

CHAPTER II: A HISTORY OF THE STEMMATIC

APPROACH TO THE CRITICISM OF TEXTS

This chapter aims to present a brief chronological account of the development of the stemmatic method. It focuses on the traditional applications of the stemmatic method and the criticism put forward by its detractors, including Joseph Bédier. I try to explain how the dissemination of the stemmatic method through the Maas book, *Textual Criticism*, generated a series of misconceptions which seem to permeate criticism up to the 21st century. This chapter also attempts to show the flaws of traditional stemmatology, and put forward the solutions proposed by the New Stemmatology. Although the paths opened by this approach solve some problems presented by the stemmatic method, they also present some new challenges. Part of my discussion focuses on the current application of computer technology to the construction of stemmata and its benefits and shortcomings.

1. CLASSICAL STEMMATICS: THE LACHMANN METHOD

Although the stemmatic approach, sometimes called ‘historical editing,’ has traditionally been attributed to the German scholar Karl Lachmann, he was not the first one to suggest that there are genealogical relationships between manuscripts. In fact, Erasmus in 1508 and Scaliger in 1552, had argued that manuscripts could be shown to be genetically related (Cameron 231). The roots of this critical approach can be traced back

to Alexandria, where the classics were already being revised and stripped of passages that were considered spurious (Reynolds and Wilson 9 and ff.).

Lachmann presented his ideas about editing in several of his works, notably in his 1850 edition of Lucretius.¹ What he proposed was to group the manuscripts belonging to a particular tradition according to their errors. In this way, ‘families’ of manuscripts could be established and their relationships made clearer:

Lachmann’s crucial change was the separation of two phases in the preparation of the critical text: *recensio* and *emendatio*. Before establishing his text, he subjected all variant readings obtained through collation to a critical analysis and attempted to establish through a calculus of common and individual errors the different groups or families of manuscripts into which the tradition was divided, and the place which each manuscript occupied within the family to which it belonged, summing up his analysis with a so-called *stemma* that derived all extant manuscripts and families from a single archetype. (Kristeller 14)

Independently of the implementation of the two-phased schema, Lachmann’s ideas made such an impact that the genealogical approach he used came to be known as the Lachmann method. However, Lachmann did not write independent theoretical books about textual criticism or scholarly editing, a fact that has been pointed out by Ben Salemans:

Speaking of the method of Lachmann, we may think that this is a concrete text critical, stemma generating method which was clearly formulated by Lachmann in one of his books or articles. This interpretation is incorrect: Lachmann himself did not formulate a concrete ‘method of Lachmann’. So, THE method of Lachmann does not exist. Several text genealogists have worked out some fundamental ideas and they all call their results (extensions of) the method of Lachmann. Paul Maas may be considered as the one who ultimately formulated the method of Lachmann. (434)

What Salemans affirms seems reasonable. It is true that part of the traditional terminology related to the Lachmann method does not come directly from his ideas or of his work, and instead comes from Maas’ interpretation of them. Independently of who formulated these ideas, the method which uses common errors in manuscripts to determine if they are or are not related and that assumes that the process of understanding the textual tradition must be carried out before one can decide which variants are to enter the emended text is usually called the Lachmann method, and I refer to it by this name as scholars have done traditionally.

2. RE-THINKING THE LACHMANN METHOD

2.1 Henri Quentin: Considering All Variants

When Dom Henri Quentin started to think about an edition of the Vulgate, he discovered what seemed to be insurmountable defects in the Lachmann method. One of

Quentin's objections was very much a theoretical one. He was uneasy at the idea that the scholars who followed the Lachmann method claimed to be attempting to produce a text which was a reconstruction of the author's original rather than simply an archetype:

He (Quentin) insisted [...] that the processes of recension could result, if properly applied, only in the establishment of the archetype, and that to lose sight even for a moment of this fact was a grave editorial error. (1:16)

Quentin's criticism goes further to say that even the author's original had to have errors and, for this reason, errors could not be used to group manuscripts, since the errors could be archetypal.² What he did was to propose what he thought was a more scientific approach to textual problems:

Il renonce à la méthode des fautes communes. Dans le text de la Vulgate, les fautes sont sans cesse corrigées par le recours à d'autres exemplaires latins, au grec ou à l'hébreu elles ne se propagent pas de façon régulière de l'ancêtre au descendant; les fautes communes ne pouvaient donc être d'acun secours. Dom Quentin renonce, dit-il, à la notion de faute, pour lui substituer celle de variante; à vrai dire, il ne fait que la repousser jusqu'à une étape ultérieure. (Froger 14-5)

The innovation of looking at 'variants' instead of 'errors' is one of the most important contributions that Quentin made, and this contribution has even been implemented in modified versions of the Lachmann method, in which all variants are taken into account.³

Quentin's observations are, in fact, related to the issues that have divided most textual critics during the last century, that is, the question of whether it is possible to recover the original text.⁴ The Lachmann method did not attempt to recover an authorial original, but instead proposed to reconstruct the archetype of the tradition.⁵ Quentin pointed out this unattainable goal (the recovery of an original text) as a basic error in the construction of the Lachmann method and from this point of view his contribution was of great value for the later development of stemmatology.

2.2 Joseph Bédier: 'Best Text' Editing

Probably the most famous detractor of the Lachmann method was Joseph Bédier, who produced an edition of *Lai de l'Ombre* for which he used this method. But at a later point, Bédier became suspicious of it:

C'est pour avoir remarqué ces choses que je rouvris un jour mon antique édition du *Lai de l'Ombre*: n'était-elle pas fondée elle aussi sur un classement de ce type? Le bel arbre bifide qui s'y dresse, je le regardai à nouveau, mais on imagine de quel regard désabusé, hostile. Il fallait reprendre le travail en sosoevre, préparer une autre édition. (14)

Once Bédier had discovered that many stemmata produced using the Lachmann method were initially bifid, i.e that most of them had their first division into two branches, he surveyed stemmata and decided to re-edit *Lai de l'Ombre*, and, in the process of doing

this he produced the now famous essay: “La tradition manuscrite du Lai de l’Ombre.” In this essay, Bédier explains how he came to be suspicious of the method and how, after confirming his suspicions he decided to revise his own ideas about how textual editing. About his new edition he states:

[L]e texte qui se lit en cette édition est celui d’un bon manuscrit, le manuscrit A, imprimé presque sans retouches et accompagné de notes qui marquent un retour vers la technique des anciens humanistes. (17)

It seemed that Bédier had come up with a different way of approaching scholarly editing, at least, it seemed so in the context of Lachmann’s influence. His proposal was that, instead of attempting to restore the text to its original form, editors should find the best witness to the text and use this, with the minimum amount of retouches, as the text of their editions. This came to be known as best-text editing, but in fact, Bédier does not refer to the ‘best’ text, he just says that the manuscript he has chosen is a ‘good’ one. Of course, the statement about the good manuscript begs the question: how does the editor get to know which one is a ‘good’ manuscript? Bédier explains that one has to take into consideration the variants of the text, he also insists on using neutral terms and referring to the ‘diverse forms of the tradition.’ But even if Bédier’s theories seem to disagree completely with the Lachmann method, he still attempts to define the genetic relationships among the manuscripts. The fact that the two methods, which differ in so many other fundamental aspects, appear to have a common goal appears puzzling at first, but this is what allows for the differences between the two approaches. ‘Best-text’ editing relies on the identification of the best extant witness of a given text, but in order to tell

with any degree of certainty which one is likely to be the best manuscript, one has first to evaluate the textual tradition and the relationships between the witnesses. Yet the difference in approach seems to be deeper than what it would seem at first sight. The questions that Bédier's ideas generate touch on many more general aspects of textual criticism, such as which is the text an editor should aim for and how far he should go when attempting to establish the text. Once more, the choice is not about what method is used to study the history of the text; instead, the debate is about how much the edited text should be altered in relation to the documents that preserve its versions. If the text is based on the best manuscript available and altered as little as possible, we are more likely to be in the presence of a 'Bédierist' approach. If the text is altered, by emending it (usually in order to recover a previous state of the text) and the relationships between the witnesses are greatly emphasized and are one of the prime pieces of data used to make decisions about how the text should be emended, we are probably facing a 'Lachmannian' edition.

2.3 The Influence of the Anglo-American School

Best-text editing became popular in France and Spain where it was used for many medieval texts, but the Italians and the Germans kept analysing and rethinking Lachmann's ideas and the derivations of his method.⁶ It is difficult to pinpoint the exact reason why best-text editing in France and Spain became so popular for so long and perhaps a more appropriate question would be for the editing of which texts. For

example, the case of Spain is interesting, because many medieval texts survive in a few copies only. Some of them, such as the *Poem of the Cid* survive in a single manuscript, a fact that has not prevented the text from being edited very differently by different scholars.⁷ The Anglo-American school, on the other hand, was pursuing authorial intention as its final goal and therefore could not make very much use of the 'best-text' approach which would have limited the scope of the emendation in an edition (at least in theory). When a scholar of the Anglo-American school edited a text without altering it greatly, this was referred to as 'documentary editing.'⁸ It seems important to point out that although there are many documentary editions, notoriously many of the ones produced by the Early English Text Society, these are not necessarily considered critical editions. Tanselle strictly differentiates both kinds of editions:

An edition is either a *noncritical edition*, which aims to reproducing a given earlier text as exactly as possible, or a *critical edition*, which contains a text resulting from the editor's informed judgement at points where questionable readings occur--a text that may therefore incorporate readings drawn from various other texts or supplied by the editor. (Tanselle, "Scholarship" 32-3)⁹

Following the pattern of the above quotation, a Lachmannian edition is a kind of critical edition in the sense that this permits the emendation of the text based on editorial judgement. In the light of the above quotation, a Lachmannian edition differs from other kinds of critical editions in which editors rely solely on their judgement to decide which variants will go into the reading text.¹⁰ The intentionalist school (to a greater or lesser degree derived from Greg's work) asserts that the intentions of the author are recoverable

through a process that requires knowledge of the genesis of the text and all its relevant witnesses as well as familiarity with the author in question. According to Tanselle, the work of an author is only possible in a non-material environment (the author's mind) since material objects have accidents:

My phrase "the intractability of the physical," which McGann takes as a sign of my "romantic" position, has--in its context in *A Rationale of Textual Criticism*--a less exalted meaning. It simply refers to the difficulty of getting words transferred accurately to a physical surface. Authors do formulate texts, not just ideas for texts, at the moment of composition; but they may make mistakes in writing down the words. An authorially intended text is a text that once existed, though it may not have existed in physical form. Such a situation can occur because language is intangible, and a verbal text can therefore exist apart from being made physical. ("Scholarship" 12)

Tanselle supports the idea that even the author of a text can have "slips of the pen" introduced by the author himself (a position that cannot be denied in a general way). The intentionalist school (of which Tanselle is a recognized follower) proposes that if a text contains such authorial "slips of the pen," these ought to be corrected by the editor. Documentary editions, on the other hand, are concerned with the preservation of the document and not with recovering authorial intention.¹¹ The influence of Greg, Bowers and Tanselle on Anglo-American editing was so widespread during the 20th century that other kinds of edition have been somewhat overshadowed.

2.4 Paul Maas: Describing the Lachmann Method

As stated before, Lachmann did not produce any theoretical description of his method. Instead, this was comprehensively described by Paul Maas in his essay *Textual Criticism*. Maas was interested in the ‘scientific’ aspect of the method, or at least its apparent objectivity when compared with other approaches:

Previously the principle was to follow the vulgate (*textus receptus*) without troubling about the quality of the witnesses; or to follow the text of the majority of the witnesses, in spite of the fact that 100 manuscripts which derive from a single manuscript and have no more authority than one manuscript which does not go back to that single manuscript; or to follow the oldest, the most complete, the best witness, just as if *every* scribe were not liable to error. This was all completely arbitrary, and there was never any attempt made at a methodical justification. The mistake of treating the *codex optimus* as if it were the *codex unicus* has not been completely overcome even today; it is often set right by the *codex optimus* finally revealing itself as the *codex unicus*. (19)

There is a clear point about the fact that editors need to make choices and that this might be helped by the use of a method that allows us to learn the origins of the variants. In this case, the variants can be selected according to the likelihood of their presence in the archetype.

Maas questions the lack of objectivity shown by other scholars when choosing a single manuscript as a base for an edition. His criticism has to do with the fact that there are mistakes in every witness of the text that should be corrected. Moreover, Maas thought that the errors found in the witnesses of a tradition were the key to discovery of the relationships between them. There is a very subtle point here, since if we accept that errors, and only errors, can be used to group the witnesses of a text, by definition, the archetype we presuppose should be free of them. If the archetype contained errors, then these could not be used to group the witnesses together since some errors could be indeed archetypal readings (in which case they would not be able to tell us anything about the genetic relationships among the witnesses). Another implication is that the original state of the text, which could not have been physical since material things are accidental, is, at least, approximable. But whatever underlies Maas' book, his description of the Lachmann method is thorough and minute. Step by step he guides the reader into the most elaborate descriptions and examples of problems generated while dealing with a textual tradition. Maas' influence can be seen in the extremely high number of references to his work made by other scholars working in the area. The other side of the coin is that someone who can produce such an influential text also produces visceral counter reactions.

2.5 Reactions against Maas' Lachmann Method

The strongest argument against Maas' approach was put forward by Giorgio Pasquali in his book *Storia della tradizione e critica del testo*. It seems that Pasquali

disagreed with Maas from the very beginning, and mostly he thought that Maas had not been very accurate in attributing the invention of terms and techniques. When one faces Pasquali's book there is no mistake: one immediately realizes that he has studied in detail the totality of Lachmann's work and of that of his followers. Pasquali describes each of the steps of the creation of the Lachmann method, and makes clear which terms have to be attributed to whom. He points out that we owe the notion of 'lectio difficilior' to J. J. Griesbach, but that it was Quentin who noticed the importance of this idea (See Pasquali). In this way, Pasquali demystifies the idea of a unitary methodology developed by Lachmann for his edition. Once he has done this, he moves on to point out what seem to him the weaker aspects of Lachmann's own ideas:

Il Lachmann fondava il suo metodo sul presupposto che la tradizione di ogni autore risalisse sempre e in ogni caso a un unico esemplare già sfigurato di errori e lacune, quello ch'egli chiamava archetipo. (15)

As many others after him, Pasquali has doubts about those who postulate a single archetype. It is not clear, though, how it is that you could have more than one origin to the tradition. In fact, when, for example, a scribe re-writes a text and interpolates passages from a different one, he creates what is known as a 'new recension' of the text. This modified text usually becomes the origin of its own stemma. By definition, this new recension would be the result of the conflation of two or more texts, and its origin would be, at least in part, in all of the conflated texts. In theory, this supposes a textual tradition with more than one archetype. But if we take this further and suggest that the whole of the textual tradition descended from the scribal conflated version, we would have the

choice of where to place the beginning of it.¹² This is an interesting theoretical problem, because one would have to decide if the tradition indeed starts with the two authorial versions or if the texts descended from the conflated scribal text represent a new recension. In theory, given enough data, it should be possible to build a stemma of more than one recension of a text. However, a further problem arises with reference to the different authorial texts, where these are independently produced and bear no relationship to one another or where one is a revision of the other text. In the case in which a revised version of a text has been released, the ultimate origin of the textual tradition would be the first authorial text and not its revision (as it seems to be the case of L31, which has two different versions one of which must be earlier than the other). If the author re-writes the text in such a way as to make it almost impossible to see the relationship between the two versions, these versions, of a text could be transmitted independently of each other, therefore having distinct textual traditions (an example of this is Langland's *Piers Plowman*, which appears to have been released in three or more authorial versions).¹³

Although Maas has to be credited with establishing some of the language that stemmatologists still use today, the method he exposed is still the target of the criticism of literary critics who are not aware of the developments in this field. An example of this is the statement by Ralph Hanna:

To construct a stemma in order to carry on "scientific editing," the researcher must be able to recognize at least some range of "palpable errors," for in stemmatic theory only agreement in such corruption can demonstrate that any two manuscripts share a common corrupt exemplar. However, the term

palpable here represents an equivocation, since it relies upon a judgement: wise persons may well disagree on the “palpability” of any single corruption, and consequently, the scientific factuality of the stemmatic evidence is engendered by having identified specific readings as erroneous. But this necessary move simultaneously indicates that, however contentiously, one might believe oneself able to identify certain readings as “errors.” (*Pursuing* 85)

Hanna’s criticism is valid if applied to the Lachmann method as described by Maas, but it does not apply to the latest developments in the field. In fact, the use of ‘errors’ as the sole element to establish the genetic relationships of a text is a characteristic of the Lachmann method. The New Stemmatics differs from it (among other things) in the fact that it takes into account variant distribution, i.e. the agreements between manuscripts independently of the fact that these might or might not be mistakes. The argument against stemmatics developed by Kane and Donaldson suggests that there is no use for the methods since this might require knowledge *a priori* of the nature of the variants in the text. Both Kane and Donaldson have stated their criticism together and independently. For example, in his assessment of Manly and Rickert’s work, Kane states:

[N]ot all agreements in unoriginal readings are necessarily evidence of a genetic relation. The editor is again thrown back upon his judgement: to classify the manuscripts he must somehow distinguish between genetic and random variational groups, identify the evidentially valid agreements. (“John” 209)

This argument suggests that the reliance on editorial judgement invalidates the use of stemmatic analysis (since this becomes unnecessary). Donaldson takes the point further while discussing variant wight/ wrighte in WBP 117 (D 117), where he suggests that manuscripts should not be considered wrong in all readings just because most of them are non-archetypal:

[B]ut I will argue for the right and the responsibility of an editor who is trying to reconstruct Chaucer's text --not merely O¹-- to let all MSS help him, not just the respectable ones. (*Speaking* 128)

Donaldson's point is unconvincing because it mainly relies on authorial intention. He presupposes that Chaucer originally intended the reading 'wrighte,' the only one that makes sense, but to justify his intervention in the text he relies on the fact that the reading is in three manuscripts: Ld2 Ry2 and Ln. Interestingly enough, it does not seem that this procedure is the standard he would follow; that is, even if what he believes to be the correct reading was not present in any manuscript, he might still decide to introduce an emendation into his edited text.¹⁴

2.6 Steps towards a Revision of the Genetic Method

For their eight-volume work *The Text of the Canterbury Tales*, Manly and Rickert used a revised version of the Lachmann method, a genetic approach that radically differed from the one described by Maas. Manly and Rickert referred to the fact that

manuscripts could be grouped “according to their readings without reference to whether the readings are correct or incorrect” (1:20). This truly represents a step in the evolution of stemmatology; in a quite evident fashion Manly and Rickert implied that the text that originated the tradition might have contained mistakes. Errors were not the only way to determine the affiliations of a manuscript. Based on this idea, Manly and Rickert conceived the concepts of genetic group, accidental group (agreement by coincidence) and group-variant. Another of the characteristics of their work is that they attempted to establish first the smaller genetic groups and go from there to the larger ones. Clearly they propose that Chaucer’s original (O^1) was impossible to recover, but that the archetype of the textual tradition (O^2) could be reconstructed (Manly and Rickert 1:40-1). But even after the enormous work carried out by Manly and Rickert, few critics realized that what they had actually suggested might change the way scholars view stemmatics.¹⁵

In fact, despite the developments in the field, still in 1973, Martin West insisted on reinforcing the idea that the purpose of stemmatic analysis was to restore the text as the author originally conceived it:

When the evidence of the various sources for the text has been collected and organized, apographa eliminated, hyparchetypes and archetypes reconstructed where possible, and so on, the time has come to try to establish what the author originally wrote. Sometimes this is a matter of choosing between transmitted variants, sometimes it is a matter of going beyond them and emending the text by conjecture, or adopting an emendation already

proposed. We will consider these alternatives separately; but the requirements which a satisfactory solution must fulfil are the same in both cases. (47-48)

This description, in fact, goes back to the Maas conception of the method, in which by using the errors in the witnesses one could, somehow, make deductions as to the text as originally written by its author. Once more, Quentin's criticism becomes valid, since it is inconceivable that the author could have produced a perfect text completely free of mistakes (since the work would have to be held in a material document liable to the accidents of the physical world).¹⁶ Therefore, any emendation based on errors may, in fact, change what the author wrote rather than restoring what was in the original text. This takes us to another theoretical problem: if the archetype of a textual tradition had mistakes and these are corrected by an editor, the re-constructed text would not be the origin of such tradition; instead, it would be some other text. From this we must assume that West's pursuit is not really to re-construct the archetype of a textual tradition, but instead, is to produce a text as it might have been conceived by the mind of the author with no relation to any of the physical copies of the text which could have been produced.¹⁷

At the same time that critics such as West were reinforcing a perception of stemmatics drawn from concepts presented by Maas, other scholars had already been influenced by what Manly and Rickert had suggested as a new perspective for the use of stemmatic analysis. Peter Robinson was one of them.

2.7 Modern Genetic Methods: The New Stemmatics

At the end of the 20th century, the advances in computer technology made it possible to use it to analyse texts. Software especially designed for studying texts was developed, and soon other programs (written for other disciplines) were incorporated into the equation.

In his 1991 DPhil thesis, Robinson criticizes the inflexibility of the Lachmann method as exposed by Maas and suggests that the way forward is to follow Manly and Rickert's example and use all variants and not only errors "as potential evidence of MS relations" (Robinson 153). This was a first step in the next big change for the New Stemmatics, and on July 31st 1991, Robinson launched the "Textual Criticism Challenge" which was published in Humanist Discussion Group. The challenge consisted in constructing "by Housman's 'mathematical principles' alone, and not using any external evidence, a table of relationships of the manuscripts (a 'stemma') like that I [Robinson] have already made [for the *Svigdagsmál* data]." Scholars could use "any method, any computer, any software" that would help to build a stemma comparable to the one that Robinson had produced for the Norse tradition.

2.7.1 Using Phylogenetic Software with Manuscript Traditions

Later, Robinson, with Robert O'Hara, presented a series of papers based on the Challenge.¹⁸ A version of the "Report on Textual Criticism Challenge 1991" has been

published on the internet. In it we find a more or less detailed account of what happened after the posting of the “Textual Criticism Challenge.” We read that “nine scholars requested the data” and that there were “three submitted entries.” Two of those were based on statistical clustering techniques, the third was Robert O’Hara’s attempt, for which he used PAUP. O’Hara’s result is described as achieving the following successes:

- (1) It placed directly adjacent to one another (usually as descendants from the same node) sixteen manuscripts known from external evidence to be directly related to one another.
- (2) It successfully defined the seven manuscript groups deduced by Robinson within the tradition.
- (3) It successfully defined two of these groups as subgroups of another, larger group.
- (4) It suggested, accurately, that the two largest groups were each descendants of single manuscripts, and that a third group also descended from one of these two manuscripts.
- (5) It provided lists of just what variants were introduced at what point in the tradition. These agreed reasonably closely with Robinson’s own lists of variants, derived by database analysis of the collation output, characteristic of particular groups of manuscripts. (“Report”)

The phylogenetic proposal was, by far, the closest to what a hand-made stemmata had produced. It seems that the way in which programs such as PAUP work has many things

in common with the stemmatic approach. In fact, there are clear parallels between the phylogenetic approach and stemmatics.

Cladistic analysis . . . is an explicitly historical approach that aims at reconstructing sequences of events, and fundamental to the cladistic approach is the identification of ancestral readings and their elimination at every point. . . . A further reason for the success of cladistics is that it works explicitly on the tree model. It assumes that a varied group of objects (whether manuscripts or species) is the result of a sequence of branching descents over time. Cladistics simply finds the shortest (or “most parsimonious”) tree of descent which explains the agreements and disagreements within this group. The overall similarity or dissimilarity of the objects under study, so important in statistical clustering, is unimportant in cladistics. (“Report”)

O’Hara’s idea of using PAUP to build stemmata was quite successful; however, the program showed some problems when dealing with contamination and coincident variation. In this sense, PAUP has similar limitations to those that have affected scholars in the past. The advantage that a computerized method for dealing with manuscript descent presents is that once all the variants have been isolated it takes a relatively short amount of time to get the results.

2.7.2 Ben Salemans: The Neo-Lachmannian Approach

Another contributor to the New Stemmatics is Ben Salemans,¹⁹ whose doctoral thesis, *Building Stemmas with the Computer in a Cladistic, Neo-Lachmannian, Way*, is an example of the application of computer software to the making of stemmata:

Bédier found out that the history of the text deliverance of the Lai de l’Ombre can be sketched [*sic*] in eleven differently shaped stemmas (“schémas”). It was for Bédier impossible to pick out the one correct stemma. Therefore he concluded that the value of text genealogy, resulting into eleven different models of textual deliverance of the Lai de l’Ombre, is rather poor. (454)

When faced with many stemmata, one might feel puzzled at the fact that all of them can be arrived at using the same data. Salemans, by abstracting information from the stemmata produced by Bédier has been able to show that he was incorrect in being concerned about the differences between them:

Bédier’s problem is not as complex and disastrous [*sic*] for text genealogical methods as he surmises: the eleven stemmas with different shapes go back to one and the same chain. The only problem left is the orientation of the Lai de l’Ombre chain. . . . (*Stemmas* 456)

The problem left (the orientation of the chain) is not an easy one to solve, but at least Salemans has shown that all of Bédier’s stemmata show the same relationships as those that appear in Salemans’ chain. Salemans, as others before him, has also attacked the Lachmann method on the premise that it relies on errors in a way in which they cannot be

verified and validated. The other great criticism agrees with that of Quentin: there is no clear way to determine which variants are errors and, therefore, the approach is ‘unscientific’ and subjective (Salemans, “Cladistics” 5). Salemans is not just criticising the approach; he is also offering a solution:

Most twentieth-century [stemmatic] methods have in common that they first determine the shape or deep-structure of the stemma (the chain) and that they then raise (orient) a stemma from this chain. For the construction of the chain no knowledge about the originality of variants is necessary. (“Cladistics” 22)

He offers the alternative to the stemma (rooted tree): the chain or unrooted tree. Unrooted trees had also been put forward by Robinson in *The General Prologue in CD-ROM*, but he did not elaborate as much as Salemans on the idea of the chain and its advantages. Salemans also makes a good point (often forgotten by critics of the stemmatic method) about the role and meaning of stemmata:

One should bear in mind that a stemma is a *minimal* picture relating only to the text versions that still exist. Thus, a stemma can only be considered as a hypothesis about (a part of) the historic reality. On and around the lines of descent, we can imagine lost manuscripts whose contents are unknown. (“Cladistics” 14)

Although this statement seems to be relatively straight forward, it is quite clear that many scholars have taken stemmata to be ‘reality’ rather than a representation of it. Stemmata are constructs that have the function of helping to explain the status of a particular textual tradition; they do not have to be taken as a synthesis of actual history or a parallel of the

real world. In an ideal situation a stemma aims to produce a representation that parallels a textual tradition. In reality, a textual tradition is incomplete because historically we have lost some of the witnesses of the text; thus a stemma (whether hand or computer made) can only represent relationships of witnesses which we still have. It is important to remember that, at least in this sense, the stemma can only present a partial representation of a historical phenomenon.

Salemans makes detailed studies of the way in which stemmata can be built using phylogenetic software, but his work does not go beyond this. He concentrates on the *recensio* of the text, not on the *emendatio*. The reason for this is that while the construction of stemmata can be carried out, with the help of computers, in a quite objective way, the emendation of the text still requires the use of editorial judgement. The subjectivity of editorial judgement has deterred scholars from following this path, which might be, at least in part, one of the reasons why best-text editing has been so popular for so long.

2.7.3 Robinson and the STEMMA Project

O'Hara and Robinson had shown that phylogenetic software could help with the construction of stemmata and that it provided an accurate way of dealing with these, so the next natural step was for someone to take this further and study why and how the programs work: this is the role of STEMMA. The STEMMA Project is a collaborative project in which textual scholars are working with molecular biologists to clarify and test

issues that have arisen from the application of phylogenetic programs to the study of transmission of texts. The group of scholars in STEMMA have set themselves to test five considerations:

- 1- Phylogenetic analysis should be applicable to manuscripts other than those already tested by Robinson, i.e. the Norse *Svigragsmál* tradition and the *Canterbury Tales* manuscripts for the Wife of Bath's Prologue.
- 2- "Different methods of evolutionary inference should give consistent results", i.e. even if the approach used by the programs is different the results produced by them should not be in conflict.²⁰
- 3- "The tree structure should be independent of the characters used."²¹ Different types of variants should have the same 'weight' when a tree is produced.
- 4- "There might be useful information in the order of sections in the manuscripts."
- 5- "New programmes may allow us to carry out more sophisticated analysis."

If these goals are achieved, the phylogenetic methods could become more widely accepted and used. In fact, point 4 was specifically created with the *Canterbury Tales* in mind. The idea was to test if genetic reconstruction could be carried out using the order of the sections as data. The STEMMA Project has been running for almost three years and, up to this date, it has explored most of the aspects outlined above. As part of the work that has been produced, the tale-order data has been coded by Matthew Spencer²² and has been fed into the programs. It is part of my work in this research, to try to explain how well it has worked and why, as well as to make clear when the codicological evidence supports the stemmata that we now have.

It seems that there have been some remarkable changes in the way in which scholars now approach genetic studies of texts. The New Stemmatics uses sophisticated software which has either been originally designed for evolutionary biology (such as *PAUP* and *SplitsTree*) or which has been specifically written for use with texts (such as Wattel's programs²³). Besides the use of computers, which has widely spread in most areas of knowledge, one of the main changes in stemmatology is the fact that now all variants are taken into account, as opposed to errors being the only significant type of variant.²⁴ Also, thanks to the role of the computer there is no need to make a supposition *a priori* about the place at which to root the stemma. The New Stemmatics has also changed the focus of the edited texts: these are not attempts to reconstruct lost archetypes or texts that reflect authorial intentions. The New Stemmatics proposes to 'construct' a text which would help the reader to understand better the textual tradition.

With all the advantages brought by this new method, there are, however, issues that remain difficult and require further study. An example of this is the problem of contamination, which has not been satisfactorily solved with the computer programs we use. When dealing with contaminated traditions, we still have the need of manual analysis to clarify relationships between the witnesses of a text. Another problem arises when we have to make the decision about which variants are likely to be archetypal, but this is partially solved by the fact that we do not need to establish the nature of the variants before we actually produce a tree. It seems that the advantages presented by the New Stemmatics are considerable and that it has overcome most of the problems that scholars have pointed out when referring to the Lachmann method. If some of these have

not yet been completely solved, it is just because the methods that the New Stemmatics has implemented are still being tried and developed.

¹ For details of the theories presented by Lachmann, see *Kleinere Schriften*.

² The consideration that there are errors that could have been present in the archetype could suggest that these might have been authorial (if the archetype was a holograph copy) or scribal (if the copy which originated all the others was copied by a scribe). In any case, what is important is not who generated the errors, but the consideration that there can be errors in the archetype of the tradition, in which case, a reconstructed text might have to account for them.

³ However, probably Griesbach was the first one to suggest this. See my discussion later in this chapter.

⁴ What is meant by 'original' text varies from one approach to another. See below for a description of the different methods proposed by various editors.

⁵ It could be argued that it is conceivable that the archetype of the tradition was the latest version of a text by its author. Because the archetype could be one with the author's version, at least in theory, the Lachmann method could show similarities with the intentionalist school of editing.

⁶ For a history of the Lachmann method see Timpanaro, *La Genesi del Metodo del Lachmann*.

⁷ See Ramón Menéndez Pidal (*Cantar de mio Cid*) and Colin Smith (*Poema de mio Cid*).

⁸ It seems important to point out that although there are many documentary editions, notoriously many of the ones produced by the Early English Text Society, these are not necessarily considered critical editions. "An edition is either a *noncritical edition*, which aims to reproducing a given earlier text as exactly as possible, or a *critical edition*, which contains a text resulting from the editor's informed judgement at points where questionable readings occur--a text that may therefore incorporate readings drawn from various other texts or supplied by the editor" (Tanselle, "Scholarship" 32-3).

⁹ For more details about the differences between critical editions and non-critical editions see Tanselle "Scholarship."

¹⁰ An example of such editorial position can be found in Kane and Donaldson's edition of *Piers Plowman*.

¹¹ 'Best-text' editing (described below, in this chapter) often offers a text that is as close as possible to its manuscript source, frequently advocating minimal emendation. See the introduction to Mitchell and Robinson's edition of *Beowulf*.

¹² The theoretical possibility exists of a scribe (or even the author himself) merging two or more recensions of the same text, creating a point of union between them and a new start for a different recension. Each of the recensions has its own archetype, at least from a theoretical perspective, an independent tree for each of the recensions can be built.

¹³ It is also conceivable that two different recensions of a text might be conflated by a scribe, generating a third recension.

¹⁴ See Kane and Donaldson, *Piers Plowman: The B Version* and Kane, *Piers Plowman: the A version*.

¹⁵ Kane heavily criticizes Manly and Rickert's method in the essay in which he reviews their work ("John" 207-29).

¹⁶ A fact also accepted by Tanselle. See above quotations.

¹⁷ "Detecting erroneous readings at points where there are no variants is one of the primary responsibilities of the critical editor, but it has not been written about as much as other editorial duties because it is not amenable to theorizing or systematizing. Some corrections of this kind are obvious, as when they rectify mere slips of the pen or typographical errors. Others, however, come only after repeated close readings of the text and long familiarity with the author, for the errors they correct are by no means immediately apparent. An error that makes a kind of sense and that requires concentrated attention for its discovery may remain undetected for years or through a succession of editions. Once it is pointed out, readers often wonder why they had not noticed it before; similarly, the correct reading, when the editor hits upon it,

seems so natural and so clearly right that it scarcely leaves room for doubt. An emendation of this sort is the product of imagination and insight and therefore does not occur with great frequency; locating subtle errors, difficult as it is, often is easier than knowing what to replace the errors with." (Tanselle 37-8).

¹⁸ Robinson and O'Hara were not the first scholars to try computer assisted stemmatic analysis. Clustering techniques have been used since John Griffith applied them to variants in Juvenal manuscripts (101-38), and other scholars have analysed and assessed phylogenetic methods Cameron ("227-42), Platnick and Cameron (380-5).

¹⁹ Although some of Salemans ideas are compatible with those of the New Stemmatics, he stops at the application of computerized tools to the study of textual traditions and the theoretical classification of variants, that is, he does not go further to produce an edited text (see below).

²⁰ In chapter IV I will discuss the different approaches used in the phylogenetic software.

²¹ Here the word 'character' is used in reference to the data utilized after it has been coded. The term does not refer to letters, but to the coded version of a place of variation, that is, a set of parallel variants occurring in various witnesses.

²² Details on the coding of the data can be found in Spencer et al., "'Gene Order' Analysis Reveals the History of *The Canterbury Tales* manuscripts"

²³ See E. Wattel, 311.

²⁴ There are still scholars who sustain views which could be related to Maas' interpretation of the Lachmann method: "Zoologists really are most interested in the end-points of their trees, the individual taxa. They are interested in how real animals are related and the course of evolution that got them there. The more end-points, the more successful the analysis. They are excited about apomorphies. The textual critic is not really interested in the end-points of the tree, that is, the specific manuscripts. Indeed, he tries to eliminate as many as possible. His only interest is in reconstructing the archetypes as a step in reaching the author's original text" (Cameron 239). Clearly, Cameron's views are based on traditional perceptions. Now, his ideas present an interesting contrast with the proposals of the New Stemmatics, since this advocates, not the reconstruction of a lost 'original,' but the construction of a text that can help explain the extant witnesses.