitatus atque abiectus conscientia} repente conticuit.

Then Cethegus, {who a little earlier had nonetheless responded about the swords and daggers [that had been discovered at his residence] and had said that he had always been a connoisseur of iron instruments}, {[at the recitation of his correspondences] having been debilitated and humbled by his sense of guilt} suddenly fell quiet.

³⁷ See *OLD* s.v. *is* B.14.f.

Another way of showing a sentence's structure is in a tree diagram like so:

tum Cethegus
 qui paulo ante aliquid tamen de gladiis ac siccis
 quae apud ipsum erant deprehensa
 respondisset dixissetque se semper bonorum ferramentorum studiorum fuisse
 recitatis litteris
 debiliatus atque abiectus conscientia
 repente conticuit.

Combining the two gives us the clearest picture, for the diagram by itself does not indicate whether parallel lines merely belong to the same level of subordination or are actually parts of the same clause. Nor without brackets is it possible to tell at a glance whether an indented line (subordinate clause) has its head in the clause preceding or following:

tum Cethegus
 { qui paulo ante aliquid tamen de gladiis ac siccis
 quae apud ipsum erant deprehensa
 respondisset dixissetque se semper bonorum ferramentorum studiorum fuisse }
 { recitatis litteris
 debiliatus atque abiectus conscientia }
 repente conticuit.

Together with word-emphasis (**strong**, *italic*, underlined, and any combination of the three), brackets and tree diagrams will continue to be used throughout this study to illustrate sentence structure and accentuate associated words.

iii. It is often the case that subordinate sentence clauses are situated only partially within their head clause. When this occurs, they are interrupted by the remainder of the head clause and picked back up and brought to a close afterward. The resulting *interlacing* or *weaving*-together of clauses involves a sort of mental gymnastics as the mind focuses in-again and out-again from one level of subordination to another:

Cic. *Att.* 1.19.8 odia autem illa libidinosae ac delicatae iuuentutis quae erant in me incitata, **sic mitigata sunt comitate quadam mea me unum ut omnes illi colant.**

But that hostility of wanton and luxurious youth that had been stirred up against me **has been so mitigated by my courtesy me alone that they all honor.**³⁸

More generally, the interlacing of clauses entails *hyperbaton*, the displacement of two or more logically connected and (otherwise) closely coalescing words:

Cic. *Arch.* 1 si **quid** est in me **ingeni**, iudices ...

If there be **anything** in me **of inspiration**, gentlemen of the hury ...

38 In translation the Latin word order cannot be preserved without violating English convention.

Cic. *Rep.* 6.22 quibus amputatis cernis profecto quantis in angustiis **uestra se gloria dilatari** uelit.

With these taken away you surely see in what small narrowness **your itself glory to be broadened** desires.³⁸

Sometimes a hyperbaton is notable not for the quantity of intervening words or syllables, but for their quality:

Cic. *Arch.* 24 hoc maximum **et periculorum** incitamentum est **et laborum**.

This the greatest stimulus **both to danger is and to work**.

Cic. *Rep.* 6.22 ex his ipsis cultis notisque terris num aut tuum aut cuiusquam nostrum nomen **uel Caucasum hunc, quem cernis, transcendere potuit uel illum Gangen tranatare?**

Of these inhabited and familiar lands is either your name or that of anyone **either to ascend this Caucasus that you see able or to swim across yonder Ganges?**³⁸

It would not be unusual *per se* for two commata (short clauses) linked by *et ... et* ('both ... and'), *uel ... uel* ('either ... or' inclusive), *aut ... aut* ('either ... or' exclusive), or any other pair of word doublets to be separated by even long intervening clauses. For instance, they could be displaced by a long parenthesis or by a relative clause belonging to either; what is unusual—and the reason these two examples qualify as hyperbata—is when they are split by a word or phrase, usually their predicate, that belongs equally to both. And so these hyperbata stick out because of which word/words intervene and not because of the length of the intervening fragment.

Of course, none of these hyperbata perpetuates by itself its respective clause's periodic relationship to the rest of the sentence. In the first example (*odia autem ...*), the *ut*-clause ('that') relates periodically to its head because it is anticipated by *sic* ('so'), and this is so regardless of the interlacing between *sic ... ut* and *me unum ... colant*. Likewise, the hyperbaton of *quid ... ingeni* ('anything ... of inspiration') in the second example is altogether irrelevant to the question of periodicity, since its clause relates periodically to its head by virtue of its coming first. In the third example, the order of *uestra se gloria dilatari* can be rearranged in any way without affecting periodicity, which is actually secured by the placement of *uelit* ('it desires') in the terminal position. But it can in fact occur that the dissolution of a given hyperbaton by the reordering of its words should result in syntax being resolved earlier or later than it would have otherwise. Consider one example from above rewritten thus:

ex his ipsis cultis notisque terris num aut tuum aut cuiusquam nostrum nomen **uel Gangen tranatare potuit uel Caucasum, quem cernis?**

Of these inhabited and familiar lands is either your name or that of anyone **either to swim across Ganges able or to ascend Caucasus, which you see?**

Without *hunc* ('this') or *illum* ('that', 'yonder') to anticipate *quem cernis* ('which you see'), sense and syntax are resolved at *Caucasum*, and this sentence is thus no longer a full period. Yet even without expressly anticipating the relative clause, this very sentence could have attained to full periodicity had the second *uel ...* been placed before *potuit*, as it usually would be.

These are by no means the only methods of retaining semantic and syntactic suspense across cola boundaries. Obviously, any subordinate clause that is situated entirely before (and, for the most part, those placed partially before) its head clause anticipates and relates periodically to it because subordinate clauses by definition cannot exist by themselves. The subordinate clauses that tend more than any others to precede their head clause are the conditional (*si*,

'if'), temporal (*cum*, 'when'), and the concessive (*cum*, *quamquam*, 'although'), but causal (*quod*, *quoniam*, 'because/since'), final (*ut*, 'in order that'), and even relative clauses frequently precede.

Nor are these methods mutually exclusive, but they may take effect singly or in combination with each other, and no such combination entails periodicity necessarily. Demonstrative pronouns and sentence adverbs (e.g., *sic*, 'so/thus') don't always point forward, but may refer to something previously mentioned or in another sentence. They can also occur absolutely, without any qualification whatsoever, like *sic* in this sentence from Cic. *Att.* 1.19.4, which, though verbally unqualified by a corresponding *ut*-clause, refers collectively to the events narrated in the sentences leading up to it:

urbanae autem res se sic habent.

Thus is the state of affairs in the city.

Similarly, subordinate clauses bracketed by their head clause are not necessarily in periodic relationship, but only when it is clear that the sense and syntax of the head clause are not yet resolved at the point where it is interrupted.

Presently we will attempt to measure the periodicity of a collection of Latin texts using the definition we have been developing. Before doing so, however, it will help if we can anticipate some of the problems we might encounter in attempting to apply our definition to certain kinds of constructions. One such construction that might prove an obstacle is the compound sentence:

Cic. *Rep.* 6.14 'immo uero,' inquit, 'hi uiuunt, qui e corporum uinculis tamquam e carcere euolauerunt, uestra uero, quae dicitur, uita mors est.'

'Indeed,' he says, 'they are alive that have flown away from the shackles of their bodies as if from a prison. In fact, that of yours which is called life is death.'

Cic. *Arch.* 17 ergo ille corporis motu tantum amorem sibi conciliarat a nobis omnibus; nos animorum incredibilis motus celeritatemque ingeniorum neglegemus?

Now he had gained for himself so great from all of us on account of the movement of his body; shall we ignore the incredible motions of minds and the swiftness of one's talents?

Both of these are compound sentences, i.e. sentences composed of two or more syntactically independent but logically connected or verbally related expressions—each of which capable of standing for a complete sentence by itself—linked together into one larger whole.³⁹ In the first example, the first sentence-part *immo ... euolauerunt* is linked to the second, *uestra ... est*, in three ways: first and most generally, they both belong to the same direct discourse introduced by *inquit* ('he says'); next, the adversative and asseverative particle *uero* ('but', 'in fact') ties them together logically; and finally, they are related by virtue of what they express, as the second sentence-part is a concretization of the metaphor contained in the first. In the second example, the two sentence-parts are likewise tied together in three ways: loosely by the concessive nature of *ergo* ('now', 'even though')⁴⁰ with the rhetorical nature of the question *nos ... neglegemus* ('shall we ... ignore?'); more emphatically by the symmetry of *corporis motu* ('the movement of his body') and *animorum incredibilis motus* ('the incredible motions of minds'); and finally, by the adjacency of *nobis omnibus* ('all of us') and *nos* ('we'), which highlights powerfully the irony of the speaker's point.

³⁹ Henceforward I refer to the individual sentences of which a compound sentence is composed as 'sentence-parts'.

⁴⁰ *OLD* s.v. *ergo* 3.b.

It is self-evident that sense and syntax in compound sentences are not suspended throughout, but are resolved at the end of one sentence-part and picked back up again by the next. However, our definition should not therefore preclude these sentences from periodicity, for it is possible that each sentence-part, as a syntactically independent unit capable of standing alone for a complete sentence, should by itself exhibit all the features of a full period. Therefore, we propose to call a compound sentence periodic if each of its sentence-parts passes the criteria individually, that is, if each of its sentence-parts considered by itself is a complex sentence in which sense and syntax are perceptibly held in suspension until the final word or element. Thus only the first sentence above is periodic, since neither of the constituent sentence-parts in the second example is complex.

But what about compound sentences composed of multiple sentence-parts that are all periodic in themselves save just one or two? To put it more generally, how should we deal with sentences that are not full periods but very nearly so? Do these merit the label of 'free-running' despite their rotundity? These questions demonstrate the need for criteria that distinguish between several degrees or level of periodicity. Black and white Boolean criteria will not suffice for describing something as complex as periodic style. For this reason, in addition to those sentences that are full periods and those that are free-running, we shall consider two more classes of sentences: those that are very nearly full periods and only fall short of the criteria because of one colon, comma, or even word, tacked on where a full period would have ended; and those that do not even meet these standards but are nevertheless more periodic than free-running, having over half of their cola in periodic relationship with the rest of the sentence. An example of the former class is the extraordinarily long sentence from *Arch.* 3 given above, which is fully periodic up to *paulo loqui liberius* but continues forward for one more clause that is itself a period. For the latter class, consider:

Cic. *Catil.* 3.8 tum ille dixit,
 cum uix se ex magno timore recreasset,
 a P. Lentulo se habere ad Catilinam *mandata et litteras*
 ut seruorum praesidio uteretur,
 ut ad urbem quam primum cum exercitu accederet;
 id autem **eo consilio**
 ut,
 cum urbem ex omnibus partibus
 quem ad modum descriptum distributumque erat
 incendissent caedemque infinitam ciuium fecissent,
 praesto esset *ille*
 qui et fugientis exciperet
 et se cum his urbanis ducibus coniungeret.

The he said,
 when he had scarcely recovered from a great fear,
 that he had *letters and orders* from P. Lentulus to Catiline
 that he (Lentulus) take a garrison of his slaves as a guard,
 that he come to the city with his army as soon as possible;
 and that he do this **with the intention**
 that,
 once they had set fire to the city in all parts
 just as they had been drawn up and assigned
 and had made an endless slaughter of citizens,
 he might certainly be there
 who would **both** cut off the fugitives
 and unite himself with the ring-leaders in the city.

This sentence contains at least two unanticipated clauses. *Ut ad urbem ... accederet* ('that he come to the city') is asyndetically conjoined with what comes before and is not verbally anticipated. *Id ... consilio* ('and that he do this with the intention') is also tacked on without warning, almost as an afterthought. But although this sentence does not belong to the class of full periods, it is nonetheless highly rotund conjunction of over ten cola, all but two of which are expressed periodically. It would indeed be misleading to call such a sentence 'free-running', so having two in-between classes of periodicity will allow that they not go unnoticed.

Thus far we have been content to define a complex sentence as one that contains one or more subordinate (or 'dependent') clauses, but we have not formally considered what constitutes a subordinate clause. According to one scholar, 'every syntactic unit that contains a verbal notion' is a subordinate clause, including participial phrases and accusative-and-infinitive constructions.⁴¹ However, this definition is rather ambiguous and, arguably, misguided in its generality, for not all participial phrases are verbal, and accusative-infinitive constructions are more often than not complex direct objects that do not merit the label 'subordinate clause'. Also, there are other kinds of constructions, such as parentheses and clauses of comparison, whose nature as subordinate or non-subordinate clauses is not obvious. Since our definition of periodicity depends on what constitutes a subordinate clause, we must settle on how to qualify the following types of constructions.

Participles and Participial Phrases

In general, let us regard every participle or participial phrase that has a verbal force as constituting a subordinate clause, while those that have merely an adjectival or adverbial force will be thought of as belonging to the same clause as the noun or verb they modify.⁴² A participle has a verbal force when it equates to a temporal, causal, concessive, or conditional phrase; it has an adjectival or adverbial force when it equates, respectively, to a simple adjective or relative clause, or to a simple adverb. For example:

Cic. *Rep.* 6.17 in infimoque orbe luna radiis solis accensa conuertitur.

And in the lowest orbit the moon turns over, ablaze with the rays of the sun.

Cic. *Catil.* 3.22 quid uero? ut homines Galli ex ciuitate male pacata, quae gens una restat quae bellum populo Romano facere posse et non nolle uideatur ...

What then? That people of Gaul from a state poorly subdued, which tribe is the only one remaining that seems able and not unwilling to wage war against the Roman populus, should ...

Cic. *Fam.* 5.2.9 nulla est a me umquam sententia dicta in fratrem tuum; quotienscumque aliquid est actum, sedens iis adsensi qui mihi lenissime sentire uisi sunt.

I have never spoken a word against your brother; as often as a case has been plead, I have agreed, while sitting, with those who seemed to me to express themselves most gently.

The emphasized participles in these sentences are adjectival or adverbial and should not qualify as subordinate clauses. *Accensa* merely means 'ablaze', and *male pacata* ('poorly subdued') equates to *quae male pacata est* ('which has been poorly subdued'), a relative clause. *Sedens* ('sitting') is an example of an adverbial participle: Cicero means that he complied 'without rising', i.e. to speak himself. It is thus, grammatically speaking, the equivalent of *placide* ('calmly') or *primus* ('first'). Consider on the other hand:

41 Gotoff (1979) 67.

42 I have adopted most of my rules for qualifying subordinate clauses from W. R. Johnson's book *Luxuriance and Economy: Cicero and the Alien Style* (1971). Johnson tries to classify sentences according to where their main clause falls, to do which he develops his own criteria for distinguishing between subordinate clauses and non-subordinate sentence parts. Cf. pp. 15-20.

Cic. *Catil.* 3.10 introducitur Statilius cognouit et signum et manum suam.

Statilius, having been brought in, acknowledged both his seal and his hand-writing.

Cic. *Arch.* 1 nam quoad longissime potest mens mea respicere spatium praeteriti temporis et pueritiae memoriam recordari ultimam, inde usque repetens hunc uideo ...

For as far back as my mind is able to consider the span of time gone by and recall the furthest memory of my boyhood, looking back thence I see him ...

These participles do not describe or define their nouns as much as they put their respective predicates into context. *Introducitur Statilius* could have been written *Statilius cum introducitur esset* ('Statilius, when he had been brought forward'), and *inde usque repetens* ('looking back thence') is equivalent to *inde usque ut repeto*, 'as I look back thence'. In neither of these examples would a relative clause have had the same effect, for the participles describe Statilius and Cicero only in the specific contexts of *cognouit* ('he acknowledged') and *uideo* ('I see'). It is therefore proper to regard them as subordinate clauses.

One common brand of participial phrase in Latin is the *ablative absolute*, a combination of noun and participle in the ablative case, syntactically distinct from the rest of the sentence. In nearly every instance, these are equivalent to a temporal or causal clause and must be regarded as subordinate clauses:

Cic. *Att.* 1.19.4 qua constituta diligenter et sentinam urbis exhauriri et Italiae solitudinem frequentari posse arbitrabar.

This having been carefully established, I thought that it would be possible both for the dregs of the city to be drained out and for the wilderness of Italy to be re-inhabited.

However, with regard to the ablative absolute, two anomalies must be addressed. Latin, unlike Greek, lacks a participial form for its verb of essence, *sum*, *esse* ('I am, to be'). It sometimes occurs then, that an ablative absolute will contain no participle at all, since the implied participial form of *esse* does not exist:

Cic. *Arch.* 21 populi Romani exercitus eodem duce non maxima manu innumerabilis Armeniorum copias fudit.

The army of the Roman populace, with the same man as general, with not the largest band of men routed the innumerable forces of the Armenians.

Despite the absence of any verbal form, such ablative absolutes are logically indistinct from those that do contain participles, and we shall accordingly count them in with subordinate clauses. There is, however, one kind of AA that cannot be properly regarded as a subordinate clause, namely, that which modifies a form of *sum*:

Cic. *Att.* 1.19.10 apud me si quid erit eius modi, me imprudente erit et inuito.

If there is anything of that sort in my writing, it will be out of my imprudence and unintentional.

This AA would never be expressed in a separate clause—such as *erit cum imprudens et inuitus ero* ('it will be when I am incautious and unwilling')—just as *lubens te uisam* ('I will happily come see you') would never be expressed instead as *te uisam cum me lubebit* ('I will come see you when I can do so happily').

One more ambiguity that may arise as we try to distinguish between participles of verbal force versus those of adjectival or adverbial force involves gerunds and gerundives. To these the same general rule applies: some are pure adjectives that describe what ought to be done to their nouns, and others, usually in combination with *ad*, *causa*, or

gratia, ('for the purpose [of]') describe intent and equate to a final *ut*-clause ('in order that'):

Cic. *Arch.* 14 quam multas nobis imagines non solum *ad intuendum* uerum etiam *ad imitandum* fortissimorum uirorum expressas scriptores et Graeci et Latini reliquerunt!

How many vivid likenesses of the bravest men did both Greek and Latin writers leave for us, not only that we might contemplate them, but also that we might imitate them!

As this sentence is written, Greek and Roman writers have left behind *imagines* 'not only that we might contemplate them, but also that we might imitate them'. The gerunds in combination with *ad* amount to *ut eas non solum intueremur, uerum etiam imitaremur*—a subordinate clause. Had Cicero desired to express the idea more adjectivally, he could have written *non solum intuendas, uerum etiam imitandas*, 'worthy not only of contemplation, but of imitation as well'.

Parenthesis

Parentheses are not properly subordinate clauses, since by definition they are grammatically independent of the sentence into which they protrude. Perhaps it would be more correct to say that parentheses produce compound rather than complex sentences, but what sets them apart from regular sentence-parts in regular compound sentences is their placement within (as opposed to besides) another clause, as if in hypotaxis. Thus the parenthesis is a kind of bracketing, as is illustrated by the modern convention of placing rounded brackets around it. But in fact, parentheses in the technical sense are usually set off by commas or, in the case of longer instances, by double dashes, as in the following:⁴³

Cic. *Arch.* 16 quod si non hic tantus fructus ostenderetur, et si ex his studiis delectatio sola peteretur, tamen, ut opinor, hanc animi remissionem humanissimam ac liberalissimam iudicaretis.

But if this great profit were not being shown, and if from these studies pleasure alone were being sought, nevertheless, so I think, you would consider this relaxation of the mind most refined and honorable.

Cic. *Arch.* 18 quotiens ego hunc Archiam uidi, iudices—utar enim uestra benignitate, quoniam me in hoc nouo genere dicendi tam diligenter attenditis—quotiens ego hunc uidi, cum litteram scripsisset nullam ...

How often did I see Archias, gentlemen of the jury—allow me to take advantage of your kindness, since you are giving me your undivided attention in this unusual mode of speaking—how many times did I see him, when he had written no notes ...

Since parentheses prolong syntactic and semantic suspension of their head sentence, i.e. of the sentence into which they interject, we shall consider them equivalent to subordinate clauses, even if they are not properly so.⁴⁴ Of course, not all parentheses amount to full clauses because they do not all contain a finite verb or its equivalent. Nor do those that contain a verb qualify always as whole clauses, for certain verbal expressions in Latin became so common that they were understood as mere adverbs or adjectives:

43 Lausberg (1998) par. 860 '*Interpositio* "parenthesis" is the insertion—foreign to the construction—of a clause (and thus of an idea) into a sentence.'

44 Cf. Lausberg (1998) par. 923 'The parenthesis also give the one-colon sentence a period-like cyclical structure through the correspondence between the two fragments (one before the parenthesis, the other after the parenthesis).'

Cic. *Rep.* 6.24 homines enim populariter annum tantum modo solis, id est unius astri, reditu metiuntur.

For people most commonly measure out a year by the return only of the sun, that is, of one star.

Cic. *Arch.* 15 atque idem ego hoc contendo, cum ad naturam eximiam et inlustrem accesserit ratio quaedam conformatioque doctrinae, tum illud nescio quid praeclarum ac singulare solere existere.

And also I contend this, that when methodology and the fashioning of instruction have been added to an extraordinary and brilliant inborn character, then some strange thing splendid and remarkable usually emerges.

Parentheses introduced by *id est* ('namely', 'in other words', 'that is') clarify like an appositional phrase, and very often *uel* (inclusive 'or') in place of *id est* would not alter the meaning except trivially.⁴⁵ Similarly, *nescio quid* ('something—I know not what') does not have the full force of a parenthesis because it means the same as *quiddam* or *aliquid* ('something'), the only difference being that the speaker's ignorance is stressed when he chooses to say *nescio quid*. The adjectival nature of the phrase is evidenced by the preference of many editors for writing it as one word: *nescioquid*. Hence our general rule of thumb shall be to count all non-trivial parentheses containing a finite verb or its equivalent as a subordinate clause. Others will be regarded as belonging to the clause in which they are situated.

Indirect Discourse

Indirect discourse, whether of the nominative-infinitive or accusative-infinitive brand, is doubtless a 'syntactic unit that contains a verbal notion'. But whenever the construction is the object of a *uerbum declarandi*⁴⁶ or the subject of an impersonal verb, as it usually is, it cannot be considered a subordinate clause, for in such cases, it is grammatically equivalent to a one-word substantive. Hence it is often called an 'object sentence':

dixit se numquam Romam uenisse.

He said he had never come to Rome.

The habit of the English-speaker to introduce indirect discourse pronominally with 'that' (as in 'he said *that* he had never come to Rome') might give him reason for regarding such constructions as subordinate clauses, but a translation more sensitive to the Latin grammar would omit the 'that', without which it would be difficult to argue, for instance, that 'he said he had never come to Rome' is a complex sentence. For properly regarded, in English as well as in Latin, the indirect quotation is altogether the direct object of the verb of speaking, thinking or observing. Another form of indirect discourse common in Latin is that introduced by impersonal verbs:⁴⁷

eum oportet Romam uenire.

It behooves him to come to Rome.

When translated idiomatically into English, these do not always preserve grammatical structure quite as faithfully: 'it behooves him to come to Rome', or 'he must come to Rome'. It would be more literal to say 'it is necessary that he

45 In fact, *uel* is another example of a parenthesis that is for most intents and purposes not regarded as such, for it is technically the imperative of *uolo* and its placement in the middle of a clause thus constitutes *interpositio*.

46 Gildersleeve and Lodge par. 527 'Active verbs of Saying, Showing, Believing, and Perceiving (*verba sentiendī et dēclārāndī*), and similar expressions, take the Accusative and Infinitive.'

47 'Indirect discourse' usually refers strictly to accusative-infinitive constructions introduced by *uerba declarandi*. I use it here more liberally to mean any accusative-and-infinitive clause, such as those that accompany impersonal verbs.

come to Rome'. As with indirect discourse introduced by *uerba declarandi*, these constructions are grammatically equivalent to one-word substantives; only in this case, they operate as subjects of their predicate.

To the general rule that indirect discourse does not constitute a subordinate clause there are one exception and one anomaly. Sometimes an accusative-infinitive construction stands in apposition to a pronoun that is the actual object of the *uerbum declarandi*:⁴⁸

Cic. *Fam.* 5.2.3 **illud** dico,

me,

ut primum in contione prouinciam deposuerim,

statim

quem ad modum eam tibi traderem

cogitare coepisse.

I say **this**,

that I,

as soon as I gave up my province in that assembly,

at once

how I might hand it over to him

began to ponder.

In these instances, the indirect discourse equates to a relative clause introduced by *quod* ('that', 'which') and may in fact be replaced by one without its meaning being thereby altered (though perhaps obscured).⁴⁹ Accordingly, object sentences of this sort should be considered subordinate clauses.

Just as there are verbs in Latin that require a complex accusative-and-infinitive object or subject, so there are also verbs that require the infinitive alone. Words like *uolo* ('I want') and *debeo* ('I ought') take a bare infinitive as their object:

uolo/debeo Romam adire.

I want/ought to go to Rome.

Volo and its derivatives may also take an accusative with the infinitive, especially when the subject of the infinitive is different from the person doing the wishing:

uolo te Romam uenire.

I want **you** to come to Rome.

For the same reason given above, neither these nor similar constructions are subordinate clauses. Yet there are also times when words like *uolo* ('I want') and impersonal verbs like *oportet* ('it behooves', 'it is necessary') take not an infinitive clause, but a subjunctive verb:

48 This is not to be confused with indirect discourse that is introduced by a relative (*quod* or *quia*), in the same way it is sometimes introduced by ὅτι in Greek. Rather, here we are talking about indirect discourse in the regular accusative-infinitive construction that stands in apposition to the real object—usually a pronoun—of the *uerbum declarandi*.

49 Clauses introduced by *quod* always have the potential to be mistakenly regarded as causal.

Cic. *Fam.* 5.2.4 postea uero quam profectus es, uelim recordere quae ego de te in senatu egerim.

After you have set out, I would like for you to recall what I did concerning you in the senate.

Cic. *Rep.* 6.25 suis te oportet inlecebris ipsa uirtus trahat ad uerum decus.

Courage itself must drag you away from its own enticements towards true glory.

It may be true, as some have supposed, that these constructions are the more economical and prevailing forms of what in earlier times would have been expressed with *ut*: *uelim ut recordere*; *oportet ut trahat*—'may you recall—I will it'; 'may it drag you—it must'. Clauses of fearing do just this: *metuo ut Romam uenias*, 'may you come to Rome—I am afraid (i.e. that you will not)'.⁵⁰ When *ut* is expressed, there is no question as to the subordinate nature of its clause. As they are written, however, these sentences are semantically rather similar to *uolo te recordari* ('I want you to recall') and *ipsam uirtutem oportet te trahere* (literally 'it behooves virtue to drag you itself'). *Velim* with the subjunctive is just a more polite way of expressing a wish, and *oportet* with the subjunctive is semantically indistinguishable from its more normal construction.⁵¹ Therefore, without any significant change in sense, and without a clear conjunction such as *ut* to mark off the start of what would then be a subordinate clause, let us count these constructions in with the same class as regular accusative-infinitive object sentences and treat them as belonging to the same clause as the verb that introduces them.

Direct Discourse

The same reasoning applies likewise to sentences of direct discourse, with one minor variation. Direct quotations introduced by *inquam* ('I say') or other verbs of speaking may be thought of as complex direct objects:

Cic. *Rep.* 6.12 hic cum exclamasset Laelius ingemuissentque uehementius ceteri, leniter arridens Scipio 'St! quaeso,' inquit, 'ne me e somno excitetis, et parumper audite cetera.'

Here when Laelius had shouted out and the other had groaned rather vehemently, Scipio, laughing softly, said 'Shush! please, lest you awaken me from my dream, and listen for a short while to the rest.'

As with indirect discourse, the object of verbs introducing direct quotations are sometimes pronouns to which the quotation itself stands in apposition:

Cic. *Fam.* 5.2.10 atque hoc ipso tempore tibi paene minitanti nobis per litteras **hoc rescribo atque respondeo**: ego. dolori tuo non solum ignosco sed summam etiam laudem tribuo.

And at this very time to you as you are practically threatening me in your letters **I write back and respond thus**: I not only forgive your indignation, but I even bestow upon it the highest praise.

But whereas accusative-infinitive constructions in such a position operate like relative clauses, we shall consider direct quotations distinct sentence-parts that form compound sentences in union with the sentence that introduces them. The reason for this is that, unlike the infinitive, which depends syntactically on another verb, the main predicate in a direct quotation is grammatically independent of the verb of speaking.

⁵⁰ Cf. Hale and Buck par. 502.4.

⁵¹ *OLD* s.v. *uolo* 10; *OLD* s.v. *oportet* 1.d.

Clauses of Comparison

Clauses of comparison, introduced in Latin by *quam* and in English by 'than', may be classified into two kinds: those that contain a verb and those that do not. Technically speaking, every such clause contains a verbal notion, though it is more common, in English and Latin, for the verb to be suppressed. Thus in English we say 'he is taller than *I*' and not 'he is taller than *me*' because we are really saying 'he is taller than *I am*'. Just so in Latin, the verb may be suppressed without obfuscating the meaning, since the comparison is evidenced by the common grammatical case of the things being compared:⁵²

Cic. *Rep.* 6.13 *nihil* est enim illi principi deo ... **acceptius quam** *concordia coetusque* hominum iure *sociati*.

For *nothing* is **more welcome** to that chief god **than** *unions and companies* of men *allied together* by law.

Cic. *Arch.* 5 studiaque haec et in *Latio* **vehementius tum** colebantur **quam nunc** *isdem in oppidis*.

And those pursuits even in *Latium* were being **more passionately tended** *at that time* than **now** in *the same towns*.

Cic. *Att.* 1.19.7 quod non **tam** interfuit *mea* ... **quam rei publicae**.

This does not **so much** matter *for me* as it does *for the Republic*.

Cic. *Fam.* 5.2.8 quis esset qui me in consulatu non *casu* **potius** existimaret **quam consilio** fortem fuisse?

Who would there be that would not think that I in my consulship had been brave **more** *out of luck* **than** *out of resolve*?

But as these constructions do not express any verbal notion, we must not regard them as subordinate clauses. On the other hand, many clauses of comparison contain predicates of their own:

Cic. *Fam.* 5.2.8 neque illi *quicquam* **deliberatius** fuit **quam me** *quacumque ratione posset, non iudicio neque disceptatione sed vi atque impressione euertere*.

And *nothing* was ever **more resolved upon** by him **than** *to ruin me by whatever method possible, not in court nor in debate, but by violence and force*.

Cic. *Fam.* 5.2.10 **citiusque amore tui** fratrem tuum odisse *desinam* **quam** illius odio *quicquam* de nostra benevolentia *detraham*.

And I will **sooner** *stop* hating your brother **out of love for you** **than** *lose* something of our friendship **out of hatred for him**.

These are structurally equivalent to relative sentences and must therefore be considered subordinate clauses.

⁵² Of course, nouns are not the only kind of words that undergo comparison. Verbs and even entire clauses may also be compared; in these instances as well, what is being compared is discernible in the grammar.

Rhetoricians and Classical scholars have concerned themselves with periodic style for millennia, but no one has ever attempted to quantify periodicity for empirical analysis. Admittedly, numerical treatment of Classical texts (and of literature in general) is relatively novel, but that has not discouraged large-scale analysis of other rhetorical properties like anaphora, homoeoteleuton, alliteration, word-order, and of course, clausulae. Perhaps scholars have felt that periodic style is too loose of an idea to be rigidly defined, as it would have to be for any worthwhile empirical study. We have seen that there was considerable disagreement even in antiquity over the period's precise definition, so it is not surprising that scholars of the digital age have been neither anxious to try nor optimistic enough to consider it possible.

Though I suspect that the stylistic insights to be afforded by large-scale analysis of a given Latin or Greek author's periodicity would be most valuable, before we can even begin to wonder what we might learn from the fruits of such an endeavor, we must first establish the feasibility of its premise, namely, that periodicity can be so strictly defined as to allow for empirical application without forfeiting so much of its substance that it should become only a caricature of what the ancients had in mind. Thus far, we have looked at relevant passages from several of the most authoritative Classical Greek and Roman critics and ventured to uncover the common ground on which their definitions of *περίοδος* converge. Unsatisfied by the vague and subjective nature of their own criteria, we then considered a more technical definition shared by modern scholars. After some refinement and clarification, it now seems that we have a definition specific enough for subtle delineation and elastic enough to be applied to Latin sentences of all shapes and sizes. Our criteria are not perfect, but it seems that we have reached a point where their weaknesses and ambiguities, no longer obvious, will be most readily brought to light through experimentation. It is time to take our definition for a test run.

Methods of Analysis

As this study is an experiment in defining periodicity, we shall test our criteria on the author whose name is most associated with periodic style: Cicero. We have tried to conceive of our criteria independently of any one author's stylistic tendencies, but the choice of Cicero is most befitting for at least two reasons. In the first place, aside from his undeniable influence in shaping modern (and pre-modern) Classicists' conceptions of the rhetorical period, Cicero's own first-hand statements about the proper usage of the period have survived even to this day. From these we can better inform our expectations, and if our findings should discord with or contradict them outright, we may conclude either that Cicero's rhetorical theory did not always direct his practice or, what is more likely, that our criteria, though they seemed capable enough in isolated instances, do not hold up when applied to real Latin. Additionally, Cicero makes for an ideal candidate because there is hardly a literary genre untried by his extant works, and even within any one genre, his style has been shown to vary considerably throughout his literary career. Thus one can observe a tremendous variety of Latin styles without ever wandering outside the vast corpus of Cicero. In light of this, the tiresome habit of associating him chiefly with the periodic style (or periodic style with him) is surely misguided, for he admits himself, as we will presently see, that writing or speaking in periods is not always appropriate.

Most of the authentic Latin quotations thus far given as illustrations of the finer points of our criteria have come from one of five Ciceronian texts that span at least three genres. They are, in chronological order according to their dates of composition, the *Third Catilinarian Oration*; *Ad Familiares* 5.2, Cicero's famous rebuttal to Quintus Metellus Celer; the *Pro Archia Poeta*, widely considered the literary masterpiece of his oratorical works; *Ad Atticum* 1.19, a letter of moderate length written to his close friend Atticus in the winter of B.C. 60; and the *Somnium Scipionis* or 'Dream of Scipio', the ambitious conclusion to Cicero's much longer but highly fragmentary *De Re Publica*. Without even reading these, we may assume quite safely that each is stylistically distinct from the others, for each is unique in its purpose, intended audience and, for the most part, its mode of delivery.⁵³ Where there is overlap in genre, the similarities are superficial, for although the *Catilinarian* and *Pro Archia* belong equally to oratory, they qualify as two very different kinds of orations. Similarly, our two letters are written for very different purposes and addressed to two men whose relations to Cicero could hardly be compared. Thus it seems that within this modest specimen of Ciceronian texts are represented a comparatively wide range of styles ideal for testing our criteria.

Together, the five texts examined here run 379 sentences long. I have categorized each sentence into one of four classes, as discussed above. We have defined a period to be a complex sentence in which sense and syntax are perceptibly held in suspension until the final word or element. In the table below, sentences that fully comply with this definition are labeled 'full periods'. On the other extreme, 'free-running' sentences, which includes simple sentences, are those that have been deemed to have at least half of their cola in non-periodic relation to their head. In between are 'near-periods' and 'semi-periods', respectively sentences that fail to qualify as full periods on account of just one non-periodic colon, comma, or other phrase; and those that do not even meet this criterion but nevertheless have more periodic cola than not. Each text has also been assigned a periodic 'score', or a weighted average of the periodicity of its sentences. The weights assigned are 0 to free-running sentences, .5 to semi-periods, .75 to near-periods, and 1 to full periods. I realize that these are arbitrary, but if they are not completely grounded in reality, they will at least let us compare the texts in relation to each other.

⁵³ That is, these texts represent formal and informal presentations, written and spoken; and of the two orations, the settings varied considerably.

	FREE-RUNNING	SEMI-PERIODS	NEAR-PERIODS	FULL-PERIODS	Total	SCORE
Att 1.19	23	0	6	15	44	.44318
Somnium	43	9	4	18	74	.34459
Fam 5.2	13	8	1	12	34	.49265
Pro Archia						
Exordium	1	0	1	5	7	<i>.82143</i>
Peroration	1	0	1	1	3	<i>.58333</i>
Other	45	5	12	38	100	<i>.49500</i>
TOTAL	47	5	14	44	110	.51818
Catil. 3						
Exordium	2	0	1	1	4	<i>.43750</i>
Peroration	14	5	0	8	27	<i>.38889</i>
Other	32	8	5	41	86	.56686
TOTAL	48	13	6	50	117	.52137
CUMULATIVE	174	35	31	139	379	<u>.46966</u>

Observations and Conclusions

sed si habitum etiam orationis et quasi colorem aliquem requiritis, est et plena quaedam, sed tamen teres, et tenuis, non sine neruis ac uiribus, et ea, quae particeps utriusque generis quadam mediocritate laudatur. his tribus figuris insidere quidam uenustatis non fuco inlitus, sed sanguine diffusus debet color.⁵⁴

quanquam id quidem perspicuum est, non omni causae nec auditori neque personae neque tempori congruere orationis unum genus; nam et causae capitum alium quendam uerborum sonum requirunt, alium rerum priuatarum atque paruorum; et aliud dicendi genus deliberationes, aliud laudationes, aliud iudicia, aliud sermones, aliud consolatio, aliud obiurgatio, aliud disputatio, aliud historia desiderat. refert etiam qui audiant, senatus an populus an iudices: frequentes an pauci an singuli, et quales: ipsique oratores qua sint aetate, honore, auctoritate, debet uideri; tempus, pacis an belli, festinationis an otii. itaque hoc loco nihil sane est quod praecipere possit, nisi ut figuram orationis plenioris et tenuioris et item illius mediocris ad id, quod agemus, accommodatam deligamus. ornamentis eisdem uti fere licebit aliam contentius, aliam summissius; omnique in re posse quod deceat facere artis et naturae est, scire quid quandoque deceat prudentiae.⁵⁵

Towards the end of the third book of Cicero's *De Oratore*, we are thrust into a discussion about the theory of the three styles that dominated ancient rhetorical criticism.⁵⁶ Through the persona of Lucius Licinius Crassus, Cicero lists the circumstances that the orator must take into consideration when deliberating over whether to use the high, low, or middle style. Chief among these are audience (*qui audiant*), occasion (*tempus*), and purpose or intent (*causa, res*), a variety of combinations of which are represented by our five texts. Writing the *Orator* a decade later, he tells us likewise about the proper time and place for using various rhetorical figures and expressions. In one rather long passage, after discussing the nature of periodic style, we are afforded a glimpse of his opinion on the proper use (*usus*) of the rhetorical period in oratory, from which we can infer three general rules.⁵⁷ First, we are told that periodic style is especially commendable in orations of the epideictic sort. But more generally, the exordia and perorations of all kinds of oratory ought to be composed in periods.⁵⁸ And finally, on these two rules Cicero imposes the limitation that the consummate orator must alternate between periodic and free-running style, even sentence-by-sentence when appropriate (*retinenda non diu est*).⁵⁹

54 Cic. *de Orat.* 3.199 'But if you also want to hear about general character and tone of diction, there is the full and yet rounded style of oratory, the plain style that is not devoid of vigour and force, and the style which combines elements of either class and whose merit is to steer a middle course. These three styles should exhibit a certain charm of colouring, not as a surface varnish but as permeating their arterial system' trans. Rackham.

55 Cic. *de Orat.* 3.210-212 'Although one point at least is obvious, that no single kind of oratory suits every cause or audience or speaker or occasion. For important criminal cases need one style of language and civil actions and unimportant cases another; and different styles are required by deliberative speeches, panegyrics, lawsuits and lectures, and for consolation, protest, discussion and historical narrative, respectively. The audience also is important—whether it is the lords or the commons or the bench; a large audience or a small one or a single person, and their personal character; and consideration must be given to the age, station and office of the speakers themselves, and to the occasion, in peace time or during a war, urgent or allowing plenty of time. And so at this point it does not in fact seem possible to lay down any rules except that we should choose a more copious or more restrained style of rhetoric, or likewise the intermediate style that has been specified, to suit the business before us. It will be open to us to use almost the same ornaments of style on some occasions in a more energetic and on others in a more quiet manner; and in every case while the ability to do what is appropriate is a matter of trained skill and of natural talent, the knowledge of what is appropriate to a particular occasion is a matter of practical sagacity' trans. Rackham.

56 Cic. *de Orat.* 3.210-212

57 *Orat.* 204-211.

58 Cf. Quint. *Inst.* 9.4.128 *periodos apta prooemiis maiorum causarum.*

59 Cf. Demetr. *Eloc.* 15 δοκιμάζω γὰρ δὴ ἔγωγε μήτε περιόδοις ὄλον τὸν λόγον συνείρεσθαι ... μήτε διαλελύσθαι ὄλον.

With regard to genres other than oratory, we are left to speculate about what Cicero considered proper style. One assumption that seems safe enough is that Romans—and especially Romans before Cicero's time—⁶⁰did not speak in elaborate periods in their day-to-day discourses, and that any style that purports to represent colloquial speech, such as in dialogues, will accordingly be composed εἰρομένως ('in the free-running style'). Thus the back-and-forth of the Platonic dialogues almost necessarily takes free-running form. As with oratory, we can also make inferences from the aims of Cicero's letters, and from their addressees as well. His letter to Metellus is a carefully construed *apologia* in response to serious accusations of mockery (*ludibrio*), betrayal (*desertum, circumuentum*), and inconstancy (*animo mobili*), and the point-by-point refutation, complete with quotations of Metellus' charges, is unadorned but lucid.⁶¹ In contrast, writing his letter to Atticus, Cicero is clearly more relaxed and his language less formal, which is indicated, among other things, by his use of Greek words and phrases.⁶² Also, the subject matter of this letter is less serious by far, which brings us to believe that Cicero was probably not as concerned with writing beautifully, whereas his response to Metellus demanded sufficient clarity and persuasion. Though it is true that diligence in writing does not necessarily entail one particular style, writing in the periodic style does require due diligence, so if our criteria should deem one letter more periodic than the other, we would expect Cicero's meticulous defense against Metellus to score higher.

Taking these admittedly tenuous premises into consideration, the data come as no surprise. Of the five texts analyzed, the defense of Archias, which has a reputation for its periodicity, has proved to be most periodic; or rather, our criteria seem to give some authority to the notion that the *Pro Archia* is periodic *par excellence*. Not far behind is the *Third Catilinarian*, while the letters occupy the third and fourth spots, the one addressed to Metellus narrowly edging out the other, as we predicted. Far behind the other texts—and this is equally unsurprising—is the *Dream of Scipio*, the only text of the five with a significant majority (58.11%) of free-running sentences. Whatever data might be called surprising are only apparent when considering the orations as divided into exordium, peroration, and everything in between, and that only in the *Catilinarian*. The opening and closing of the *Pro Archia* do exhibit a higher proportion of periodic sentences than any other text or section, which Cicero's own testimony caused us to suspect, but their samples are so small (just seven and three sentences respectively), that even had the criteria yielded low scores for those sections, no significant inferences could justifiably be made. The *Third Catilinarian*, on the other hand, with its unusually long-winded and free-running peroration (22.50% by word count), also boasts of a highly periodic *narratio*. This is notable on account of its nonconformity with several statements of Cicero and Quintilian, who insist that the middle parts of an oration should be composed *membratim* ('limb by limb', i.e. 'strung-together' or 'free-running'):

Quint. *Inst.* 9.4.127

membratim plerumque narrabimus, aut ipsas periodos maioribus interuallis et uelut laxioribus nodis resoluemus, exceptis quae non docendi gratia sed orandi narrantur.

For the most part we shall compose the *narratio* limb by limb, or we will disperse what periods we do write with great distances in between and, as it were, in rather loose bunches, except for those details that are related not for the sake of informing, but for embellishing.

Cic. *Orat.* 225

incisim autem et membratim tractata oratio in veris causis plurimum ualet, maxumeque iis locis, cum aut arguas aut refellas.

Orations composed comma by comma and colon by colon are very potent in actual lawsuits, especially when disclosing the accusations or in passages of refutation.

60 Johnson (1971) 24 'The Latin sentence was far more capable of these qualities [sc. 'suppleness, the immense sophistication, and the seemingly limitless potentiality of the Greek sentence'] after Cicero had finished with it than it had been before and, probably, than it could have been had his peculiar gifts, temperament, and ambition never taken up this task.'

61 *Fam.* 5.2.

62 *Att.* 1.19.

Of the 86 sentences that comprise the *Third Catilinarian's* middle, 41 (47.67%) are classified according to our criteria as full periods, whereas only 38 *Pro Archia's* 100 command full periodicity. Although this may seem like an anomaly, it is actually quite explicable. Upon close examination of the passages in question, we see that it is the simplicity of the narrative section that allows for such a high proportion of periods. This sounds like a contradiction in terms, for simple sentences, according to our criteria, by definition do not and cannot possess periodicity. But by 'simplicity', we do not mean 'simple' in the technical sense of having no subordination; rather, the simplicity of the narrative section of the *Third Catilinian* manifests itself in sentences that have little subordination. Understood in this way, we can more easily imagine why our criteria score the *narratio* so highly, for although what we might call an 'elaborate' period is usually one with multiple subordinate clauses, sentences with only one or two such clauses are *ceteris paribus* more likely to be periodic. This is so for several reasons: first, speaking merely on the basis of probability, the more subordinate clauses a given sentence contains, the less likely that every such clause will relate to its head periodically,⁶³ which is what our criteria require of full periods. Also, the suspension of sense and syntax across many subordinate clauses and over various depths of subordination wears tiringly on the intellect of the speaker, of whom much verbal and grammatical foresight is demanded.⁶⁴ In other words, writing in periods is not easy, and composing them *ex tempore* all the less so. Not to mention, highly complex periods, even when gracefully composed, exercise the intellects of the the audience more strenuously than the less abstruse run-ons, unpleasant though they may be. And so, since the chief purpose of the *narratio* is to relate facts, rhetorical embellishment, including overtly circular periods, ought to be withheld so that the audience can more easily comprehend the language, and so that they can do this without feeling like they are being 'got at'.⁶⁵ But are these not grounds for suspecting a high proportion of simple or free-running sentences in narrative passages? Indeed, but they are also reasons to expect more complex sentences of less complexity.⁶⁶ For according to our criteria, a full period need only contain one subordinate clause in periodic relation to its head. It so happens that the middle parts of the *Third Catilinarian* abound with such short periodic sentences:

Catil. 3.14 deinde L. Flaccus et C. Pomptinus praetores, quod eorum opera forti fidelique usus essem, merito ac iure laudantur.

Then, the praetors L. Flaccus and C. Pomptinus, because I had made use of their firm and faithful service, were given due praise.

Catil. 3.14 senatum frequentem celeriter, ut uidistis, coegi.

I quickly convened a full session of the senate, as you saw.

Catil. 3.11 si quid de his rebus dicere uellet, feci potestatem.

If he desired to say anything on this matter, I gave him an opportunity.

63 This is akin to saying the more persons there are in a randomly selected group, the less likely that every person in the group is a male. The analogy is not perfect, but it makes the point well enough.

64 Cf. Cic. *Orat.* 200 *id autem bona disciplina exercitatis ... non erit difficillimum*,

65 Cf. Cic. *Orat.* 209 *genus autem hoc orationis neque totum adsumendum est ad causas forensis neque omnino repudiandum; si enim semper utare, cum satietatem affert tum quale sit etiam ab imperitis agnositur; detrahit praeterea actionis dolorem, aufert humanum sensum auditoris, tollit funditus ueritatem et fidem*.

66 That is, they are reasons for expecting a higher ratio of less complex complex sentences (having just one or two subordinate clauses) than otherwise might have occurred.

Catil. 3.11 nam, cum id posset infitiri, repente praeter opinionem omnium confessus est.

For although he could have denied this, suddenly and contrary to everyone's expectation, he confessed.

Equally numerous are full periods that have only two or three short subordinate clauses:⁶⁷

Catil. 3.7 etenim, Quirites, si ea [quae erant ad me delata] reperta non essent, tamen ego non arbitrabar in tantis rei publicae periculis esse mihi nimiam diligentiam pertimescendam.

For indeed, Romulans, if those details [that had been delivered to me] had not been disclosed, I still did not think that I could be too careful in the face of such great dangers to the Republic.

Catil. 3.6 litterae quaecumque erant in eo comitatu integris signis praetoribus traduntur; ipsi comprehensi ad me, cum iam dilucesceret, deducuntur.

The correspondences, whatsoever there were in that company, **with their seals intact** were handed to the praetors; they themselves, having been arrested, **when daylight was already beginning to appear**, were delivered to me.

Catil. 3.12 Gabinus deinde introductus, cum primo impudenter respondere coepisset, ad extremum nihil ex eis quae Galli insimulabant negavit.

Gabinus then having been brought in, **although he had at first begun to answer insolently**, denied nothing—even to a tee—of those things that the Gauls were alleging.

Catil. 3.13 indiciis expositis atque editis, Quirites, senatum consului de summa re publica **quid fieri placeret**.

Once the evidence was exposed and divulged, Romulans, I consulted the senate on **what would statify** the welfare of the state.

We find that the presence of a great number of these kinds of sentences sufficiently explains the relatively high incidence of full periods within the *Third Catilinarian* on the whole, for absent only a handful of these periods of minimal complexity, the oration would have scored significantly lower.⁶⁸

Considering that our criteria have yielded results that accord with the statements of Cicero and our commonsense intuition—and that the only data point notable for its deviation from what we expected can be explained away by reference to a special case—we have good reason to believe that our definition enables us to more or less accurately quantify periodic style in Latin. Our criteria cannot be said to invest objective meaning into the results that their application produces, for the value of these data is only apparent when they are considered relatively to each other. We can confidently say, however, that these results bear witness to the strong foundations of our criteria, and that our definition therefore merits further experimentation. But it is not perfect, for just as our sole puzzling datum makes more sense in light of the specific sentences that produced it, so too do these results on the whole conceal specific instances where sentences were not so easily classified. In particular, while categorizing the sentences, I encountered four kinds

67 The second sentence here (*litterae ... deducuntur*) is an example of a compound full period, as both of its sentence-parts (*litterae ... traduntur* and *ipsi ... deducuntur*) pass the criteria individually.

68 A transferal of just six sentences from the ('Other') column of full periods into that of the free-running sentences would yield a score (.49709) roughly equal to that of the letter to Metellus.

of constructions to which our criteria either were not easily applied, or that gave me reason to reevaluate, broaden, or more carefully specify some of the finer points already discussed. In addition to these, I have discovered that there are at least two deficiencies in our definition as it currently stands. Following is a brief discussion of each of these.

Anacoluthon

Aristotle tells us that periodic style is more pleasant because one can foresee the end, while free-running sentences cause the audience to stumble when they expect one thing only to hear another.⁶⁹ This is because the periodic sentence ends as soon as it possibly can—as soon as sense and syntax are simultaneously resolved—whereas the free-running sentence carries forward farther than grammatically necessary, after which point the end is often impossible to anticipate. Another kind of sentence whose ending is unforeseeable is the sentence containing anacoluthon, or a 'deviation in the structure of a sentence by which a construction started at the beginning is not followed out consistently'⁷⁰—as it were, a grammatical *non sequitur*:

Ter. *Hec.* 286-287

nos omnes, quibus est alicunde aliquis obiectus labos,
omne quod est interea tempu' priu' quam id rescitumst lucrost.

In these verses of Terence, the nominative *nos omnes* ('all of us') anticipates a verb in the first person plural, but the subject is suddenly changed without warning to *omne ... tempus* ('all time', 'every moment'), which takes a verb, accordingly, in the third person singular. Given the second verse, in which the change of subject occurs, *nos omnes* ('all of us') should have read *nobis omnibus* ('for all of us'). As it is, it reads:

All of us in whose path some obstacle is from somewhere thrown,
all time in between, before it is ascertained, is as profit.

But with proper grammar, it ought to say

For all of us in whose path some obstacle is from somewhere thrown ...

Here is an example of anacoluthon from Greek prose:

X. *An.* 2.5.41 Πρόξενος δὲ καὶ Μένων, ἐπιπέτερ εἰσὶν ὑμέτεροι μὲν εὐεργέται, ἡμέτεροι δὲ στρατηγοί,
πέμψατε αὐτοὺς δεῦρο.

Proxenus and Menon, inasmuch as they are your benefactors and our commanders, send them here.

Πρόξενος and Μένων, as they are in the nominative, ought to be the subject of some predicate, but they are in fact the object of πέμψατε ('send') and should therefore stand in the accusative, like αὐτούς ('them').

Both of these examples are complex sentences in which sense and syntax are perceptibly held in suspension until the final word or element. In the verses of Terence, the terminal position of the predicate (*est* in aphaeresis) guarantees resolution of grammar only at the end of the construction. Likewise in the example from Xenophon, the predicate πέμψατε ... δεῦρο ('send ... here'), which we conceive of as one semantic element, takes the final spot in its sentence. It would seem that we therefore have two full periods on our hands, but despite their periodic qualities, for neither of these sentences is it feasible to anticipate the proper end. Terence's verses assure us either of a verb in the first person plural that takes *omne tempus* ('all time') as its object, or a verb in the third person singular, with *omne*

⁶⁹ *Rhet.* 1409b.

⁷⁰ Smyth par. 3004.

tempus as the subject and *nos omnes* ('all of us') as the object. The resolution of the sentence with an intransitive verb, regardless of its person and number, is grammatically unpredictable. Similarly for Xenophon, there is no grammatical evidence suggesting a predicate in the second person.

We required that a periodic sentence must suspend grammar and meaning until the very end precisely because such sentences allow the audience to foresee that end, but in light of anacoluthon, this is not always true; some sentences, while suspending sense and syntax as we require, do not allow us to correctly anticipate their conclusion. Indeed, sentences containing anacoluthon prove to be contrary to the very meaning implicit in *περίοδος* and its various Latin translations: there is no 'way round' in such sentences, there is no grammatical integration at the end of words placed at the beginning; in short, there is no predictability. Instead, there is a stumbling of the intellect as it tries to fashion together pieces of the same puzzle that have not been cut so as to fit but belong together nonetheless. We must therefore refrain from calling such sentences periods.

Rhythm

The most glaring deficiency of our definition of the period is its lack of consideration for rhythm. All of the ancient critics more or less agree on the importance of prose rhythm in periodic sentences. Aristotle tells us that the periodic sentence is the easiest to remember of all ὅτι ἀριθμὸν ἔχει, 'because it is numbered', i.e. because it has a rhythm; and he commends the periodic style for this quality no less than he does for its circularity.⁷¹ For him then, rhythm was at least as essential to the period as the suspension of sense and syntax.

Cicero was equally assertive in declaring the intimate relationship between periodicity and prose rhythm:

Orat. 199 solet autem quaeri totone in ambitu uerborum numeri tenendi sit an in primis partibus atque in extremis.

It is often asked whether rhythm should be kept in throughout the entire period of words or in the beginning parts and the end.

We may infer from these words that although the precise nature of the relationship between rhythm and periodicity was a topic worthy of debate, there was nevertheless a universal opinion that the two at least belong together somehow. The real contention was over which clausulae (see p. 11 n. 22) were appropriate and where. For instance, Aristotle commends the fourth paeon, a rhythm made up of three short syllables followed by a long,⁷² but Cicero disagrees, preferring the cretic (— ~ —) instead since, according to him, the length of the terminal syllable is inconsequential.⁷³

The only rule of prose rhythm that seems to have been unanimously accepted was that periods should not be concluded with the same two or three feet common in verse endings, nor should the same clausulae be repeated consecutively.⁷⁴ Otherwise, different critics preferred different clausulae, and given this lack of unanimity, it is difficult to factor rhythm into a definition that we have formed to be susceptible of objective empirical application. So while we cannot say that one kind of clausula makes a sentence more periodic than any other, we ought to at least acknowledge

71 *Rhet.* 1409b ἡδεῖα δ' ἡ τοιαύτη καὶ εὐμαθής, ἡδεῖα μὲν διὰ τὸ ἐναντίως ἔχειν τῷ ἀπεράντῳ, καὶ ὅτι αἰεὶ τι οἶεται ἔχειν ὁ ἀκροατῆς καὶ πεπεράνθαι τι αὐτῷ, τὸ δὲ μηδὲν προνοεῖν μηδὲ ἀνύειν ἀηδές, εὐμαθῆς δὲ ὅτι εὐμνημόνευτος, τοῦτο δὲ ὅτι ἀριθμὸν ἔχει ἢ ἐν περιόδοις λέξις, ὃ πάντων εὐμνημονευτότατον. Notice the parallelism between ἡδεῖα μὲν διὰ τὸ ἐναντίως ἔχειν τῷ ἀπεράντῳ ('on the one hand it is pleasant because it is the opposite of the indefinite') and εὐμαθῆς δὲ ὅτι εὐμνημόνευτος, τοῦτο δὲ ὅτι ἀριθμὸν ἔχει ('on the other hand, it is intelligible because it is easy to commit to memory, and this because it is numbered'), by which Aristotle seems to assert that the two qualities—suspense of sense and syntax, and rhythm—are equally important.

72 *Arist. Rhet.* 1409a.

73 *Cic. Orat.* 218 *qua re etiam paeana qui dixit aptiorem, in quo esset longa postrema, uidit parum, quoniam nihil ad rem est postrema quam longa sit.*

74 Cf. *Arist. Rhet.* 1408b τῶν δὲ ῥυθμῶν ὁ μὲν ἠρῶος σεμνῆς ἀλλ' οὐ λεκτικῆς ἀρμονίας δεόμενος; *Cic. Orat.* 213 *nihil est tam uitiosum quam si semper est idem.*

the importance of rhythm in periodic sentences. Unless we are solely concerned with the suspension of grammar and meaning, we should categorize our sentences according to their clausulae in addition to their degree of circularity. We do not have to concern ourselves with the implications of the presence of one clausula over another, but in case we should desire to draw conclusions from a text's periodicity based on a more holistic notion of the period, we would be better off with data that keep track of rhythm as well.

Simple Sentences

"The monocolon remains an Aristotelian mystery. For Cicero there was no such thing."⁷⁵ We have already taken note of the disagreement among several ancient critics over the minimum and maximum number of cola necessary to form a rhetorical period. By asserting that the period can be either one- or two-membered, but no more, Aristotle has made for himself an impressive list of adversaries with more than a few prominent names. The greatest of these is Cicero, and our criteria, which require subordination for, and consequently exclude all simple sentences from, periodicity, accord with his views on this question. However, an examination of our texts has revealed that the number of simple sentences that could be considered periodic (in every sense but one) is not negligible. The most conspicuous example is the opening of the *Third Catilinarian*:

rem publicam, Quirites, uitamque omnium uestrum, bona, fortunas, coniuges liberosque uestros atque hoc domicilium clarissimi imperi, fortunatissimam pulcherrimamque urbem, hodierno die deorum immortalium summo erga uos amore, laboribus, consiliis, periculis meis e flamma atque ferro ac paene ex faucibus fati ereptam et uobis conseruatam ac restitutam uidetis.

The Republic, Romulans, and the life of all of you(rs), your possessions, wealth, wives and children and this dwelling of most illustrious power, this most blessed and noble of cities, on this very day by the love of the immortal gods on your behalf, through my toil, counsel, and peril, rescued from flame and sword and nearly from the jaws of destiny, preserved and restored to you, you see.

This sentence meets every criterion for periodicity except complexity. The placement of the verb in the terminal position guarantees semantic and syntactic suspension throughout, and the compound object at the beginning of the sentence combined with the diminutio of predicative participles *ereptam*, *conseruatam*, and *restitutam* ('rescued, preserved, and restored') at the end give it the fundamental circularity implicit in the very word περίοδος. It is simple, but only in the technical sense; certainly no one could argue that because it does not contain any subordination, it is therefore less rounded than many shorter complex sentences that have only one or two subordinate clauses.

There are a host of other simple sentences exhibiting periodic features that have been speciously classified as free-running on account of their simplicity. Here are three more examples:

Catil. 3.11 leguntur eadem ratione ad senatum Allobrogum populumque litterae.

Read in the same manner to the senate of the Allobroges and the people were the letters.

Att. 1.19.9 est enim illud senatus consultum summa peditum uoluntate, nullius nostrum auctoritate factum.

For that decree of senate was, by the assent of the lower senators and with none of my own authority, passed.

75 Wilkinson (1966) 170.

Rep. 6.20 *tu* enim quam celebritatem sermonis hominum aut quam expetendam consequi gloriam *potes*?

For *to you* what fame of the talk of men or what desirable glory *is possible* to pursue?

Each of these begins with a word that is not grammatically integrated into the rest of the sentence until the final word is spoken. Is this what Aristotle had in mind when he said of the period that it 'has *in itself* (καθ' αὐτήν) a beginning and an end'⁷⁶

Many scholars have tried to reconcile Aristotle's μονόκωλον (*monocolon*) with the prevailing conception of the rhetorical period,⁷⁷ but it seems that as long as we believe that the number of cola is essential to the definition of periodicity, as the ancients did, we will always be second-guessing our intuition about the periodicity or non-periodicity of simple sentences. The question we must ask then, is whether the more essential feature of the periodic sentence is semantic and syntactical suspension or complexity. To the ancients, for whom rhythm was of primary concern—and for whom the colon was the prosaic analogue of the verse—the number of cola, with its implications for prose rhythm, was understandably crucial. But the significance of rhythm has largely disappeared from the modern notion of periodicity, for semantic and syntactic suspension occurs independently of a sentence's clausula. Therefore we propose the following:

- i. Even divorced from all considerations of complexity, simple sentences in which sense and syntax are perceptibly held in suspension until the final word or element have at least some of the essential features of periodicity, if not most. Therefore, classifying them as semi-periods or near-periods would account for their rotundity without giving them too much weight.
- ii. A better solution to (i) might be to give simple periods their own class and assign them weights based on their length (by word count). This would allow longer examples, such as the opening to the *Third Catilinarian*, to factor into the score more heavily than less impressive and shorter simple periods.
- iii. Given the subjective nature of identifying where one sentence ends and another begins, we might be better off ignoring sentences altogether and focusing instead on the colon as the building block of style.

Admittedly, the adoption of proposals (i) or (ii) would not affect the data considerably, for not only are there relatively few simple sentences within these five works of Cicero, but the proportion of these that can be said to possess semantic and syntactic suspension is slight, though important. Nonetheless, we cannot predict how consequential these additional criteria would prove if analysis were to be carried out over a wider range of sentences from a greater variety of Latin authors, but we would at least be able to say that the simple period is appropriately given some weight in the determination of a text's degree of periodicity. A fuller discussion of (iii) follows under the section on the **colon**.

Indirect Discourse

In most instances of indirect discourse, the quotation in full stands as the direct object of the *uerbum declarandi*. For this reason we did not classify such object sentences as subordinate clauses. As with our concerns about simple sentences, this rule has entailed the classification of several rounded sentences containing indirect discourse as simple and therefore free-running sentences. Most notably, this has occurred with regard to sentences in the letter to Metellus:

scribis ad me *te existimasse pro mutuo inter nos animo et pro reconciliata gratia numquam te a me ludibrio laesum iri.* (5.2.1)

⁷⁶ *Rhet.* 1409a, trans. Roberts.

⁷⁷ Cf. Gotoff (1973) 218 n. 4 'Attempts to reconcile the simple period with the statement that the period consists of two cola have not, unsurprisingly, been successful.'

You write to me that you did not imagine on account of our shared interests and restored friendship that I would ever make you the butt-end of my jokes.

Nor do the other texts lack a generous collection of examples:

Arch. 12 ego uero fateor me his studiis esse deditum.

Certainly I admit that I have been dedicated to these pursuits.

Arch. 8 Heracleaene esse tum ascriptum negabis?

That he was at that time enrolled at Heraclea do you deny?

Catil. 3.26 in animis ego uestris omnis triumphos meos, omnia ornamenta honoris, monumenta gloriae, laudis, insignia condi et conlocari uolo.

I want all of my parades, all my decorations and honors, the memorials of my fame and emblems of my merit to be stored up and stowed away in your hearts.

Suspension of sense and syntax is maintained throughout each of these, but according to our criteria, none qualifies as periodic because none is complex. And so it seems once again that we ought to modify our criteria to accommodate simple sentences, but actually, the question of indirect discourse is distinct from that of the $\mu\omicron\nu\acute{o}\kappa\omega\lambda\omicron\nu$ because many scholars would disagree with our classification of these sentences as simple, i.e. with our reluctance to classify accusative-infinitive constructions as subordinate clauses. The most logical remedy, therefore, is to adjust slightly our understanding of what constitutes a subordinate clause and include accusative-and-infinitive constructions as dependent sentences and not just predicate supplements. One sensible reason for doing this is that object sentences behave like subordinate clauses—even if they are not technically—both in their hypotactic relation to their head and, consequently, in their susceptibility of compounding complexity. In other words, like other subordinate clauses and unlike sentences in parataxis, object sentences may contain within themselves any number of additional object sentences and other subordinate clauses. This is the very essence of 'complex', whereas a string of sentences in parataxis cannot be said to become more complex on account of its breadth.

Participles

We have distinguished between participles having a verbal force and those having adjectival or adverbial force, grouping the former into the class of subordinate clauses, but not the latter. Our experiment has proved that this distinction is not always apparent or, more specifically, that certain participles seem to possess both senses equally. That is, some participles and participial phrases seem equally capable of being replaced, without a change of meaning, by a relative clause and by some other adverbial subordinate clause (e.g. *cum*-, *si*- etc.). In such instances, the participial phrases in question often have a concessive adjectival force:

Catil. 3.12 atque ibi uehementissime perturbatus Lentulus tamen et signum et manum suam cognouit.

In this sentence, the implication is that Lentulus, who is 'most deeply disturbed' (adjectival), despite being deeply disturbed (concessive), acknowledges his seal and hand-writing. So it seems that the phrase could have been written as a relative or a concessive clause:

atque ibi Lentulus, qui uehementissime perturbatus est, cognouit **tamen** et signum et manum suam.

And thereupon Lentulus, who was most deeply disturbed, acknowledged **nonetheless** both his seal and his hand-writing.

atque ibi Lentulus, etsi/cum uehementissime esset perturbatus **tamen** et signum et manum suam cognouit.

And thereupon Lentulus, although he had been most deeply disturbed, **nonetheless** acknowledged both his seal and his hand-writing.

The concession here is apparent explicitly in *tamen* ('nevertheless, yet'), but in other similar cases, it is implied in the context and order of words, by which the appropriate parallelisms and contrasts are highlighted:

Arch. 19 **saxa atque solitudines** uoci respondent, **bestiae** saepe **immanes** cantu flectuntur atque consistunt; **nos** instituti rebus optimis non poetarum uoce moueamur?

Stones and wastelands answer to voice, **savage beasts** are often tamed by and stand motionless at song; are **we**, having been instructed in the noblest affairs, to remain unmoved by the voice of the poets?

Here Cicero contrasts the stones, wastelands, and feral beasts of the wild—all of which, he claims, are aroused by song—with humans that are supposed to remain unmoved by the same forces of artistry despite their education in the liberal arts (*instituti rebus optimis*). In cases like this as well, the distinction between adjectival and concessive perhaps does not exist, so for example, the third colon of this sentence could be correctly translated in either of the following ways:

Are **we**, who have been instructed in the noblest affairs, to remain unmoved by the voice of the poets? (adjectival)

Are **we**, even though instructed in the noblest affairs, to remain unmoved by the voice of the poets? (concessive)

Since the distinction between subordinate clauses and non-subordinate sentence parts is essential to our criteria, in light of these examples, we must reexamine our understanding of participles in the context of periodicity. We propose the following:

- i. The most expedient solution would be an addendum to the criteria by which the nature of every such relative-concessive participial phrase as either subordinate or non-subordinate would be determined *a priori*. For example, we could say that even though relative-concessive participles are both adjectival and verbal (whereas most other participial phrases are more clearly one or the other), they are more verbal and hence qualify as subordinate clauses.
- ii. It is preferable that the determination of a participial phrase as either subordinate or non-subordinate should follow from general principles about the nature of subordination and not from arbitrarily determined exceptions to be applied on a case-by-case basis, such as was suggested in (i). Therefore, we could attempt to define 'subordinate clause' in a way that would eliminate the need to distinguish between the various types of participles.
- iii. More generally than (ii), we could alter our definition of periodicity to a degree that the classification of a clause as subordinate or non-subordinate would not factor as powerfully into the determination of a sentence's level of

periodicity. In the extreme, this would mean removing completely all consideration of simple versus complex from our understanding of periodicity, focusing merely on the suspension of sense and syntax and, perhaps, on rhythm.

The least appealing of these is (i), as it is not really a solution, but a temporary fix that will allow a slightly flawed method of analysis to continue without a reexamination of first principles and the necessary sentence-by-sentence re-collection of data that would otherwise follow. It is akin to duct tape, which will inadequately secure functionality until a better solution is found: if one has already collected his data, classifying all relative-concessive clauses as either subordinate or non-subordinate will allow him to more or less ignore the problem, interpret his data, and draw relevant conclusions even though those data will have been rendered slightly less objective by his arbitrary classification of the participles in question.

Preferable to (i) are solutions (ii) and (iii), though these entail a more fundamental and therefore a more consequential reevaluation of the nature the relationship between sentence complexity and periodicity. The classification of all participial phrases as non-subordinate sentence parts, one way of going about (ii), is a more general solution than (i) and one for whose adoption we could argue in the following way: Just as it is true for adjectives in general, it is clear that participles have an adjectival, adverbial, or a verbal force, or any combination of these. Thus every participial phrase could be expressed as a subordinate clause, relative or otherwise. For example:

Arch. 18 quotiens [hunc uidi] reuocatam eandem rem dicere commutatis uerbis atque sententiis!

How often [did I see him], having been called back for an encore, recite the same passage with different words and sentences!

could have been written

quotiens [hunc uidi] cum reuocatus erat eandem rem dicere commutatis uerbis atque sententiis!

How often [did I see him], when he had been called back for an encore, recite the same passage with different words and sentences!

just as

Fam. 5.2.10 nec in te, ut scribis, animo fui mobili, sed ita stabili ut in mea erga te uoluntate etiam desertus ab officiis tuis permanerem.

Nor, as you write, was I fickle towards you, but so firm that I might remain in your good will towards me even having been deprived of your obligations.

might have read

nec in te, ut scribis, animo fui mobili, sed ita stabili ut in mea erga te uoluntate etiam si desertus ab officiis tuis fuisset permanerem.

Nor, as you write, was I fickle towards you, but so firm that I might remain in your good will towards me even if I should have been deprived of your obligations.

Even participles operating as mere adjectives could be expressed in a subordinate clause without a change in meaning:

Rep. 6.17 in infimoque orbe luna radiis solis accensa conuertitur.

And in the lowest orbit the moon turns over, ablaze with the rays of the sun.

in infimoque orbe luna, quae radiis solis accensa est, conuertitur.

And in the lowest orbit the moon, which is ablaze with the rays of the sun, turns over.

It follows therefore that every time an author uses a participle instead of a subordinate clause to communicate the same idea, he is deliberately avoiding an explicit subordinate clause and thus choosing a simpler structure to one that is more complex. After all, every participle is technically, i.e. grammatically, just an adjective. Therefore no participial phrase should be considered a subordinate clause because the participle is the simpler way of expressing an idea that could have been expressed with a regular subordinate clause. Thus runs a reasonable argument for altering the way our criteria deal with participles. This solution (ii) would eliminate the need for using one's subjective judgment in distinguishing between adjectival and verbal participles, a distinction which, we have seen, is sometimes impossible to make. We may suppose also that its adoption would considerably affect our results, as the number of sentences that contain what we have deemed to be verbal participles—and hence subordinate clauses—is quite large. It is nonetheless a more consistent and permanent solution than (i). Solution (iii) merits a more detailed examination; it will be discussed below in the section on the **colon**.

Relative Sentences

Beginning students of Latin learn quite early that unlike English, sentences in Latin may begin with a relative pronoun whose antecedent occurs in an earlier sentence. Hence we distinguish between regular relative clauses and so-called 'relative-connective' or 'continuative-relative' sentences. The difference between the two is highly relevant to our understanding of periodicity, as the precise nature of a relative sentence has the potential to either make complex what would otherwise be a simple sentence, or compound what would otherwise have just one principal clause, both of which could affect the ultimate classification of some sentences. Important though it may be, however, it is in many cases a distinction with which we need not be concerned, as the editors of our texts have by modern conventions of punctuation already divided them according to their best judgment—and they usually know best. And especially in Cicero, himself a lover of the relative-connective, there tends to be a clear line between those relative pronouns that begin a new thought and those which stand adjectivally to describe or define their antecedent:

Rep. 6.16-17 iam ipsa terra ita mihi parua uisa est, ut me imperii nostri, quo quasi punctum eius attingimus, paeniteret. quam cum magis intuerer, 'quaeso,' inquit Africanus, 'quousque humi defixa tua mens erit?'

Now that continent seemed so small to me that I became displeased with our empire, which attained to a mere point, as it were. As I gazed upon this, Africanus said, 'Tell me, how long will your frame of mind be fixed on the ground?'

Catil. 3.11 atque ille primo quidem negauit; post autem aliquanto, toto iam indicio exposito atque edito, surrexit, quaesiuit a Gallis quid sibi esset cum eis, quam ob rem domum suam uenissent, itemque a Volturcio. qui cum illi breuiter constanterque respondissent per quem ad eum quotiensque uenissent, quaesissentque ab eo nihilne secum esset de fati Sibyllinis locutus, tum ille subito scelere demens quanta conscientiae uis esset ostendit.

And he indeed at first denied it; but some time thereafter, when all the evidence was already exposed and divulged, he stood up and asked *the Gauls* what business they had with him, why they had come to his residence, and [he asked] likewise from Volturcius. When *they* had briefly and resolutely answered him by way of whom and had come to him and how often, and had asked him whether he had not said anything to them about the sibylline prophecy, then suddenly, reckless in his wickedness, he showed how debilitating his sense of guilt was.

One of Cicero's favorite ways of beginning a sentence is with a relative pronoun that belongs to a subordinate clause whose introductory conjunction (e.g. *cum* ('when'), *si* ('if')) is withheld in hyperbaton until, in some cases, the penultimate spot in the clause. Such phrases are almost always an indication that a new sentence has begun. Similarly, the phrases *quam ob rem* and *qua re* ('wherefore') are used much more often by Cicero to begin a new sentence (at least in these texts) than the demonstrative *ergo* and *igitur* ('therefore') (*Fam.* 5.2.9; *Catil.* 3.22):

Fam. 5.2.9 addam illud etiam, quod iam ego curare non debui sed tamen fieri non moleste tuli atque etiam ut ita fieret pro mea parte adiui, ut senati consulto meus inimicus, quia tuus frater erat, subleuaretur. qua re non ego oppugnavi fratrem tuum, sed fratri tuo repugnavi ...

And let me add this as well, that even now I ought not attend to it, but I nevertheless have not let it bother me and to the best of my ability I have even helped it so come about that my adversary, because he is your brother, be assisted by the decree of the senate. *Therefore* I did not assault your brother, rather I opposed your brother.

Catil. 3.22 quid uero? ut homines Galli ex ciuitate male pacata, quae gens una restat quae bellum populo Romano facere posse et non nolle uideatur, spem imperi ac rerum maximarum ultro sibi a patriciis hominibus oblatam neglegerent uestramque salutem suis opibus anteponerent, id non diuinitus esse factum putatis, praesertim qui nos non pugnando sed tacendo superare potuerunt? quam ob rem, Quirites, quoniam ad omnia puluinaria supplicatio decreta est, celebratote illos dies cum coniugibus ac liberis uestris.

What then? That people of Gaul from a state poorly subdued, which tribe is the only one remaining that seems able and not unwilling to wage war against the Roman populus, should neglect the hope of empire and of the greatest wealth that had been offered to them voluntarily by well-off patricians, and that they should prefer your welfare to their own riches, do you not think that this has happened with divine intervention, especially seeing that it was in their power to conquer by just staying quiet and not by fighting? *Therefore*, Romulans, since a day of thanksgiving has been decreed to all the gods, celebrate those days with your wife and children

However, the difference between regular relative and continuative-relative sentences, even in Cicero, is sometimes painfully delicate, requiring intricate examination of every little nuance, and our data are less reliable for it. Consider, for example, this sentence from *Att.* 1.19:

de tuo autem **negotio** saepe ad me scribis; cui mederi nunc non possumus.

Does the relative clause *cui ... possumus* begin a new thought, or does it merely describe or define the *negotio* ('business') to which Cicero is referring. I sometimes find that the difference is more conspicuous in translation:

You are always writing to me about that **business** of yours, which I cannot help you with at the moment.

You are always writing to me about that **business** of yours; as it is, I am unable to help you with it.

Here the first translation is more faithful to a regular relative sentence, but the second translation renders *cui ... possumus* as if it were a continuative-relative phrase. In this case, I chose the latter option, since the main point of the sentence seems to be that Cicero is impotent (or unwilling) to help, whereas what a regular relative clause would express would be closer to an afterthought. In other words, the main point of the sentence is made in the *cui*-clause,⁷⁸ and although it is not impossible that the semantic crux of a sentence should be expressed in a subordinate clause, we are more inclined, *ceteris paribus*, to call a relative pronoun a relative-connective when it begins a new or more principal idea.

Arch. 21 Mithridaticum uero bellum magnum atque difficile et in multa uarietate terra marique uersatum totum ab hoc expressum est; qui libri non modo L. Lucullum, fortissimum et clarissimum uirum, uerum etiam populi Romani nomen inlustrant.

This sentence is made more difficult than the previous by the implicit nature of the antecedent to *qui* ('who', 'which') which is unexpressed. Again, translation helps to highlight the distinction we wish to make:

The whole of the great war against Mithradates has been chronicled by him, which books bring glory, not only to ...

The whole of the great war against Mithradates has been chronicled by him—these books bring glory, not only to ...

In this case, both options seem equally plausible considering that the ideas expressed in both parts of the sentence (principal clause and relative clause) are equally relevant to Cicero's purpose. That is, the fact that Archias has articulated the entire Mithradatic war is a testimony to his genius, while the fact that his work gives glory to Romans demonstrates his patriotism and, in a sense, his eligibility for citizenship. So unfortunately, the context of this sentence does not enable us to distinguish between regular and continuative-relative. As a last resort, deference to the editor, who preferred a semi-colon to a comma in this instance, suggests the classification of this sentence as compound, which only makes sense if we regard *qui ... inlustrant* ('which ... bring glory to') as a continuative-relative clause and distinct sentence-part.

Att. 1.19.4 populo autem Pompeioque (nam id quoque uolebam) satis faciebam emptione, qua constituta diligenter et sentinam urbis exhauriri et Italiae solitudinem frequentari posse arbitrabar.

The nature of the relative in this sentence is even more ambiguous. Does Cicero mean that he chose the particular *emptio* ('purchase', 'acquisition') that he thought, once brought to fruition (*constituta*), would 'drain out the dregs of the city'? Or is he just expressing his wish that it will do so? The imperfect tense of *arbitrabar* seems to indicate that his thinking was contemporaneous with the purchase, which would lead us to believe the former; but this is pretentious, for tenses in Latin epistolary writing become obscured as the letter-writer writes from the tense perspective of his recipient; so *arbitrabar* ('I thought', 'I believed') might stand for *arbitror* ('I think', 'I believe') Shackleton Bailey, whose edition of the text we use here, has separated *satis faciebam* ('I met', 'I satisfied') from *qua constituta* ('once this has been brought to fruition') with a comma, the usual mark that precedes a descriptive relative clause. But in his own translation, the two clauses are separate sentences:

⁷⁸ Cicero does not need to remind Atticus of what he wrote.

As for the populace and Pompey, I am meeting them (as I also want to do) by way of purchase. If that is properly organized I believe the dregs of the urban population can be cleared out and Italy re-peopled.

There is much to be said about the influence of the editors and their punctuation, for excepting a small handful of sentences, the division of the texts used for this study into sentences is theirs. Within the sentences, we have generally regarded their semi-colons (except in complex lists) as separating two or more sentence-parts that form a compound sentence. The majority of continuative-relative clauses they have already identified for us, namely, by placing a full stop in front of them, so we do not beg the question any more by deferring to their authority for punctuation standing within sentences. And yet it would be preferable if our criteria could avoid the question altogether—if we did not have to acknowledge this distinction between regular relative and relative-connective clauses that in reality is quite artificial, for 'neither the Greeks nor the Romans had a word for "sentence" but they had craving for form and that was, finally, more useful to them than a word for something that does not perhaps exist'.⁷⁹ And if they had no word for 'sentence', then we can imagine they did not lose sleep fretting over where one ended and another began. One then wonders to what degree the very modern notion of sentence influences our understanding of the ancient concept of periodicity, and to what degree the common meaning of our word 'period' distorts and hinders a proper understanding of the periodic.

Colon

Of the six problems discussed above, four of them originate from uncertainties surrounding the importance and nature of subordination in periodic sentences. The difference between regular relative and continuative-relative sentences is not always apparent and possibly not even real; participles, which can be thought to have either an adjectival/adverbial or a verbal force, sometimes seem to possess both equally; we are not sure whether to regard sentences in *oratio obliqua*⁸⁰ as subordinate to the clause containing their *uerbum declarandi*; and simple sentences in which sense and syntax are suspended until the end escape our notice because our criteria require some degree of complexity. Since each of these is rooted in the same question of subordination, it may be possible to resolve them all at once with one sweeping solution. Ultimately, it would have to be a solution whereby the difference between dependent and independent sentences is rendered irrelevant—not because it is, but because as we have seen, the distinction between the two kinds requires sometimes a rather subjective determination, and therefore an undesirable one.

Many inconvenient implications have flowed from our *a priori* acceptance of complexity as a periodic necessity. When we read that most of the ancient critics require a minimum of two cola for periodicity, we are compelled by our modern preoccupation with the idea of 'sentence' to associate a multiplicity of cola with complexity, but just because a sentence contains two cola does not mean that one is grammatically subordinate to the other. And even if they are both independent, it is still possible that the second is anticipated by a word or word group in the first:

Catil. 3.13 ac mihi quidem, Quirites, cum illa certissima uisa sunt argumenta atque indicia sceleris, tabellae, signa, manus, denique unius cuiusque confessio, tum multo certiora illa, color, oculi, uoltus, taciturnitas.

And for me at least, Romulans, not only did those proofs and evidence of the crime seem most reliable, the documents, seals, hand-writing, and the confession of each, but also much more reliable seemed their complex, eyes, expression, and silence

The two cola of which this sentence is composed are *ac ... confessio* and *tum ... taciturnitas*. They are both independent, and in fact, the first anticipates the second, as *cum* ('not only') implies *tum* ('but also'), just like

⁷⁹ Johnson (1971) 15.

⁸⁰ 'Indirect discourse.'

conjunctions of *non solum/modo ... sed/uerum etiam*. Such a combination of cola that are grammatically independent but of which the first verbally anticipates the second is especially common in Greek with *μὲν ... δὲ* ('on the one hand ... on the other'):

Pl. *Phd.* 87d ἡ **μὲν** ψυχὴ πολυχρόνιον ἔστι, τὸ **δὲ** σῶμα ἀσθενέστερον καὶ ὀλιγοχρονιώτερον.

On the one hand the soul lasts a long while, but the body **on the other hand** is weaker and more short-lived.

It is important to note that in these sentences, the fact that one colon anticipates another has nothing to do with the suspension of sense and syntax, for in the above Latin example, both cola are free-running, whereas at least the first colon of the Greek example suspends sense and syntax until the final word *ἔστι* ('is'). Hence anticipation and suspension, two of the three essential features of the periodic style, are independent. The third essential feature, rhythm, is likewise causally unrelated to the other two.

More importantly, none of the three essential features of the periodic style is related to the one issue standing between us and a more objective set of criteria: grammatical subordination. In fact, the colon, which is the most basic 'complete part of the complete period',⁸¹ is at once (1) the most basic fabric of prose rhythm; (2) the shortest sequence of words containing a complete sense, and therefore the shortest sequence in which the suspension of grammar and meaning is non-trivial; and finally, (3) the largest semantic unit that can be said to be verbally anticipated. Let us consider these in more detail.

By saying that the colon is the fabric of prose rhythm, we mean that it is the smallest unit that may be said to possess a clausula and therefore the largest unit to which one and only one clausula may belong. In other words, combinations of cola, e.g. sentences, may contain as many clausulae as cola, whereas there is a one-to-one correspondence between the colon and the clausula: a given clausula cannot simultaneously belong to two cola, and a given colon cannot contain more than one clausula. This idea accords with the ancient tradition whereby the colon was considered the prosaic analogue to the verse.

The colon is not absolutely the most basic division of the period, but it is the smallest 'complete part of the complete period':⁸²

Demetr. *Eloc.* 2 τὸ κῶλον ὅλην μὲν οὐ συμπεραισιῶ διάνοιαν, μέρος δὲ ὅλης ὅλον.

The colon does not mark off a complete thought, but it does mark off a complete part of a complete thought.

Here Demetrius means that although the colon may be syntactically dependent and only part of a complete thought (*διάνοια*), it is nonetheless a whole part containing a complete notion, just as fingers, as part of the arm, are still whole in themselves. Just so, we can say that a protasis by itself 'contains a certain semantic-syntactic completeness'⁸³ even though it becomes fully integrated only by its apodosis. As the smallest unit of the period having some form of completeness, the colon may be categorized into those that suspend sense and syntax until the final word or element and those that do not. In other words, it would make no sense to speak of words or commata—both of which are more fundamental than the colon—that suspend sense and syntax, since those units are too short to contain grammatical, i.e. syntactical, completeness within themselves. For sake of example, here are two cola of which the first does not suspend sense and syntax whereas the second does:

81 Lausberg (1998) par. 930.

82 Lausberg (1998) par. 930.

83 Lausberg (1998) par. 930.

over an entire sentence and not within individual cola, let us take one more look at what we mean when we say that a colon does or does not suspend sense and syntax throughout:

Arch. 20 Themistoclem illum, summum Athenis uirum, dixisse aiunt,
cum ex eo quaereretur quod acroama aut cuius uocem libentissime audiret:
'eius a quo sua uirtus optime praedicaretur.'

They say that the Athenian Themistocles, that greatest of men, said,
when he was asked which act or whose voice he was most pleased to hear:
'his by whom his own character was most excellently proclaimed.'

This sentence contains three cola, *Themistoclem ... aiunt*, *cum ... audiret*, and *eius ... praedicaretur*. The first opens with an object in the accusative that is not grammatically integrated until the speaker reaches the predicate of which it is the object, namely, *aiunt* ('they say'). The second colon is a *cum*-clause ('when') and therefore cannot be syntactically or semantically complete without a predicate, probably in the subjunctive—*audiret* ('he heard'). And finally, the last colon beginning with *eius* ('his') anticipates *quo* ('by whom'), a relative clause that also requires a predicate, *praedicaretur* ('was proclaimed'), which comes as the last word in the clause. Since sense and syntax in each of these three cola are incomplete until their respective final words, we say that they suspend sense and syntax until the end. Compare this with *Arch. 2*:

quod alia quaedam in hoc facultas sit ingeni neque haec dicendi ratio aut disciplina

that there should be some other means of inspiration in this and not this method or teaching of speaking.

In this colon, sense and syntax are resolved at *ingeni* ('inspiration'), but Cicero carries the colon forward by two more commata, *neque ... ratio* and *aut disciplina*. Hence we would say that this colon does not suspend sense and syntax until the final word or element.

So much for rhythm and suspension. Let us now deal with the question of anticipation. We have already looked at some of the prominent ways whereby subordinate sentences may 'relate periodically' to their head. These were through the use of *signal words*, *bracketing*, and *hyperbaton*. Also, we noted that any subordinate clause that is situated entirely before its head clause—and most that are placed partially before—relates periodically to it because subordinate clauses cannot exist by themselves. But now our focus is on the individual colon and not the subordinate clause, and we can therefore do away the notion of 'periodic relation' and speak instead about the means whereby one colon can be said to be anticipated by another. The difference between a colon that is anticipated and a clause that we would have said is in periodic relation to its head is that only subordinate clauses could be in periodic relation, whereas any kind of colon, including those that are grammatically independent, has the potential to be verbally anticipated by a word or words that come before. For example:

Fam. 5.2.1 si tu exercitusque ualetis,
bene est.

If you and your army are well,
I am pleased.

We would have said that the subordinate clause *si ... ualetis* ('if ... you are well') in this sentence relates periodically to its head because it is situated entirely before it. But we cannot say, however, that the colon *si ... ualetis* is anticipated by anything that comes before. Rather, it is the second colon *bene est* ('I am pleased') that is anticipated, because every protasis expects and anticipates a protasis.

Arch. 20 neque enim quisquam est tam auersus a Musis
 qui non mandari uersibus aeternum suorum laborum praeconium facile patiatur.

For there is no one so averse to the Muses
who would not willingly allow an imperishable celebration of his deeds to be committed to verse.

In this sentence, composed of one independent and one dependent clause, each of which being also a colon, the subordinate clause comes second, unlike in the above example. And yet we would have said that the second clause (colon) relates periodically to its head because it is anticipated by it, i.e. because *tam* ('so') is usually qualified by a consecutive clause. So whereas in this example, we would have said according to the original criteria that the subordinate clause relates periodically to its head because it is anticipated by it, in the former example, the clause that is anticipated (*bene est*) does not relate periodically to any head because it has no grammatical head. Hence the difference between periodic relation and anticipation: in such sentences where independent clause comes before dependent clause, we might have said that the dependent clause relates periodically to its head because it is anticipated by a word in it, but under the original criteria, only subordinate clauses could be said to relate periodically to a grammatical head. Now that our focus is on the question of anticipation, it matters not which colon is dependent on which, but which colon is anticipated by one that precedes. And so according to our revised criteria, having divided the texts into cola, we could then categorize them as either anticipated or unanticipated. A colon may be anticipated in one of two ways: either by a *signal word* in a previous colon that foreshadows it, or by virtue of its nature as an apodosis whose protasis comes before and thus anticipates it.

In summary, here are the rules of our revised criteria for quantifying periodicity:

- i. *Periodic* is the name given to the style of writing that is defined by a combination of three essential features: rhythm, suspension, and anticipation.
- ii. The *colon* is the most basic unit of periodic style that is capable of possessing or not possessing these three features.⁸⁵
- iii. *Ergo* every colon can be classified according to which of these three features it possesses.
 - α) The colon ends in a series of two or three rhythmical feet called *clausulae*, and every colon can therefore be classified according to which clausula it possesses. The degree of specificity desired, i.e. the number of metrical feet deemed significant, as well as the types of clausulae thought to possess rhythmical value, may be determined at one's own discretion.
 - β) Every colon may be classified according to whether or not it is grammatically and semantically resolved only at its end, i.e. at its final word or element.
 - γ) Every colon may be classified according to whether or not it is verbally anticipated by a word or words preceding it. This can happen primarily in two ways: its presence is suggested either by a *signal word* belong to a preceding colon, or by virtue of its coming after the protasis of which it is the apodosis.

The data gathered from an analysis of a Latin text based on these criteria will not, of course, interpret themselves, but they will at least provide preliminary measurements that can be compared with those of other texts. And what is more important is that the measurements in question will describe in some degree all three of the features essential to the

⁸⁵ The revised criteria assume an established and agreed upon objective definition of the colon, an assumption that seems to beg the question in light of disagreement over that of the period. However, the colon is a much less complex notion than the period, and difference of opinion over its exact nature is therefore not as extensive. For an overview of the three most common definitions of the colon, see Lausberg (1998) par. 931.

period style, unlike our first set of criteria, according to which rhythm was ignored and ambiguities over the question of subordination made it difficult to categorize sentences in the way we required. And so it seems that after a first-time analysis of several texts according to our original set of criteria, the objectivity of those criteria may be improved upon by taking the colon as our basic unit and qualifying it independently based on its rhythm, grammatical structure, and predictability.

Review and Closing Thoughts

The definition of the rhetorical period has since Classical times been a subject of great dispute, and so it is no wonder that despite the modern preference for 'empirical' and 'scientific' analysis—even of things artistic—no one has ever attempted to quantify periodicity. As we ventured to accomplish this very task, we began by looking at some of the major literary figures of antiquity and their own views on the periodic style. We then shifted our focus to the broader and more encompassing modern conception, which does away with limits on length and the number of cola required for a periodic sentence. In one modern formulation we found the basis of what became a set of criteria by which we attempted to empirically quantify the periodicity of five popular texts of Cicero representing at least three different genres. As we categorized the sentences of the texts in question according to these criteria, the flaws in our methodology brought themselves to our attention, and we finished with a detailed look at some of these defects and a few proposals for setting them right.

On the whole, our original set of criteria seems to have held up remarkably. Regardless of genre, they proved applicable for most kinds of constructions and overall, the resulting data accorded with our expectations in such a way that we had no grounds for doubting that they describe, more or less, what we created them to describe. For the problems that we did encounter, we proposed suggestions individually, though once we realized that most of the ambiguities stemmed from the dependence of our criteria on the notions of sentence and subordination, we attempted to address them collectively by severing from the criteria these rather modern ideas. We seem to have accomplished this by shifting our focus from the sentence to the colon and dealing independently with anticipation and suspension instead of trying to determine which subordinate clauses 'relate periodically' to their head—another rather novel idea.

The data we gathered on the sentences of these five texts of Cicero were categorized into four degrees of periodicity, namely, free-running (little), semi-period (some), near-period (much), and full period. Although we aimed for objectivity, the boundaries between the three lower categories were somewhat arbitrary, and the differences between sentences that fell into those categories were not always apparent. With the switch from sentence to colon, there is no longer a need for arbitrary degrees of periodicity since unlike the sentence, the colon as the most basic unit susceptible of rhythm, suspension, and anticipation cannot be said to contain any of those features relatively, i.e. in degrees; rather, the colon contains or does not contain them absolutely. Once data have been collected according to these revised criteria, the degree of periodicity may be determined by the ratio of the those cola that contain one or more of these features to those that do not. And so not only does treating of the colon allow us to ignore considerations of sentence and subordination, but moreover, it enables us to do away with arbitrary and subjective distinctions of degree and therefore results in a more objective set of data.

As we set out to scientifically analyze periodic style, we were doubtful of its practicability. As an art, we had no reason to believe that an aspect of rhetoric could be defined empirically without it losing a great deal of what makes it an art in the first place. And even if we were to succeed, there was (and still is) no telling to what extent further experimentation might reveal further deficiencies in our criteria. We tried out the criteria on a wide range of genres and hence a wide range of styles, lest some aspect of Latin syntax or grammar be overlooked that might undermine our attempt at objectivity. By testing the criteria even on just these five texts, a whole host of problems was disclosed. But far from having any major implications, the problems with our criteria as originally defined did not affect the overall results in any significant way, and now that we have accounted for most of them by adjusting our focus from the sentence onto the colon, the criteria are even more capable than they were at the beginning. We do not know how many more different kinds of ambiguities will be brought to the surface by further experimentation with the revised criteria,

and so we cannot yet affirm that they are in their present form ready for large-scale analysis over whole corpora. But we can at least say that the empirical quantification of the rhetorical period in a non-trivial way is in light of this study a very realizable goal, and one basis for achieving that goal is contained within the criteria set forth herein. So to those figures of syntax and rhetoric on the basis of which Classical texts undergo empirical analysis, modern scholars may now confidently add the rhetorical period as a measure, in some sense, of an author's style.

Epilogue

This project began as a broad examination of several texts of Cicero, and I had hoped to arrive at some general truths about his style and use of rhetoric relative to the purpose of his works, their intended audiences, and their dates of composition. The idea first came to me when I was introduced to the Latin dependency treebank software hosted online at the *Perseus Project*, a tool that accepts user feedback on the relationships between words in Latin sentences and compiles it into a single XML file with which subsequent software can in turn numerically interpret the occurrence of a multiplicity of verbal stylistic components. The paper that demonstrated the software, Professors Bamman and Crane's "The Design and Use of a Latin Dependency Treebank",⁸⁶ compared the relative placement of the predicate between sentences of Cicero, Caesar, Vergil, and St. Jerome, and having seen what the treebank was capable of in this regard, my initial focus for this project was accordingly on the order of words. However, once I realized that the tools for actually interpreting the raw data had not yet been implemented, I abandoned working with the treebank and took instead to manually counting instances of particular rhetorical devices like alliteration, anaphora, homoeoteleuton, asyndeton, etc.

Needless to say, I soon discovered the near impossibility of objectively quantifying these phenomena. As I scoured through Cicero's sentences and tried to categorize them according to the presence (or absence) and degree of each of these figures, the need for more scrupulous criteria became evident. So for example, in the case of alliteration, I had to decide, among other things, how many repetitions of the same consonant sufficed for that figure; whether to consider only those sounds that begin a word or those that begin syllables as well; whether the words had to come consecutively; if not, how many could intervene; what to do about cognate sounds like those of the gutturals C and G (do these count for the same sound in alliteration?); and so on, and so on. For each rhetorical figure I was faced with a seemingly endless litany of questions about how to properly define and quantify it, and so I was forced to narrow my objectives and focus instead on just one or two components of style, and periodicity interested me the most.

Even though I am quite satisfied with the modest conclusions of this study, I am ever skeptical of the methodology it would seem to promote. I cannot help but call to mind the words of C. E. Murgia, who captured the very sentiment by which I became increasingly disturbed: 'One wonders whether ... a simple black and white distinction of periodic and unperiodic based solely on whether there is "simultaneous suspension of the meaning and the components of syntactic structure until both are resolved at the end of the sentence"' suffices for describing the elaborate periods of Cicero and Livy.⁸⁷ Of course, I have suggested that a correct understanding of periodicity takes more than the suspension of sense and syntax into account, and as I have proposed a shift of focus from the sentence to the colon—a much more tractable concept—I believe my own criteria depend less on one's subjective and pre-conceived notion of the periodic; but nevertheless, as one tries to formulate an objective, i.e. black and white, set of criteria according to which an artistic phenomenon can be measured, he necessarily cuts corners and wrongfully excludes those transcendent aspects that do not conform themselves to a measuring stick. Therefore, even though I believe the sort of scientific methodology utilized herein has a place in the study of literature and in the humanities in general, it can never by itself treat of all aspects of the creative products of the human genius. We will no sooner accept that it can, than have lost a proper sense of both the beautiful and the divine.

⁸⁶ (2006).

⁸⁷ Murgia (1981) 306.

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