

A NEW PARADIGM FOR PUNCTUATION

by

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ABSTRACT
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This is a comprehensive study of punctuation, particularly the uses to which it has been put as writing developed over the centuries and as it gradually evolved from an aid to oral delivery to its use in texts that were read silently. The sudden need for standardization of punctuation which occurred with the start of printing spawned some small amount of interest in determining its purpose, but most works after printing began were devoted mainly to helping people use punctuation rather than try to discover why it was being used. Gradually, two main views on its purpose developed: it was being used for rhetorical purposes or it was needed to reveal the grammar in writing. These views are still somewhat in place.

The community of linguists took little notice of writing until the last few centuries and even less notice of punctuation. The result was that few studies were done on the underlying purpose for punctuation until the twentieth century, and even those were few and far between, most of them occurring only in the last thirty years.

This study argues that neither rhetoric nor grammar is directly the basis for punctuation. Rather, it responds to a schema that determines the order of the words in spoken and written English, and it is a linguistic concept without question. The special uses of the features of punctuation are discussed, as well as some anomalies in its use, some ideas for more studies, and some ideas for improving the teaching of punctuation.

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Chapter 1

Introduction

1.1 The Purpose of the Study

The goal of this study is to look at the current beliefs about punctuation, how it evolved to its current state, what scholarship regarding punctuation has taken place over the past century, and look at a new way to consider how punctuation functions. The particular behavior of some individual features are also examined, along with some possibilities for research and teaching.

Chapter 1 will survey some of the more contemporary attitudes toward punctuation and define some of the terms that will be discussed later.

Chapter 2 reviews the stages in the development of punctuation, dwelling not on individual symbols but on the larger ideas that were motivating the attempts to use them.

Chapter 3 is a survey of the literature on punctuation from the past century, the period of time during which the punctuation we use today should have been coming under more scrutiny because of the large quantity of writing being published.

Chapter 4 will develop the hypothesis and explore how the **form** of language rather than the **content** is the structure that punctuation is really functioning in. It is what the purpose is, rather than how it appears to be

doing it, that is of importance here in the hope of proving the thesis:

Punctuation is a system of symbols and graphic features used to protect the integrity of the sentence in the English writing system and make it visible.

Chapter 5 examines some individual punctuation features that scholars have found of particular interest because of what they can do, some anomalies that exist in the present system, along with some ideas for future research and the teaching of punctuation.

It seems appropriate that William of Ockham was born in Surrey, England (in 1285), around the time that silent reading was becoming the norm in libraries, because this study is going to use a principle that is associated with his name, Ockham's Razor. Briefly, it reads like this:

One should always choose the simplest explanation of a phenomenon, one that requires the fewest leaps of logic.

(Beckett, 1994)

This study aims to adopt Ockham's approach and instead seek the more general "cause," the reason why there is a need for punctuation and the principle involved. This will involve looking at it from a number of points of view.

The many ways people have tried to determine the function of punctuation to date reminds one of the story of the elephant and the blind men. Each one examines a different part of the elephant and each makes a

different judgment about its reality. Punctuation is very much the same. Many people have studied and commented on punctuation, and each seems to see a different phenomenon. They tend to look at what is on a page already and concentrate on the “effects” of punctuation, usually in local places. The concern here is to look at contemporary English and how punctuation works as a linguistic feature in the English orthography.

Studies of punctuation take a variety of approaches, including its historic development, the frequency of use of certain symbols, the special and varied uses of individual symbols, how it impacts the processing of English in a corpus, its use as a stylistic device, how it does or does not duplicate the sounds of speech, whether it is related to logic or rhetoric or prosody or just something to help those who want to read a text out loud, and many more.

Greta Little stated what still needed to be done yet in studies of punctuation back in 1986 in an article titled “Punctuation as a linguistic phenomena”:

Like other linguistic phenomena, punctuation must be examined in a variety of ways. We need to know its history, how it evolved through time We need to establish the various ways in which the punctuation symbols are able to convey meaning—how they function. (Little, 1986:71-72.)

Unfortunately, most of the studies since she wrote have not accomplished what she was looking for. Only one of Little’s wishes has been granted: there

have been a number of good studies on the history of punctuation. To make matters worse, the linguistic community has not been very sympathetic to Little's invocation. Not only has punctuation not gathered much interest to linguists, but even writing itself has gotten a cold shoulder, perhaps partly because of what was said by some significant scholars in the last century.

About 80 years ago, Leonard Bloomfield, who spent some time in Wisconsin during his growing up and college years, wrote that "Writing is not language, but merely a way of recording language by visible marks" (Bloomfield, 1933:21). Edward Sapir, an important contemporary of Bloomfield, apparently accepted writing as "language" but had little to say about it for this reason:

Written language is thus a point-to-point equivalence, to borrow a mathematical phrase, to its spoken counterpart. The written forms are secondary symbols of the spoken ones—symbols of symbols—yet so close in the correspondence that they may . . . be entirely substituted for the spoken ones.

(Sapir, 1921:20.)

Sapir's only reference to punctuation is in his Preface to the book where this is stated, where he claims that "There is not a single diacritical mark in the book" (vi). Both Bloomfield and Sapir apparently inherited Saussure's approach to writing because he had made it quite clear where he stood:

Language and writing are two distinct systems of signs; the second exists for the sole purpose of representing the first. The linguistic object is not both the written and the spoken forms of words; the spoken forms alone constitute the object.

(Bally et al., 1959:23-24.)

Apparently, the result of these statements was that, for a good part of the twentieth century, writing was not considered that important to linguists. Along with this view of writing, punctuation was of even less concern to linguists and apparently still is not considered that important. You are unlikely to find even a mention of punctuation in most books related to linguistics, much less a definition of it. Definitions of punctuation are also difficult to find in books and articles on related subjects as well, regardless of their level.

1.2 Definitions in Textbooks and Handbooks

Students looking for assistance in understanding punctuation as a concept get very little direction. Most of the definitions of punctuation in writing texts are not helpful. Many writing texts no longer even offer a definition or description for punctuation but go right to the “rules.” Those that have offered descriptions of punctuation over the years have tended to use metaphors, make reference to speech characteristics, or merely offer general

or vague descriptions. Here are some typical examples of definitions that have made it into textbooks over the years:

Punctuation is to writing what notation is to music: it allows the eye to re-create from the page the sounds the author of the composition had in mind. Both are necessary and exacting systems. Just as musicians know the crucial difference between a quarter note and a half note, so writers know the crucial difference between a comma and a semicolon, between brackets and parentheses.

(Mulderig and Elsbree, 1990:605.)

Most punctuation marks represent the pauses and stops we would use in speaking. Periods, question marks, exclamation points, semicolons, and colons are stop marks—the “red lights” of writing. Commas and dashes are pause marks—the “amber lights” that tell us to slow down momentarily. Some punctuation marks *separate* words and ideas; others *group* and *keep together* related ideas; still others *set aside* words for special emphasis.

(Ellsworth, 1985:12.)

Punctuation consists of cue marks for joining and separating words, phrases, clauses, and sentences. The purpose of punctuation is to clarify what otherwise would seem vague or confusing to a reader. (Kuiper and Luke, 1992:403.)

Punctuation is designed to mirror the way we speak. For example, a *period* is supposed to reflect the amount of time (a period) that it takes to say one sentence. If you were to read a document out loud, the periods would signal places to breathe. Similarly, commas are used to signal a pause. When you come across a comma in a sentence, you pause slightly.

(Johnston-Sheehan, 2005:275.)

. . . by punctuation, the writer can suggest what the speaker can reveal with gesture, pause, tone, and pitch. Or, to use the terms of many modern grammarians, punctuation is to writing what supra-segmental phonemes . . . are to the spoken sentence.

Imaginative use of punctuation can strengthen prose; conventional use of punctuation, according to codes refined by printers and editors, promotes accuracy and clarity.

(Gorrell and Laird, 1967:467.)

These are just a few of the many different reasons for punctuation that one can find in handbooks and writing textbooks.

The many reference books devoted directly to helping people use punctuation that are on my shelves are not much better. Most have no definition of punctuation at all. Some offer metaphors similar to what the writing textbooks offer. Lynne Truss, in her *Eats, Shoots & Leaves*, a best-seller a few years ago, talks about defining punctuation but never really gets

around to doing it. The only book that even comes close is Eric Partridge's *You Have a Point There*. Partridge begins with comments on punctuation from the writings of sixteen people who wrote on the subject between 1640 and 1943 (Partridge, 1953:3-6). They resemble the definitions found in the texts and handbooks above, and Partridge never offers one of his own. Only one handbook makes a stated offering of a definition, but it is clearly only partly serious:

Punctuation: (1) A bunch of impossible-to-figure-out marks, invented by the devil to give writers a foretaste of hell, taught in a hundred confusing and contradictory ways. (2) A code, used in writing, that is often necessary for meaning and emphasis. The code originated in attempts to capture, in text, the various stops, pauses, and inflections of speech. Today it is logical in application. (Lauchman, 2010:17.)

Lauchman's first definition probably sums up the situation quite well.

Generally, the definitions you do find in textbooks, handbooks, and books on punctuation are certainly not helpful, despite the many "rules" that they offer.

1.3 Punctuation in Reference Works

Of the twelve dictionaries and encyclopedias devoted exclusively to linguistics on the shelf in my study, only three have any entry at all for punctuation.

Two of them devote one sentence to it. The third devotes about a page to a brief history of punctuation. A random check of ten grammars of different languages in the library at the University of Wisconsin-Milwaukee revealed that only two of them made any mention at all of punctuation, which consisted of an index listing and a few pages in one of them. The *International Encyclopedia of Linguistics*, a huge 2,218 page work, devotes less than two pages to punctuation (Frawley, 2003). Also, *The Writing Systems of the World*, a discussion of many languages at 922 pages, has a dozen entries for punctuation which might add up to a total of about three or four pages, but most of them relate only to diacritics (Daniels and Bright, 1996). *The Chicago Manual of Style* (Sixteenth Edition, 2010), which otherwise offers very good advice about how to use punctuation, never bothers to define it. *A Comprehensive Grammar of the English Language* (Quirk, et al. 1985), a work which is often cited in discussions of punctuation, states that punctuation serves two purposes, separation and specification, and sees the features of punctuation as forming a hierarchy, but does otherwise list a number of reasons for the way punctuation works:

The punctuation mark specifies a grammatical, semantic, or pragmatic function, sometimes in addition to the marking of separation. [So] punctuation practice is governed primarily by grammatical considerations and is related to grammatical distinctions. Sometimes it is linked to intonation, stress,

rhythm, pause, or any other of the prosodic features which convey distinctions in speech, but the link is neither simple nor systematic, and traditional attempts to relate punctuation directly to (in particular) pauses are misguided.

(Quirk et al, 1985:1610-1612.)

There is no attempt here to locate a single principle that underlies the need for punctuation. Instead of seeking a single idea that might lurk behind all punctuation features, they seem to just cobble together a number of the current ideas.

1.4 Some Scholarly Approaches to Punctuation

One might suspect that scholars who have been reading and writing about punctuation and studying it would come up with some new ways to approach it, but they tend to keep looking for answers in the same places. The majority of articles by scholars adhere to one of the two approaches as the source of punctuation that are the most common: a relationship to speech features or a relationship to grammar. William Chafe, who has written a number of articles on punctuation, insists that his approach is correct:

At this point some readers may object that the signaling of prosody is only one of the functions of punctuation, and perhaps not the primary one. Although that is a common belief, and although certainly there are instances of punctuation that do not

serve prosodic ends, I will defend the position here that those instances are departures from its main function, which is to tell us something about a writer's intentions with regard to prosody of that inner voice. (Chafe, 1988:397.)

Fernando Poyatos has taken an even broader stand and places punctuation in the category of non-verbal communication, a study he is immersed in:

. . . although punctuation reveals a conscious effort to symbolize speech for the better evocation of its semantic variations and the avoidance of too conspicuous ambiguities, it simultaneously, and quite unwittingly, evokes and marks the co-occurrent body movements and still positions that are an integral part of the kinetic-acoustic continuum of human and animal communication. (Poyatos, 1981:91.)

Poyatos has produced many large charts in which he shows relationships between what occurs in speech situations with what seems to occur in punctuation in writing. Poyatos also believes that we have insufficient items for showing in writing all the things that occur in speech and has invented a number of new symbols to help writers elaborate their texts with a collection of new punctuation features, something which others have also been doing over the years

The belief that grammar is the model for punctuation is firmly established in an article by Karsten Schou. After reviewing some historical

documents, he comes to this conclusion:

We have now seen how the discussion of the history of English punctuation theory centres on the role that syntax has played. The general experience is that syntax has been central at least since 1600, although prosody played and still plays a certain part. Punctuation and its theory have moved towards an increasingly syntactic orientation. By examining sources in punctuation theory we have seen that in the seventeenth century punctuation was grammatical in the sense that it was frequently used to mark boundaries of syntactic units, mainly based on criteria of form. (Schou, 2007:213.)

In other words, grammar is in charge, but prosody still gets a mention. But, strangely, the word “form” turns up at the end of his statement.

Furthermore, what is fascinating about all the discussions of punctuation and grammar is that almost none of them mention which grammar they are talking about. It is spoken of as some kind of universal system that everyone knows. This occurs in spite of the fact that dozens of grammars have been proposed in the last century alone. One reference work, *Concise Encyclopedia of Syntactic Theories*, published in 1996, lists and describes at least thirty different grammars, and it is possible that some more have been devised since then (Brown and Miller, 1996). They define “grammar” as:

1. The study of language and the rules that govern its usage.
2. A description of the form of words and the manner in which they combine to form phrases, clauses or sentences.
3. A systematic and explicit account of the structure of
 - (a) language according to the tenets of one or other of the theories of modern linguistics.

(Brown and Miller, 1996:402.)

Based on these definitions, each grammar listed could approach the structure of English—and hence the punctuation—in a different way, which certainly would have some influence on how it is viewed and performs. Without some extraordinary research, it would be difficult to determine which grammar represents punctuation best. In the long run, it may not be necessary to do that because punctuation functions in its own context, the written form of English, a dialect which has its own requirements.

One of the few writers who has made a definite stand for a particular grammar for punctuation is Christine D. Doran in her 1998 dissertation:

Punctuation marks are treated as full-fledged lexical items in a Lexicalized Tree Adjoining Grammar, which is extremely well-suited formalism for encoding punctuation in the sentence grammar. Each mark anchors its own elementary trees and imposes constraints on the surrounding lexical items.

(Doran, 1998:vi-vii.)

References to her approach occur in the literature, but not in everyday discussions of grammar, probably because it is “a computational model of punctuation” and as such has specific and limited uses.

Finally, there are even some scholars who find nothing useful in punctuation and would dispense with it completely:

Punctuation conventions are culturally evolved aids to meaning-making which members of a particular culture have in common, and use as a resource for communicating through written language. However, the particular set of conventions that constitute the “rules” of punctuation for any culture are nothing other than “conventions”, and are not based on any permanent or universal principles of language. [So], while punctuation conventions can be useful, the conventions themselves have no intrinsic virtue and hence adhering to them should not be treated as a marker of ability.

(Clark and Ivanic, 1997:205-207.)

This seems to give writers carte blanche to do whatever they like with punctuation, a bit severe, it seems, but there is an undercurrent of this idea in the writings of other scholars as well.

Were this study being written in the year 1014 CE instead of 2014 CE, Scholes and Willis tell us we might have to include yet another purpose for punctuation:

In its elocutionary function, punctuation serves as a set of instructions for reading a text aloud. As such it is one aspect of written speech . . . and a kind of phonetic transcription for prosody (stress, pause, and intonation).

(Scholes and Willis, 1990:13.)

Certainly, different kinds of writing may use punctuation in somewhat different ways. Also, it is obvious that punctuation involves conventions, but the conventions evolve from some information that is important to the way writing is presented. That is what we are looking for: a clue to what punctuation does to language that makes it a sensible and necessary addition to written English.

Harold Whitehall, although he subscribed to the idea that punctuation was used to represent the sounds of speech, also said something prophetic when he said that the “most important purpose” of punctuation is “to make grammar graphic” (Whitehall, 1956:119).

Because of the many different approaches to punctuation, teaching it to students is a significant challenge. Mina Shaughnessy, author of *Errors & Expectations*, a book on teaching basic writing that shook up the English teaching community, put it this way:

Unquestionably, one of the primary needs in literacy research must be empirical investigation into the function of punctuation.

(Shaughnessy, 1977:81.)

Many years have passed since she wrote those words, and it really hasn't been accomplished yet.

1.5 Defining Language

At this point it might be appropriate to define some of the categories we will be dealing with: language and writing. For the sake of expediency, I will use Chomsky's definition for "language":

. . . I will consider a *language* to be a set (finite or infinite) of sentences, each finite in length and constructed out of a finite set of elements.

(Chomsky, 1966:13).

I am partial here to Chomsky's definition because of his reference to "sentences." More will be said of sentences in a later chapter. The discussion of punctuation will be involved with the concept of the sentence so it would be beneficial to have on record some notion of the importance of the sentence as a significant part of written language.

1.6 Defining Writing.

In many ways, punctuation is used to patch up an inadequate writing system. You could probably say honestly that the more punctuation you encounter in a writing system the more likely it is that the writing system is a poor representative of the speech system. We are probably fortunate that English

is alphabetic, but as it evolved, it also has had to adapt in some ways that have required punctuation and changed some of the conventions as the language changed. Since this study is about the role of punctuation in the English writing system, we should have some conception of what a writing system is so we can get an idea of the kind of problems punctuation is trying to solve.

The first warning we get about trying to define “writing” comes from Florian Coulmas:

Every attempt at a single universal definition of writing runs the risk of being either ad hoc or anachronistic, or informed by cultural bias. (Coulmas, 2003:2.)

Yet in an earlier work, he provided a rather reasonable list of probable characteristics:

1. It consists of artificial graphical marks on a durable surface;
2. its purpose is to communicate something;
3. this purpose is achieved by virtue of the marks’ conventional relation to language. (Coulmas, 1991:17.)

Henry Rogers gets to the point quickly:

We can define writing as the use of graphic marks to represent specific linguistic utterances. (Rogers, 2005:2.)

Actually, Rogers is accomplishing two things at the same time here: he is in a way also giving us a synonym for a quantity of speech: “specific linguistic

utterances.” Sooner or later, we may have to discuss the different forms in writing. Utterance could be one of them: a stretch of written language which has no other recognizable form, such as a text, a paragraph, a sentence, a phrase, or a word. Utterance seems to be an abstract popular term for what most of us would call simply speech.

I. J. Gelb, whose book on writing systems spawned many others, is also quite brief:

Writing. A system of intercommunication by means of conventional visible marks. (Gelb, 1965:253.)

Michael D. Coe, author of a book on Mayan writing, gives a nod to speech:

Writing is speech put in visible form, in such a way that any reader instructed in its conventions can reconstruct the vocal messages. (Coe, 1992:13.)

Geoffrey Sampson adds some synonyms to broaden out the definition a bit:

I shall use the terms *script*, *writing system*, or *orthography*, to refer to a given set of written marks together with a particular set of conventions for their uses. (Sampson, 1985:19.)

John DeFrancis adds some information about the size for those who hadn't yet thought about the quantity it might take to be officially “writing”:

Full writing [as opposed to just a word or two on signs, for example] is a system of graphic symbols that can be used to convey any and all thought. (DeFrancis, 1989:5.)

Peter T. Daniels, who edited *The Writing Systems of the World* with William Bright, adds a new idea:

. . . writing is defined as *a system* of more less permanent marks used to represent an utterance in such a way that it can be recovered more or less exactly without the intervention of the utterer. (Daniels, 1996:3.)

Perhaps the longest definition comes from Floyd Lounsbury:

I speak of “writing” in its fullest sense in those instances where we find graphic representation of complete sentences and the concatenation of sentences into texts; but I also accept as “writing,” though in a more attenuated sense, those instances in which compound words and phrases are the maximum attested units (as in representations of place names, personal names, composite numerals, numerals with signs for things tallied, etc.) but where the representation of the fully formed sentences is not general. (Lounsbury, 1989:203.)

Lounsbury, it seems, would accept the signs that DeFrancis refuses to accept.

John Mountford, who also talks about utterances, adds some things that have so far been neglected:

Besides the verbal component in writing, we have a non-verbal component. . . . [T]he non-verbal elements in writing can be divided into ‘punctive’ (punctuation marks and other unit-

delimiting devices, including white space between sections, indentation, word-space, etc.) and ‘parascriptal’ (italics, asterisks, underlinings, changes of size, etc.).

(Mountford, 1980:229.)

The terms that get the most exposure in these descriptions are “graphical,” “conventional,” and “utterance,” with a nod to “visible,” “system,” and “sentence.” Some of the other ideas, such as “communicate,” “symbol,” and “permanent,” are probably implied in some of the more common terms used. Again, there is a term here that we may not have expected: “sentences.” Like the word “form” that turned up earlier in a place where we might not expect it, the word “sentence” here seems like a foreboding of something we might find out about writing that we didn’t expect. But it would probably be unnecessary to conduct a study to find out that, indeed, the sentence is not only more common in writing than in speech but also more important. But we might notice also that most of the terms used in the descriptions imply something about “form.”

1.7 The Symbols found in Writing.

There are many different symbols found in writing, but not all of them are punctuation. We need to sort out the different symbols that a reader might encounter and determine which are probably punctuation and which are not.

There are at least three types:

1. Symbols that replace words: numbers, dollar signs, ampersands, etc. Writers sometimes use one or the other. They may turn up in a sentence but are usually understood as a word rather than an abstract symbol representing some non-verbal concept. Some symbols used in the sciences might fit this category if they are pronounced.
2. Symbols which are extra-textual: bullet lists, paragraphing, footnotes, etc. These are non-verbal and purely graphic. They are not part of the text but rather the visual layout or design.
3. Symbols that have a linguistic function in a text: punctuation.

Some writers on writing systems and punctuation would like to consider some of the items in 2. as part of a class called “macro-punctuation,” but they are not considered so in this study. For our purposes, only those symbols which have some influence on the other linguistic features in the writing will be included. That list would include the following: **comma, semicolon, colon, period, question, exclamation, hyphen, dash, parenthesis, brackets, apostrophe, diacriticals, capitals, bold, underline, italics, ellipsis, and space.** Some features that are also possible might include a change of font size or appearance, which would be functioning in the same way as bold, for example. The virgule seems to be feature in transition. It turns up on occasion in expressions such as “and/or,” but it doesn’t seem to

have achieved tenure yet. Its influence on the linguistic features seems questionable.

The above features are to be found in four major sources: *A Comprehensive Grammar of the English Language* (1985), *The Oxford English Grammar* (1996), *The Chicago Manual of Style* (2010), *The Cambridge Encyclopedia of the English Language* (1995). There are only some minor disagreements among these sources. It is interesting to note, however, that all of them include the virgule.

The punctuation features listed are symbols. That is, they have no independent meaning of their own. Any meaning that they have to a reader is purely a learned convention. Obviously, these symbols are both used and misused. Every aspect of a writing system can be used as an element of style whether it involves a spelling, a word, word order, a punctuation feature, sentence length, or anything else. In this study we are concerned with the more general use of the punctuation features and how they are used in a majority of writing situations rather than some specific genre. **Why** should we want to establish a new paradigm for punctuation when some others already exist? Thomas S. Kuhn has also provided an answer for that. He said it is “to urge a change in the perception and evaluation of familiar data” (Kuhn, 1970:viii-ix).

1.8 Summary

Punctuation, then, is viewed as controlled by some variation of speech qualities or in some way by some grammar of English. Attempts to define it, if there are any, are usually very general or couched in some metaphoric way. None of these are explained in detail. Instead, most works that include information on punctuation devote their attention to listing rules that must be followed in very specific locations where punctuation might be needed.

Chapter 2

The Evolution of Punctuation

2.1 Introduction

In this chapter we will trace the development of punctuation over the centuries since the beginning of writing. This should provide a sense of the early purpose for the use of punctuation and how that has changed over time. There have been different reasons for its use that match the different uses for writing. What is unusual is that some of the reasons for its early use have not disappeared as the purpose for writing has changed over time.

The punctuation system we have today was not designed by a group of linguists or designers but instead gradually evolved over several millennia at the hands of craftsmen. It was designed, in a way, by the writers themselves, the scribes and later technicians involved in the printing trade, who gradually saw some ways to make reading more efficient and understandable by adding symbols to the language they were making visible. Looking at the way punctuation evolved may offer some insight into what they were seeking to accomplish by adding symbols so that we may better understand its uses today.

2.2 The Earliest Punctuation

According to Bruce G. Trigger, the earliest forms of writing had little to do with speech. Instead, they were mostly bureaucratic records that were necessary to meet the needs of the growing complexity of civilization. There was no need to record anyone's real or imagined speech and, consequently, no need to show how it might be organized to represent how someone might say it (Trigger, 2004:44). As such, we might think there was no need for punctuation.

It is, of course, difficult to establish exactly when punctuation first began. Many languages which used it may have disappeared and left no trace. However, Rochelle Altman, in her *Absent Voices: The Story of Writing Systems in the West*, has looked at languages in the middle east, a place where many written languages had their origins, and decided that the Sumerian Cuneiform could very well contain the oldest form of punctuation. The Sumerians figured out a way to represent words and incorporate several sets of features with them:

By 2450 [BCE], cuneiform writing limits and punctuation were stabilized. Each word was encased in its own box (case) and arranged from right to left. Inside each case, words were spaced as spoken or "uttered." The right hand margin (incised line) served as a stop. (Altman, 2004:23.)

The line at the right at the right edge of the box, which serves as a stop, is in effect the first punctuation, she claims.

Altman also notes the use of what may be punctuation in other earlier written languages. The colon turns up in Phoenician, for example, and it continued to appear in other written languages over the centuries (Altman, 2004:38). Apparently, there is something mystical about the colon's appearance that attracts scribes, and it is still around today. The Etruscans, she claims, adopted spacing and paragraphing by the eighth century BCE (Altman, 2004:39). In this period, the door seemed to be open for experimentation in the way to organize and display writing.

However, it isn't until later, when writing systems attempt to make records that represent speech, that punctuation becomes even more important. The alphabetical approach that culminated in the Greek system (c. 750-480 BCE, according to Daniels and Bright, 1996:271) could be seen as a marvelous achievement in communication, but alphabetical language systems also pose problems for discussions of punctuation, we shall see, perhaps because they may represent the spoken language too well.

2.3 Writing as Technology

One tendency is to see writing as little more than an exact recording of speech instead of the translation of language from one technology to another technology in a different medium. Walter Ong says:

. . . we find it difficult to consider writing to be a technology as we commonly assume printing and the computer to be. Yet writing (and especially alphabetic writing) is a technology, calling for tools and other equipment: styli or brushes or pens, carefully prepared surfaces such as paper, animal skins, strips of wood, as well as inks or paints, and much more.

(Ong, 1982:81-82.)

Those of us who can read and write often forget that there are places in the world where scribes are very necessary craftsmen. M. T. Clanchy, in *From Memory to Written Record: England from 1066 to 1307*, 2nd ed. (1993: 114-144), goes into great detail in describing the skills and material needs of a person who had to write a thousand years ago. Just because we can use a keyboard and printer today doesn't make the task that much easier, however. We still need to know how and why to punctuate.

2.4 Problems with Terminology

Perhaps the most difficult problem in studying about punctuation is the lack of clear definitions of features of the language. This begins, as we have noted, with "language" and "writing" and stretches on to "paragraph," "sentence," and even "word" at times. (Prefixes have at times been separated from words by a space, for example, and might not have been counted as words.) We might be told that punctuation is used to aid elocution. That may mean that

a text is punctuated so that it reveals how it should be spoken out loud. Terms like “prosodic” and “intonational”—which are synonymous in many reference works—are used to describe the way a text is structured, apparently for oral delivery. In other places the same terms are described as synonymous with “suprasegmental,” which refers usually to the stress, pitch, and juncture in a sentence.

When the term “rhetorical” is used to describe punctuation, it is often used without any explanation. If it is defined, it is usually done in such a way as to be equally misunderstood as referring to phrases and clauses. In the more traditional sense, rhetoric usually describes larger entities, mostly the units in the way an argument is organized, not the order or character of words or phrases in a sentence. Rhetoric is traditionally one of the members of the trivium which consists of the studies of grammar, rhetoric, and logic. Apparently, these terms were being used as categories for determining the appropriate home for punctuation because all of them turn up in descriptions of punctuation in one age or another.

Naomi Baron, however, in “Commas and Canaries,” claims that there are two types of punctuation: 1) rhetorical punctuation, which refers to the attempt to create an oral rendition of a text; and 2) called grammatical, syntactic, or logical, which look at the structure of the text instead (Baron, 2001:21-22.)

Vivian Salmon has offered a definition of “rhetorical” as well:

. . . ‘rhetorical’ punctuation [is] designed to show where and for how long to pause for breath, or how to show emphasis and tone of voice. (Salmon, 1962:358.)

Scholes and Willis say it in a slightly different way:

In the elocutionary function, punctuation serves as a set of instructions for reading a text aloud . . . a kind of phonetic transcription for prosody (stress, pause, and intonation). In its syntactic function, punctuation serves, like other aspects of orthography, to convey meaning . . . by identifying lexical elements and clausal, phrasal, and sentential structure. (Scholes and Willis, 1990:13.)

The elocutionary function, after the beginning of silent reading, apparently transformed into the rhetorical version, which is still around.

Vivian Salmon has also offered a way to classify punctuation:

Fundamentally, all punctuation is a method (albeit a very crude one) of conveying meaning which is not expressed lexically; this meaning may be of three kinds: (1) *grammatical*, indicated by punctuation in its ‘separating’ function, whereby units within the sentence are marked off from one another and sentence distinguished from sentence; grammatical punctuation also places the sentence within one of the categories of statement,

question, or exclamation/command; (2) *emotional*, marking a speaker's attitude to a statement; (3) *logical*, indicated by punctuation in its 'linking' function, by which is shown the degree of closeness in the semantic relationship between structurally independent grammatical units.

(Salmon, 1979:47-48.)

To this, Salmon adds an interesting comment about another way of classifying punctuation:

. . . a very valuable and somewhat different system is postulated by H. Whitehall, who sees that the purpose is 'to make grammar graphic.'

(Salmon, 1979:48: Whitehall, 1956:119)

Finally, "sentence" is just as puzzling. In one approach, it simply can be defined as "the meaning," and a meaning can take any one of a number of forms. An even simpler definition comes from Thomas Tuite, author of *The Oxford Spelling book: Being a Complete Introduction to English Orthography*: "A sentence is words put together as they ought to be" (1726:116). M. B. Parkes also reminds us, when we are reading older manuscripts, that words like "*sensus* and *sententia* are medieval ones which are not necessarily equivalent to the modern English 'sense' and 'sentence'. Moreover, the terms could even mean different things at different times during the Middle Ages" (Parkes, 1978: 131).

If it is difficult to find good sources for information on punctuation in ancient and medieval times, Ian Robinson, who is working on medieval punctuation, has gone further and publically solicited help in finding information about a century which included the incunable period in English: “. . . and if anybody knows of a history of punctuation, especially as regards the English language between about 1450 and 1550, I would be most grateful to be informed” (Robinson, 1992:36). The incunable period lasted for just a few decades after the start of printing in England and could be interesting to a scholar because it might reveal the struggles of printers to make sense out of the transition to punctuation in the new medium.

Robinson is particularly interested in the concept of the sentence, the available definitions of which he finds unsatisfactory. “*Periodus* is a word well established in both Latin and its Greek original, but again it is hard to be quite sure what it means syntactically.” After considerable research, he said: “What I have not found before the Renaissance is any clear statement of the modern concept of the sentence” (Robinson, 1992:41). He concluded that the sentence seems to have developed in the seventeenth century:

For most of a thousand years English prose, and Latin written in England, was punctuated by rhetorical stops, not grammatical marks. They altered remarkably little between Wulfstan and Caxton. The scribes evidently thought of the units of prose not as we do, syntactically, but as phrases, constructed

by the voice. The whole thing is voice- and rhythm-based, not syntax-based. (Robinson, 1992:45.)

Robinson is one of the few writers to state this quite explicitly.

The literature on the sentence is vast. But Joan Persily Levinson tried to sort it out somewhat by labeling a visible sentence, the words between a capital that is apparently the beginning and some terminal punctuation ending it, as an “orthographic sentence” in the attempt to establish clearly at least one name for a sentence in a definite visible form. She also tried to avoid the term “fragment,” which has traditionally had bad connotations, and replaced it with “partial,” a more polite word for a sentence that seems to be lacking all of its parts (Levinson, 1985:126-127).

Levinson also traced the idea of the “pause” to Aelius Donatus in the fourth century CE, who supposedly recommended three kinds. The pattern got repeated for centuries in discussions of punctuation and ultimately became connected to the comma, the colon, and the period, even though their meanings now are not intended to be related to sound (Levinson, 1985:26). You can probably still find this three-part description of pauses as representing punctuation in a handbook on a bookstore shelf today. In an attempt to quantify one of the smaller gaps you might make in your delivery or reading, the term “half-pause” was also invented (Levinson, 1985:28).

Punctuation features can even be classified strangely. Some writers mistakenly label punctuation features as “graphemes.” Graphemes, however,

are usually defined as graphic versions of phonemes, which are a recognizable class of sounds. Punctuation features have no individual phonemic character themselves, though they might modify a grapheme. (See Rogers brief discussion of this, 2005:15.) However, the term “grapheme” has survived the arguments of some linguists who see no need for it.

2.5 The Genre Confusion

In addition to problems with terminology, punctuation is frequently, not seldom, discussed as if all kinds of writing are the same, regardless of the historic period. It isn't. The difference in the writing style between a poem, a play, a treatise, and a parts catalog can be extraordinary . Yet discussions of punctuation often proceed as if the writing in them is all the same and the audience is all the same so the punctuation is all the same.

Percy Simpson, in his *Shakespearian Punctuation*, took modern editors to task because of their careless editing of Elizabethan poetry and drama—and rightly so (Simpson,1911:7). But even mixing poetry and drama is dangerous. The voices in poetry are usually those of the poets. The voices in a play are multiple, and the language and punctuation have to be adjusted to reveal that. (Having written scripts for a telecourse, I am aware of the differences that have to be taken into account for the various participants who have to read what is on a teleprompter. All of the voices are considerably more like speech than like writing so the dialogue and

punctuation will appear to be more chaotic.) Research in which the punctuation of many genres are mixed together may produce curious conclusions. Some scholars have been careful to avoid this problem, however. Editorial preferences are also a concern. One cannot tell if a writer's behavior comes from personal preference or a company style manual.

It is apparent that any discussion we might have about punctuation will be labored by the lack of clear definitions and understandings about what punctuation is scientifically, how the terms used in describing it are defined, and what context it is in. So the challenge is to put punctuation in some place, some definite category, and describe what makes it function there. Doing that may provide some benefits related to the analysis of writing in many different contexts and for many different reasons.

2.6 Characteristics of the Evolution

Once punctuation was established in some form, there were a number of events that altered it in some way. One was some sort of change in the language or an improvement in the readability based on the appearance of a written page. Another was the change in the size of the audience of readers, mostly because of more instruction. There was also the interest of some significant person, someone who had the ability to promote or improve punctuation, which then had an influence on its development. The most significant changes, of course, occurred because of the sudden availability of

printed materials which presented what were standardized approaches to punctuation at the time. This obviously promoted feedback, which undoubtedly had some influence on all of the people involved in the writing and the production of printed materials. At that moment, the needs of the reading audience began to outweigh—or at least prove to be an equal match to—the philosophy and habits of the writers, editors, and printers.

2.7 Greek Punctuation

Earlier, I avoided the term “paragraph” as a part of the discussion of punctuation, focusing instead on what occurs mainly in a sentence (in the modern sense of it). But there could be an argument in favor of including the paragraph as punctuation in some periods in history because of how it was being indicated. For example, the early Greek writing used a number of methods for showing paragraphing involving the use of size or space, one of which is still used today: allowing space at the very beginning of a paragraph. Obviously, space was costly in earlier centuries. So they also sometimes projected a letter into the margin, left an extra space mid-line, or enlarged a letter to show the beginning of a new paragraph. (Thompson, 1966:60.) A symbol for a paragraph was also used in Greek writing as well (¶), and it was usually located marginally. This is more like an indicator of a section of a text which has no linguistic influence otherwise today.

Almost immediately upon locating a study on punctuation, one is liable to encounter yet another terminology problem. For example, E. M. Thompson's discussion of Greek paleography puts aside such symbols found in early manuscripts as "Dots or points, single, double, or treble, [which are] seen in ancient inscriptions [which are] marking off several words; but these are marks of separation rather than of punctuation, unless, perhaps, we are to except those which happen to stand out at the conclusions of sentences" (Thompson, 1966:60). One of the symbols he is talking about looks suspiciously like our modern colon and seems to be closing a sentence but also is used in other capacities, he says. Thompson also acknowledges the unsystematic use of symbols in Greek generally. But we are left on our own to discern the difference between symbols that separate and those that punctuate. In modern discussions of punctuation, separation is often cited as one of the reasons for it.

But Thompson claims that a "more regular system was developed in the schools of Alexandria," probably by Aristophanes of Byzantium in around 260 BCE:

This was the use of the full point with certain values in certain positions . . . : high point . . . , equivalent to a full stop; the point on the line . . . , a shorter pause, equivalent to our semicolon; and the point in the middle position . . . , an ordinary pause,

equivalent to our comma. But this system does not appear in practice in extant papyri. (Thompson, 1966:60.)

Over time, it is claimed, the middle point disappeared and was replaced by the comma. The difficulty of finding suitable examples of punctuation in older versions of languages is an unsolvable problem, of course.

The three places in which punctuation was used in ancient Greek might be familiar to a modern reader. The symbols seem as if they are framing the complete sentence as we usually know it, marking its beginning and end and perhaps some kind of phrasal activity internally in the sentence. Although the construction of the sentence itself is still being debated by some scholars, this seems to be an early acknowledgement of a unit that occurs even in Greek quite frequently. When we have a model for the way punctuation works that could be applied to the ancient Greek writings, we might be able to discover what their purpose was for the middle point. The others seem evident.

Aristophanes was interested in other linguistic features of Greek as well as syntax. He invented some diacritics—acute, grave, and circumflex accents—“to assist students, particularly foreigners, in correct pronunciation of Greek words” (Diringer and Olson, 1989:1046). Early on, it seems, educators were interested in improving their languages and the learning of them. Certainly, silent reading was not yet what written works were used for with these ancient writings. Diringer and Olson note that it is commonly

believed that the Roman alphabet was derived from the Greek, but they think that “the Etruscan alphabet was the link between the Greek and the Latin” (Diringer and Olson, 1989:1047).

To understand the state of punctuation for about two thousand years, from about 100 BCE to about 1900 CE, a scholar might need to rely on only two books, E. Otha Wingo’s *Latin Punctuation in the Classical Age* (1972), and *Pause and Effect: Punctuation in the West* (1993), by M. B. Parkes. Wingo covers the glory and decline of the Roman Empire, and Parkes picks it up from there and carries it to the nineteenth century. Both books provide many examples of manuscripts. [Unfortunately, neither book has an index.]

2.8 Punctuation and the Roman Empire

The tumultuous events of the past have made the search for any more ancient documents containing punctuation close to impossible, but there are other reasons why we may never find a manuscript originally written by its author. According to Parkes:

No manuscript containing a work in the author’s own handwriting has survived from Antiquity; this absence of autograph material has been attributed to the practice of dictating one’s works, letters, and even one’s notes, to amanuenses. (Parkes, 1993:10.)

The style of the writing is sometimes even unusual by modern standards. Some authors sound as if they are directly addressing the potential readers, and even though the punctuation and marginal comments might be provided by the authors, it was done as readers rather than as writers (Parkes, 1993: 10).

- Roman writing originally used centrally located dots to separate words. “But during the third century BCE,” according to Altman, “the Romans adopted the Greek model and abandoned their previous practices. They changed from point as word divider and bar as sense divider [in · this · manner] to a true *scriptura continua*” [in this manner] (Altman, 2004:40). Most of us today would see this as a regression, but an argument could be made for it to be at least a tradeoff. The disadvantage of points is the visual clutter. The disadvantage of *scriptura continua* is the difficulty of locating the words. But *scriptura continua* actually has several other advantages in a culture that believes that writing is merely speech written down. [For the sake of consistency, the various forms have been regularized to *scriptura continua* in this document.] So what would *scriptura continua* sound like if it were read out loud? In the way it is heard, speech is like what musicians call legato, a continuous sound. Modern writing with spaces is more like staccato. If a person spoke to us in a staccato fashion, we would be very puzzled, but to “record” speech in a continuous or legato fashion might seem quite normal. Another advantage to using *scriptura continua* is that it is more economical;

you can get more letters on a page. Until paper became available, the surfaces for writing on were always hard to find and expensive to prepare. The use of *scriptura continua* did not prevent the Greeks from including symbols around the letters as instructions to readers, so punctuation was still used but in a contracted way.

So, where others might see disadvantages in *scriptura continua*, Parkes has recognized its advantages:

The merit of *scriptura continua* was that it presented the reader with a neutral text. To introduce graded pauses while reading involved an interpretation of the text, an activity requiring literary judgement and therefore one properly reserved to the reader. In ancient Rome, readers of literary texts were mostly a social elite, whereas full-time scribes were usually freedmen or slaves. . . . (Parkes, 1993:11.)

Since the manuscripts were intended to be read out loud to people later, it was proper to get ready for it by inserting your own punctuation. Here less emphasis is on what the text might mean and more on the way the reader might care to deliver it, an important aspect of public speaking. “It isn’t what you say but how you say it” is still being taught in speech classes.

2.9 The Glory of Roman Punctuation

Wingo prepares us for his discussion of the punctuation of earlier Roman manuscripts by offering a definition:

The term ‘punctuation,’ in the restricted sense in which I shall use it here, refers to the use in writing of certain signs to show the end of a sentence or to indicate its structure or the interrelation of its parts for the sake of clarity to facilitate reading. Marks may also be inserted, again for the sake of clarity, to show pauses in speech even when no syntactical consideration would demand them.

(Wingo, 1972:14.)

Like others who have done research on punctuation, Wingo then complicates matters a bit by including and excluding features without providing a more explicit definition; in this case he includes the paragraph. But he leaves out the “interpunctum as a word divider,” the dot or space between words (also known as the “medial point”), because it was “taken for granted and universally used during the period in which we are interested” (Wingo, 1972: 14). Indeed, its presence is actually the test for the accuracy of classifying the documents for the period of his interest. The Romans retained the dots from the language they inherited. It wasn’t until later that they abandoned them in about the second century CE and adopted the *scriptura continua* .

Wingo's argument against using the interpunctum (the medial dots) as punctuation is that they can't be both punctuation and something to only separate the words. When they no longer separate words, then he could consider them punctuation. He also excludes decorative features and "lectionary signs," which are never clearly defined. He includes spaces as long as they are "divisions within paragraphs" (Wingo, 1972:17). At one point, Wingo actually says that "The earliest form of punctuation for sense appears to have been a blank space" (20), but the concept of "sense" is never fully explained either. (Later on we see it used as "meaning.") Although we cannot get a good impression of all of these features discussed without seeing them, it is apparent that the creators of the manuscripts were making efforts to deal with a number of the linguistic forms which they were punctuating to clarify what the authors meant.

The manuscripts that Wingo is working from may not represent everything that was written at the time, of course. What exists is what later people deemed worth keeping:

It is a reasonable inference, therefore, that those writers preserved by quotation only passages which they deemed relevant to the 'modern needs' of a decaying civilization, and therefore discarded as otiose references to a system of punctuation that had become obsolete long before their day.

(Wingo, 1972:22.)

Wingo was unable to locate any definitive descriptions of the system as well, but there are extant manuscripts later in the course of the empire that seem to “approximate the rules given by the grammarians,” but the grammarians themselves are from a later time, he says (25-28).

A single text by Augustus (63 BCE -- 14 CE), of which there exists a number of examples, was used by Wingo as a test for determining the goal of the punctuation. In the text, he found seven different symbols, only two of which we might recognize today: spaces and the virgule (32-33). He determined that the various features were used for four different reasons:

1. to make the document easier to read;
2. to show the end of complete thoughts—probably sentences;
3. to show syntactical relations and set off clauses; and
4. a variety of symbols being used to represent what appeared to be the same kind of activity. (Wingo, 1972:48-49.)

Some of these features seemed to function like modern colons and semicolons. Full stops seem to involve three different symbols. Another seems to be used to punctuate a series, and other symbols indicate different syntactic activities within a sentence. In many cases, of course, the exact goal of the symbol is difficult to determine (Wingo, 1972:49).

Wingo looked at a variety of other documents in order to confirm some of what he found in the Augustan document and found little that was conclusive about the use of punctuation in what was available. He did find

that legal documents tended to use longer sentences and that, though Latin documents contained a variety of features, the most common symbol was the virgule, which was used to show the ends of paragraphs, as a full stop, a comma, semicolon, a colon, dash, and as a rhetorical pause for emphasis. (Wingo, 1972:94-131).

His conclusions about Latin writing in the classical age through the first century CE involved a variety of factors that emerged from the modifications that were being made to the language in Latin writing:

1. separation by word, sentence, and clause was frequent;
2. the more literary a document, the more punctuation;
3. punctuation in documents by well-known authors may have shown elements of style;
4. word separation and punctuation “for sense” were related;
5. twenty-one different symbols (including space) were used within paragraphs;
6. seven was the largest number of symbols found in one document, but usually it was between two and four;
7. although the symbols weren’t interchangeable, there was great overlapping in the function for which they were used;
8. despite the overlapping, a tendency to indicate three common features: a break in a paragraph, a sentence ending, and a comma;

9. only a few texts seem to show a modern-like consistency; and
10. the available materials available for study are not reliable.

(Wingo, 1972:132-133.)

The available evidence, then, suggests a period of trial in the attempt to use punctuation in some meaningful ways to help readers discern the intended meaning of a document, not necessarily inserted by its author, but by others who may have been intending to read it out loud. There appears to be no clear standard in the way individual symbols were used, except that identifying the paragraph, sentence, and the clarification of some internal structures was considered an important thing to do. Counting the number and type of punctuation features in documents seems to be one way of investigating their use, a practice that is still going on. Punctuation was even used to make clear the items in a series, however, a fact which could reveal something about our own approach today.

Wingo noted that documents using *scriptura continua* were already appearing by 66 CE, and by 200 CE the interpunctum was probably no longer the norm (Wingo, 1972:83).

2.10 The Empire after the Fall

One of the most certain things about the history of punctuation in the Roman Empire in the early centuries CE is that the facts are hard to determine.

According to M. B. Parkes, in his book *Pause and Effect: An Introduction to Punctuation in the West*:

The attitudes of grammarians and rhetoricians to the punctuation of texts have been embodied in theoretical discussions down the centuries, but these treatises have to be employed with great caution as sources of information about the usage of punctuation. The principles advocated in the discussions often do not correspond with the practices manifested in the bulk of surviving manuscripts and printed books. (Parkes, 1993:4.)

His argument sounds as if it could even apply today. The judgments provided by commentators on punctuation often suggest they have either a limited view of the kinds of documents they are relating to, perhaps because of a bias, or they are just being unclear about the documents and the views they offer. Many just assume that punctuation is connected to speech. The old oratorical history of punctuation casts a long shadow on what people think punctuation is for, even in the twenty-first century.

To offer some evidence for his own remarks, Parkes has devoted half of his 327 page book to reproductions of manuscripts. Fortunately, spaces were returned to writing in Europe in the seventh century—by Irish and Anglo-Saxon scribes (Saenger, 1997:12). But lest we think *sriptura continua* has become obsolete, Saenger reminds us that the Vai ethnic group in Liberia

uses a version of it today with no “word separation, diacriticals, punctuation, or the presence of initial capital forms” (Saenger, 1997:4).

Standardization of punctuation has always been problematic, and nobody was in charge in the waning days of the Roman empire. “Two scribes can copy the same text and place punctuation in the same positions, but employ different symbols, or apparently apply different values to the same symbol” (Parkes, 1993:2). It would take some large steps by people with some power over the activities of the scribes and users of their work to produce some changes in the way punctuation was used as well as some useful innovations in text practices to begin improving the way punctuation was used. One long-lasting innovation was the minuscule.

2.11 A Small Change with a Big Effect

When a technology is working in some acceptable way, there is usually no attempt to completely replace it, but users are always looking for way to improve it. The usual way is by some kind of modification. According to *The Blackwell Encyclopedia of Writing Systems*, minuscule writing was not a new invention, just a modification:

Minuscules were for the most part derived from the earlier MAJUSCULES, especially from the uncial style, a book hand. They first appeared in Roman manuscripts of the third century CE. Their popularity gradually increased, and in the mature

form of the Caroline minuscule of the eighth century . . . they became the major form of European writing.

(Coulmas, 1999:338.)

Few of us perhaps notice that the lower case b is just a truncated version of the capital B, that the h is just missing a piece; or that the d is a shrunken and turned around version of the capital D, that the y is just a shrunken and moved down version of Y. Like any technology, writing follows the rule of parsimony and tries to use space as efficiently as possible for multiple meanings without distorting them too much.

Sometimes an improvement is created in a backward fashion, like the unanticipated consequences of an action. The beginning of the use of the minuscule script may have had the effect of creating a new punctuation feature. Once all the other letters in a sentence were now minuscule (like lower case), the scribe now could make the first letter of a sentence a majuscule (like a capital), thus creating a new way to indicate a sentence beginning and eliminating the need for a symbol underneath a letter or an empty space to announce the beginning of a sentence. (Chapter 5 will include some more simplification ideas that have been proposed.)

2.12 The Early Middle Ages

Throughout the period after the fall of the Roman empire, oral reading continued to be the norm, and *scriptura continua* continued to be the format

for a page of writing. Only minor changes took place in the appearance of texts, such as the introduction by Cassiodorus in the sixth century of “red marginal notations designed to help the reader find discussions of important topics” and dividing texts into chapters, where spaces were sometimes used in the chapter headings but not in the rest of a text (Saenger, 1982:376).

In 1972, Niles Eldredge and Stephen Jay Gould went to a conference of paleontologists and presented a new idea involving evolution. They intended to point out that there were some glitches in Darwin’s approach to speciation. They had observed situations where gradualism was not always the case. They proceeded carefully, knowing that attempts to alter existing theories might bring an outcry (Eldredge and Gould, 1972:81-115).

They were aware of the ideas of Thomas S. Kuhn, who warned of the dangers of upsetting old theories with new ones, despite their apparent value (Kuhn, 1970:76-77). According to Kuhn:

As in manufacture so in science—retooling is an extravagance to be reserved for the occasion that demands it. . . . The decision to reject one paradigm is always simultaneously the decision to accept another, and the judgment leading to that decision involves the comparison of both paradigms with nature *and* with each other. (Kuhn, 1970:76-77.)

Eldredge and Gould did have their idea criticized, but it managed to survive the criticism. It is now known as the “punctuated equilibrium,” the idea that

sometimes events occur which cause something to take a leap in its development, something “macroevolutionary,” whether it is genetic or technological. As Gould puts it, “the story becomes more like ordinary history in the crucial sense that predictable components, driven by the internal logic of a system, interact with peculiar contingencies to yield a result that none could have anticipated” (Gould, 2007:303).

Apparently, just such a set of peculiar contingencies came together in the British Isles:

The origins of rapid, silent reading lie in the scribal techniques and grammatical teachings that developed in Ireland and England in the seventh and eighth centuries. The first separated Latin manuscript books in western Europe were Irish In eighth-century England, we find grammatical treatises composed in separated script by Anglo-Saxon authors trained by Irish masters that begin to offer direct insight into the pedagogical implications of word separation.

(Saenger, 1997:83-84.)

Throughout first few centuries of the new millennium, English was already in a gradual transformation from Anglo-Saxon to Middle English. After the invasion of 1066, the language of the powerful was French, which was considered culturally superior to the English of the time (Kuteva, 1999: 224). But as French words were absorbed into English, the royalty took a

bilingual approach, and by 1400, English was allowed in the courts and Parliament (Kuteva, 1999:224). In that century, English faced yet another major change, but more suddenly.

Perhaps three more punctuated equilibria that have something to do with writing, but only indirectly, occurred after the beginning of silent reading: some changes in the appearance of letters, the invention of printing, and reading online today. In the millennium after word separation occurred, manuscripts remained places for art work and highly decorated letters. Even after printing began, some complex fonts made even printed materials hard to read. In the twentieth century, finally, some attempts were made to eliminate fonts that were overelaborated and devise some more quickly discernable fonts. Fraktur was eliminated from German printings, for example, and Helvetica, a rather streamlined and now widely used font, was invented. Studies were also done on the differences between serif and sans serif type faces.

Printing created a large audience that was likely more sensitive to the way writing was punctuated and probably made it known, affecting how it was then improved. As Walter Ong put it, "Print gave to visualist organization of thought and to textuality . . . a force unknown before, and in doing so effectively served pedagogical expediency and at the same time dissociated knowledge from discourse and gave it a quasimonologic setting (Ong, 1983:vii).

Locating an idea buried in a text has always been a problem. The first help came from France: “In the late tenth and early eleventh centuries in Reims, Fleury, and Chartes, *résumé* notes evolved into marginal treelike schematic diagrams,” the precursor to our table of contents (Saenger, 1997: 79). Today, one can use a “search” mechanism—if it is available—to find a word anywhere in a digital text located somewhere in the world. Meanwhile, “page” has become a purely spatial term for a quantity of text that fills a screen, and “links” may soon completely replace “footnotes.”

2.13 The Role of Important Individuals in the Middle Ages

Oral delivery was the interest of Quintilian, a first century CE rhetorician, who defined the comma, colon, and period for his day. The period expressed a complete thought, “but the orator must be able to deliver it in a single breath” (Baron: 2001:21-22).

Another person who had an influence on the development of punctuation was Magnus Aurelius Cassiodorus in the early sixth century, who created a program of study for scribes. The use of punctuation was still for pauses, but it was used to indicate meanings of certain words to help locate the meaning of a text. “According to Cassiodorus punctuation is ‘clear pausing in well regulated delivery’ . . . [as well as] a guide to the interpretation of a text” (Parkes, 1993:17).

Isadore of Seville (c.560 – 636) apparently saw writing as a technology that spoke directly to the mind through silent reading rather than being spoken out loud, and he arranged the order of the comma, colon, and period, which had been used in a different way to that time (according to rhetorical principles) for silent reading (Parkes, 1993:21).

In the late eighth century, Alcuin became an assistant to Charlemagne, whose idea was to promote scholarship. Alcuin tried to revive a kind of punctuation which had fallen into disuse involving *distinctiones* and *subdistinctiones*. The symbols involved pauses, but they were placed at different heights in a text based on importance, meaning, and the incompleteness of the “sense” in the body of a sentence (Parkes, 1993:303-304).

After printing started, the need for some kind of punctuation standard was imperative. The solution came from Aldus Manutius, an Italian printer, who chose five symbols for the comma, semicolon, colon, period, and question, intending them to be used in a grammatical system of punctuation. The popularity of this set of symbols spread and was used by many printers. Unfortunately, not all printers used them that way, which once more contributed to the confusion in texts (Baron, 2001:42).

2.14 The Ninth Century Turnaround

The transition away from speech as the model in the use of punctuation thus occurred before the end of the first millennium:

By the ninth century readers and scribes had come to perceive the written medium as an autonomous manifestation of language, which was apprehended as much by the eye as by the ear. Since punctuation had ceased to be solely a form of direction for the oral performance of the written text, more emphasis was placed instead on the identification of marks with pauses in the process of reading silently as well as aloud: such marks enabled readers to recognize the constituent grammatical structures of a Latin text, and to evaluate the roles which these structures played in communicating the message of that text.

(Parkes, 1993:34.)

In an article on the problem a modern editor of a medieval writing faces in representing punctuation, Mary-Jo Arn summarized it this way:

Because medieval punctuation was unstandardized, there is no simple correlation between specific medieval and modern marks of punctuation. Because such marks may, at times, serve to indicate breath pauses, poetic caesuras, the insertions of numbers into text, or warnings to later copyists, they sometimes cannot even be called punctuation in our sense. And of course

different genres of medieval texts enjoyed different punctuation traditions—and some no punctuation at all. Medieval punctuation is therefore a most unreliable guide to modern editorial punctuation of medieval texts.

(Arn, 1994:162.)

John Lennard found the same problem in his examination of punctuation in the twelfth century:

By the twelfth century there was a wide variety of punctuation in use, which is best to regard as overlapping *repertoires* of punctuation, each repertoire being associated with a particular scriptorium or a particular geographical area. These variant repertoires were gradually absorbed into a general repertoire, of which the principal marks were the *punctus*, *punctus elevatus*, *punctus interrogativus*, and *virgula*, approximately corresponding to the modern full-stop, colon, question mark, and comma. These correspondences are of function rather than shape, for the shapes of the marks did not become standardized until the economics of printing led to the emergence of specialized type foundries supplying many printers; and the gradual change of shape still continues. (Lennard, 1991:3.)

The varieties of older punctuation, we can assume then, have a minimal influence on our contemporary punctuation, so it would not be productive to

pursue them point by point. More important was the reason why punctuation was being used at all. But the use of space as punctuation continued to have an important influence. The introduction of space between words clearly did something that went beyond merely an improved ease of reading.

According to Saenger, some practices in the seventh century made for better reading, not only because of spaces, but also because scribes were creating lines of text only ten to fifteen letters in length, thus improving the ability to see and retain a stretch of text better. Modern research on saccades has found that to be about the optimum length for good reading (Saenger, 1982:378). Consciousness of the value of space apparently increased over the centuries. According to Parkes, twelfth century scribes not only left spaces between words but began to reduce the spaces between letters, and they began to use serifs to link letters in words, which probably had the effect of making a word appear more quickly as an independent unit. In addition, punctuation features began to take a more modern appearance (Parkes, 1993: 41).

Once books were put in libraries and chained down in the thirteenth century, silent reading became the norm, a practice still encouraged in libraries (Saenger, 1982: 397). Humanist scribes of the late middle ages invented quotation marks, parentheses, and enhanced capitalization, and their sentences included the comma and period in syntactical patterns (Saenger, 1982:410). Parentheses (known as *lunulae*) were first found in a

manuscript from 1399, and their grammatical place in a sentence and what kind of effect they create have been debated ever since (Lennard,1991:5). Scribes, it seems, were finding more symbols with which to modify the ideas in a text.

2.15 The Great Division

As writing and the teaching of it became more common, factions developed. One group saw writing more as a silent “art” while others saw it more as representing speech. It was in the thirteenth and fourteenth centuries that the seeds for the disagreement about the role of writing may have been planted. What is writing, then? Is writing simply meant to record speech in some fashion? Or is it meant to transmit ideas from one mind to another in a tangible form? The scholastics of the period were leaning in the direction of grammar and logic as guides to understanding the meaning of texts.

Meanwhile, another group had a different idea:

The proponents of *ars dictaminis* in the thirteenth and fourteenth centuries reacted strongly against the scholastic attitudes to language. They were concerned with the whole art of prose composition: to stimulate interest in a correct and elegant Latin, and to put forward rules for the writing of letters in a highly formal and ornamental style. They invoked the oratorical ideal with its aural response to the written word. . . .

Reactions to scholastic attitudes to language were accompanied by reactions against the punctuation found in scholastic texts (Parkes, 1993:44-45.)

Thus, the war between speaking and writing as the preferred model for punctuation may have begun six centuries ago and is still raging.

2.16 The Humanists of the Fourteenth Century

The last major influence on the role of punctuation before the advent of printing involved the humanists:

The humanists were the successors of the dictaminists. Both were equally concerned to encourage the writing of correct and elegant Latin; both favored the epistle as a vehicle of communication. (Parkes, 1993:46.)

Latin, which had been the language of scholarship for at least 1500 years already, was of course the proving ground for experimentation in punctuation. The vernaculars could imitate the Latin approach to punctuation of the humanists or find their own way. The humanists revered some works of Cicero. Nostalgia set in, and the humanists tried to emulate his style:

His letters provided them with new models, new ideas, and new ambitions. In their own letters they began to write of their experiences and opinions in a subjective manner in the first

person. By imitating the works of ancient classical authors, and by appropriating their attitudes, the humanists sought to recreate ancient ideals. (Parkes, 1993:46-47.)

The resulting confusion led to the development of new marks, which began to appear around 1400 CE. The semicolon may have made its debut around that time as a compromise: it was half colon and half period; perhaps something between a comma and a complete stop.

2.17 The Modes of Medieval Punctuation

Parkes' assessment of punctuation of the middle ages is that it took two different directions: diectic qualities or equiparative qualities. Diectic was likely to produce different interpretations of a text in different copies, while equiparative was likely to produce more uniform texts. For example, in two texts of the deictic type, "the punctuation has modified the 'dynamics' of the same text to achieve different, specific interpretations, although inevitably there are overlaps between them." But in the equiparative texts, the "extensive pointing can indicate grammatical or rhetorical structures in more detail than diectic punctuation [and] the frequency of the punctuation marks makes it easier for a reader to construe the text . . ." (Parkes, 1993:71). A third way, a "neutral reading of a text," was achieved by "indicating only the most basic divisions of the text—paragraphs and *sententiae*—leaving the rest unmarked" (Parkes, 1993:71-72). Most important to the scribes, he believes,

was “to elucidate sense” and involve grammar or rhetoric only if necessary to achieve a certain interpretation (Parkes, 1993:72).

Arguments about whether or not punctuation was an accurate reflection of speech in the writing in Latin was not an issue in the middle ages because there were really no longer any native speakers of it. But the ideas of the humanists about punctuation continued to hold sway even during the early days of printing.

The most important difference that occurred when printing began was that all the copies of a text in a print run had the same punctuation. The focus could now be on the punctuation itself and the reason for doing it, not the individual behavior of an author, scribe, or orator. The earliest printers, according to Parkes, used the punctuation they found in the manuscripts, but some standardization began to occur in the fifteenth century already. Having arrived late, the semicolon was not treated with as much courtesy as other symbols, but it became a favorite some time later. “By the 1580s there was clear evidence that compositors were responsible for introducing punctuation marks—especially the semi-colon—to replace others indicated in an author’s copy” (Parkes, 1993:53). The technicians had begun to exercise their role as modifiers of the technology.

2.18 The Impact of Printing on Punctuation

Like anyone who tries to spread a new idea or a new technology, there is always the thought of how the users of the old ideas and technology might respond. Why William Caxton in 1476 set up his press in Westminster instead of London has been a topic for discussion ever since. Some have speculated that he did not choose London because “the stationers and professional copyists who were already entrenched there would not welcome a printer, whose ‘black art’ might threaten their livelihood” (Childs, 1976: 150). A more likely reason was probably that he thought Westminster would be a better neighborhood for selling books (Childs, 1976:152).

Consider the problems he faced: setting up machinery, finding people to set type and run the machine, selecting manuscripts and editing them to prepare them for print, and still having to worry about things like punctuation. According to Saenger and Heinlen, “The late incunable printer, by establishing a close and rigorous control over punctuation and nuances of meaning that flow from punctuation, became . . . an editor in the modern sense of the word” (Saenger and Heinlen, 1991:255). Readers apparently began to accept the editing role of the printers and did less to repunctuate printed books:

Throughout the Middle Ages, readers, even long after a book had been confected, felt free to clarify its meaning through the addition and modification of *prosodiae*, punctuation, and

marginalia. Under the influence of printing, reading became increasingly an activity of the passive reception of a text that was inherently clear and unambiguous.

(Saenger and Heinlen, 1991:253-254.)

In effect, there were two versions of punctuation in operation at the time, one for Latin, which was taught in the schools, and one for vernacular English, which was not taught in the schools and was less systematic; add to this the variety of kinds of English Caxton faced: The Old English Bible, Beowulf, Chaucer, and Wyclif's Bible (Bolton, 1982:178):

So there were three kinds of punctuation represented among the four texts. Both Old English manuscripts were almost unpunctuated; the few marks of punctuation were so infrequent and sporadic that their absence would make no difference to the understanding of the text. (Bolton, 1982:178)

According to W. F. Bolton:

Caxton was the inheritor of over a thousand years tradition about punctuation, most of it based on the needs of breathing but with increasing attention to elocution and syntax. Within less than a hundred years after his death in 1491, punctuation had altered to a system that is even now clear to modern readers. (Bolton, 1982:180.)

Thus, another punctuated equilibrium had taken place. But Bolton was perhaps too optimistic. In the next centuries, two different theories for the use of punctuation developed. Some standardization did occur, however, and some new features were added.

An Italian printer gets a lot of the credit for the changes that took place, including the arrival of parentheses:

Lunulae were included in the fonts designed by the great humanist printers, notably Aldus Manutius and Pietro Bembo, and were disseminated in print, reaching England in 1494.

(Lennard, 1991:5.)

A work in Latin containing the parentheses, *Opus Grammaticum* by Sulpitius defined “five types of punctuation—full-stop, question-mark, virgula, colon, and lunulae—and provides examples of each mark . . . “ (Lennard, 1991:5). This was probably not lost on the printers, and things began to change in the punctuation of English printed work.

2.19 Syntax vs. Rhetoric: The Theoretical Argument

The standardization of punctuation got a boost in the mid-1500s from two publications by John Hart in 1561 and 1569 which provided detailed recommendations for using punctuation, but his descriptions mixed rhetorical and syntactic descriptions, assigning different lengths of time to pauses for different features in musical terms (Salmon, 1999: 22).

At about the same time, the son of Aldus Manutius published a document on punctuation in 1561 that got great interest, *De ratione interpungendo*. (The work can also be found with a slightly different name, *Interpungendi Ratio*, and in translation, in *Punctuation: Its Principles and Practices* by T. F. Husband and M. F. A. Husband. They identify it as part of a long treatise on orthography. Their version is seven pages long. The examples in their translation seem reasonable, but the punctuation in any translation could be problematic. See Chapter 3.)

According to Mindele Treip:

The period between about 1580—1680 . . . witnessed a particularly marked evolution away from rhythmical and oratorical, or sometimes theatrically dramatic, concepts of syntactical design, concepts which encouraged individuality and flexibility of expression, toward more logically and grammatically oriented views. The approach was increasingly to the ideal of ‘correctness’ in writing: toward regulating all aspects of composition toward universal and logically fixed standards. Altered practices in punctuation are among the features which reflect these changes.

(Treip, 1970:x-xi.)

Over the centuries since Caxton, a good number of documents which include advice on punctuation were published, many of them significant

grammars that were popular in their own time. Between 1500 and 1800, many arguments took place over certain punctuation features and their placement in a sentence. Authors lined up on one side or the other of the rhetoric-or-syntactic argument or didn't care to decide between them.

Scholars looking at different periods after 1500 tend to come up with different views of the rhetoric-or-syntactic argument. Walter Ong surveyed seven publications printed between 1582 and 1692 in search of the policy they might support:

Mulcaster (1582), Puttenham (1589), Heywood (1612), Gill
(1621), Butler (1634), Daines (1640), Jonson (1692)

Virtually all of them mentioned breathing or rhetoric in reference to punctuation. According to Ong :

the most telling characteristic, then, of Elizabethan and
Jacobean punctuation theory remains the fact that it never cut
itself loose from the traditional view of punctuation as basically
a physiological rather than either an elocutionary or a
syntactical (logical) device. (Ong, 1944:360.)

Here and there one person stands out. Arguments about the number of punctuation features and where they should go seemed to involve all the commentators. Sometimes curious distinctions in punctuation features were made. For example, John Hart subdivided those points having a correlation to *spoken* language into two types:

- (a) those representing pauses in speech
- (b) those representing intonation: those were the marks of
interrogation, exclamation, and parenthesis

(Salmon, 1988:298.)

Salmon believes that the rhetorical view dominated the eighteenth century (Salmon, 1988:295). She surveyed a number of grammars of the time to find out if it were true:

Hart (1551), Morley (1597), Hume (1617) , Butler (1636), Daines (1640), Lewis (1672), Luris (1672), Clare (1690), Aickin (1698), Brightland (1711), Kirby (1711), Mattiare (1712), Watts (1721), Kames (1762), Sheridan (1762), Lowth (1762), Steele (1775), Cockin (1775), Steel (1786), Bayly (1789), Murray (1795), Cockin (1775), Walker (1785) Fogg (1796)

(Salmon, 1988:passim.)

Salmon determined that perhaps most of them, except for Brightland, who was somewhat uncertain, ascribed to the rhetoric approach. Attempts to classify features according to some pattern of use also occurred in these books—and are still occurring, judging from any survey of writing handbooks.

In the later decades of the eighteenth century, the war of the points apparently began, and attitudes toward punctuation changed more quickly:

During the period c.1789-1824 the grammarians evolved no consensus about punctuation, but their exchanges sharpened

the quality of analysis. By mid-century many significant typographical conventions . . . had been established in that particular combination which still widely endures.

(Lennard, 1991:144.)

Greta D. Little disagreed to some extent with the findings of Salmon, who apparently saw a slow but continuous drift toward rhetorical punctuation. Little also saw a drift, but beginning in the 1600s, toward grammar, which culminated by 1850 (Little, 1984:371). Little claims not two but three traditions were developing: “rhetorical, grammatical, and typographical” (Little, 1984:372). The rhetorical was concerned with sound and emphasis and had no hard and fast rules; the grammatical, which has to do with sentence structure, has fairly rigid rules; the typographical has to do with “the history and development of printing and the division of labor between author and printer in matters of punctuation” (Little, 1984:372). She believed that the works of twentieth century scholars contributed little new information to help us understand punctuation, but listed some exceptions (a few of which will be reviewed in Chapter 3).

2.20 Punctuation in Concert with Music

For two thousand years prior to 1700, writers and had already been looking for some way to characterize the use of punctuation. When it was related to elocution, there was little room to question its need. But when documents

were gradually used less and less for oral delivery, the justification for punctuation became a troublesome question because someone had to make a decision about why and where to insert symbols into a text. Reading out loud could still be used as a practical reason for using punctuation, but silent reading changed things. Now a reader needed punctuation to help understand a text. Meaning rather than delivery had suddenly become more important, but, for some unknown reason, readers were not able to recognize that they were “looking” at language and not “hearing” it. The result was the search for abstract principles that might explain and help sort out and justify the use of punctuation. Every abstraction in the trivium, for example—grammar, rhetoric, logic—was mined for justifications for punctuation, but not one of them could fully explain its purpose. Readers and scholars kept trying to find ways to make them work, however.

After printing, the choices between two features of the trivium, grammar and rhetoric, were the final contenders. But around 1700, another paradigm was proposed: music. According to Stephanie D. Vial, in her dissertation, *Take Pause: Musical Punctuation in the Eighteenth Century*, the analogy of music and language seemed evident. Both used syntax and phrasing; longer units in music resemble some in written form. The sonata has a beginning, middle, and end, just as an essay does. Perhaps music, with its semidemiquavers and Gestalt-like forms, could be used to explain punctuation and return it to an earlier day as a help in both oral delivery and

reading. (Leonard B. Meyer, in *Emotion and Meaning in Music*, discussed the applications of Gestalt to music and found it wanting, however (Meyer, 1958: 85-86).)

Serious attempts were made between 1700 and 1850 to ally music and the other parts of the trivium, logic and rhetoric, to writing, but before the end of the nineteenth century, all of them were trumped by grammar.

2.21 The Triumph of Technology

Three authors who have tried to make some sense of the feud between the advocates of the rhetorical and the syntactic approaches to punctuation and the changes they may or may not have brought about are Park Honan (1960), David Cram (1989), and Karsten Schou (2007). In reviewing the history of the feud, each came to some kind of conclusion. Honan believes that the syntactic theorists won, partly because of books published by the Wilson company.

Cram is not sure that a battle even existed: “The supposed conflict between the rhetorical and syntactic principles is either spurious, or has at least been blown up out of all proportion” (Cram, 1989:310). Schou took a common position of many writers between 1600 and 1900: “The general experience is that syntax has been central at least since 1600, although prosody played and still plays a certain part” (Schou, 2007:213).

In spite of Cram’s view, publications that were beginning to emerge during the nineteenth century that had something to do with punctuation

tended to make the argument clearer and imply that the grammaticists had won the argument. It was not so much what the proponents of the grammatical approach were saying as much as the way they were saying it and who was saying it that seems to reveal something.

The Wilson printing company might have become interested in publishing their own book on punctuation as a result of their printings of the grammars of Lindley Murray, whose works became quite popular around 1800. The first edition came out in 1795 and others followed. Murray's grammars had large sections on punctuation, and the books themselves were over four-hundred pages in length. Murray was careful about how he treated punctuation, apparently aware of the arguments about what kind of principles controlled it. In the third edition of his grammar of 1816, he was careful to avoid conflict by adopting a compromise:

As punctuation is intended to aid both the sense, and the pronunciation of a sentence, it could not have been exclusively discussed under the part of Syntax, or of Prosody. The nature of the subject, its extent and importance, and the grammatical knowledge which it presupposes, have induced us to make it a distinct and subsequent article. (Murray, 1816:389.)

(Strangely, a printer's guide published in the United States in 1818 by C. S. VanWinkle quotes Murray's careful approach but then talks about pauses.)

Perhaps the Wilson company saw an opportunity to profit from an interest in educational books at the time. Their work titled *A Treatise on Grammatical Punctuation*, by John Wilson, was first available in short form in 1826 and went through at least thirty-two editions by 1899 under the name *A Treatise on English Punctuation*. Wilson's introductory remarks reveal that he was not afraid to take on the proponents of the rhetorical approach and others:

We would not overrate the importance of Punctuation, or deny that many subjects are worthy of a higher regard, and have a more immediate and vital influence on the well-being of society. . . . It is intimately connected with the principles of grammar; subservient to the purposes of syntax; essential to the clearing up of ambiguities, which so often obscure composition; and useful to the more ready understanding even of those sentences whose construction is not liable to the charge of obscurity.

(Wilson, 1864:3.)

The Industrial Revolution was likely an exciting time for proponents of punctuation as well as people manufacturing machines. A book by S. Rousseau in 1813 also promoted the grammatical approach:

The grammatical construction of a language, which ought to be the basis of Punctuation, has seldom been considered as adequate to the purpose: too much accommodation to the reader,

and too little attention to the Rules of Grammar, have usually been the sources whence the doctrine concerning the points has been deduced. But such principles, with defence to those Gentlemen who adopt them, we can conceive to be erroneous however specious; as indeed must be all systems that are founded upon varying authority. . . . Punctuation should lead to the sense; the sense will guide to modulation and emphasis. When Punctuation performs its office thus, it will point out likewise the grammatical construction of a sentence; for the sense of a passage and its grammatical construction are inseparable. (Rousseau, 1813:31-34.)

Rousseau's interest in promoting the concept of punctuation seems obvious. The book begins with a twenty-nine page history of punctuation with references to books he had studied at the British Museum.

A century later, the grammatical approach is still strong. Printer Theodore Low DeVinne, in his 1902 book on punctuation, is not afraid to debunk some of the old practices while he is promoting the proper views:

The function of points is to make expression intelligible. Punctuation tries to do this by separating the words that are not closely related, and by keeping together those that are related. Incidentally points justify rules of grammar, but the demonstration of those rules is not their first purpose. Points

have small elocutionary value. The old teachings that there should be one pause in the voice after a comma, two pauses after a semicolon, three pauses after a colon, and four pauses after a period, are now generally condemned.

(DeVinne, 1902:245.)

The tenor of the time was probably that expressed by Wilson in his 1844 edition, and Wilson probably deserves the last word on the issue of punctuation in his time:

Notwithstanding, however its utility, Punctuation has not received that attention which its importance demands. Considered merely as the plaything of the pedant, or as the peculiar function of the printer, it is often neglected or perverted by those who have occasion to present to the eye either their own thoughts or the thoughts of others.

(Wilson, 1844:4-5.)

Wilson proceeds to take on the grammarians, the lawyers (who garble the law by leaving out the punctuation), the painters, engravers, and lithographers, the letter-writers, as well as the people the printers publish:

Even the author—who, of all writers, ought to be the most accurate—not infrequently puts his manuscript into the printer's hands, either destitute of grammatical points, or so

badly punctuated as to create a needless loss of time to the
composer. (Wilson, 1864:5.)

We can wonder if any of the handbook writers of the twentieth century
happened to notice what Rousseau, Wilson, and DeVinne had to say.

2.22 Conclusion

Thus, we arrive at the twentieth century with a relatively stable set of
symbols for punctuating written English yet a difference of opinion about how
those symbols perform in a text. But people were at least beginning to take
an interest in looking into what the underlying principles were in their use.
In chapter 3 we will examine some of the linguistic studies of punctuation in
the period that was labeled The Century of Progress to see if there was any
breakthrough in the views on the purpose for punctuation and how it
accomplished that purpose.

Chapter 3

Punctuation Scholarship in the Twentieth Century

3.1 Introduction

When you are looking to understand an entity, you usually want answers to some basic questions. How is it defined? What does it consist of? What is its scope? What makes it work? The existing scholarship on the entity also shapes your search for understanding. You can accept what already is believed and go on from there, or you can locate a new paradigm. At the close of the nineteenth century, there were basically the two approaches to punctuation that were available and being debated on and off: the rhetorical approach and the grammatical approach. Most studies before 1900 had accepted one or the other and did some variation on the use of punctuation that did not really answer or deal with any of the basic questions.

It is not unusual to encounter the complaint in some book or article that not enough is being done in a certain field of study, but to find that comment bridging two different centuries speaks to the neglect that has occurred in that field. It turns up 150 years apart:

Punctuation has not received that attention which its
importance demands. (Wilson, 1864:4.)

. . . punctuation has much to contribute to language processing
by both humans and computers. However, perhaps in part

because of these difficulties, there has been surprisingly little research in the area. (Doran, 1998:1.)

This kind of comment occurs in other studies of punctuation as well, and it says something about the lack of serious interest in the principles behind its use. A lot of it had to do with the state of linguistic studies during the early part of the century, but some may also have had to do with the belief that one of the views concerning punctuation had already been accepted more widely and that there was no longer any need to do any serious research.

3.2 A Century of Little Progress

Writing itself was not being treated very well by noted linguists in the twentieth century, and books that were used for teaching punctuation seem to have simply accepted one or the other of the major theories in describing how to use punctuation without entering the debate. The surprising thing about the twentieth century, then, was that it did not add much to our knowledge of how punctuation works. First of all, there are very few books that could be called scholarly studies of punctuation. There are only two in the twentieth century that use the word “linguistic” in their titles. Even those books seem reluctant to get completely immersed in all of the possible answers to the way punctuation might be linguistic by limiting the scope of their research in some way. Perhaps the best two books about punctuation published in the century came out in 1905 and 1990. In between, there are

few published works that add to our understanding of punctuation as a linguistic feature. The 1990 book, by Nunberg, did not spawn more books on punctuation immediately, but it did stimulate some interesting research that ended up in dissertations instead.

There are, of course, many “how-to” books on punctuation and many that are simply entertaining. There are a number of scholarly books on just one limited area of punctuation, perhaps one feature, the punctuation of one author, or how to teach it, some of which will be mentioned briefly below. On the other hand, there were a number of dissertations on various aspects of punctuation that did not get published in book form, but most of them seem to have tried to avoid the major debate and deal with uncontroversial features. Otherwise, the vast majority of books on punctuation that were published were books that did not discuss the linguistic aspects of punctuation although they might preface their lessons with some brief discussion of the issues.

3.3 Published Works on Punctuation in the 1900s and early 2000

3.3.1 *Punctuation: Its Principles and Practices*, by T. F. Husband and M. F. A. Husband, published in 1905, is really like no other book on punctuation. It begins with a single sentence written originally by Thomas De Quincy in his *Confessions of an English Opium-Eater* but shown in *scriptura continua* form. It is a “cumulative” sentence of eighty-six words held

tightly together in majuscules with no punctuation and is considerably hard to read. (De Quincy's original version, which is in an appendix, used one capital, one exclamation, three dashes, one semicolon, four commas, and one point for an abbreviation.) The first few lines look like this:

HOWPAINFULTOSEEORTOKNOWT
 HATVASTREVELATIONSOFGGRANDE
 URANDBEAUTYAREWASTINGTHEM
 SELVESFOREVER . . .

(Husband and Husband, 1905:2.)

The point that the Husbands were trying to make about the value of punctuation got made very quickly.

The first fifty-three pages of their book are a history of punctuation ending at about 1900. Recognizing the dominance of Latin in the history of English and its development, they chart the problems along the way that involve punctuation. Not until Alfred the Great's efforts to get English translations made do things begin to improve. The difference between Latin, an inflectional language, and English, a word order language, causes problems. English, it turns out, probably needs more punctuation, but there is little uniformity in its use.

A major shift in the use of punctuation occurs after the start of printing. But Caxton, perhaps the best-known of the early printers in England, seems to have had no system for punctuation and used only the

comma, semicolon, and period. The picture changed when a document by Aldus Manutius, an Italian printer, circulated in Europe. It set forth a coherent system that got adopted widely.

To fill in the gap to the present, the Husbands include twelve brief summaries of books on punctuation from 1617 to 1859 and provide each writer's approach to punctuation theory. The on-going debate between the rhetorical and grammatical theories is mentioned, of course. They note that the sentence as a form is frequently a part of discussions of punctuation, perhaps implying its importance in the future for punctuation changes. Their final summary is only partly hopeful:

Grammatical classifications and rules tended towards absolutism. This, we take it, is one reason for the revolt from strict constructional punctuation that is noticeable in the latter part of the nineteenth century. But the chief reason is to be found in the fact that *a return to more native forms of expression has made heavy constructional punctuation unnecessary.*

(Husband and Husband, 1905:52.)

They devote a chapter each to the full stop; exclamation and question; comma; semi-colon and colon; and the dash, parenthesis, and quotation, using examples from various writers to show how each feature is used.

The real bonus to the book, however, is the inclusion of a translation of the *Interpungendi Ratio* by Aldus Manutius, the document that may have spurred the standardization of punctuation among printers. They claim their translation is close to the original punctuation. (However, there are at least two ways to translate a document: by word or by meaning. Either way, it may not be able reveal anything about the way the punctuation is used because it is likely to be different from one language to another.) The document does contain one each of a comma, semicolon, colon, capital, and question symbol.

Their approach to punctuation is that it is an “aid to intelligibility” and:

The difference between good pointing and bad is, in such a theory, mainly a question of degree, rightness being determined by adherence to the precise degree of minuteness with which we decide to break up a sentence

(Husband and Husband, 1905:127.)

The Husbards did provide a service by including the *Interpungendi Ratio* by Aldus Manutius as an appendix because it is otherwise difficult to find. It is surprising that the book was never reprinted, because it provides a brief but thorough background to the current punctuation climate at the time, but it is presently available as a free EBook through Google.

3.3.2 *Modern Punctuation: Its Utilities and Conventions*, by George Summey, Jr., is lengthy and puzzling. He seems at first to take a very liberal approach to punctuation. In the Preface, we are told that “The so-called rules of punctuation, as a general code for all conditions, have not worked (Summey, 1919:vii). This is supported later when he says “The current rules, moreover, are too numerous and too rigid” (Summey, 1919:2). Later we are told that “There is no single working principle. In cases of punctuation it is necessary to apply one or more of several considerations. There are questions of custom, clearness, emphasis, movement, economy, variety—sometimes even of appearance on the page” (Summey, 1919:4).

Even the way of identifying the symbols comes into question:

The use of the term to mean a punctuation mark is practically obsolete; and punctuation in the rare sense of observing stops with the voice is aside from the present purpose. Punctuation marks are meant for the eye. Though they may convey suggestions of intonation and vocal pauses, that is not their usual purpose. (Summey, 1919:19.)

By the time we get to page six, we find out that “Punctuation is not a matter of mechanical correctness: it is an art” (Summey, 1919:6). With that, we expect that Summey will be about to adopt an aesthetic approach to punctuation, but he doesn’t.

Instead, the “rhetorical nature of the marks must be insisted on, because the grammatical viewpoint—legitimate in itself—has laid emphasis upon formal syntax rather than upon communication” (Summey, 1919:31). We are told that “The inaccurate and misleading classification of punctuation marks into grammatical and rhetorical points, or into grammatical and grammatical-rhetorical, is still current” (Summey, 1919:24). He also rues the separation of punctuation from the rest of writing in textbooks and instead sees it as a feature that is used in paragraphs, and he devotes a few chapters later to a discussion of paragraphs and the way sentences are involved in them.

Summey then gets immersed in the grammatical vs. rhetorical argument and, during a lengthy examination of just about all the punctuation features one by one and offering evidence from a variety of writers, he finds most of them to be clearly rhetorical. He also mentions a number of earlier works on punctuation and finds agreements and disagreements with them in how punctuation functions. He also offers another definition: “Punctuation marks are signs which indicate the relationship and character of the words which they precede, enclose, or terminate” (Summey, 1919:20). But we are not sure how this applies to his discussions of the individual punctuation features. The definition is difficult to apply, except that we should probably look for some kind of rhetorical

consideration in a situation and use it for punctuation. A later definition of it also leaves us confused:

Rhetorical means aiding or defeating in whatever degree any of the aesthetic or practical aims of writing. More specifically, it means aiding or hindering communication in respect to clearness, economy, ease, agreeableness, force, persuasiveness, or whatever may be desired. A rhetorical use of a point is simply an instrumental use; instinctive perhaps, but in its degree effective, whether for or against any of the purposes of writing.

(Summey, 1919:26.)

The goal of the final chapter is “to point out some facts about the frequency of punctuation marks in representative current books and periodicals” (Summey, 1919:241). The punctuation features used by a variety of popular writers are counted and compared, apparently to see how the use of certain features influences their styles, but no conclusions are drawn from the data.

Summey deserves some praise for three comments he made along the way: “Punctuation marks are made for the eye” (Summey, 1919:19). “White space judiciously employed makes communication easier and more pleasurable” (but he assigned it no role) (Summey, 1919:26). “Often the only way to avoid an awkward pointing is to revise the phrasing” (Summey, 1919:

23). Of course, he is right about revision. Too often, punctuation gets the blame when a complex construction should have been rewritten instead.

Summey's first book on punctuation is like a bellwether of some coming discussions of punctuation theory. It struggles to prove punctuation belongs to one class but is always mentioning another one, as if there is continued uncertainty about the accuracy of the classification. The evidence that seems to lurk in the background of his discussion is that it is difficult to reject one approach to classification completely and adopt another one.

3.3.3 Summey's second book, *American Punctuation*, seems somewhat bolder. It is "a study of punctuation in its relationship to the art of writing" (Summey, 1949:v). His opening definition reminds us of a hundred handbooks, though it includes one wrinkle: "Punctuation is the use of conventional marks for the purpose of making written matter clear at sight" (Summey, 1949:3). He classifies the kind of writing he will study as prose, but not fiction or advertising. He also omits from consideration any feature that alters the appearance of a grapheme, such as capitals, italic, font appearance, and the like.

Mostly he is interested in "structural punctuation," which he identifies as "paragraph breaks and the various marks used between or within sentences to make a writer's meaning clear at sight" (Summey, 1949:v). It includes the usual features of punctuation that are found in the horizontal or

syntactic line of a sentence (. ? ! , ; : -- () [] . . .). “Punctuation,” we can recall now, “is primarily for the reader’s eye, with only partial correspondence to the movement, stresses, and inflections of speech” (Summey, 1949:6).

Summey tries to cancel out the old ideas, but only partly: “The various marks have no definite pause values, and even relative values are variable”

(Summey, 1949:7). He claims that the old approach to punctuation as related to oral reading is unworkable:

All the marks have rhetorical effects, and all of them do their part in making grammatical relations clear—not for the sake of grammar but for the sake of meaning. They are grammatical because they help to make clear the relations between sentence members, between expressions in series, between a noun and a following descriptive modifier, etc. At the same time they are rhetorical because they are useful for clearness and emphasis.

Bad punctuation, of course, is bad rhetoric.” (Summey, 1949:8.)

At this point, we are uncertain about where the lines are drawn. This seems like a compromise—or a unity. Punctuation, he maintains, should be seen as part of the writing process, and paragraphing is also a kind of punctuation (a view that some later writers refer to as “macro-punctuation”). He anticipates Joan Persily Levinson’s definition of the “orthographic sentence”:

A sentence is a group that properly begins with a capital (not following an interior mark such as a semicolon) and ends with a period or other terminal mark. (Summey, 1949:23.)

A large area of the book is devoted to how the “structural” points operate in a sentence, including all of the syntactic symbols mentioned above, along with samples of writing and comments on these features by other writers. Some space is devoted to morphological features like the hyphen, apostrophe, and the abbreviation dot, in a deviation from his attention to “structural” points.

Again, we have a final chapter that involves “quantitative” information about how various writers and various publications use many of the points, but he admits that it is “too small a sampling of any single writer or periodical to warrant sweeping conclusions about the general practice of that person or journal” (Summey, 1949:157).

In both of his books, Summey appears to be unable to forget about the two opposing approaches to punctuation that competed in the previous five hundred years and seems to be trying to resolve the argument by isolating different groups of symbols and allying them with both rhetorical and grammatical responsibilities in some way. His arguments never quite seem to come together as a unified theory around a single concept.

3.3.4 In 1987, Charles F. Meyer published *A Linguistic Study of American Punctuation*, a book version of his dissertation. The study was limited to American writing and was based on a collection known as the Brown Corpus, from which he selected twelve samples in three styles totaling 72,000 words. He used the approach of Summey in his 1949 work and intended to only look at “structural punctuation,” which would consist of periods, question marks, exclamation points, commas, dashes, semicolons, colons, and parentheses (Meyer, 1987:xiii).

Features like paragraphing, apostrophes, hyphens, brackets, ellipsis, quotation marks, underlining, or other incidental uses of punctuation, in dates, for example, were not included in the study. (By using Summey’s approach, though, some other features that affect graphemes and morphemes were also excluded,)

Five earlier studies were investigated to establish a taxonomy for the study. Those studies produced a list of ideas that punctuation might do: terminate, introduce, separate, enclose, combine, join, and insert. It was decided that, broadly, there are two major concepts at work in punctuation: separating and enclosing. The features that separate are: ? ! : and sometimes – , (Meyer, 1987:4). The features that enclose are: , – () (Meyer, 1987:6). Boundaries that the features functioned in are: syntactic, prosodic, and semantic (Meyer, 1987:8)

Meyer decided that an important issue to consider had to do with the three functions. “In other words, why does punctuation separate and enclose syntactic, semantic, and prosodic boundaries?” (Meyer, 1987:11.) Meyer decided that American punctuation was conventional and that the uses of the features were dictated by the three boundaries identified (Meyer, 1987:15).

The remainder of the book is a chapter each devoted to documenting the three boundaries and including examples from the Brown Corpus for each one. Another chapter is devoted to “violations” of the norms and one to the way style manuals approach the subject of punctuation. Meyer does not come to any major conclusions about the totality of the subject of punctuation but lets the examples speak for themselves. He does offer conclusions at the end of each chapter which provide some wrap-up for each function. For example, for the syntactic function he offers this:

Punctuation has various syntactic functions. Because the marks of punctuation are hierarchical, they interact in various ways to distinguish subordinate from superordinate boundaries.

Moreover, punctuation is a device that serves to segment syntactically lengthy and complex constituents, particularly compound sentences and adverbials heading sentences, subordinate clauses, and the second main clause of a compound sentence. (Meyer, 1987:38.)

The other chapters have similar conclusions for their function or topic.

Certainly, these conclusions are not that much different from what one might find in a good manual devoted to punctuation, but the advantage here is that Meyer provides the evidence immediately to prove the point.

The disappointing aspect of this study, like others, is that once again only some of the features of punctuation found in a text are being looked at and assessed for their use. No attempt is made to locate a single, underlying reason for punctuation in the first place. Part of the problem is that so little information about the linguistic aspects of punctuation is available. We can imagine that Meyer did the best he could with what was at hand by preparing a taxonomy from sources that were both reasonable and available.

3.3.5 Perhaps the most referenced book on punctuation, one which also appeared close to the end of the twentieth century, was *The Linguistics of Punctuation* (1990), by Geoffrey Nunberg. Like other writers on the subject, Nunberg laments the treatment punctuation has received, even at the hand of other linguists, and supports the study of it and writing, saying that it “should no longer be necessary to defend the view that writing is truly language . . .” (Nunberg, 1990:3). He argues that “punctuation is in fact a linguistic subsystem, and hence to be considered as part of the wider system of written language” (Nunberg, 1990:7). Furthermore, “viewed as a whole, the system has no analogue in the spoken language . . . except for a few

overlapping devices,” and should be thought of “as a part of the study of graphical representation in general” (Nunberg, 1990:9).

Nunberg airs and discounts two views of punctuation that have prevented more scholarship—the “intonational” and the “transcriptional” approaches that try to claim that writing is a poor imitation of speech at best (Nunberg, 1990:11-13). Rather, he says, we should approach punctuation as “an autonomous system that admits of study in its own terms” (Nunberg, 1990:15). He claims that punctuation should be thought of together with other graphical features, including font alternation, capitals, indentation, and spacing, all of which should be labeled as “text-category indications”. These indications can have three functions: they delimit, separate, and distinguish (Nunberg, 1990:17).

Nunberg focuses on general kinds of writing below the level of the paragraph and puts aside special items like block quotes and bulleted lists. He sets up two grammars to make his points in the discussion that follows: a text grammar (which is a form that relates to discourse analysis) and a lexical grammar (“which is responsible to describe the dependencies that obtain among lexical items in the text”) (Nunberg, 1990:19). From this point on, he really deals with only what he calls the “text-sentence” and defines it as “that unit of written text that is customarily presented as bracketed by a capital letter and a period . . .” (Nunberg, 1990:22). In other words, it could be a phrase, a NP + VP sentence, or some variety of compounded sentence(s)

(Nunberg, 1990:22). (This is also roughly equivalent to Levinson's orthographic sentence.)

A chapter is devoted to a number of "text-category" adjuncts: colon-expansions, dash-interpolations, and parentheticals, paying most attention to the places where they occur and how they interact with the comma in the lexical grammar which (we recall) can delimit, separate, or distinguish. Using these categories, Nunberg explores how the regular punctuation features (fonts, other type manipulations, and spaces) interact.

Perhaps his most useful (though seemingly obvious) observation is the sequencing constraint: "no more than one point indicator (i.e., comma, period, semicolon, dash, or colon) can be presented in sequence in any given position" (Nunberg, 1990:57). He also speaks of an "absorbtion rule," under which features of different types occurring in the same location have a certain order of precedence" (Nunberg, 1990:57). Parentheticals and quotations obey special ordering rules as well. This culminates with a series of rules which dictate the order in which punctuation features are placed (Nunberg, 1990:70).

The standard symbols, incidentally, can be viewed as affixes or clitics attached to a neighboring word—the comma being an example of a left-cliticizing mark because "the comma is treated as an inseparable part of the word to which it is attached" (Nunberg, 1990:58). Generally, Nunberg's approach is based on assigning specific rules to each punctuation feature and

stating rules for how they all interact. A later chapter provides examples of how some punctuation functions in certain genres, such as recipes, and takes a more “discourse” approach to punctuation.

In his conclusion, Nunberg points out that sentences of previous centuries followed different patterns than those of today and included punctuation in different ways. He warns that attempts to modernize the punctuation of older manuscripts are usually misguided and destructive of historical information (Nunberg, 1990:131).

In general, Nunberg’s work involves the “how” of punctuation more than the “why.” The different punctuation points operate and interact according to sets of rules he mostly invented. His approach involves mainly discourse and the sentence in particular. Nowhere is there a mention of a phoneme or a morpheme. But his discussion of absorption rules stands out as a valuable concept. It is a concept that never seems to be found in indexes to help people understand why one feature of punctuation is allowed to swallow another.

3.3.6 The most recent book involving a study of punctuation is *Punctuation as a Means of Medium-Dependent Presentation Structure in English* (2013) by Sebastian Patt. The first problem we have is determining what is meant by a “presentation structure.” Jürgen Esser, who was the inspiration for Patt’s work, put it this way in an article he wrote:

Quite generally, presentation structures are the result of stylistic choices in encoding at the level of form and substance.

(Esser, 2000: 1524.)

The next term we need to define next is “medium-dependent.” A feature can be medium-dependent or medium independent. Since punctuation functions only in writing and not speech, it is medium-dependent.

Patt cites a variety of scholars who took the position that punctuation is essentially rhetorical, thus opening the door to a discussion of punctuation from that point of view. Punctuation marks, we are told, “can be understood as ‘indices’ in a basic semiotic sense. They predominantly convey paralinguistic material” (Patt, 2013:10). (Studies involved with paralanguage usually put punctuation in the same category as all the nonverbal communication discussed in relation to speech.) So now every punctuation event, apparently, “can be described as an interaction of (at least) two expression systems, with each system having its own distinctive units of analysis” (Patt, 2013:85.) The two could be the punctuation and the language, perhaps (both form and content?).

But punctuation also needs definition:

In the present study, the term “punctuation” is synonymous only to “segmental marks”, i.e. to a set of non-alphanumeric

characters that supplement the typographic realization of the medium-independent word-forms. In principle it is therefore limited to the orthographic sentence. (Patt, 2013:94.)

The orthographic sentence plays an important role in Patt's analyses, just as it has in some others. Punctuation marks "should, at least partly, function as graphic sign posts, whose choice and placement facilitates the decoding (and processing) of the structural arrangement of a given text" (Parr, 2013:88).

A major part of the book is devoted to seeing how the features of punctuation interact with the language in many situations and how they influence the meaning in those places. The presentation structure is being diagnosed in these locations, but we need to be careful because "a punctuation mark does therefore not have a specific, decontextualized meaning" (Patt, 2013:275).

In his final pages, Patt confesses that "punctuation marks predominantly convey paralinguistic information" and "the communicative value of punctuation marks is not (completely) predetermined by fixed conventions, but within a given framework . . ." (Patt, 2013:275). Patt believes his approach "moves away from a static rule-based description towards a more dynamic, context-based interpretation of punctuation" (Patt, 2013:277). To others, however, it might just resemble a somewhat complex discussion of style.

3.4 Books Which Contain Some Linguistic Value. Although there were few books about punctuation directly linked to linguistics in the twentieth century, there were still books on somewhat related subjects which still contain some valuable information for linguistics and punctuation.

3.4.1 Mindele Treip's *Milton's Punctuation and Changing English Usage, 1582-1676* (1970). Although the book is mainly about Milton's work, it also contains some concentrated information about one period in the development of punctuation in English.

3.4.2 John Lennard's *But I Digress: The Exploitation of Parentheses in English Printed Verse* (1991). The work includes a lot of information about a single feature of punctuation over a period of more than 500 The years.

3.4.3 Anthony Graham-White's *Punctuation and Its Dramatic Value in Shakespearean Drama* (1995). The work provides some insight into the way play scripts were punctuated in the Elizabethan period and beyond. This was a period when punctuation practices were changing rapidly.

3.4.4 Paul Saenger's *Space Between Words: The Origins of Silent Reading* (1997). The space between words may seem like nothing to some people, but it was likely one of the punctuated equilibria in the development

of reading and a large step in the development of today's system of punctuation.

3.5 Dissertations Having a Linguistic Approach to Punctuation

In contrast to the dearth of studies about punctuation and linguistics in book form, there have been a variety of dissertations that deal with some aspect of punctuation, some of them inspired by Nunberg's *The Linguistics of Punctuation* (1990). Most are limited to some isolated feature of punctuation rather than dealing with it in a comprehensive way, or they discuss punctuation as it relates to some other concept the writer was also interested in.

3.5.1 David Steegar's *Prosody and Punctuation: A Linguistic and Experimental Study* (1975) could very well have been written several hundred years ago. It explores seeming parallels between prosody and suprasegmentals and punctuation but deals with only a few features of punctuation common to sentences. Although the basic text is in English, it is actually a study of French writing and punctuation, and virtually every example in the work is in French, making it impossible to confirm Steegar's conclusions by someone who does not know French.

3.5.2 Joan Persily Levinson claims she set out to do a wide-reaching study of punctuation, but in her dissertation, *Punctuation and the Orthographic Sentence: A Linguistic Analysis* (1985), she laments the shortage of good sources for research and the apparent traditional focus on the sentence (which itself she believes is poorly defined) as the home of punctuation, to the exclusion of most other places in a text. As a result, she focused her study on something that looks like a sentence but is “neither ‘complete thought’ nor a ‘grammatical unit’” (107), a sentence in appearance only which exhibits “informational grouping” (126).

3.5.3 In *The typographic contribution to language: towards a model of typographic genres and their underlying structures* (1988), Robert Waller ultimately makes the case that there is little difference between the typographic aspects of a text and the punctuation in it. His approach is from the study of typography, but he comes to the conclusion that both typography and punctuation share the same function: to provide a context for a text.

3.5.4 Robin Hill’s dissertation, *A comma in parsing: a study into the influence of punctuation (commas) on contextually isolated “garden-path” sentences* (1996), involved an experiment with garden-path sentences to see if punctuation would really help subjects reading them. The results were mixed, with some structures providing unclear answers.

3.5.5 A dissertation by Bernard Jones, *What's the point? A (computational) theory of punctuation* (1996), was aimed at discovering how punctuation can help in the processing of natural language, a practice that had heretofore omitted punctuation. His working definition is “any fact of the text that is not a lexical item or number [including inter-word space (6)]” would include punctuation. Jones suggests that, because of the frequency of punctuation features in written English (one for every fourth word), punctuation deserves more study. He provides a taxonomy of punctuation that seems quite usable.

3.5.6 The dissertation by Bilge Say, *An information-based approach to punctuation* (1998), involves the study of punctuation but uses primarily just four features (the dash, colon, semicolon, and parentheses) using natural language processing (NLP) techniques from corpus linguistics, computational linguistics, and formal semantic modeling. The study concentrated on the orthographic sentence and the discourse level. A model that resulted could be taken as a template for NLP software developers for making use of punctuation more effectively and revealed some noticeable things about anaphora resolution and presupposition.

3.5.7 Christine D. Doran's dissertation, *Incorporating punctuation into the sentence grammar: a lexicalized tree adjoining grammar perspective*

(1998), takes a strong stand against the idea that punctuation has anything to do with prosody. Various punctuation situations are discussed, and she concludes that features she added to the lexicalized tree adjoining grammar (LTAG) to deal with those situations were workable.

3.5.8 Stephanie D. Vial's *Take pause: musical punctuation in the eighteenth century* (2000) examines how the punctuation of writing was applied to musical composition. During the eighteenth century, punctuation was required to meet the demands of both grammar and rhetoric, resulting in a kind of pointing craze which reached its culmination toward the latter part of the century, when the analogy to musical phrasing reached its prominence.

3.5.9 A dissertation by Benjamin Grindlay, *Missing the point: the effect of punctuation on reading performance* (2002), also focused on the kind of misreading caused by garden-path sentences. The major goal was to find out if the use of punctuation, particularly the comma, would provide a dependable and effective way to help in reading such sentences. The study revealed that the comma was helpful, but a subject's reading ability was also a factor.

3.5.10 *The problem of English punctuation* (2002), by Karsten Schou, who is a teacher of translation (Danish to English), was begun when he was

unable to find adequate answers to questions he had about punctuation. It involves a detailed look at the history, development, the available literature, and the current state of beliefs about punctuation. He concluded that the cognitive approach to punctuation has gotten little attention, the classical heritage had been neglected, relevant issues had not been described well, and rhetoric still “should be granted a prominent position in descriptions of the punctuation system” (300).

3.5.11 In her dissertation titled *Punctuation as symbol: experiencing archetypal patterns through personal narrative* (2003), Gail Emily Arriola-Nickell claims that punctuation features “offer abundant possibilities for psychological and artistic interpretations that transcend semantics, and these offer a re-mythologizing of punctuation symbols as personal narrative” (iii). Her explorations of the possible uses of punctuation that are related to symbolism and psychology may help to explain the way some writers have used punctuation in a personal and stylistic way, despite the rules in the handbooks.

3.6 Conclusion

The work of a century of research on punctuation was not very enlightening. The studies surveyed here did not answer the basic questions about punctuation very well. The controlling feature was still thought to be either

some aspect of the way content was arranged (rhetoric), some aspect of grammar, or somehow that punctuation might still be tied to speech (elocution), along with attempts to match nonverbal aspects of speech to nonverbal aspects of writing. Even a book with “linguistics” in its title offered no concrete explanation for punctuation but instead treated it as a discourse feature. It is probably time for a fresh approach to the understanding of punctuation to find out which one of the two major parts of everything is the model for punctuation.

Chapter 4

The New Paradigm for Punctuation

4.1 Introduction: Content and Form

Everything has at least two parts: content and form. The question that is at the bottom of arguments about theories is often the problem of determining which of the two dominates in the way something is constructed, understood, and used. Punctuation is involved in this problem. When writing was thought of as merely a note-taking system for oral delivery, there was little argument about what was dominant, the soon to be spoken words or the images in the document. The content and its delivery were of great importance.

But times have changed and the written document has matured and has a life of its own. Yet the argument about which of the two features is dominant in relation to punctuation has not gone away. Is it content or form? The alternatives still seem to be sound or sight, prosody or grammar. But there could be a third way of perceiving what is important to display in the context of a sentence.

What goes on in speech is described in a number of ways: prosody, intonation, suprasegmentals, and more. But all of these terms relate to the way the voice configures the sounds in speech, and that is usually the proof for those who claim that speech processes are the basis for punctuation. The forms created by the voice, they say, should be used to insert the punctuation

in a written document. The proponents of grammar argue for the grammatical organization of the words in a written statement as the basis for punctuation. It is how the parts and pieces of a sentence are put together on a page that should be considered the basis for inserting the various punctuation features. What is it that the punctuation is protecting or preserving? What is the plan?

Both media are using the same language so there should not be any arguments about the semantic aspects; we should not be arguing about the content of speech and writing. It is really the form of the medium that is important and how the language is configured. In every translation, both content and form undergo significant change. That is true. So we need to look at how writing presents language and makes it available to a reader. The main place where we find punctuation is in the sentence and its partials.

4.2 Hypotheses for Form

Here are the hypotheses that are to be dealt with in this chapter:

The basic form of the written English sentence is the canonical (SVO) sentence.

The graphic form of the sentence in written English is the orthogonal projection, which has two basic dimensions, the horizontal axis (dynamic/syntactic) and the vertical axis (static/phonological, morphological, semantic).

Punctuation is a system of symbols used to protect the integrity of the canonical sentence and make it visible in the graphic medium of writing.

The comma is used in the dynamic dimension to prevent inappropriate modification of the sentence.

A number of other symbols are used to modify linguistic forms in the static dimension.

Using specialized punctuation, interpolations are inserted into the sentence.

Full or partial adjunct sentences are added to a sentence using the semicolon or colon; the semicolon also functions as an elevated comma.

4.3. The Sentence

People who write are encouraged to use full sentences. But finding a clear and usable definition of the sentence anywhere can be trying. Part of the problem may be that the English sentence is not very old, so the punctuation behavior in one may not have developed completely yet either. Ian Robinson put it this way: “What I have not found before the Renaissance is any clear statement of the modern concept of the sentence” (Robinson, 1992:41).

Apparently, anyone interested in grammar and sentences before the Renaissance would be looking more at Latin than at English. The remnants of the study of Latin were still around in the early 1900s. Robinson believes that the “completion of the understanding of our modern sentence is a

seventeenth-century development” (Robinson, 1992:43). Prior to that time, those doing the writing thought of “utterances, or breaths, or discourse. With medieval prose and verse it is much more useful to think of breaths than of sentences: begin with the voice, and the written language as instructions to the voice” (Robinson, 1992:44). The result was that “medieval punctuation in English was either metrical, or rhetorical, or non-existent” (Robinson, 1992: 44).

The problem with any definition is that there are many ways of coming at it for different purposes. David Olson aired some of the ways one could judge the validity of a sentence. It might be “well-formed” if it is understandable to a listener, or it might be “valid” if it is syntactically correct (Olson, 1977:259). Some people would find a sentence valid only if it were in the proper context, regardless of its semantic-syntactic correctness (Olson, 1977:260). To others, it would be a sentence regardless of its semantic or syntactic content as long as it began with a capital letter and ended with some terminal punctuation, the kind of sentence examined in some detail by Joan Persily Robinson, who found in her study that the sentence had “no commonly accepted definition” even by many of the important names in the world of linguistics in the early part of the twentieth century (Levinson, 1985:6):

A central hypothesis developed in this research is that the
“sentence” in writing is not a grammatical unit and is not to be

explained by the grammar of the language (accounting for both the difficulty in defining it and the reluctance to do so), and that consequently its punctuation does not “mark’ syntax. This is not to say that there is no grammar, that there are no requirements on syntactic arrangements and on acceptable writing, but that the characteristics of the sentence in written English are such that syntactic rules alone (or even mainly) cannot capture them.

(Levinson, 1985:8.)

Levinson seems to agree with Robinson that the sentence did not really begin to become important until sometime after the spread of printing around 1500 CE.

But things that begin with a capital and end with some terminal punctuation have to be called something. Levinson decided to call them “orthographic sentences” (purely on the basis of their appearance, that is), but then had to deal with those orthographic sentences that were not syntactically complete, the ones that are usually marked in classroom writings as “fragments.” Zellig Harris used the term “residue” (Harris, 1982: 388). The more polite name Levinson gave them is “Sentence-Partials” (Levinson, 1989:116) The question now is how to decide about the way punctuation is used in both “orthographic sentences” and “sentence-partials”: Will it be the same or different?

We might expect a 450 page book titled *Sentence Comprehension: The Integration of Habits and Rules* by Townsend and Bever to come up with a clear and useful definition of a sentence that we could use for analyzing punctuation, but we would be disappointed. After quoting several century-old offerings by Wundt (1911), they leave us to read the rest of the book to try to locate the one they might have to offer:

- We cannot define sentences as sequences of words because there are single-word sentences (e.g., “Stay”).
- We cannot define sentences as word uses that have meaningful relations because there are meaningful relations within certain word sequences that, nevertheless, are not sentences (e.g., “Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday”).
- Hence, the sentence must be defined as a sequence that native speakers of a language intuitively believe to convey a complete proposition in linguistically acceptable form.

(Townsend and Bever, 2001:11-12.)

In a later chapter, Townsend and Bever do manage to mention some concepts helpful to understanding sentences—and to these concepts: the schema and the canonical sentence.

But some day we may be able to avoid the problem of defining sentences in writing, according to M. A. K. Halliday:

Eventually we shall discard the term ‘sentence’ from the grammar altogether; it can then be used unambiguously to refer to a unit of the **writing system**—that which extends from a capital letter following a full stop up to the next full stop. . . .

We cannot identify a ‘sentence’ in the spoken language . . . only by defining it as a clause complex. (Halliday, 1989:66.)

4.4 The Sentence by Parts

Perhaps it would be possible to come to a workable way of understanding a sentence by seeing how it is constructed. Most taxonomies of it would probably look something like this:

sentence

clause

phrase

word

letter

Certainly, the visible parts of a sentence are here—even if we use the orthographic sentence without bothering to define it any more or even if we added the subject and predicate at the clause level. We can usually find all of these parts when we see a sentence. But some conceptual approach still seems to be missing. There is nothing here about what holds all these parts together, how they are organized, and how they produce a meaning. Some

kind of process that determines how the sentence parts become a whole meaning seems necessary.

Lakoff, in his discussion of The Spatialization of Form Hypothesis, mentions “linear order” schemas and “up down” schemas but doesn’t go into much detail about them. However, the written sentence is an image schema as he describes it, and it is probably a gestalt (Lakoff, 1987:283-284). Paul D. Deane agreed with Lakoff in how the sentence is likely to be framed:

Specifically, it is claimed that linguistic expressions are processed as if they were objects with internal structural configurations. That is, they are processed in terms of certain basic image schemas, namely part-whole and linkage schemas critical to the recognition of the configurations which define complex physical objects. . . . In other words, the Spatialization of Form Hypothesis treats grammar as a form of image-schematic thought in which words, phrases and sentences are endowed with an abstract structure grounded in immediate bodily experience of physical objects.

(Deane, 1991:364.)

Written sentences, then, should apparently be seen and not heard.

4.5 The Parsing Process

In the 1960s, a number of psycholinguists began searching for answers to the way a person processes language, particularly concepts that make it possible to come up with the right order of things to establish an intended meaning. In their article *The Sausage Machine: A Two-Stage Parsing Model*, Frazier and Fodor proposed a parsing device that “assigns phrase structure to word strings in two states,” one which notes six-word strings of words and another which notes the phrase level; in this fashion a reader acquires the “deep structure” of a sentence ($S \rightarrow NP + VP$) (Frazier and Fodor, 1978:291). This would account for the surface level of a text that one can see, but there is apparently more to the comprehension of a sentence than merely seeing what is on the page. How does the reader know what order the parts should be in?

Fodor, Bever, and Garrett came up with an answer for that earlier:

An early stage in the perceptual analysis of linguistic material is the identification of the sentoids of which the input sentence is composed. By hypothesis, each such sentoid will consist of a *subject-NP* and a verb which may or may not have an object.

(Fodor et al., 1974:344.)

They assumed that someone following the surface structure of a text was unconsciously perceiving the “canonical-sentoid strategy” and assuming that something ordered as NP V (NP) was probably following the “subject, verb, and object of a deep sentoid” (Fodor et al, 1974:345). In other words, there is

really a form deeper than the “deep structure” that is guiding the decision to link the words encountered into a form at the top of the parts list that we recognize as making up a “sentence.” The list of parts does not account for an important concept. The sentence is not the most abstract rung in the ladder. There is one above it or one that should replace “sentence.” With this information, we might be able to solve everyone’s problem and not call a string of words a sentence unless it has the subject and verb part of the canonical form in the right order. Everything else would be a partial.

A number of studies over the years have looked at “garden-path” sentences, sentences in which the order of words causes a misread, to see if they would reveal anything about the parsing process. “The garden path theory, as we have developed it, claims that the parser assigns a single immediate analysis to an ambiguous fragment or a temporarily or permanently ambiguous sentence” (Frazier and Clifton, 1996:8). The results suggested that the readers confused by garden-path sentences were being fooled into thinking that they were seeing the canonical sentence but were tricked by the word order. In effect, this showed something very important: the readers apparently believed that there is a proper order of words in a sentence and were deceived when it did not occur. The study of disordered sentences proved that the readers were expecting the canonical sentence and it did not come.

Frazier and Clifton later summarized much of the earlier work, noting three of the most-studied parsing principles:

Minimal Attachment

Do not postulate any potentially unnecessary nodes.

Late Closure

If grammatically permissible, attach new items into the clause or phrase currently being processed (i.e., the clause or phrase postulated most recently).

Minimal Chain Principle

Postulate required chain members at the earliest point grammatically possible but postulate no potentially unnecessary chain members.

All of these “follow from the claim that the parser constructs syntactic representations by applying rules (like phrase structure rules) that create a single enriched tree structure” (Frazier and Clifton, 1996:8-9).

Other studies have also looked at which concepts are involved in parsing, and there have been claims that both syntax and semantics are working together, but they also doubted the existence of “parallel analysis” and think syntax (or form) probably takes precedence (Frazier and Clifton, 1996:5-7). (Again, one can probably also find some strong arguments for the idea that semantics comes first in parsing.)

There is still another concept that contributes to meaning in parsing. In syntax it is called “adjacency,” and in visual perception studies it is called “proximity.” When two items are next to one another in a sentence or nearly always come in a certain order, the implication is that they belong that way and have a recognizable meaning together (Moravcsik, 2006;32).

David W. Jacobs calls the gestalt-like idea “grouping,” claiming that it occurs quickly; that items tend to group by edges; that objects being grouped do not have to resemble anything “real”; and that the distance between the objects is important (Jacobs, 1988:17-18). (There may be some support for the “edge” perception idea for words. An online game circulating now involves asking people to read words in which the letters in the middle are mixed up but the letters on the ends are correctly in place, allowing a reader to quickly recognize a word even though some letters are out of order.)

One thing about parsing is difficult to find information about. Just what is the process called that seemingly “adds” words together to create a meaning? What has happened to the words in the sentence? In response to their grammatical relationship, the words have gone together in some way. How did they manage to do it? How did we get from a line of words to a sentence meaning? Terms that are sometimes used to describe the process are “concatenation,” “accumulation,” “modification,” “accrual,” “incremental,” “aggregation,” “agglutination,” and others. There is obviously some way in which the words in a sentence go together to make up a meaning greater

than the individual words, but the process cries out for a good term to describe it.

Walter Sargent Stolz, in his dissertation, *Syntactic Constraint in Spoken and Written English*, said that Chomsky (1966) put “models of syntax (grammars) into three categories: (a) Markov models, (b) phrase structure grammars, and (c) transformational grammars” (Stolz, 1964:7). Stolz described the Markov model:

The Markovian model . . . is essentially a finite-state automoton in which the symbol being produced at any given time is a function of the previous symbols emitted by the device.

(Stolz, 1964:7.)

There are certainly resemblances between a Markov model and what is going on in a sentence in English, but it was dismissed by Chomsky as not possible. However, it remains to be seen if someone can locate a model or a process that describes the continuous modification that occurs from the start of a sentence until its resolution as a “complete meaning” at the end.

There is still one issue to resolve related to parsing: Where does a reader obtain the concept of a canonical sentence that seems to lie invisible underneath the parsing strategies?

4.6 Sentences without Meaning

One way to analyze a problem is to remove some part of it so that another part may become more visible. Noam Chomsky did that with a sentence:

Colorless green ideas sleep furiously.

(Chomsky, 1966:15.)

Apparently, Chomsky subscribed to Levinson's orthographic sentence because he used a capital letter and a period. The initial reaction of most people to this is that it is nonsense, but most still see it as a "sentence." (Some people, though, have looked at it as a variety of figurative language and tried to defend it as having poetic meaning.) In fact, the sentence has a curious but distorted meaning. It proves at least one thing: the words are in the right order. With two positive things, words in the right order and orthographic features, we have a good reason to call it a sentence. The only thing missing is meaning—content.

Lewis Carroll's lines are just about as meaningless but much more like sentences because they include something that Chomsky left out: function words.

'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe;
All mimsy were the borogoves,
And the mome raths outgrabe.

(Carroll, 1999:12.)

Carroll provides coordinators, determiners, prepositions, plurals, the copula, one auxiliary, plus a variety of punctuation, including the semicolon, but it is all nonsense. Both Chomsky and Carroll seem to prove that you can say nothing and still have a good sentence. But what they really have done is demonstrate how a sentence works, including the value of the punctuation. Chomsky does it by putting meaningful words in the wrong places in relation to one another (with only “orthographic” punctuation), Carroll by putting meaningless words in the right places (but well punctuated). In doing so, we see the form of the sentences in both, even when they don’t mean anything.

In a way, Carroll has actually trumped Chomsky. According to Paul Saenger:

. . . psychologists have observed that the presence of graphically distinct short function words, including articles . . . and prepositions, is very important for organizing eye movement because such short words are particularly easy to decode in parafoveal vision. (Saenger, 1997:45.)

4.7 The Schema

Most people would probably agree that repetition is a major source of cognition. We watch and we listen and in doing so we accumulate most of what we need to get along in the world. But how do we store all of the information we gather, and in what form, so that we can access it when we

need it? Scholars in many areas have decided that we manage to store many kinds of information by using patterns of different kinds, linking concepts in such a way that they are then immediately recoverable as a group.

Some of these patterns are more complex than others, and they could involve some activities that we engage in every day and others only on rare occasions. Also, it is very likely that many or even most of the schemas we are storing in memory are not even conscious. Often, we encounter a situation in which we are aware of something “out of order” but are unable to determine exactly what it is. Some of the names used to describe these concepts are pattern, frame, script, schema, prototype, stereotype, plan, exemplar, ideational scaffolding, template, plot, abstract symbolic representation of knowledge, structure of expectation, a generic concept of memory, framework, scenario, mental model, story, and we could possibly include plan and blueprint and some others.

Different areas of study seem to find their own characterization for a pattern or a name for an idea, based on the probable perceptual context of a situation, but they have a similar outcome: we store in our memories some kind of structure that we have experienced and recognize it again when we encounter it. But the most commonly used word to describe this kind of structure is “schema” (the plural is usually “schemata,” although “schemas” has also been suggested). One common experience that is often used as a

metaphor for a schema is going to a restaurant; after going to a few, we all know what the likely order of events will be.

Although some writers on the subject credit Kant and his *Critique of Pure Reason* (1787) for the idea, more credit is often given to F. C. Bartlett, in *Remembering: A Study in Experimental and Social Psychology*, for promoting the schema, even though Bartlett himself credits one Sir Henry Head for the idea—and expresses his dislike for the term “schemata” (Bartlett, 1995:198-201):

I think probably the term ‘organized setting’ approximates most closely and clearly to the notion required. I shall, however, continue to use the term ‘schema’ when it seems best to do so, but I will attempt to define its application more narrowly.

(Bartlett, 1995:201.)

Bartlett describes a schema as “an active organisation of past reactions” which are “operating in any well-adapted organic response” involving “any order of regularity of behaviour” which have been “serially organized” but operate “as a unitary mass” (Bartlett, 1995:201). Bartlett’s definition seems good enough to apply to a large variety of events.

David E. Rumelhart, whose interest is reading comprehension, raised Bartlett’s idea to a new level. Rumelhart describes schemata as a theory:

. . . basically a theory about knowledge. It is a theory about how knowledge is represented and about how that representation

facilitates the *use* of the knowledge in particular ways.

According to schema theories, all knowledge is packaged into units. . . . A schema, then, is a data structure for representing the generic concepts stored in memory. (Rumelhart, 1980:34.)

Rumelhart listed some of the major features of schemata:

1. Schemata have variables.
2. Schemata can embed, one within another.
3. Schemata represent knowledge at all levels of abstraction.
4. Schemata represent knowledge rather than definitions.
5. Schemata are active processes.
6. Schemata are recognition devices whose processing is aimed at the evaluation of their goodness of fit to the data being processed. (Rumelhart, 1980:40-41.)

So schemata are not stagnant. Rather, they are dynamic, ready to change when the need arises because our experiences change, and they are apparently based on real events, not just textbook versions of something.

Another important idea that Rumelhart discusses is “perception.” He is concerned that we perceive a whole in relation to its parts: “the interpretation of parts and wholes must proceed jointly” (Rumelhart, 1980: 48). We could easily make a mistake and start to believe that Rumelhart’s discussion is actually about the canonical sentence and gestalt psychology, because the things he is saying certainly could easily be applied to them.

Lest we get too interested in perceptions, though, Johnson-Laird reminds us that “a schema is not an image, but a model that underlies the ability to form an image” (Johnson-Laird, 1983:190). It is not a “perfect” example of a concept but a “typical” or “default” example (Johnson-Laird, 1980:190).

Also, we are not likely to find some kind of universal schema that we can apply to every situation, according to Asghar Iran-Nejad, because:

conceptually and essentially, a schema is a domain-specific relational cluster. Beyond this, however, the concept of schema remains, theoretically, disturbingly vague. One reason for this is that the metaphors cognitive scientists use (e.g., "link," "association," "connection," "pointer," etc.) to refer to the relations among schema constituents are purely conceptual.

(Iran-Nejad, 1980:3.)

But one more idea that Rumelhart offers could be very useful. He says that schemata are like parsers:

A parser is a device that, given a sequence of symbols, determines whether that sequence forms a legal sentence (according to the rule of some grammar) and, if it does, determines the constituent structure of the sentence. That is, it determines which symbols in the sequence correspond to which constituents of the sentence. (Rumelhart, 1980:40.)

In effect, Rumelhart has provided here something that will work for us in dealing with punctuation, a tool that will fit the task, an invisible schema that we can use for looking at sentences and seeing how they are organized in order to punctuate them. We can use the schema of the canonical sentence to help us identify the basic constituent construction of a sentence and the punctuation in it.

4.8 Yaggy and the Canonical Sentence

Using the canonical sentence as a starting point for understanding how to use punctuation is not a new approach. Elinor Yaggy, in her article titled “Let’s Take the Guesswork Out of Punctuation,” certainly had it in mind when she recommended the “basic sentence” as a starting point for learning how to punctuate:

Before attempting to learn about the biggest bugbears, commas, the writer needs to learn the basic sentence pattern: subject and verb, or subject, verb, and complement. . . . Because English has dropped the majority of case endings, the sense of the sentence is peculiarly dependent upon logical order (dog bites man; man bites dog). When the arrangement of the words or the punctuation does not make this relationship clear, communication is impeded. . . . The necessary basic kit is comparatively simple. First, the writer needs to learn two

fundamental facts: (1) punctuation separates, and (2) internal punctuation is used to show interruption or other irregularities in the basic sentence pattern. . . . The next step would be to learn about simple adjectives and adverbs and their normal positions. These also would require no punctuation unless they were multiplied. (Yaggy, 1953:129.)

Yaggy's references to separation, interruption, and irregularity really amount to the same thing as preventing ungrammatical modification of the canonical sentence because this is what these actions would accomplish. She also seems to be hinting at recursiveness in mentioning something "multiplied." Unfortunately, Yaggy provided few examples to explicate her concepts, but her approach makes it clear that she was suggesting the same basic idea: Use the uncluttered canonical sentence as a starting point, then add the types of details that one is likely to encounter in more complex sentences, such things as multiple adjective modifiers, sentence adverbs like "however" and "nevertheless," along with "participial modifiers, appositives, and relative clauses" and "the ubiquitous prepositional phrase" (Yaggy, 1953:130). But one should prevent units that do not directly modify the canonical sentence (relative clauses, appositions, and the like) from doing it by using the comma.

Clearly, Yaggy saw the comma as the only feature of punctuation operating directly in relation to the canonical sentence. To complete the picture, she offered some ideas for dealing with coordination, the semicolon,

and colon which are useful. Her approach could probably be described as “structural” for she begins with the basic sentence as the primary structure, looks at how various parts and pieces are attached to it, and shows how they must be punctuated to preserve the schema of the sentence.

4.9 The New Paradigm

Walter J. Ong took a practical stand about writing. He announced it quite clearly in the title of one of his writings: “Writing is a technology that restructures thought” (Ong, 1992:293). Yes, he said, “writing (and especially alphabetic writing) is a technology, calling for the use of tools and other equipment” (Ong, 1992:299). When we use a tangible thing to accomplish an action that we can’t do with our bodies alone, we are using tools, and tools involve technology. It comes in many forms, affecting every one of our senses. And the best technology of all, the most advanced, says Ong, is writing:

Writing, in the ordinary sense of a coded system of visible marks enabling a writer to determine, in effect without limit, the exact words and sequence of words that a reader will generate from a given text, is the most momentous of all human technological inventions. It is not a mere appendage or accessory to oral speech. Because it moves speech drastically from the oral-aural or voice-and-ear world to a new sensory world, that of vision,

writing transforms speech and thought as well.

(Ong, 1992:304.)

It should be hardly surprising to learn that one of Ong's professors at St. Louis University was Marshall McLuhan, whose famous slogan, "the medium is the message," dominated many discussions about the importance of form for several decades but has recently been put aside. It may be time for its revival. When it comes to writing, and including punctuation, form is at least as important as content—and probably more important. The graphical form of writing is the medium that delivers the message to us.

4.10 English Writing as a Graphic

Writing's purpose is to use a language to communicate something, but it is a machine that is essentially a graphic presentation. P. T. Smith et al. put it this way:

The problem for the design of an efficient writing system is that writing systems are essentially *linear*: a single sequence of symbols must suffice to represent a complex hierarchy of linguistic units. Phonemes, syllables, morphemes, words, syntactic and semantic structures are all implicit in linguistic output and may be inferred by a listener, but only a fraction of this information can be conveniently transcribed by a simple linear sequence of symbols. (Smith et al., 1984:104.)

Like other machines, writing has an organized set of parts. The **content** of language is, in abstract linguistic terms, phonology, morphology, syntax, and semantics. But the **form** of writing is essentially a gestalt, and many of the characteristics allied with the graphic aspects of gestalt psychology are identifiable in it. The English written sentence is indeed the quintessential graphic.

Stephen A. Bernhardt said it without equivocation: “Print is a graphic medium; it displays its meanings in the spread of ink on page” (Bernhardt, 1993:168). Waller also anticipated this when he said that “‘Text as diagram’ is a useful metaphor because it focuses us on the written-ness of text, mostly ignored by linguists and those who study reading and learning” (Waller, 1982:137).

Written English obeys all the rules for graphics, especially those that are related to gestalt psychology. To begin with, like other graphics, it has the two basic parts: figure and ground. The **ground** for writing is the location for it. Over time it has consisted of many different things and can still be any one of them: a rock, a board, the wall of a cave or building, a sheet of glass, the hide of an animal, a field of corn, a television screen, a computer monitor, a sidewalk, droplets of water falling through space, a hologram, a sheet of paper, and many more.

The **figure**, which is the basic content of the graphic, in English consists of twenty-six minuscule graphemes:

abcdefghijklmnopqrstuvwxy

The graphemes reside in the matrix, which has a **vertical** dimension and a **horizontal** dimension and looks something like this:

vertical |
 |_____ horizontal

This is a common L shaped graph form that is used frequently to show the relationship of variables on two axes. There are technically no “spaces” in the matrix, and there is no need to create any. Any gaps that we might perceive are simply the ground showing through.

A very **basic** stretch of writing in English, then, consists of **minuscule graphemes arranged in various configurations in a sequence on the ground in an orthogonal matrix.** The sentence (or a partial one) is a basic form found in writing. It organizes information syntactically and has horizontal and vertical aspects. It has a definite beginning but is potentially infinite because of recursion. It is displayed in an orthogonal matrix. It might be easier right away to see the linear sentence as a set of boxes into which we can add the vertical features.

□□□□□□□□□□□□□□□□

Since not all writing systems function in accord with horizontal and vertical dimensions as English does, it would be advantageous for the purpose of any future cross-linguistic study to describe what is occurring in these locations in terms of the **actions** taking place rather than using the names of the axes. Therefore, I will discuss English writing in accord with

that approach and not use the dimensional names. I will refer to the vertical as the “static” axis and the horizontal as the “dynamic” axis. The terms “static” and “dynamic” should also be more useful in describing what occurs in writing systems which do not have clearly perceivable vertical and horizontal axes. Giardino, coincidentally, in an article about trying to just classify diagrams, uses the same terms, “static” and “dynamic,” to describe their axes (Giardino, 2013: 243). Many of the orthogonal charts you see are arranged that way, with the static (vertical) axis on the left and the dynamic (horizontal) axis on the right, with data moving to the right on a line—much the way a sentence does.

Seeing a sentence as a graphic is not a particularly new approach. Scholars involved with artificial intelligence have been working on the problem of mixing linguistic characteristics with graphic ideas for some time. Shimojima provided a discussion of seven different ways in which linguistic and graphic properties can be combined—without deciding which one was the most viable for sentences, unfortunately (Shimojima, 2001). Steedman, in trying to make syntax and phonology fit together, also talks about the right-angle shaped characteristics of the sentence. According to him, “Phrasal intonation in English is frequently orthogonal to traditional notions of surface syntactic structure” and he claims that Halliday (Halliday, 1967) some time ago was already talking about this kind of dimensional view of the sentence (Steedman, 2000:656). Steedman and Halliday, of course, were

probably talking about spoken rather than written English, but they were both mentally conceiving the sentence in a more or less graphic way.

Roy Harris noticed the same thing in the sentence and saw that “two variables are usually plotted orthogonally within the graphic space” (Harris, 1995: 123). But, unfortunately, he dismissed the possibility that a language could reside in such a space:

Instead of a configuration of points related to the two axes, we should find a series of sentences (i.e. arrays of alphabetical or other scriptorial forms) displayed on the page in a pattern which bears no relation at all to the co-variation of the values in question. Nor would the value of any individual scriptorial form depend on its occupying one particular position determined by a calibration of horizontal and vertical axes on the page.

(Harris, 1995:123-124.)

Harris, apparently, was not able to see that the “figure” area consists of a line of spaces, some of which are filled and some of which are empty.

Written English, then, is essentially an “orthogonal projection,” with the horizontal axis representing the syntactic activities and the vertical axis representing phonology, morphology, and some semantic features. Or, as the dictionary says it, “a system of making engineering drawings showing two or more views of an object at right angles to each other on a single drawing” (*Oxford American College Dictionary*, 2002:964). Generally, the activities in

the static axis occur one space at a time as they affect individual linguistic features. But the actions in the dynamic axis are spread over a number of spaces in a line moving to the right in English.

Unfortunately, only a few people involved in fringe areas of linguistics have discovered the orthogonal characteristics of written English. Some are involved with things like speech recognition systems. Scheiber and Tau, who were dealing with comma problems and surveying other studies, found that “These studies, typically based on augmenting a Markovian language model with duration or other prosodic cues as conditioning features, show that prosody information is orthogonal to language model information . . . “ (Shieber and Tao, 2003:147). Daelemans et al., who were dealing with natural language processing problems, also noted it:

On one strategy, information is partitioned between parental nodes. You can, for example, inherit morphological properties from node A and syntactic properties from node B, but no single property can be inherited from more than one parent node. This is known as orthogonal inheritance.

(Daelemans et al., 1992:209.)

Unfortunately, if you have a real interest in orthogonality, a random search may lead you more to articles on Cartesian mathematics and discussions of X and Y (two planes that intersect at a right angle) than to English writing topics.

4.11 Gestalt and the Text

According to Lothar Spillman, in the Preface to Max Wertheimer's *On Perceived Motion and Figural Organization*, it was Wertheimer's 1912 article in the *Zeitschrift für Psychologie* on "Experimental Studies on Seeing Motion" that began a flurried but relatively short study of what is now briefly known as "gestalt," which often translates as "form" (Wertheimer, 2012:ix).

Gaetano Kanizsa, however, believes that the term "gestalt" has acquired too many ambiguities over time and ought to be translated as:

"organized structure," as distinguished from "aggregate," "heap," or simple "summation." When it is appropriately translated, the accent is on the concept of "organization" and of a "whole" that is *orderly, rule governed, nonrandom*. This concept is opposed to that of a merely, *arbitrary, random and unstructured* grouping. But in addition to its being used to describe the product of a process of organization, the term "gestalt" also indicates the structural properties of the process itself. The term "organism" could be used, but it too is inadequate because, in its most frequent usage, it refers to a particular kind of gestalt (plant or animal). Similarly, the use of "form" is inappropriate because form is only one of the attributes of a gestalt.

(Kanizsa, 1979:56.)

To make matters even more complex, the term, which Wertheimer talked about in terms of actual physical perception, became entangled with a variety of psychological issues, muddying the waters even more. Curious slogans that emerged, like “the whole is greater than the sum of the parts,” which Kanizsa also takes issue with, did not help to clarify what gestalt is really about (Kanizsa, 1979:61).

Several other German scholars joined the fray early, Kurt Koffka and Wolfgang Köhler, but all of those involved early in getting the gestalt ideas off the ground got sidetracked by the two world wars and the Jewish diaspora. Wertheimer and Koffka died in the early 1940s and Köhler in 1967. According to Roy Behrens, the gestalt “influence in the field of psychology is unobtrusive in the sense that its findings have all been absorbed by more recent viewpoints,” and no major names have been associated with it recently, with the possible exception of Rudolf Arnheim, Gyögy Kepes, and Donis A. Dondis (Behrens, 1998:302). Otherwise, the result has been something like a long hiatus in discussions of the gestalt theories in how visual perception works. Only here and there throughout the twentieth century can one find an article devoted to what were the clear and fascinating facets of perception that the gestaltists were beginning to reveal as so important in how we perceive the world around us. Also, there is often some disagreement among the writers on the number of basic gestalt features, so

what amounts to less than a half dozen features in one source comes close to a full dozen in another.

Perhaps it is Chang, Wilson, and Dooley who have collected the greatest number of gestalt “laws” from a variety of other sources and compiled them in an article. They found eleven of them, as follows:

Law of Balance/Symmetry: suggests that design should aim for symmetry, balance, and proportion to promote the sense of equilibrium

Law of Continuation: human eyes are inclined to follow an object’s direction; continuation is the eye’s instinctive action

Law of Closure: Our brains instinctively enclose a space by completing an outline and ignoring gaps in the visual concept, thus completing unfinished forms

Law of Figure-Ground: it is natural for humans to distinguish between a foreground and background

Law of Focal Point: the purpose of the focal point is to attract the viewer’s attention and get them to look further. It is the most important area compared to other parts of the visual area

Law of Isomorphic Correspondence: the kind of audience involved must be taken into consideration so as not to mislead or confuse them with the designs used

Law of Prägnanz (Good Form): good form is a simple design,

such as a simple circle, a symmetrical layout, or something that tends to impress the observer

Law of Proximity: elements close to each other are seen as related, and those far apart are less related or unrelated, so items near each other are seen as part of a group

Law of Similarity: similar objects will be viewed as part of the same group, which can be used to capture attention and focus on key points

Law of Simplicity: elements and objects should be arranged in a simple manner; complex design may cause misunderstanding

Law of Unity/Harmony: related objects should appear in the same form so they seem to belong together .

(Chang et al., 2003-2004:4-12.)

[I took the liberty of shortening the descriptions of the “laws” but tried to preserve the key factors in the explanations.] Their article was actually aimed at someone intending to prepare a multimedia presentation, but it should be evident that virtually all of the laws mentioned could apply to every written text or any kind of visual medium.

The degree to which writing obeys these “laws” should also be obvious. Writing is understood to contain meanings, so even the smallest thing that you put on a page of print will be scrutinized to discover its meaning. Writing embodies the laws in a number of ways. **Figure and ground** we have noted already. Capital letters to start and terminal punctuation to end a sentence

operate with **continuation** and **closure**. The line on which the text exists is part of the **symmetry** and **linearity**, while words that are joined by a hyphen work with the idea of **proximity**. Some of the laws, of course, may relate more to how style is used and overlaid on a text, things such as the font and other typographic features the writer may have chosen to use. But a brief study of the “laws” and a look at a line of text will quickly confirm that all of them are present in some way.

Michael Twyman, in “A Schema for the study of Graphic Language,” notes the inevitable linearity of writing, even if it occurred in a circle in some texts in Minoan from about 1700 BCE (Twyman, 1979:123). Turnbull and Baird note that the eye tends to move across an area from left to right and prefers horizontal movement (Turnbull and Baird, 1975:167-168). Donis A. Dondis, in *A Primer of Visual Literacy*, in what could be a comment about a sentence, says that:

line, because of its nature, has enormous energy. It is never static; it is the restless, probing, visual element of the sketch. Line, wherever it is employed, is the essential tool of previsualization, the means for presenting in palpable form that which does not exist yet, except in the imagination. . . . Yet for all its looseness and freedom, line is not vague; it is decisive; it has direction and purpose, it is going somewhere, it is doing something definitive. . . . Line is also a tool for notation

systems, writing . . . [and] symbol systems in which line is the most important element. (Dondis, 1973:43.)

Even the least noticed of the static (vertical) punctuation features gets a boost from a gestaltist. Rudolf Arnheim extols “the attractive simplicity of static concepts, which pick out some one characteristic state of an object or movement and let it stand for the whole” (Arnheim, 1969:178-179). Arnheim could easily be talking about a capital letter—or an apostrophe. Lest we overlook the minutiae, Martin Solomon, in “The Power of Punctuation,” says that “The sensitive application of punctuation even in the most commonplace unit changes the entire feeling of a design” (Solomon, 2004:287).

George Gerbner, in “The Interaction Model: Perception and Communication,” perhaps unknowingly echoed the gestaltist mantra when he said that:

Communication is communicating. It is a pattern of doings, a process. This means that it is a flow of events so interrelated that one act in the series derives part of its significance from all the other acts, and can be fully grasped only in the light of the total pattern. (Gerbner, 1960:6.)

For some reason, it almost sounds like Gerbner is saying that the whole is greater than the sum of the parts.

Visual language, then, operates in a significantly different context than spoken language, which is arbitrary, random, often unstructured, and

has its own set of rules. It may be possible to do some kind of comparisons of the content of the two, but the forms are different enough so that casual comparisons are liable to misrepresent how something is intended as well as what is intended. If you hear a voice while you are reading (it is called subvocalizing), for example, the voice you are hearing is your own, not that of the writer, who had to obey only the visual rules while creating the text. Writing, of course, is based on a more neutral standard with conventional rules, not necessarily the writer's dialect.

4.12 Locating Punctuation

Most people have the idea that the role of punctuation in a written text is rather minor and consists of a few leftover things that have to be added to an otherwise clear and well-organized piece of writing. Here is a working definition for punctuation:

Punctuation is a system of symbols and graphic features used to protect the integrity of the sentence in the English writing system and make it visible.

A symbol is usually defined as an object that has no intrinsic meaning but acquires it by use over time by human beings. The definition will be used for both the static and the dynamic axes, though it will be applied differently.

But there are a few things we need to clarify about symbols. Our interest is only in symbols that have a direct influence on one or more of the

linguistic units, the semantics, syntax, morphology, or phonology of the English writing system. There are many other symbols that might be found in a written text. Unicode, a character encoding standard used in programming, also provides lists of symbols that are labeled as punctuation but really are not according to our definition (for Unicode symbols, see <http://www.fileformat.info/info/unicode/category/Po/list.htm>). Most of them do not modify any linguistic units. Also, symbols such as %, @, and # are included, but these and many other symbols in Unicode are just synonyms for words like “percent,” “at,” and “number.”

On the other hand, some symbols used to indicate abbreviations might fit into our definition because they usually show that a longer word has been shortened in some conventional way, thus indicating that a modification has taken place, one of the two uses of the period. “Mister” becomes “Mr.” and “Miss” becomes “Ms.” (However, to confuse the issue, some publications have even eliminated the punctuation with abbreviations in some contexts).

Acronyms are also a questionable category.

When the punctuation is omitted and they are pronounceable, they move to the category of words in English. Thus, NATO is pronounceable as a word. If it were up to Robert Bringhurst, author of *The Elements of Typographic Style*, some of these acronyms that are pronounced should even shed their capitals:

When a writer accepts them fully into her speech and urges readers to do likewise, it is time for the typographer to accept them into the common speech of typography by setting them in lower case: Unesco, Ascii (or ascii) and Fortran. Other acronym words, such as *laser* and *radar*, have long since traveled the same road. (Bringhurst, 2005:49.)

Language is changing all the time. Just about the time we start to believe the lexicon is rather stable, some kind of alteration or borrowing is liable to occur.

When you look at a typical page of written English, you are likely to see more than the twenty-six minuscule graphemes. There are many arguments about which of the items one sees on a page of writing should really be classified as punctuation. But using our definition and the list of items we classified as punctuation, everything else you might see that is added to or included with the twenty-six minuscule graphemes is actually punctuation. This can be demonstrated. Below is a sample paragraph which includes all the items of punctuation from the reference works mentioned earlier. They have not been preselected or limited to just certain ones as was done with virtually all of the studies discussed in Chapter 2.

4.13 The Sample Paragraph with Punctuation

This sentence is simple. But, when you start getting into some depth and want to add a variety of things to your sentence, it gets complicated. An appositional structure, like this one, may require several commas around it to make sure you don't end up with a noun phrase with a different meaning. That goes for a relative clause as well, which may or may not modify the noun it's near. Word modifications, such as a nice, new adjective added to a subject noun, are not usually a problem; but transformations—that is, really sentences that have been truncated in some way, (e.g., even a relative clause without a relative pronoun, for example)—can cause *considerable* confusion when the punctuation is missing. As someone once said: “. . . a sentence is a complete idea!” [Did I get that right?]

4.14 The Sample Paragraph without Punctuation

this sentence is simple but when you start getting into some depth and want to add a variety of things to your sentence it gets complicated an appositional structure like this one may require several commas around it to make sure you don't end up with a noun phrase with a different meaning that goes for a relative clause as well which may or may not modify the this sentence is simple but when you start getting into some depth and want to add a noun its near word modifications such as a nice new adjective added to a subject noun are not usually a problem but transformations that is really sentences that have been truncated in some way even a relative clause without a relative pronoun

ounforexamplecancauseconsiderableconfusionwhenthepunctuationismissinga
ssomeoneoncesaidasentenceisacompleteideadidigetthatright

4.15 The Importance of Space

The lack of spaces in this last paragraph sends us back at least several thousand years in the history of writing to *scriptura continua* and makes it difficult for a modern reader to locate the words. The argument for including spaces as an “official” part of the punctuation of a written graphic is rather strong and has been mentioned by a number of scholars over the years.

Mountford, in discussing ways to sort out writing systems, considers including “punctive” items such as “white space” and “word space” among other criteria (Mountford, 1980:229). Waller claims that:

Punctuation is the single aspect of written language, for which grammatical rules exist, that does not represent words themselves but the spaces between them. It is, then, an organizational system at the micro-text level functioning in much the same way as typographical signals and the use of space at the macro-text level. (Waller, 1980:245.)

Southhall says it briefly: “Written language contains elements which are not alphabetic or numeric characters: punctuation signs and space” (Southhall, 1984:83). Nunberg says that punctuation “must be considered together with a variety of other graphical features in the text, including font- and face-

alterations, capitalization, indentation and spacing, all of which can be used to the same sorts of purposes” (Nunberg, 1990:17).

Richard L. Venezky (1970:47) showed his support for the idea by repeating some lines directly from W. Nelson Francis:

Taking inventory of the segmental graphemes of standard English writing, we find that there are thirty-seven of them, which can be classified in two groups:

(a) Twenty-six **letters of the alphabet** <abc . . . z>

(b) Eleven **marks of punctuation** <, ; : . ? ! ‘ — “ (>

In addition, we must include **space**, a sort of zero grapheme.

(Francis, 1958:436.)

This judgment by Francis seems prescient. (I can accept the twenty-six minuscule letters that Francis mentions but may have more to say about a classification involving graphemes later.) In talking about space as a grapheme, however, Venezky and Francis are in fact giving it an equal place in the graphic scheme. But a space is not a grapheme. Graphemes are the representatives of phonemes. Spaces are the ground showing through.

Just how important are spaces? Robert D. Stevick rued the fact that some additional and meaningful spaces were eliminated from some Old English manuscripts when new print editions were produced:

That is, the [new] editions disregard the spacings in the manuscript, assuming them to be irrelevant, if not arbitrary or

capricious. Yet these were produced by Anglo-Saxons who, to their credit and to our good fortune, had not embraced “canonical word separation” and instead used spacing to record something more than lexical demarcations.”

(Stevick, 2004:3.)

Stevick believes the purposeful spacing in the Anglo-Saxon manuscripts was related to prosodic features that the writers could not show in any other way (Stevick, 2004:11). The Anglo-Saxon scribes were, in effect, using space as meaningful punctuation. Perhaps inspired by those Anglo-Saxon scribes, a few modern linguists have made an effort to improve readability by altering the spaces in texts using some computer programs to locate phrasal boundaries. They were able to prove that “isolating major phrases within extra spaces facilitates reading, especially among poor readers” (Bever et al., 1990:83).

Readers of some non-alphabetic languages may actually be more likely to believe that space is important in their texts than English readers and writers. According to Roy Harris, space “is in a sense ‘built into’ Chinese writing, since in most cases the individual character identifies a word” (Harris, 1995:171). An extreme case, he says, is Classical Tibetan, “where syllable division, indicated by punctuation marks, becomes the organizing principle of the whole arrangement of character” (Harris, 1995:171). Most people looking at English writing, however, probably don’t have a clear idea

how space fits into the scheme of things, and it remains more or less invisible to them.

John Lennard, in his article titled “In/visible Punctuation,” suggests that the failure to see space as related to punctuation is an act of denial:

The most obvious and important example of invisibility arising from such denial is spaces of punctuation, and the problem begins etymologically. ‘Punctuation’ derives from Latin *punctus*, a participle of *pungō*, ‘to puncture, prick (a hole),’ once a literal piercing of parchment with a sharpened point, most probably in tallies, but transferring to use of a stylus on wax. Most modern definitions of the English word . . . consequently insist that ‘punctuation’ is synonymous with ‘punctuation marks,’ i.e., that it comprises only points and other non-alphabetic marks interspersed among words. This ignores the Latin extension of the term from a point in space to a point in time, usage reflected in modern English ‘to punctuate’ (*inter alia*, to “interrupt at intervals: intersperse with” . . .), in ‘punctual’ and its cognates, and in the common compound noun ‘punctuation marks’ . . . which would be needless if there were no other kinds of punctuation to distinguish. (Lennard, 2011:123.)

What Lennard is suggesting is that, if there were a class for features of punctuation, some of them would be “marks” and some would not because the

word “marks” seems to modify the word “punctuation.” (Thus, there should be some that are *not* marks. So we need a better word to describe the features. We will talk about that in Chapter 5.) Lennard continues his argument by noting that anyone who has experienced the unspaced early writing called *scriptura continua* (like our unpunctuated sample paragraph above) should be able to tell that modern writing is clearly punctuated using space in many places, “between words, in conjunction with full-stop and capital letter between sentences,” and just about everywhere else (Lennard, 2011:124).

Roy Harris, in an appendix to *Signs of Writing*, refers to “word division” when he means “spaces,” saying that “Word division itself, although not always recognized as a form of punctuation in modern manuals (presumably, again, because a blank space is not counted as a ‘mark’), is one of the early aids to text processing supplied by the writer” (Harris, 1995:171). So he confirms Lennard’s view of the confusion punctuation faces because of the terminology.

Martin Solomon, in an otherwise excellent article on the typographical uses of punctuation, seems to have gotten sidetracked by the terminology in a similar way. Because of his use of “punctuation mark” so often in his article, he apparently began to believe that “underscores are not punctuation” simply because they are not “marks” (Solomon, 2004:286). Solomon apparently was involved in what the gestaltists called “fixation”:

Gestaltist psychologists were especially concerned with situations where an individual misinterprets the situation or fails to see the true structure. The person is described as “fixated” on an inappropriate interpretation of the problem.

(Dominowski and Dallob, 1995: 45.)

Lennard already noted a similar problem. A person who only thinks of punctuation as “marks” is unable to see all the other features that are doing the same work.

The prize for talking about the invisible characteristics of writing goes to Paul Saenger, the author of *Space Between Words: The Origins of Silent Reading*. It seems hard to believe, but Saenger reveals that spaces between words had to wait until the twelfth century to become a regular thing (Saenger, 1997:44). Apparently, because they are always out of sight, spaces to many modern writers on the subject of punctuation are also out of mind.

4.16 Putting the Spaces back into the Sample Paragraph

this sentence is simple but when you start getting into some depth and want to add a variety of things to your sentence it gets complicated an appositional structure like this one may require several commas around it to make sure you dont end up with a noun phrase with a different meaning that goes for a relative clause as well which may or may not modify the noun its near word modifications such as a nice new adjective added to a subject noun are not

usually a problem but transformations that is really sentences that have been truncated in some way e g even a relative clause without a relative pronoun for example can cause considerable confusion when the punctuation is missing as someone once said a sentence is a complete idea did i get that right

The spaces obviously make the sample paragraph more readable and probably confirm their importance as a feature involved with punctuation. They are the essential static (vertical) feature which modifies all of the linguistic features in the matrix by preventing their collision. The writer using spaces has made decisions about how the features will be seen and understood, mostly words, of course. Even with the spaces, though, we still do not always have a clear understanding of how the pronunciation of individual graphemes might be altered, which words might be compounds or abbreviations, and which words constitute sentences or sentence partials. More punctuation might be needed in the future to accomplish those things.

Another possible problem with the word “space” in talking about a written text is that it might suggest that a writer has made a conscious decision to create one, but the spaces will really be there whether or not the writer uses them. We are dealing with a graphic which has its own characteristics, a matrix that is predetermined. Space is primitive punctuation. It was there when there was no text. A better mind set would be that the writer may only decide not to fill a space. And perhaps an even

better way to deal with this might be to use another term that is sometimes part of the vocabulary of graphics. The line of writing, in effect, is made of “cells,” and a writer can decide one of three things: to fill a cell with a grapheme, some punctuation, or leave it empty.

4.17 Phonological Punctuation

There should be no question that punctuation relates to linguistic features. It is used to modify every kind of unit in writing, one cell at a time. The phonological punctuation includes capitals, diacriticals, and graphic devices for calling attention to one or more cells. We might also think of them as a class of “single cell” punctuation because they only modify one cell at a time. A diacritic might be the only one that seldom modifies more than one cell. Each type of diacritic is usually involved with only one particular grapheme. Capitals can be used on one or more cells. The use of a capital to start a sentence may seem like a good idea, but it could also be a source of ambiguity.

4.18 Morphological Punctuation

Morphological punctuation is rarer than the phonological. The hyphen, the apostrophe, and the removal of an empty cell are the most common. The hyphen is occasionally used to remove ambiguity; for example, it can be used to prevent words like “co-op” from accidentally being read as a place where

chickens are kept. Individual words are sometimes linked to create a new compound like a “once-in-a-lifetime” offer. The hyphen is also used to separate syllables when a word needs to be broken at the end of a line of writing. This use of the ordinary hyphen for doing this, however, is also problematic, and it can cause trouble in the same way as using a capital to start a sentence.

The apostrophe has several uses. One is to indicate a missing letter in a contraction. You eliminate one of the usual graphemes in a word and put an apostrophe in its cell instead. Another use is to show possession. The singular possessive is not usually a problem, but plural possessives or words ending in “s” create some arguments among editors, mostly about the appearance, and there is a tendency to omit a dangling letter. Most of such arguments about punctuation have to do with typographical style rather than linguistics.

A new word is sometimes created by skipping the space between two words that are so often sequenced that they come to be thought of as a single conception. Something that happens around the world a lot can be considered a “worldwide” event, thus creating a new adjective and saving some space. The period used to indicate an abbreviated word might be added here. It actually does modify a morphological unit by shortening it and is usually not likely to be confused with a sentence period because of its location (see Mr. and Ms. above).

4.19 The Sample Paragraph with only Phonological and Morphological Punctuation now Added

This sentence is simple But when you start getting into some depth and want to add a variety of things to your sentence it gets complicated An appositional structure like this one may require several commas around it to make sure you don't end up with a noun phrase with a different meaning That goes for a relative clause as well which may or may not modify the noun it's near Word modifications such as a nice new adjective added to a subject noun are not usually a problem but transformations that is really sentences that have been truncated in some way e. g. even a relative clause without a relative pronoun for example can cause *considerable* confusion when the punctuation is missing As someone once said a sentence is a complete idea Did I get that right

The paragraph is beginning to look much more normal, but all the punctuation for the dynamic axis is still missing. Some of the sentences can be discerned, but some are confused or remain mysterious. We need still some dynamic and sentence level punctuation and interpolations. [You will find them in the original version of this paragraph, section 4.13 above .]

4.20 Static Attention Devices

Punctuation such as underlining, italics, bold, or a change in a font or its size usually, but not always, involves a row of cells. Typographic practices often

come into play with these features. For example, should someone underline an empty cell? No matter how hard you try, however, you can't italicize an empty cell or make it bold. So each phonological feature has its own characteristics, and only individual cells are affected. Each one creates a new meaning when static punctuation is applied and modifies an existing grapheme.

4.21 Punctuation and Markedness

From studies of markedness, we know that a change in form amounts to a change in meaning. All of the symbols seen as punctuation on a page of written English involve markedness. They embody the characteristics that are talked about in discussions of markedness. One reason they may not be understood as such is that they are more visible. Thus, they may be perceived in a way different from other items of markedness, which are usually discussed in the context of speech and often not noticeable unless someone calls attention to them. Punctuation is instead silently immersed in a graphical context—barely seen and certainly not heard.

Markedness, after all, is about difference in just a small way, not a large way. Because it is always present, it is easy to overlook what is happening with some punctuation. It becomes part of the general appearance of the page and is not consciously noticed for its influence on the language. It seems to be creating some kind of new “order” but not exhibiting an overt

linguistic difference on a text. (This may be why many younger people do not pay much attention to them.) Indeed, many of the studies of punctuation dwell on the idea of order rather than linguistic modification and miss the point.

The main idea behind markedness, according to Moravcsik and Wirth, is one of correlation:

The domain of the theory is in all cases pairs of opposing language-structural entities that exhibit an asymmetrical relationship in more than one respect. The central claim is that the various tests that demonstrate the symmetry between the two members of the opposition will have converging results: Once one of the two members has been shown to be marked by one criterion—let us say, it has been shown to be structurally more complex than the other, or paradigmatically poorer, or more restricted in its distribution—all other relevant tests will also converge to select that entity as the marked member of the opposition. (Moravcsik and Wirth, 1986:3.)

One set of those perhaps “relevant tests” is noted by Edna Andrews and comes from a domain other than linguistics. Andrews makes the point that there is a significant connection between form and meaning, that opposition is a key factor in markedness, and that the only way to ultimately

discover it is by way of “form.” The first difference noted in markedness then is “formal,” and the second is “meaningful” (Andrews, 1990:95).

Andrews introduces nine axioms from set theory to bear on any situation involving markedness. The first is perhaps the most obvious for punctuation:

Axiom 1: A Difference in Form Signifies a Difference in Meaning

The very embodiment of punctuation is form. Limited visibility is its forte. Each modification alters a linguistic form in a simple but meaningful way.

Axiom 2: Every Set Can Be Well-Ordered

If we consider all of them as a group, punctuation items appear quite distinct in how they alter the appearance from one linguistic group to another. They are well-ordered in that sense. And those that actively modify phonologically or semantically are quite distinct from those that function morphologically or syntactically.

It is likely that we could find comparative values in the remaining axioms Andrews discusses, but some seem to require greater numbers for comparison than punctuation has to offer for a test, number 4, for example:

Axiom 4: For Any Two Sets, There Exists a Set

That They Both Belong To

There just aren't enough items in the pool of punctuation to make a good test here, it seems. An exception might be the punctuation involved with syntax, with the comma representing one set and interpolations items representing

another, although the interpolations don't participate in the syntax of the basic sentence (excepting quotations, perhaps). The final axiom Andrews offers, however, rings true:

Axiom 9: There Exists a Set Which Has No Elements.

(Andrews, 1990:97-109.)

Punctuation clearly has that one: space.

With just a few items, T. Givon, in *Syntax: A Functional-Typological Introduction, Volume II*, also offers a simple test for markedness, which together will confirm our belief in punctuation as markedness:

- (a) **Structural complexity:** The marked structure tends to be more complex—or larger—than the corresponding unmarked ones.
- (b) **Frequency distribution:** The marked category (figure) tends to be less frequent, thus cognitively more salient, than the corresponding unmarked one (ground).
- (c) **Cognitive complexity:** The marked category tends to be cognitively more complex—in terms of *attention, mental effort* or *processing time*—than the unmarked one.

Perhaps in anticipation of this study of punctuation, Givon has brought up the importance of figure and ground several times here. He states that (b) above “is intimately associated with the cognitive phenomenon of **figure-ground** relations. Most perceptual and cognitive distinctions tend to pair up

so that the salient, important, ‘figure’ is less frequent” (Givon, 1990:947-948). It is likely that Givon was thinking of the figure-ground relationship in a metaphoric way in relation to speech rather in an actual graphic, but we will accept his words as meaningful in the application to a graphic context as well.

Sometimes less is actually more, especially in graphic terms. According to Edward R. Tufte, the best design strategy involves “*the smallest effective difference*”:

Make all visual distinctions as subtle as possible,
but still clear and effective.

Tufte invokes Occam’s razor (“what can be done with fewer is done in vain with more”), which is relevant to “nearly every display of data” (Tufte, 1997: 73). We know that the ground even has a role in the more effective use of features. Some punctuation items take less than a whole space and allow the ground to show through. Furthermore, says Tufte, “Minimal contrasts of the secondary elements (figure) relative to the negative space (ground) will tend to produce a visual hierarchy, with layers of inactive background, calm secondary structure, and notable content” (Tufte, 1997:74). Perhaps the only items that fail to comply with this standard are some of the semantic ones, with their purposeful and sometimes exaggerated use of different *fonts*, *sizes*, **bold**, underlining, and *italics*, which, Tufte suggests, tend to activate the ground, something that may be a distraction on a page of writing. But,

practically, their aim is to get our attention, and they certainly do, sometimes annoyingly.

“Confusion and clutter,” according to Tufte, “are failures of design, not attributes of information” (Tufte, 1990:53). The goal is to find a strategy that adds information without adding complication. Again, punctuation complies. Two features suggested by Tufte occur in punctuation: layering and separation. The semantic and phonological punctuation simply add a feature to the existing grapheme when they add another meaning. This amounts to layering. Syntactic and morphemic punctuation use space as a feature, creating a visual distance that in a graphic way also represents the grammatical distance they are creating. This amounts to separation. (Indeed, “separation” is a word often mentioned in discussions of punctuation, but it is usually meant in a different way.) At about this time, we begin to wonder how, without a trained graphic artist on the payroll, the many writers in English over the past thousand years managed to devise such an efficient visual system for displaying the symbols needed to make our written communication as clear and as well organized as it is.

But perhaps the “smallest difference” is not always effective for some people and may be the reason that punctuation is nearly invisible to some younger readers, who may because of their inexperience be having trouble more with the words and syntax than the small symbols for punctuation. But Mina Shaughnessy found that adults classified as “basic writers” largely used

only commas and periods and that “they do not perceive the written sentence as something that can be broken into or added onto for purposes of elaboration, modification, or side comment” (Shaughnessy, 1977:28). For all practical purposes, nothing other than terminal punctuation items seemed to exist for these students. And why might they not see them? “The small marks of punctuation, after all, don’t look very important. They don’t seem to say much either” (Shaughnessy, 1977:27). The problem, however, seems to be less about the lack of knowledge about punctuation than a dearth of knowledge about the sentence and its capabilities, but they tend to go together.

Edwin Battistella, in an article titled “Marked and Unmarked Punctuation Signs in English,” tried to find a way to compare items of punctuation with each other to determine how they related in terms of markedness (Battistella, 1996). In doing so, he also avoided the term “punctuation mark” because he wanted to use the concept of “zero” in his comparison and knew it was in no way a “mark.”

His analysis is puzzling, however, because he was comparing items of punctuation to each other and not to the linguistic features they represent (in the case of the phonological, morphological, and semantic features) or the ones involved with syntax in some way. Clearly, items of punctuation are not in any way hierarchic with one another in the graphic matrix. Each has a different purpose, a purpose which is related to one of the linguistic categories. They are a system, a set.

Battistella's final lines in the article revealed his uncertainty about the endeavor: "It might well be that the features posited on the first pass through the punctuation system are not correct—in fact, it would be quite miraculous if they were" (Battistella, 1996:246). I am likely to agree with him. (In an earlier work, titled "Notes on the Sign Structure of English Punctuation" (1993), Battistella looked for a way to connect punctuation with Peirce's system of signs, but he was only working with a few dynamic items and posited some ideas without arriving at a conclusion.)

4.22 Phonemes and Graphemes

David Crystal describes the "-eme" suffix used in linguistics this way:

An 'emic' approach . . . takes full account of FUNCTIONAL relationships, setting up a CLOSED system of CONTRASTIVE UNITS as the basis of a DESCRIPTION. Emic is in fact derived from such terms as PHONEME and MORPHEME, where *-eme* refers to the minimal DISTINCTIVE units involved.

(Crystal, 1997:134-135.)

There are phonemes and morphemes, then. Both have been around for some time. But the term grapheme is somewhat newer. It is the term that is used to represent the phoneme in written form. But not everyone is happy with the term because it has also sometimes been used to describe features other than phonemes that are represented as characters in a written text.

Peter Daniels posed the question in his article: “Is a structural graphemics possible?” Daniels aired all the various ways in which the term “grapheme” has been applied, and the result is clearly confusing. Too many people have tried to include too many items in the category and sometimes debased it. He is correct in bringing this out and criticizing those who misapply the term. In a later work, *The Handbook of Linguistics*, he makes his displeasure clearer:

writing systems do not work like linguistic systems; there is no “emic” level, and the popular term *grapheme* is misleading. For instance, many alphabets use a pairing of symbols—capitals and lowercase, majuscule and minuscule—that has no equivalent in sound systems. (Daniels, 2001:66.)

In the earlier work, Daniels does mention the work of Ernst Pulgram, who went to great trouble to describe the family resemblance between phonemes and graphemes in his “Phoneme and Grapheme: A Parallel” (1951). Pulgram, according to Daniels, discusses “the parallels between phonemes and *letters of the alphabet*; but even if we restrict the discussion to English, whatever the concept of grapheme may cover, it must include more than letters of the alphabet. Wouldn’t dollar signs be graphemes? Numbers? Punctuation marks?” (Daniels, 1992:531)

At this point, it is clear that Daniels has himself crossed a red line. When he tries to include majuscules, dollar signs, and punctuation marks in

the category of graphemes, he is doing the same thing as those he earlier criticized: adding irrelevant features to the category of graphemes. My guess is that Pulgram did an adequate job in classifying and comparing graphemes and phonemes in a parallel way. Here is what he offered for graphemes:

- 1 The smallest distinctive visual units of an alphabet are its graphemes.
- 2 A grapheme is a class of written characters pertaining to one alphabet.
- 3 The hic et nunc [here and now] written realization of a grapheme is a written alphabetic character or graph.
- 4 The number of graphemes in each alphabet must be limited, the number of graphs cannot be.
- 5 By definition, all graphs identifiable as members of one grapheme are its allographs.
- 6 The graphic shape of an allograph is dependent on its producer and on its graphic surroundings.
- 7 The graphs which are not immediately and correctly identifiable as belonging to a certain grapheme when occurring in isolation, may be identified through their meaningful position in a context.
- 8 Alphabets are subject to graphemic change and substitution.

9 The number, kind, and distribution of graphemes varies from alphabet to alphabet. (Pulgram, 1951:15-16.)

Thus, only those items that were phonemes originally can also be considered when looking for graphemes. Certainly, majuscules, dollar signs, and punctuation marks were never included in Pulgram’s classifications—but neither were spaces. Furthermore, some of Pulgram’s nine axioms can also be used for defining a new term for punctuation as well, simply by changing a few letters. (See Chapter 5.)

Leslie Henderson also examined the confusion about graphemes and found at least three distinct uses. He ultimately seems to have agreed with Pulgram’s approach, calling the grapheme “the minimal distinctive unit of a writing system” (Henderson, 1985:146). This certainly describes the twenty-six minuscule letters.

4.23 Punctuating the Dynamic Axis: the Comma

Baldwin and Coady, in their article titled “Psycholinguistic approaches to a theory of punctuation,” found “that the rules of English punctuation established with traditional grammar are empty conventions, which neither predict nor explain reading behaviors involving punctuation” (Baldwin and Coady, 1978:375). They determined instead that English punctuation was actually a “cue system” . . . “an orthographic device which signals syntactic patterns to the reader” (Baldwin and Coady, 1978:363-364). They performed some experiments with twenty fifth grade students and twenty linguistics

graduate students, the basis for which was to see if the canonical sentence and punctuation had any influence on their reading efficiency. They did make a difference:

The results of the present research support the notion that individual marks of punctuation exert a variable influence upon sentence comprehension. Moreover, the canonical-noncanonical distinction appears to broadly define the grammatical conditions under which punctuation cues are redundant or critical aspects of the visual display. When sentences are noncanonical, punctuation seems essential in arriving at appropriate syntactic analyses. When sentences are canonical, punctuation appears merely to reiterate grammatical information already provided by word order. (Baldwin and Coady, 1978:370-371.)

The graduate students did adjust to punctuation peculiarities better than the fifth graders, but the results showed that the canonical sentence had a serious influence on comprehension and that punctuation played a part.

A few years later, Mohan R. Limaye used the idea of the canonical sentence as part of a more systematic approach to punctuation by pointing out that marked word order often requires punctuation (Limaye, 1983: 29). By “marked” he meant noncanonical word order, and he showed that a sentence that started with the SVO pattern needed no punctuation even after other structures were added to it at the end. But when the SVO sentence was

delayed and the alternate structures put first, punctuation was necessary. Essentially, his approach was similar to that of Baldwin and Coady.

Unfortunately, most of the examples used in the studies were rather short sentences, and none of these scholars pursued the idea of the influence of the canonical sentence on punctuation any more, but they made the point that the canonical sentence, rather than the textbook rules, clearly had something to do with the reason for punctuation.

According to Nathan Knobler, in *The Visual Dialogue*,

Communication is a transfer of information or ideas from a source to a receiver. Some vehicle or medium is required for this exchange. We usually refer to this vehicle as a “language.” As communication becomes more complex, as the descriptions become more precise, the language must be developed to represent the specific information and express it. This process requires a language of many individual symbols and a systematic means for combining them into significant and understandable relationships (Knobler, 1966:33-34.)

In the next step, in English writing, we use graphemes, which are really “signs” (rather than symbols) that represent phonemes and thus possess some kind of meaning already. When language gets turned into writing, says Knobler, “a combination of lines or marks” is used to form words like “CAT,” which a seasoned reader will ultimately perceive as a whole word rather than

individual graphemes (Knobler, 1966:34). In the next step, moving into syntax, according to Knobler,:

the sentence, “**THE CAT IS ON THE FENCE,**” is a grouping of separate elements which the reader has learned to combine in a particular way. If the accustomed pattern is broken, even though the individual elements are unchanged, confusion can result:

THEC ATIS ONTH EF ENCE

CAT FENCE ON IS THE.

Both of the above letter groupings are confusing, for they do not fall into a pattern which has a familiar appearance.

(Knobler, 1966:35.)

In this digression into talking about language as an introduction to talking about art, Knobler makes a significant point about written communication. It behaves in a way similar to any visual communication where perception is concerned and this provides a clue to why punctuation is important. It is what we see and how we understand the relationship of the visual items that is in control.

If all sentences were short and simple, there would probably be no need for much dynamic punctuation. Static punctuation would probably take care of most of the phonological, morphological, and other anomalies a language is privy to. It is in syntax, when a sentence gets complex, that

dynamic punctuation is required. Just as the displacement of cells in the ground in the short sentence

THEC ATIS ONTH EF ENCE

makes it hard to read, the addition of words and phrases to a simple sentence can potentially create confusion because the relationships will not be apparent without some system for showing them visually.

Beginning in the 1960s, a number of scholars became interested in how sentence parsing worked. They devised a number of strategies on the way to finding out how sentences managed to arrive at some kind of syntactic completion. One persistent question was the relationship of semantics and syntax. Which one is called upon first in understanding a sentence? And what is the process that is occurring as one parses? Is it a stochastic process similar to a Markov chain? None of these questions have been fully resolved, but the evidence seems to be accumulating to suggest that syntax comes before semantics (cf., Chomsky's sentence).

One strategy proposed by Lyn Frazier, however, was called "late closure": "When possible, attach incoming material into the clause currently being parsed" (Frazier, 1979:20). (It could be purely coincidental, but here again a term used in graphic communication is also turning up in linguistics.) Various other approaches to parsing were also proposed, and a good amount of ink was spilled trying to resolve why some sentences, such as garden-path

and other ambiguous or confusing sentences, would cause people to come to a wrong closure.

One possible answer to explain how parsing worked was to use the “canonical sentoid strategy” or CSS, which posited the idea that a listener or reader was actually using the underlying framework in English that determines the order of sentence parts. Each language has its own pattern, which is on a very abstract level. The canonical sentence for English is subject-verb-object or SVO. The use of this strategy was ultimately put aside by Frazier and others because they found that “To reconstruct the base structure underlying a sentence, it is necessary to know not only which sentoids occur in that structure but also how they are arranged relative to one another” (Fodor, Bever, Garrett, 1974:348). The strategy was, of course, being applied to speech rather than writing. Because they were concerned with speech, there certainly could not be any predictability in what types of structures might occur and in what order so using the CSS was not a confirmable strategy in the context of speech.

However, if we apply the CSS to writing, we may find the purpose for some dynamic sentence punctuation. In contrast to speech, we already know in writing what structures are there and in what order. All that is needed is to use some system for showing the reader the relationship of the parts so that the written language can be processed appropriately. *In fact, it is the abstract canonical sentence (SVO) that is actually being used as the guide for*

the punctuation of sentences that are other than simple. To accomplish this, only one punctuation feature is used: the comma.

The comma does not function in a positive way, however. It functions in a negative way by showing which oncoming units should not be parsed with 1) the canonical sentence or 2) some other immediately preceding structure. In doing so, it is preventing closure. It is preventing the oncoming or next-to-the-right structure from modifying the existing one to the left. The comma is an “antimodification device,” an AMD. The same modification prevention is also performed with recursion, with a series of words or contiguous phrases of the same type: red, white, and blue; in the morning, behind the garage, in the new car.

The comma, then, has two functions: 1) to prevent words or phrases from directly modifying the canonical sentence (CSS); 2) to separate recursive words, phrases, and sentences (the sentences when they are linked with a coordinator).

If your sentences become too elaborate and you are reluctant to use punctuation, your more complex sentence can easily become a nightmare:

The cat I'm referring to the neighbor's cat which comes around our house frequently begging for food something I don't want to give it because it might lose its interest in our neighbor and start thinking it lives at our house is black and white.

What is needed is show the reader where the basic sentence is, and that can be accomplished easily by using commas:

The cat I'm referring to,** the neighbor's cat, which comes around our house frequently begging for food, something I don't want to give it because it might lose its interest in our neighbor and start thinking it lives at our house, **is black and white.

The punctuation makes the canonical sentence apparent by preventing closure with structures that are not a part of it. This is not being accomplished by using speech as a referent, by using logic or rhetoric as a guide, or by using grammar in any ordinary way. The sentence now is visible.

The digressions in the middle of the sentence above are of several types: apposition, relative clause, apposition, subordinate clause with coordination. Each unit can be prevented from modifying the next by using a comma, letting the reader know that the sentence is not ready to be resolved. When the verb "is" occurs, the reader knows the sentence is going to be completed. It is the word that the phrase ***The cat I'm referring to*** was looking toward for closure and completion of the canonical sentence.

The parts of the cat sentence above could be arranged in a number of ways, but the simple sentence could still be preserved using only commas. *Thus, the goal of dynamic punctuation is to preserve the integrity of the canonical sentence and make it visible, and the comma is the chief punctuation feature for doing this.*

This can be observed in other sentences that we might use as examples, regardless of what genre or source. Indeed, if we use this process to reveal the canonical sentences in writing samples, we might also discover places where good punctuation procedures have not been followed. Here is a sample borrowed from Knobler that works well:

When it becomes necessary to communicate these sounds beyond the limits of hearing, **written symbols**, a combination of lines or marks, **must be used**; and **these**, too, **require a common understanding on the part of the communicators.**

(Knobler, 1966: 24.)

Here is one that is questionable:

During this same period of time **a minority of artists began to experiment with new methods of representation.**

(Knobler, 1966: 41.)

Here the comma has been omitted from an introductory phrase, something which may cause a problem for some readers. (Indeed, a study of this writer's punctuation behavior would likely reveal that he is somewhat inconsistent in the punctuation of introductory phrases.)

It should be made clear that each comma is functioning independently, even though they sometimes appear to be working in pairs, such as when a single apposition follows a noun phrase:

Jack, our neighbor, is very handy.

It is true that the two noun phrases could be interchangeable, but the sentence began with the noun phrase “Jack,” and it is that one that is seeking closure with the verb “is.” This is one of the peculiarities of the system that may require some investigation. Some discussions of punctuation talk of “paired commas,” but more likely each comma is dealing with “closure” separately.

4.24 The Role of Interpolations

While the comma can be used to help place a word or phrase almost anywhere in a sentence, interpolations can only be added after a sentence has gotten under way. Interpolations are intrusions in a sentence but are intended to add some kind of useful information to the sentence, usually in proximity to something that has just been stated. The dash, parenthesis, bracket, and quotation fulfill this function. They are visibly part of the graphic sentence but are isolated from it by their punctuation. They do not become part of the syntax of the canonical sentence. The ellipsis is used to show omitted language where it is embedded in a quotation. It is an interpolation inside an interpolation. Brackets can also be used as an interpolation inside an interpolation ([]). Quotation can be done inside parenthesis or brackets as well. Also, some portion of a quotation can be incorporated into a sentence of the author.

4.25 The Role of Adjuncts

The semicolon and colon almost always appear near the end of a sentence because they are usually used to add some information to the basic sentence in a qualified way. The special symbol “permits” them to make a semantic modification to the sentence or partial. The semicolon has a dual role. It also serves as a replacement for a comma between the units of a recursive structure that is complex or as a replacement for “comma + coordinator” between two sentences.

4.26 The Role of terminal punctuation

Terminal punctuation and initial capitals have a single semantic goal: to show the end and beginning of an orthographic sentence.

4.27 The Absorbition Rule

When two kinds of structures (ex., a dash and a comma) could possibly end up in the same location, the one that is more likely to have been there to preserve the canonical sentence would take precedence.

* a) The house, which is dark—because nobody is home—should be shut.

b) The house, which is dark—because nobody is home, should be shut.

Normally, we see dashes in pairs, but in a) the right dash overlaps with the location where a comma would normally be if the dash had not been used. In this kind of situation the absorbition rule comes into play and the comma in b)

must replace the right dash. Otherwise, the canonical sentence would be sundered. The dash belongs to the relative clause digression, not the sentence.

4.28 Summary

Punctuation is a symbol system in a graphic domain. It needs to be analyzed in accordance with gestalt and other visual and graphic standards in addition to how it functions with linguistic categories. But the visual model or schema that it uses is not just ordinary grammar but instead the more abstract canonical sentence (SVO).

The action involved in all punctuation is modification or its prevention. The written sentence is an orthogonal projection and has two dimensions, static and dynamic. Static (vertical) punctuation (capitals, underlining, italics, bold, hyphens, apostrophes, etc.) semantically alters graphemes phonologically and morphologically. Terminal punctuation is also static and semantic. The goal of dynamic (horizontal) punctuation is to preserve the integrity of the canonical (SVO) sentence and make it visible by using commas to prevent inappropriate modification. Parentheses, brackets, quotations, and dashes are interpolations and not part of the sentence itself. The semicolon and the colon are sentence adjuncts. Ellipsis is an intraquotational punctuation feature. The absorption rule handles right closure punctuation conflicts. Punctuation involves markedness. Punctuation

is grammatical only in the sense that punctuation features must be inserted in the proper places once their relation to the canonical sentence has been identified and the canonical sentence is protected and made visible.

Chapter 5

An In-depth look at some Punctuation Features; some Anomalies; the Puncteme; and some Research and Teaching Ideas

5.1 Introduction: Speaking and Writing

As long as people continue to perceive writing as closely related to speech, they will have trouble with punctuation. Writing is graphic. It must be seen. It takes after its classification: orthographic. Speech is like a massive symphony orchestra whose music can be broadcast to the entire world via satellite. Writing is barely a thin octet playing to an audience of one. Speech has a huge advantage over writing with nearly unlimited kinds of nonverbal communication to assist it. A wink and a groan can mean much more than a five hundred word essay. A few decades ago, there was a considerable interest in comparing speech and writing, but there has been little interest in doing so recently.

When teaching the alphabet and writing, it is necessary to show the similarity to speech, but the differences should also be taught, otherwise students may get the impression that they are only mirror images of one another. Alphabetic languages have advantages; they can invent new words easily, something that syllabaries and logographic writing systems have more trouble doing. But very likely someone used to a written language like

Chinese would find an alphabetic language just as confusing as someone writing in English would with Chinese at first encounter.

5.2 The Comma as a Tool

The comma is the only feature of punctuation doing all the work in the horizontal or dynamic axis. It is the greatest challenge for many writers and has the greatest number of “laws” or “rules” in handbooks. It has also been identified as the most common punctuation feature by Charles F. Meyer, who found that 47% of the punctuation in the corpus he studied was commas, with periods taking second place at 45% (Meyer, 1983:18). No other feature comes even close, so it would benefit new writers to learn the two uses of the comma first. It also is the cause for a large number of writing errors. An article by Connors and Lunsford on student writing errors revealed that comma errors were one of the most common (Connors and Lunsford, 1988).

To understand the comma’s uses it is necessary to conceive of writing as graphic. The comma is the only feature of punctuation actually used in the syntax in the horizontal axis. It has two uses:

- a) to protect the canonical sentence by making sure that there are no inappropriate modifications;
- b) to reveal recursions.

In effect, both are preventing modification, so we could possibly talk about a single task for the comma. But there is a difference in the places where you find them. The comma protecting the canonical sentence gets its direction

from the invisible form and involves parsing, while the recursive comma gets its direction from visible and adjacent repetition in the axis.:

c) The long, dark, curvy road was dusty.

d) I drove carefully, slowly, intrepidly.

Omitting the commas would allow each adjective or adverb to modify the next one (which could be an option if the writer intended that meaning).

Coming to grips with the idea that modification is something going on all the time in a sentence could have some advantages. For example, two structures which are exactly the same can mean two different things in a sentence, depending upon whether you add a comma or two to prevent modification. A relative clause (and similar structures) can be used to modify a noun e) or just add some interesting but not necessary information f).

e) The man who flew upside down was crazy.

f) The man, *who flew upside down*, was crazy.

In e), the relative clause is modifying the noun “man.” In f), it is just some information that is interesting but not crucial to identifying the man and could be left out. If e) were called “modifying” and f) were called “nonmodifying” (rather than “restrictive” and “nonrestrictive”), our understanding of both grammar and punctuation might be improved.

Punctuation, like other linguistic categories, is also demonstrating contrastive distribution of a symbol in the same context. Since the comma is

the only feature in the syntax (the horizontal axis), it is usually comparatively easy to tell the difference between the two uses.

The comma in a) is a model which can be used in the various kinds of sentences. Those parts of an *orthographic* sentence, which may or may not resemble a canonical sentence, also use commas in the same structural locations where they might be used in a canonical sentence. A *partial* sentence can also contain commas in the same way, and its difference is that it does not have a junction between a subject and a verb.

When there are two a) commas involved in a potential modification location, they are sometimes described as being “paired.” But they are really working individually. As the sentence is parsed, the first comma is noting the potentially inappropriate modification and signals it. The attention is then directed to the modification itself, which temporarily becomes the focus until it comes to the point where it no longer is grammatically appropriate for what is coming next. Then another comma is required, not because it is related to the previous comma, but because another inappropriate modification may now be about to take place in that location. The sentence is always parsing forward, and each comma gives permission to delay the semantic closure of what just came before to what is coming next. (If the second comma occurs at the end of a sentence, the absorption rule comes into play, and terminal punctuation is used instead.)

5.3 Recursion and the Comma

The comma operates in a “series” as an indicator of recursion. We are often told that a series is at least three things, but it really need be only two.

Recursion is any two or more units in a row that are grammatically equivalent. This is really going on all of the time in the language—for example, when you put several prepositional phrases in a row (“in the morning at the hotel in New York”), but sometimes there is the need to isolate each unit by using commas and creating a list-like arrangement which is more noticeable. The goal again is to prevent one unit from attempting to modify the next one.

The commas are the feature that is doing the work in the series, but often there is an “and” between the last two items. Style then may come into play, and some writers choose to eliminate the final comma, creating the potential for ambiguity. In fact, because of the recursion and the commas, the “and” is the feature that is not needed and can be eliminated without altering the meaning in the series. The formal name for this is “asyndeton” or “no coordinator.”

The comma is also used to combine two (recursive) sentences, but this requires an additional feature to make sure the reader notices it is a different level of recursion. Some function word is needed in addition to the comma: S, and S; S, but S; S, yet S; S, or S. If the function word is omitted, however, the sentences can be combined with a semicolon: S; S. In either case the

recursion is noted. One comma error involves putting a comma after a sentence, followed by a coordinator and a phrase (S, and phrase), often based on some idea of a pause, and deceiving the reader into believing another sentence is imminent.

5.4 Interpolations

Robert H. W. Waller defines an interpolation as “the insertion or juxtaposition of a short segment into a longer one in such a way that the continuity of the sentence, paragraph, page, chapter, or book is not destroyed” (Waller, 1980:248). In graphology, you can account for variables by making one of them stable and treating the other as an interpolation (inter – between, among; pol – an axis) (Mandell, 1974:99-101). The invisible canonical sentence (SVO) in this case is the stable variable, the horizontal axis. Additions to its own parts are indicated with the comma. But additions to the sentence at large can also be made using interpolations, which are a linguistic set of features. There is no clear hierarchy among them, but some seem to have a greater distance from the basic sentence than others, but a subset may function as a hierarchy if necessary. (Other punctuation features can also be found inside interpolations of course.)

The dash < – > probably has a closer relationship to the basic sentence than the other interpolations do, because it is “empty” and functions like empty spaces, yet it interacts with other syntactic punctuation in the

horizontal axis, such as the comma or terminal punctuation, where the right dash can be absorbed. It is something of a hybrid. All interpolations perform like *sotto voce*, but the dash seems the least in that regard, more often indicating a less than important reason for departing and a rapid interruption and return. All of the interpolations may show some stylistic effect, depending upon how they are used. (However, stylistic effects in the basic sentence are more likely to be caused by word choice, word order, and larger features of the writing rather than punctuation, except for poetry, perhaps.)

The small subset involving the parenthesis < () >, brackets < [] >, and braces < { } > does form something of a hierarchy, each representing more distance from the basic sentence, and each can be inserted in the previous one, but that much embedding might be extraordinary < ([{ }]) > and difficult to follow. Parentheses often provide some useful additional idea, whereas brackets tend to include technical or editorial information. Braces are seldom used.

There is also the lurking problem of semantic meaning involving interpolations. The comma deals with semantic alteration in the meaning of the basic sentence, while interpolations seem to have more of a structural approach in addition since they are interrupting the basic sentence and announcing that they are doing so to provide some kind of modification on a different level—factual, technical, or some kind of personal observation, for

example [cf., Montague grammar, where the context plays a role in the meaning (Lappin, 2001:375)]. Still, these interruptions do alter the meaning of the basic sentence.

There is also the possibility that some interpolations are involved in metalanguage, particularly if they are used to define or clarify some language in the basic sentence. The force of punctuation can be so great, in fact, that at least one scholar has claimed of some that it “was a kind of commentary of the text” (Saenger and Heinlen, 1991:255).

Interpolations also have constraints. The ones listed so far (dash, parenthesis, brackets, braces) almost invariably follow the part of a text that they relate to or may show up at the end of a sentence. You can’t start a sentence with an interpolation, a hyphen, or an ellipsis (at least not yet in ordinary prose), but you can with a quotation or an apostrophe. On the other hand, interpolations aren’t likely to have any special meaning outside the sentence in which they exist; they are context bound. Also, they may be subject to editorial practices, like all the rest of punctuation.

5.5 Parenthesis and Quotation

Over the years, some scholars have become fascinated by certain features of punctuation. Two that have garnered particular interest are parenthesis and quotations. Book length works and many articles have been written on both features.

John Lennard, in his 324 page book, *But I Digress: The Exploitation of Parentheses in English Printed Verse*, makes it clear that “parentheses” can mean at least two different things:

‘parentheses’, rhetorical figures; and ‘parentheses’, the marks of parenthesis sometimes called “round brackets”: ().

(Lennard, 1991:1.)

Lennard’s interest was in the “round brackets,” also known as “lunula (-ae)” or “little moons,” which he borrowed from Erasmus, he claimed (Lennard, 1991:1). The symbols themselves, according to Paul Saenger, were invented by Humanist scribes in the fifteenth century and spread throughout Europe quickly (Saenger, 1982:410-411). The scribes were actually just giving a form to the rhetorical figure that had been around already, a Greek expression meaning something like “alongside.” Apparently, it didn’t take long for the little moons to become popular. One study cited by Lennard revealed that Shakespeare’s play scripts were littered with them.

But Lennard’s goal was to trace the use of parentheses over the centuries but only in verse. One of the conclusions he reached was that opinions on the use of parentheses differed strangely. Grammarians felt they were “additional, irrelevant, extraneous, subordinate, or damaging to the clarity of an argument,” while what he observed himself revealed that “they were often original, relevant, central, emphatic, or indicative of the crux of an argument” (Lennard, 1991: 242). Lennard discovered that little moons have

remained popular, something that anyone who has read poetry by e e cummings can attest to.

Parenthesis has also remained popular in prose as well. Daniel P. Deneau did a study of Claude Simon's 1960 novel *The Flanders Road*, where he found "550 sets of parentheses which enclose approximately 25% of the total text" (Deneau, 2003:553). Deneau discovered that Simon's prose was certainly unusual but his use of parentheses was extraordinary, for what was in them was as important as the rest of the text, despite a popular belief that parenthetical material can easily be omitted from a text without losing anything. Simon's prose is indeed unusual, with sentences running for two or more pages and parentheses the length of an average paragraph at times. (Trying to provide an example here could well exceed the legal limit for citations.) Apparently, the little moons are still shining brightly in prose as well.

Of all the symbols, quotation seems to have attracted the most interest by scholars. Like other punctuation features, quotation symbols have more than one function. But the scholarly interest in quotation, largely, is not in the symbol itself but in how the two types, 1) the words of others or 2) words just getting some attention, can fit into the linguistics of a sentence.

Currently, the symbol has only those two main uses: 1) to indicate a direct quotation from some person or place other than the author of the present document; 2) to call attention to some language that may require a

second thought for any one of a number of reasons (one type is referred to as “scare quotes”). Once referred to as “inverted commas,” the symbol itself is in effect similar to italics, bold, underlining or font change in its graphical use, except that its attention-getting function is meaningful and specific rather than like the more general and stylistic uses of the other features. In both uses, the reader is being advised to notice the language itself, to pay attention not only to the “what” of the language but also to “how” it is said and “who” said it. In a sense, the language in question is more “objectified,” rather than merely to be parsed and understood as just another part of the author’s argument. Or, as Townsend and Bever put it, “when a word sequence is organized into a sentence, it takes on a special psychological status” (Townsend and Bever, 2001:45). This certainly would amount to a semantic change when quotation symbols are used.

Many articles and some valuable books have been devoted to quotation, but mostly to its linguistic or literary functions rather than its graphical use. According to Colette Moore, author of *Quoting Speech in Early English*, today’s symbols were a late arrival, sometime after the start of printing. The early parentheses were also used to indicate language other than an author’s, but the whole practice was somewhat haphazard. Moore claims that the current symbols were already in some books in the sixteenth century, however (Moore, 2011:76). In addition to Moore’s book, Marjorie Garber’s scholarly work titled simply *Quotation Marks* looks into the “uses

and abuses” of quotation in a variety of contexts. For someone interested mostly in the linguistics of quotation rather than just the uses of the symbol, a recent work is *Understanding Quotation*, edited by Elke Brendel, Jörg Meibauer, and Markus Steinbach (2011).

5.6 Diacritics. Diacritics share the vertical or static axis with capitals and font alterations. They may be the most debated punctuation, and the attempt to avoid them may be responsible for some of the odd spellings in English. That is, to avoid having to use diacritics to provide more accurate graphemes in English, printers probably encouraged using other graphemes instead. Diacritics indeed are of two types, one involving adding an additional grapheme and one which modifies a grapheme (Aronoff, 1994:74). For example, the silent <e> in “write” and the doubled <tt> in “written” could likely to be the result of printers not wanting to adopt diacritics to modify an individual grapheme as is done wholesale in languages like Czech (Aronoff, 1994:77).

Even some linguists have trouble acknowledging the existence of diacritics in English. In the punctuation section of *The Cambridge Grammar of the English Language*, everything on the punctuation list we have been talking about in this study is included except one, about which they say: “Words may also contain various non-segmental marks, diacritics, but we do not regard these as falling in the domain of punctuation” and are “simply a

matter of word-spelling” (although they are unsure about the diaeresis <ä>) (Nunberg, Briscoe, and Huddleston, 2002:1724-1725). But they apparently agree with the idea that the twenty-six minuscule letters are the basic form of the graphemes in English because they state the following:

We will therefore regard punctuation as covering the use not only of punctuation marks but also of such non-segmental features as italics, capital letters, bold face, and small capitals. Ordinary lower-case roman represents the default form, and these non-segmental features can be regarded as **modifications** of the default form.

(Nunberg, Briscoe, and Huddleston, 2002:1724.)

Why they put diacritics aside is hard to understand, but they do support the basic graphemes and believe in the concept of modification.

Gabriel Altman had no problem with diacritics as punctuation and described the situation exactly: “One can count also the diacritical marks as grapheme modifications” (Altman, 2008:154). Alan S. Kaye, disturbed by an article claiming that English used no diacritics, studied *Time* magazine for a few weeks and found these: cedilla, accent acute, accent grave, circumflex, diaeresis, macron, tilde, and spiritus lenis (Kaye, 1988:11).

Dennis Kurzon, in “A brief note on diacritics,” discussed some of the arguments about them. Some believe that for something to be considered a diacritic in a language it has to be a regular feature, but that would be

making a decision based simply on how often it was used (Kurzon, 2008:90). Someone driving past a Café every day might argue with that assumption. (There is at least one business in Milwaukee that uses an umlaut in its name, which is on the façade of the building where it is located.)

5.7 The Apostrophe

To Elizabeth S. Sklar, the apostrophe is :

. . . the stepchild of English orthography. It is neither fish nor fowl, typographer's convenience, nor true punctuation.

Ordinarily well-behaved, the apostrophe is usually seen but not heard, a device for the eye rather than for the ear; yet unlike any other orthographic symbol, be it "point" or printer's mark, the apostrophe, under certain phonological conditions, is pronounced as a full-fledged phoneme. The possessive apostrophe is a grammatical anomaly, a vestigial case marker—appropriately shaped like the human appendix—in a noun system that has otherwise dispensed with cases.

(Sklar, 1976:175.)

It seems apparent that Sklar does not like apostrophes, and she also cataloged in her article a number of street signs and other places that incorrectly left them out.

J. C. Wells, in an article on diacritics, suggested that the apostrophe can sometimes be considered one: “. . . from some points of view its role is considered similar to that of the diacritic. It is true that in many languages it is used to indicate the omission of a letter: this is how it is used in English . . .” (Wells, 2000:253).

Its physical appearance, perhaps, has caused some to call the apostrophe a clitic, something which is “less than a word but more than an affix,” for which Trask provides “she’ll do it” and the possessive “’s “ as examples (Trask, 1997:44). In another work, Trask identifies the apostrophe as a grapheme, along with all the other features of punctuation (including space) (Trask, 1999:114).

To Daniel Bunčić, the “apostrophe does not mark the *omission* of letters, as traditionally assumed, but indicates important *morpheme boundaries* wherever this is necessary for certain reasons” (Bunčić, 2004: 185).

Edwin Battistella did a study of the apostrophe as related in a way to Peirce’s sinsigns and legisigns, but made no determination as to how they fit into the whole process of punctuation or how this idea relates to how other punctuation features function (Battistella, 1999).

There are a number of opinions, then, as to what an apostrophe is: diacritic, clitic, modifier, boundary marker, and sinsigns and legisigns. But Quirk et al. did manage to find something to make the apostrophe more

linguistic when they said that “There are occasional examples where the genitive acts as a modifier rather than as a determinative,” and offered words like “women’s,” “ship’s,” and “farmer’s” as examples of a “descriptive genitive” (Quirk et al., 1985:327).

Indeed, like other features, the apostrophe is a contrasting pair, with two different uses in the same context, one for an omitted grapheme in a word and another to show possession. Both occur in the static (vertical) axis in the sentence, and the two uses almost seem like opposites: the possessive apostrophe shows a concept added and the other use shows a concept left out. The apostrophe can be used nearly anywhere to show an omission, even the beginning of a word (‘T was) or sentence, but the possessive is used only at the end of a word. The well-recorded problem with the possessive apostrophe has to do with its use with words ending with “s” (in which case 1] just an apostrophe is added and no additional “s” or 2] another “s” is added after the apostrophe) and words which can’t logically possess anything, such as “my car’s tires are flat,” which disturbs some readers. These could easily be called “allopuncts” to confirm their legitimate linguistic character, but writers are definitely puzzled with how to use them.

Sklar’s advice, you can imagine, is to get rid of the possessive apostrophe:

While the apostrophe is useful in the world of letters, a reminder, perhaps, of some more formal and elegant stage of our

language, it is, in the end, an antique. . . . When it ceases to be a convenience, we have no option but to allow the apostrophe to join the flatiron, the washboard, and the footwarmer as a relic of times past. (Sklar, 1976:183.)

5.8 The Hyphen, Ellipsis, and the Virgule

Like other punctuation features, the hyphen has two contrasting uses: 1) to show a connection between morphemes and words and 2) to show separation of morphemes. It operates on the vertical (static) axis. The hyphen at the end of a line to indicate a broken word is a problem, however, since it can be confused with the other use of the hyphen. This could be solved by modifying the hyphen which is breaking a word at the end of a line, perhaps tilting it a bit, to show a difference that distinguishes it from the connecting type of hyphen.

Ellipsis may be the only feature of punctuation that seems to have nothing to contrast with, unless we contrast it to space, which is in a different axis. Its use is very specialized: to show purposely omitted language in a borrowed quotation. So the ellipsis is nearly always visible inside a line of text that is already framed as a quotation. Fiction generally uses ellipsis more generously, but there the dialog is not in always in quotation marks. One curious thing about the ellipsis is the way it is treated in some European writings. It is sometimes enclosed in brackets: [. . .]. Apparently, some

printers do not believe that spaces are sufficient punctuation. The brackets are clearly redundant.

The virgule, also known as *traits d'union*, turned up in Europe “in the late tenth and eleventh centuries,” according to Paul Saenger (Saenger, 1997: 66). It was also known by some other names and used in a number of ways over the centuries. Today it usually indicates a choice or equivalency between two ideas (perhaps opposites again). Bringhurst also claims that in the past it was used as an alternative to the comma or parenthesis (Bringhurst, 2005: 81-82).

5.9 Capitals and Terminal Punctuation

The capital at the beginning of a sentence creates a problem similar to the hyphen at the end of a line. The reader can't tell if it is just a sentence initial capital or also a proper noun, its contrasting use.

*Frank is the politician who will fully explain a new law. But they are rare.

frank is the politician who will fully explain a new law but they are rare.

Frank is the politician who will fully explain a new law. He always does.

The solution, of course, would be to eliminate initial capitals, but that might take some energy to accomplish. If we could accomplish it, we might also be able to eliminate the redundant period at end of the sentence as well and only add terminal punctuation for questions and exclamations and initial capitals only for proper nouns.

Josef Vachek also believes that capitals are a problem:

. . . the use of capitals to open a sentence is, in fact, redundant, because the beginning of the new sentence is sufficiently signaled by the presence of the full stop at the end of the preceding sentence (or by the absence of any preceding context).

(Vachek, 1989:49.)

Vachek does lean a bit toward keeping capitals for the same reason—redundancy, which he believed might in some way assist reading. For example:

more than likely, the capitals and periods are barriers to faster reading no one really needs them a reader can easily adjust to a text with no obtrusive barriers, which I'm sure reading specialists would be able to research and test, as they have with saccades, the units that a person scans when reading

Downing and Leong, in Psychology of Reading, do provide some information about the structural appearance of a text it does affect the visual attention of a reader, they found one would suspect that the fewer visual distractions there are the better! (Downing and Leong, 1982:145.)

Herbert Bayer also believed that typographic elaborations should be removed from texts to make them more readable. He omitted capitals and serifs. It seems to work. Here is a sample of his ideas:

typography is a service art, not a fine art, however pure and elemental the discipline may be.

the graphic designer today seems to feel that the typographic means at his disposal have been exhausted.

accelerated by the speed of our time, a wish for new excitement is in the air.

“new styles” are hopefully expected to appear.

nothing is more constructive than to look the facts in the face.

what are they?

the fact that nothing new has developed in recent decades?

the boredom of the dead end without signs for a renewal?

or is it the realization that a forced change in search of a “new style” can only bring superficial gain?

it seems appropriate at this point to recall the essence of statements made by progressive typographers of the 1920s:

previously used largely as a medium for making language visible, typographic material was discovered to have distinctive optical properties of its own, pointing toward specifically typographic expression.

typographers envisioned possibilities of deeper visual experiences from a new exploitation of the typographic material itself.

they called for clarity, conciseness, precision; for more articulation, contrast, tension in the color and black-and-white values of the typographic page. (Bayer, 2009:44.)

[Note: The font used in this borrowed example of Bayer’s text still had serifs. There also is evidence that some small kinds of serifs can help in reading.] Bayer omitted capitals,

but he kept terminal punctuation. He also arranged sentences and parts of sentences in patterns that might make them easier to read—once you got used to the arrangement. Getting rid of capitals would also allow writers to start a sentence with a numeral, something which is not good style presently. The ideal layout and punctuation for a page of text may not have been achieved yet. There may be some room for improvement.

The contrasting use of the period is to show abbreviations. The exclamation and question features have only a single use each, to modify the entire sentence.

5.10 The Adjuncts: The Semicolon and the Colon

By the far the most mysterious symbols in a text, the semicolon and the colon, get more attention on average than the comma. Just the mention of them in some company elicits responses that are extreme. Because they are positioned in a context controlled mainly by modification involving other punctuation, they appear to be out of place, but this is because they operate on a different level or for somewhat different purposes.

The other symbols operate on local structural levels, separating clauses, phrases, and words in the horizontal axis. Interpolations have permission to interrupt nearly anywhere but at the beginning of a sentence. But the semicolon and colon seem to operate at a quasi-textual level. They are something like textual shortcuts imbedded in a grammatical string. The result is that they are relegated to only certain places in a sentence and are not found between words or ordinary phrases at random. They operate under constraints. They don't usually appear until after there is a complete

sentence and only in special places, suggesting that they have a subordinate role in the punctuation system.

Like other symbols, the semicolon has two contrastive roles. It is usually found in only two principle locations: between two complete sentences or as an upgrade from a comma in a somewhat complex recursive situation. In one use, it is a space-saving feature which makes it clear that more words could have been spent on the language in question but that the symbol is making it unnecessary. In that sense, the semicolon is also a modifier, but on a seemingly more graphical level. The other use seems more mechanical: just a comma upgrade, but it is also used in a complex series to replace a comma.

Paul Bruthiaux believes that the semicolon arrived in English around 1560 and “gained considerable popularity among literary figures” by the middle of the seventeenth century (Bruthiaux, 1995:3). But expressive as it was to some early adopters, the semicolon lost ground in the last five hundred years, peaking in the eighteenth century and bottoming in the twentieth century (Bruthiaux, 1995:7). He did a study of a corpus of 30,000 words assembled from works devoted to grammar, language, and linguistics, places where he might find relevant information (Bruthiaux, 1995:5). He attributed the decreasing interest in the semicolon as resulting from the shift in the role of punctuation from prosody to syntax (Bruthiaux, 1995:9).

Eric Partridge, in *You have a point there*, has investigated most punctuation features and provided examples of their use. (Unfortunately, he

didn't document his sources.) He provided eleven examples of the how he believed the semicolon was being used. Three of them are somewhat questionable (they could probably be called purely "technical"), and the others could probably be reduced in the way they are used to two core ideas: 1) something series-like and 2) a semicolon between two sentences, sometimes with a connective (Partridge, 1953:44-49).

Geoffrey Nunberg, in a talk on the semicolon at a Modern Language Association meeting, aired similar problems with the semicolon (Nunberg, 1998). Is it paratactic (joins text clauses)? Is it hypotactic (introduces clausal adjuncts)? Is it just a subordinator? It is under constraints: you can't use two in a sentence (other than the series, apparently). Nunberg's talk raised many questions but provided no easy solutions for a symbol that is supposedly useful but whose application is puzzling. Teachers as a rule don't seem to find good ways to teach it.

Not everyone may agree. Angela Petit might not. She teaches the semicolon as a symbol of style and rhetoric to her students using Martin Luther King Jr.'s "Letter from Birmingham Jail," which probably includes more than the average number of semicolons for a text its size (Petit does say that there are different versions of it in print, however [Petit, 2003:69]).

A look at King's letter, in this case the August 1963 version in the *Atlantic Monthly*, reveals that King's style actually fits the more usual patterns quite closely, at the most showing something of a pulpit style in the

way he used recursion by echoing a speech technique (King, 1963:78-88). Seventeen of the twenty-nine semicolons in his letter are used to separate recursive clauses preceded by “when,” “who,” “let,” or “if.” Another nine are simply separating two sentences (S; S), and two are separating sentences that include a coordinator (S; and/but S). Petit’s use of this letter is admirable, certainly. Showing the use of a feature of punctuation is a good way to get students to understand it, a way that could be called “the reputable writer’s approach.”

But this brings up a question: Where is the style? Is it in the language or is it in the punctuation? Which is the controlling factor? Does the language create the need for certain punctuation, or does the punctuation create the need for certain language? This is certainly a question that needs some research along with similar situations involving punctuation. What can be said about the intersection of meaning and form in the way punctuation is used? And in what way, if any, does the semicolon get involved in modification?

Neither the semicolon nor the colon can be found at the beginning of a sentence. Both require some introduction by way of a sentence. Although they are often dealt with together, as we are doing here, it could be that they are independent of one another. The semicolon, we may have established, has two principles roles, a characterization that fits with other features. Is it

possible, perhaps, that the colon is also an independent feature unrelated to the semicolon and has more than one role?

The colon is truly an orphan where scholarship is concerned. Studies that are available are largely devoted to its history or its use as a predictor of scholarly acumen with its use in the titles of research work. J. R. Dillon, in the 1980s, studied seventy-two titles of scholarly work in thirty journals over a century. His conclusion was that the colon showed only minor surges in activity until 1950, when the use of the colon in titles showed an exponential leap in use just before 1980 (Dillon, 1982:96). His interest in the phenomenon spawned research on the subject by others.

To find a coherent assessment of the use of the colon is difficult, suggesting that, although it has several “technical” uses (such as introducing lists of items or preparing the reader to focus on something), a sole or best use of the colon otherwise seems nonexistent. Some uses fall into general categories like problem/solution, question/answer, statement/explanation, generalization/details, and similar dualities. On the other hand, perhaps this is the second role of the colon after all: to visibly reveal arguments that have two parts, one on each side of the symbol. But there is no easy linguistic description for these two roles, the technical uses and the more meaningful pairing; that may have to wait for more research. Maybe the colon will turn out to be a Rosetta Stone of punctuation.

Adjuncts, then, seem to operate on a more organizational level, perhaps, as a way to overcome some of the shortcomings and otherwise simple punctuation in the syntax, especially that of the comma, which has other duties to keep it busy.

5.11 Graphemes and Punctemes

When we visit a doctor for a complaint, we hope to leave with a name for whatever ails us. There is a perverse satisfaction in this. We like to know what to call things that we need to talk about with others. But there are some drawbacks when a name for something does not quite fit the facts. The term “punctuation mark” is this kind of problem. The use of it actually prohibits a person from looking for, as punctuation, anything that doesn’t look like a “mark.” I have carefully avoided the term throughout this study and used it only when it was in a quotation. The problem is that it is generally much easier to keep using a term we know already than to go looking for a new and more accurate name for something, even if we suspect the current term is not right. In addition, the term “punctuation mark” does not fit with the other terminology of linguistics.

Some of the gestalt psychologists did experiments that involved problem solving and discovered that, if a person already had some kind of solution for a problem, they were reluctant to go looking for a new one. Richard E. Mayer reported on some experiments which revealed that past

experience in an area proved to be a block he called “functional fixedness” (Mayer 1995:17). The use of the term “punctuation mark” probably involves this kind of mind set. It characterizes punctuation only as independent visible forms and completely rules out spaces and grapheme alterations.

But before we start looking for a better term, we might want to put the blame for the existence of “punctuation mark” where it belongs. That may be hard to determine. The expression is in grammars and related books at least as far back as the early 1700s, and finding the ultimate source may be an impossible task. Obviously, the term has outlived its questionable usefulness and should be replaced with something that fits better with linguistic discussions about punctuation.

As a replacement for “punctuation mark,” I propose that any feature that we determine is involved in actually punctuating be called a “puncteme.” Like all the other “-eme” units, punctemes must be individually identifiable items that are part of a set and operate as a system. This would also create a coherent alignment in the way punctuation items are described and categorized. They are a limited class. They also have no independent meaning. To complete the picture, we need to describe what punctemes do:

Punctemes are symbolic features which function in the English writing system in one of two ways: they modify some units in the writing system or they prevent the modification of other units.

The units that are modified directly tend to be phonological or morphological or are in the static axis. The units for which modification is prevented are in the dynamic axis. A few punctemes can modify an entire sentence or a partial one, such as the terminal punctuation which modifies a sentence. Spaces appear as modifiers in both axes and elsewhere.

Like their other “-emic” relatives, all punctemes have functional relationships and make up a closed system of contrastive and minimally distinctive units. Looking at it another way, you need to have a phoneme to have a grapheme, but speech has no “-emes” that punctemes can be derived from or represent in writing. They are graphic symbols created exclusively for a visual written version of English. The study of punctemes, of course, is “punctemics.” We can imagine Walter Ong calling them “tools we invented to adjust the technological features of writing and make them more immediately understandable.”

5.12 Punctuation and Research

The long discussion about the basis for punctuation has probably gotten in the way of other kinds of research that could have been done on written materials of the past in English. Perhaps a new way of looking at punctuation will open some doors and provide some new techniques for investigating older materials.

One approach might be to apply the canonical sentence schema to older writings and, with a more standard view of the sentence, see just exactly what earlier writers were up to in applying punctuation to their writing. If they were using some grammar, for example, that might be evident. If they were using some approach to prosody common in their time, that also might be evident. If they were using punctuation merely as a version of their own personal style, that might be more easily determined. This approach could also be applied to a study of a period of English. There is some evidence that English changed from an SOV language to an SVO language in an early period. This might be traceable using a more definite view of the sentence and any possible punctuation if enough documents were available. Also, the history of the sentence itself might be better understood with a schema approach.

Special kinds of punctuation could be understood better with a good model to work with. Ian Robinson, in his article on *Medieval Punctuation, the Concept of the Sentence, and Reading*, has suggested that the “singing” verses of Middle English used punctuation and would be worth doing some research on (Robinson, 1992:43).

The English syntax of the past millennium might be easier to understand using a standard approach rather than a vague approach linked to either grammar or prosody. Since writing is a sort of doppelgänger of the

speech system, some better understanding of writing might also tell us more about the speech behavior of earlier periods.

The writing in the earlier periods in the history of English often included punctemes that are no longer used. Some research on them might shed some light on how and why they were used.

5.13 Manuscripts and Punctuation

In recent years, there has developed more interest in who really applied the punctuation to many printed manuscripts. Rumors abound about the involvement of printers and their aides in the punctuation of manuscripts. A new approach to punctuation might help determine the person who actually did the work, possibly by comparing manuscripts by different authors printed by the same printer. Some manuscripts by older writers have been repunctuated by editors, possibly removing some important features that were intended to be there by the authors. This could be a rich avenue for punctuation research.

5.14 The Forensic Study of Writing

Much has been written about who really wrote Shakespeare's plays. Two books that dealt with his punctuation are A. C. Partridge's *Orthography in Shakespeare and Elizabethan Drama* and Anthony Graham-White's *Punctuation and Its Dramatic Value in Shakespearean Drama*. Besides

looking at fingerprints and DNA, a writer's punctuation could easily become a factor in author identification. Don Foster's forensic approach to authorship, *Elegy by W. S.: A Study in Attribution* (a study of a poem that could have been by Shakespeare) and *Author Unknown: On the Trail of Anonymous*, might have benefited by using punctuation as well as other features of language to determine authorship.

5.15 Punctuation for New Written Languages

New writing systems are being devised on occasion, and there certainly will be the need for punctuation in them. Ettien N. Koffi's article, *Indigenizing Punctuation Marks* (1995), described the problem of deciding just how many and which kind of punctemes to include in a newly written language. A better understanding of how punctuation works might make that task easier.

Old languages that adopt new punctuation sometimes have trouble adjusting. William C. Hannas, author of *Asia's Orthographic Dilemma*, has noted the problems that East Asians have had by ignoring the punctuation in writing: "Although texts in the four major East Asian languages today are punctuated, much of it seems to be done as an afterthought" (Hannas, 1997: 263). The problems multiply when electronic technology demands better adherence to some kind of conventional punctuation. A better approach to punctuation might help regularize a failing system.

The areas of study that are involved in electronic approaches to language could also benefit from a new way of seeing punctuation. A number of the dissertations noted in Chapter 3 having to do with computational linguistics and natural language research made it clear that the older approaches to punctuation did not solve their research problems, nor did leaving some of the punctuation out of studies.

5.16 Punctuation and the Future of English

Although we do spend some time looking at the past of our language, we probably seldom think about the future of it. It may be time for a diachronic study of the punctuation of English with a view toward considering improvements in the way punctuation is used and devising new punctemes to deal with issues that seem to occur with some regularity. This does not mean that we need a bureaucracy to assign punctuation standards, as Germany has recently done, but perhaps some scholars might look at possible improvements and report their findings. A good number of people have already recommended new punctemes to enhance the system we already have. New ideas seem to show up every day. I. A. Richards, some years ago, devised thirteen new forms of quotation punctemes to provide more specificity to the kind of quotation a writer meant (Richards, 1974:xii-xiv).

The study of linguistics as well should begin including information about punctuation in texts. As it is now, writing and punctuation doesn't

even seem to exist in them, even in texts on syntax, the place where much of the noticeable and most important punctuation occurs.

5.17 Teaching Punctuation

Judging from what is in the textbooks, articles, and books on teaching punctuation, there is little wonder that students do not comprehend how to do it. Teachers who use speech metaphors to teach writing are not doing their students any favors. They are teaching how to drive a car by using instructions for riding a horse. Speech is an oral and organically learned technology that people acquire over a period of years by imitation. Writing and punctuating are visual practices, a technology that is learned later by translating phonemic information into graphemic information and then practicing how to organize it so it is understandable to others who use the same system. It is a different technology.

Teaching punctuation is a problem that has inspired many articles by teachers in the past century. Just about every approach seems to have been tried, most without much success. Some few have worked. John C. Shafer made a good point in his article *Punctuation and Process: A Matter of Emphasis*. He suggests, after some instruction in punctuation, handing out or showing badly punctuated examples and asking the students to correct them (Schafer, 1988:47). Often, when you see someone else's errors, you start to

analyze the reason for the error, the result being your own avoidance of that error.

Judith E. Moy, in *Punctuating Punctuation in the English Classroom*, also proposed using Lewis Carroll to get students started. Hand out some of his lines to students and let them put in the punctuation:

alice found a book which seemed to be in a peculiar
 language but when she held it to the looking glass
 she found that she could read this poem it seems very
 pretty she said when she had finished it but its rather
 hard to understand somehow it seems to fill my head
 with ideas only i dont know exactly what they are
 however somebody killed something thats clear an any rate

Students who have to complete the punctuation of this text will have to deal with capitalization, apostrophes, terminal punctuation, quotation punctemes, and a variety of comma locations—a significant challenge and an entertaining lesson (Moy, 1996:50-60).

A study by Robert Stanley Zais in 1963 of the methods used to teach punctuation revealed that an approach that emphasized only the “principle” behind the use of a puncteme did not always improve the use of punctuation in a student’s writing, but it could be more effective if it were taught by combining the principle with more applications of it (Zais, 1963:94). Had a better understanding of how punctuation was to work as part of a coherent

linguistic system been added to this recipe, students might have done better. The characteristics of an individual puncteme are only a small part of a larger plan.

One of the most aggressive attempts to find a better way to teach punctuation was carried out by a number of scholars and teachers in England. The Punctuation Project was organized at Manchester Metropolitan University, and there was an online site devoted to it for some time operated by Nigel Hall. A book titled *Learning About Punctuation* on the subject was edited by Nigel Hall and Anne Robinson, and the articles in it aired many of the roadblocks to teaching punctuation. Hall placed the question front and center:

Is punctuation based on grammar, intonation, or a somewhat accidental history? Or, is it a combination of the three?

(Hall, 1996:9.)

Hall points out that one barrier to getting to know how to punctuate may be related to children's lack of knowledge of the sentence, which might be corrected to some extent by giving them well-punctuated materials to read as well as texts that they may insert the punctuation in. "The expectation is that children will develop a *feel* for what counts as a 'sentence'" (Hall, 1996: 18).

One of the articles in the book, *Conversations with Teachers About Punctuation*, by Anne Robinson, revealed that one of the main difficulties in teaching punctuation to children indeed was:

working out what a sentence was. Notions of full stops and capital letters make little sense without some concept of sentence; after all, for the most part, what they mark are the boundaries of sentences. Teachers were acutely aware that what often appeared to many people outside education to be the most basic and easiest thing of all, was actually one of the most complex (Robinson, 1996:82.)

Robert J. Scholes and Brenda J. Willis attempted to locate a compromise between the two dominant approaches to punctuation: the elocutionary function and the syntactic function. Some writers maintain that punctuation is just a mixture of the two. They ultimately decided that “While there may be cases in which punctuation corresponds to both prosodic and syntactic information, the two are fundamentally incompatible” (Scholes and Willis, 1990:14).

Nancy Mann labeled her lengthy article *Point Counterpoint: Teaching Punctuation As Information Management*, perhaps partly because she had trouble deciding which side was ultimately going to win, the prosodyists or the grammarians. To conclude, she (perhaps not so jokingly) brings up the idea of “style,” leaving us to decide ourselves who won the argument.

5.18 A Teaching Method for Punctuation

Although many people try to avoid it, there is ultimately no substitute for learning at least a minimum of grammatical structures of the sort that are most commonly encountered in writing and punctuating. One can learn to write by “feel” over a period of time but will never arrive at a complete and certain accuracy doing it that way. You can memorize thirty rules for inserting commas, but if you can’t find those places because you don’t know the grammar, the rules will do no good.

In order to punctuate with understanding, you need to see the sentence as a form, a structure involving a subject and verb at least, in that order, and understand that the role of punctuation is to protect it from becoming cluttered with other words and phrases, realizing that the chief puncteme for accomplishing this is the comma.

The use of the canonical sentence will substitute one whole structure for the many rules, but, depending on the level of the students one is teaching, it may still be necessary to teach some grammar. Teach the sentence first, the schema, not the noun phrase and verb phrase. Slobin and Bever confirmed that the canonical sentence has a presence in our language behavior. Their abstract reads:

We propose that children construct a canonical sentence schema as a preliminary organizing structure for language behavior.

The canonical sentence embodies the typical features of

complete clauses in the input language, and serves as a framework for the application of productive and perceptual strategies. (Slobin and Bever, 1982:229.)

Their research was cross-linguistic with Turkish. They also noted other, similar studies in which it was established that “children extract the basic SVO order of the language” (Slobin and Bever, 1982:231). Since children have this knowledge, we should certainly be using it to teach punctuation.

You could start with Noam Chomsky:

Colorless green ideas sleep **furiously**.

Most people will be able to identify the sentence here, despite its lack of meaning, but they should look at some of the small parts as well. It makes the point that there is a form that the sentence follows even if it can't be seen, and that is the form that is used in punctuation. Then notice something besides the content words, some small parts, and move on to Lewis Carroll:

'Twas brillig, **and the** slithy toves,

Did gyre **and** gimble **in the** wabe;

All mimsy **were the** borogoves,

And the mome raths outgrabe.

Townsend and Bever provided the evidence for the importance of function words in the comprehension of language: research has shown that function words are noticed more quickly than content words (Townsend and Bever, 2001:188). Function words are, after all, the skeleton of the language, words

you see more often than any content words, and the clues to capturing the outline of a sentence. You could teach one hundred minutes of grammar, mainly function words and basic structures, so students get at least a minimal grasp of the sentence and the way it can be manipulated and held together with function words. One could also notice the “reputable writers approach” in the way Carroll punctuated the lines.

Study the two axes of the sentence, the static vertical axis as well as the dynamic horizontal axis, and realize the differences between the punctemes in those two locations their different chores. Then study the individual punctemes and point out the special and dual use of each. This will create some order in what appears at first to be a random collection of unrelated symbols. Teach the sentence as a graphic with the graphemes in boxes.

Sentence combining is also a good way to get students to see the possibilities for manipulating sentence parts and start seeing the junction points that may need some punctuation. Studying and writing different kinds of sentences, such as cumulative sentences and periodic sentences, will also make students study punctuation more because it will be more necessary in those kinds of sentences.

Should students become adept at using punctuation, writing interesting and stylish sentences could easily become a form of entertainment

for them, a challenge to see who could write the most interesting one.

Education, after all, should not be all drudgery.

Have students write a short sentence, like the one you just read, a sentence which has many parts to it, a sentence which moves along from one phrase to another, adding ideas and structures that elaborate on something that they are interested in, making it perhaps a useful sentence for describing some complicated or detailed thing, such as a circus or the parade they last saw, a cluttered room or some other detail-filled scene, aiming always at quality instead of quantity, but keeping in mind that so much of it depends on the use of the function words and punctuation to make it work so that a reader will not have trouble with its construction and be able to enjoy a cumulative sentence.

The idea of the cumulative sentence was made popular by Francis Christensen and others in the 1960s, but it could be that it was already in the thoughts of a medieval writer, Geoffrey of Vinsauf, whose discussion of “amplification” of a sentence using description, circumlocution, digression, personification, and apostrophe—and “a single verb is sufficient for extending material endlessly”—could very well have been the first person to work on the idea (Vinsauf, 1968:57).

Good periodic sentences, on the other hand, which involve thinking ahead instead of backwards, with a full understanding of how to use punctuation, by someone who has gotten good practice at writing longer

sentences, in the same way as an athlete who gets out to practice every day, regardless of other circumstances, which do sometimes curtail one's ability to perform, are harder to write.

5.19 Summary

The new paradigm for punctuation has many things to offer for a better understanding of how individual punctemes function. But it is necessary to see them as visual symbols operating in a graphic structure. The sentence form is the place where they perform, using the system model of the canonical sentence.

Research on punctuation can be made more effective because the use of a stable schema will allow for better comparisons between different varieties of English as well as the stylistic behavior of individual writers.

Having a clearer understanding of how punctuation works should make teaching it easier because the categories of punctemes can be visually located and classified rather than be dealt with one grammatical location at a time in the way they are in many handbooks.

Chapter 6

Postscript

6.1 Some Things Don't Change and Some Might

Having done some significant work in researching and writing this study, I would like to think that it will be accepted as a useful tool for teaching punctuation and will replace all of the elocutionary-related schemes that have been around for quite some time. I suspect that I will be mistaken about that because there are some advocates for using speech as an avenue for understanding punctuation that have published their views and are willing to express their beliefs that the comparison to speech is the only way. We will look at some of their views.

6.2 Punctuation: Sight or sound?

Yes, it may be time to admit that there are still some scholars who believe without question that the use of speech to help determine where to punctuate is really the only way. John Dawkins is one of them. He has published his views frequently. His approach is to establish a hierarchy of features that he has selected from “good writers of nonfiction,” probably using the “reputable writers approach” [. ; : -- , 0]. “The secret . . . is for student writers to do what good writers of nonfiction do,” which is to use meaning not grammar-based rules” for punctuating (Dawkins, 2003:155-156). Apparently, the students are to read their sentences out loud and determine which feature of

punctuation would be most appropriate at a particular junction in a sentence based on the intended meaning. He concludes this way:

My study of punctuation suggests that the purpose of all six of the hierarchical marks is rhetorical. The marks were undoubtedly created for rhetorical purposes, that is, to make meaning more clear, more effective; in other words, the concern was with meaning (Hawkins, 2003:161.)

Peter Elbow, in his book *Vernacular Eloquence: What Speech Can Bring to Writing*, rather than having a list of features or a hierarchy, just believes, pragmatically, that most people don't know the punctuation "rules" well enough to do a good job of punctuating. Instead, we should read our writing out loud after some training to develop a technique called "careful reading" (Elbow, 2012:281). Elbow does provide a list of five rules of his own for "Punctuating Defensively" using his "read aloud" approach (Elbow, 2012: 283-285). He is certainly correct in observing that writers are seldom told when they are punctuating properly, only when they do it wrong.

6.3 The Cross-Linguistic Study of Punctuation

My original intent in studying punctuation was to do a cross-linguistic study. It was with wild and uncontrolled optimism that I began to think about such a study of punctuation, the intent being to look at every written language in the world and see what they were doing in the way of punctuation. The

earliest work in that direction ran into barriers quickly. In the first place, it is very difficult to even determine the number of written languages. Besides, languages come and go. Some have no writing systems but are working on developing them. But the problems of looking at too many languages was insurmountable. There may or may not be time to accomplish some part of that, but this examination of English punctuation had to come first.

In addition to dealing with things numerically, there was the question of how punctuation actually works. We know that languages other than English have a different word order so studying their punctuation may require a stable standard for comparison but based on a different canonical form. Then there are the dramatic differences between word order and inflectional languages.

We can imagine that using the “grammar or prosody” approach would probably not work well in analyzing most languages. Using a linguistic approach might provide a uniform standard that would allow a fair comparison. Languages that pattern closer to English might be a good place to start just to see how complicated the study might be. We might wonder, for example, just how different World Englishes are from one another in their use of punctuation. Do they tend to subscribe to either British or American style, or do they adopt one of their own?

Greta Little, some years ago, was eager to see some cross-linguistic studies done:

From crosslinguistic and diachronic studies we will be able to understand better what universal principles exist for language in the written mode. . . . Attempting to understand the function of punctuation is crucial to our study of the linguistic and cognitive parameters of literacy. (Little, 1986:84-85.)

To accomplish her goal, however, a clear and more standard approach to punctuation is necessary, one that can be applied universally. Adopting a language's word order schema might be a workable start.

6.4 Conclusion

This study was certainly not intended to support the “rules” that are widely published as a way to participate in using punctuation. The intent instead was to reveal another way of looking at writing as a graphic system that displays the canonical sentence using gestalt visual techniques. To understand this approach requires putting aside the rhetorical/prosodic/elocutionary and grammatical approaches and accepting written English and its sentences and partials as a visual representation of the language which has its own linguistic way of displaying the punctuation. Only time will tell if this paradigm finds any acceptance. However, it should be seen as an invitation for more research rather than a complete solution. As Thomas Kuhn said it, “no paradigm that provides a basis for scientific research ever completely resolves all its problems” (Kuhn, 1970:79).

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