

Institut für neutestamentliche Textforschung
Institute for New Testament Textual Research

Münster Colloquium
on the
Textual History of the Greek New Testament

3-6 August 2008

The Coherence-Based Genealogical Method CBGM

Introductory Presentation
by
Gerd Mink

Release 1.0

© Gerd Mink 2009

The Coherence-Based Genealogical Method CBGM

This presentation is based on lectures
given by the author at the Münster Colloquium
on the Textual History of the Greek New Testament.
(program here)

[Contents](#) | [Index](#)

The Coherence-Based Genealogical Method CBGM

With grateful acknowledgements
to Klaus Wachtel for productive discussions
and to Ryan Wettlaufer for reviewing the English texts.

The Coherence-Based Genealogical Method CBGM

Status of data

"Before the last fascicle of ECM IV was published, no comprehensive set of data was available for the *entire* corpus of the Catholic Letters. ... A revision of the local stemmata of variants is currently under way, guided by genealogical relationships between witnesses that have become more clear through coherence-based analysis of the entire corpus. The result will be improved genealogical data which will affect the local stemmata." (Cf. the preface to the *Guide to "Genealogical Queries"*)

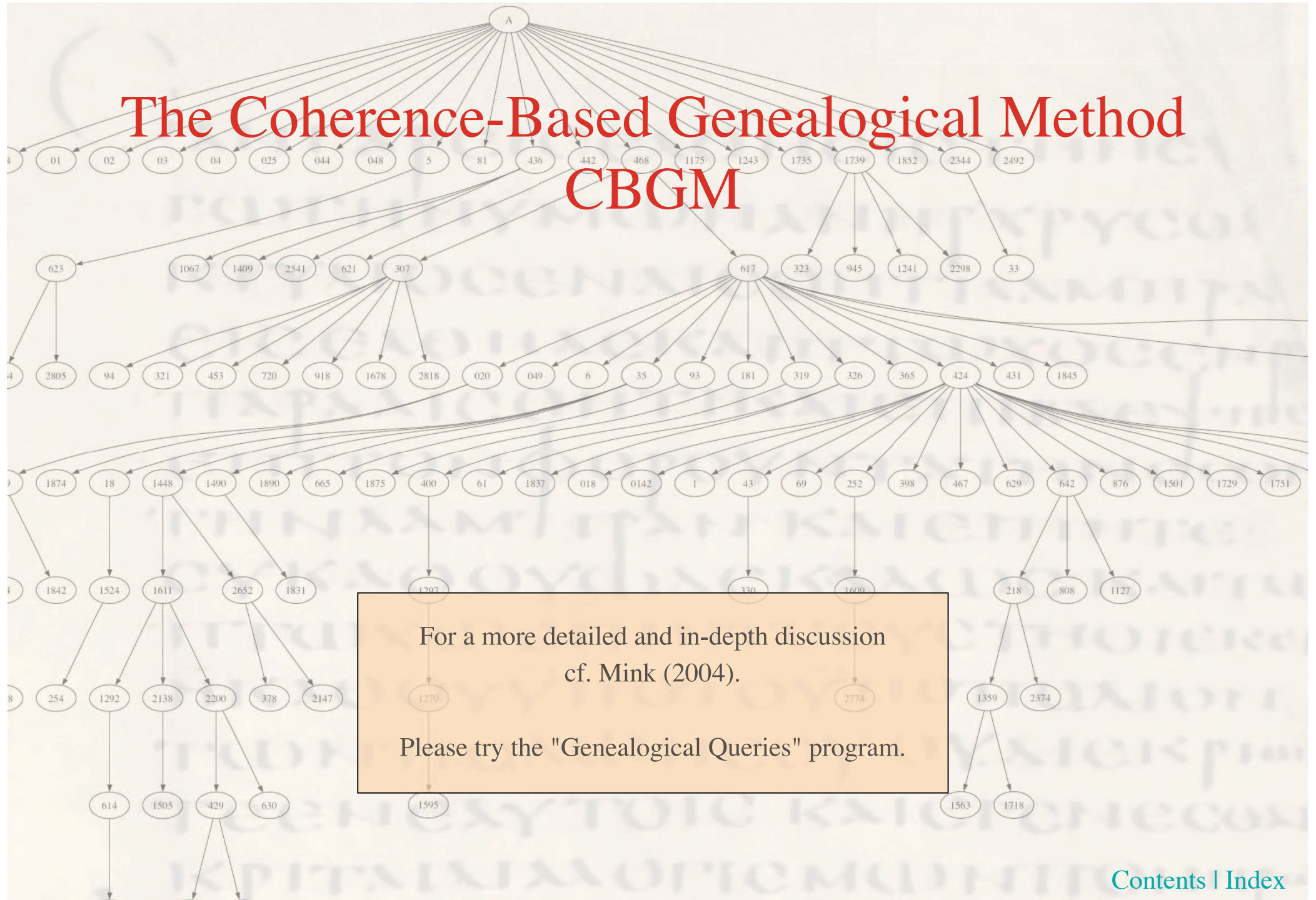
This presentation uses the data available in March 2009.

For news on updates or a new release of this presentation look here.

Numbers of witnesses (e.g. 140 witnesses read variant *b*)
refer to the Greek witnesses (1st hands only) selected for the *Editio Critica Maior* (ECM).

Lectionaries are not included.

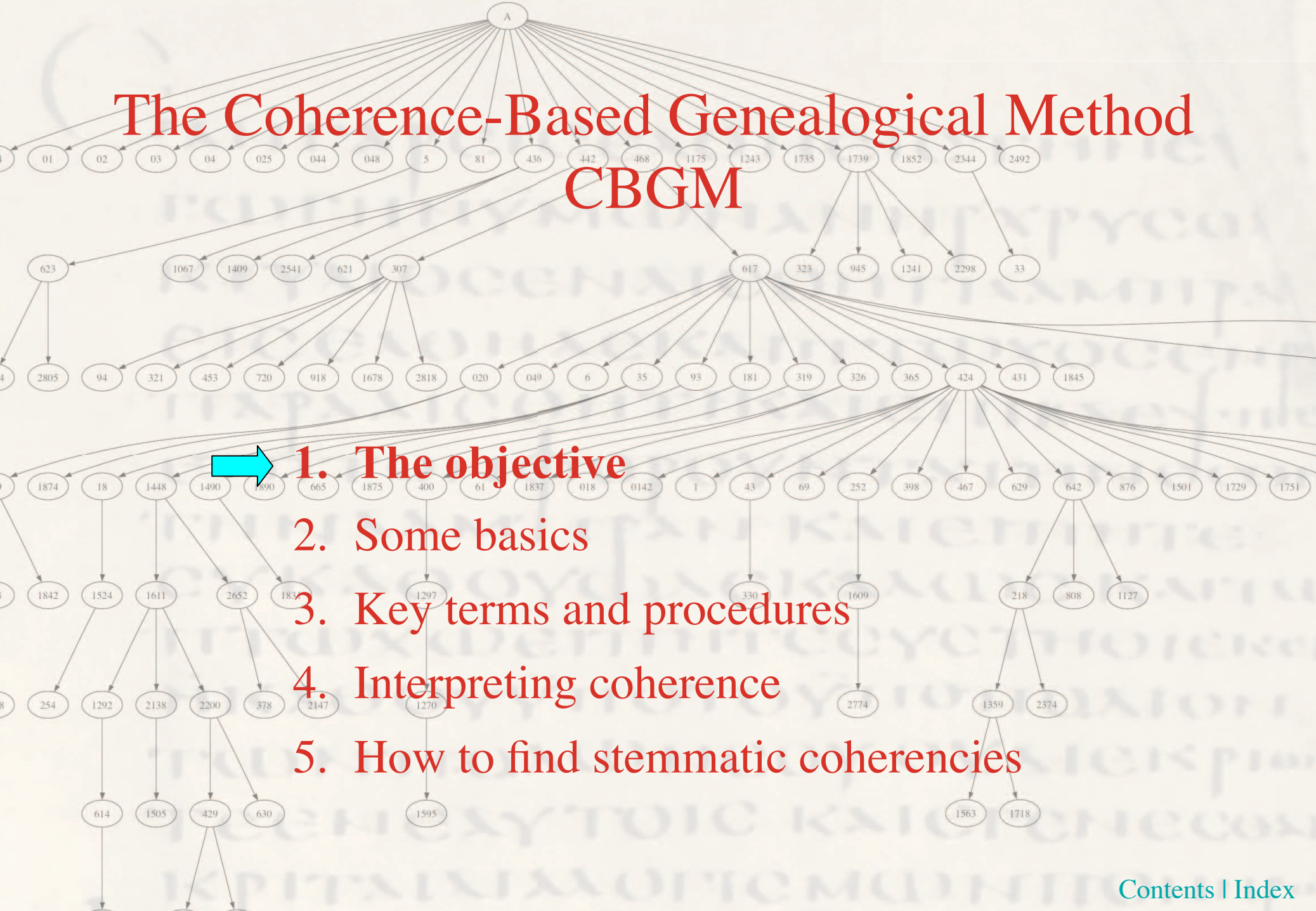
The Coherence-Based Genealogical Method CBGM



The Coherence-Based Genealogical Method CBGM

1. The objective
2. Some basics
3. Key terms and procedures
4. Interpreting coherence
5. How to find stemmatic coherencies

The Coherence-Based Genealogical Method CBGM

- 
1. The objective
 2. Some basics
 3. Key terms and procedures
 4. Interpreting coherence
 5. How to find stemmatic coherencies

The objective

The general objective is

- to improve understanding of **textual history**
in light of all available information

The objective of the CBGM is

- to establish a **comprehensive hypothesis**
for the **genealogical structure of the textual tradition**

The objective

The general objective is

- to improve understanding of **textual history**
- in light of all available information
- to **reconstruct** its starting point,
i.e. the **initial text** (*Ausgangstext*). ←

The objective of the CBGM is

- to establish a **comprehensive hypothesis**
for the genealogical structure of the textual tradition
- to examine **the validity of textual decisions.**

The objective

The general objective is

- to improve understanding of **textual history**
- in light of all available information
- to **reconstruct** its starting point,
i.e. the **initial text** (*Ausgangstext*).

The objective of the CBGM is

- to establish a **comprehensive hypothesis**
for the genealogical structure of the textual tradition
- to examine **the validity of textual decisions.**

The objective

The general objective

– to improve

in light of

– to reconstruct

i.e. the initial

The objective of the

– to establish

for the genealogical structure of the textual tradition

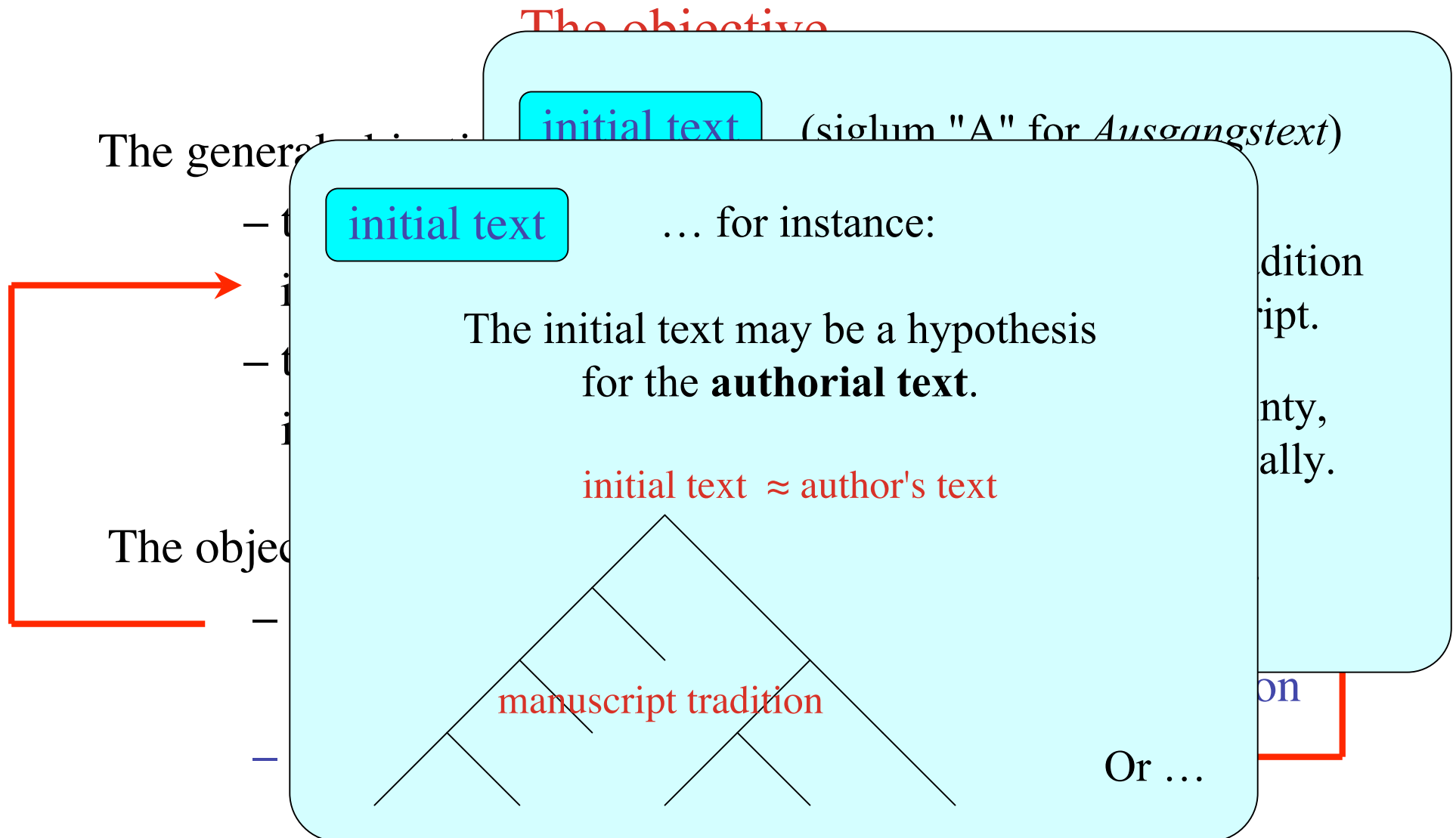
– to examine the validity of textual decisions.

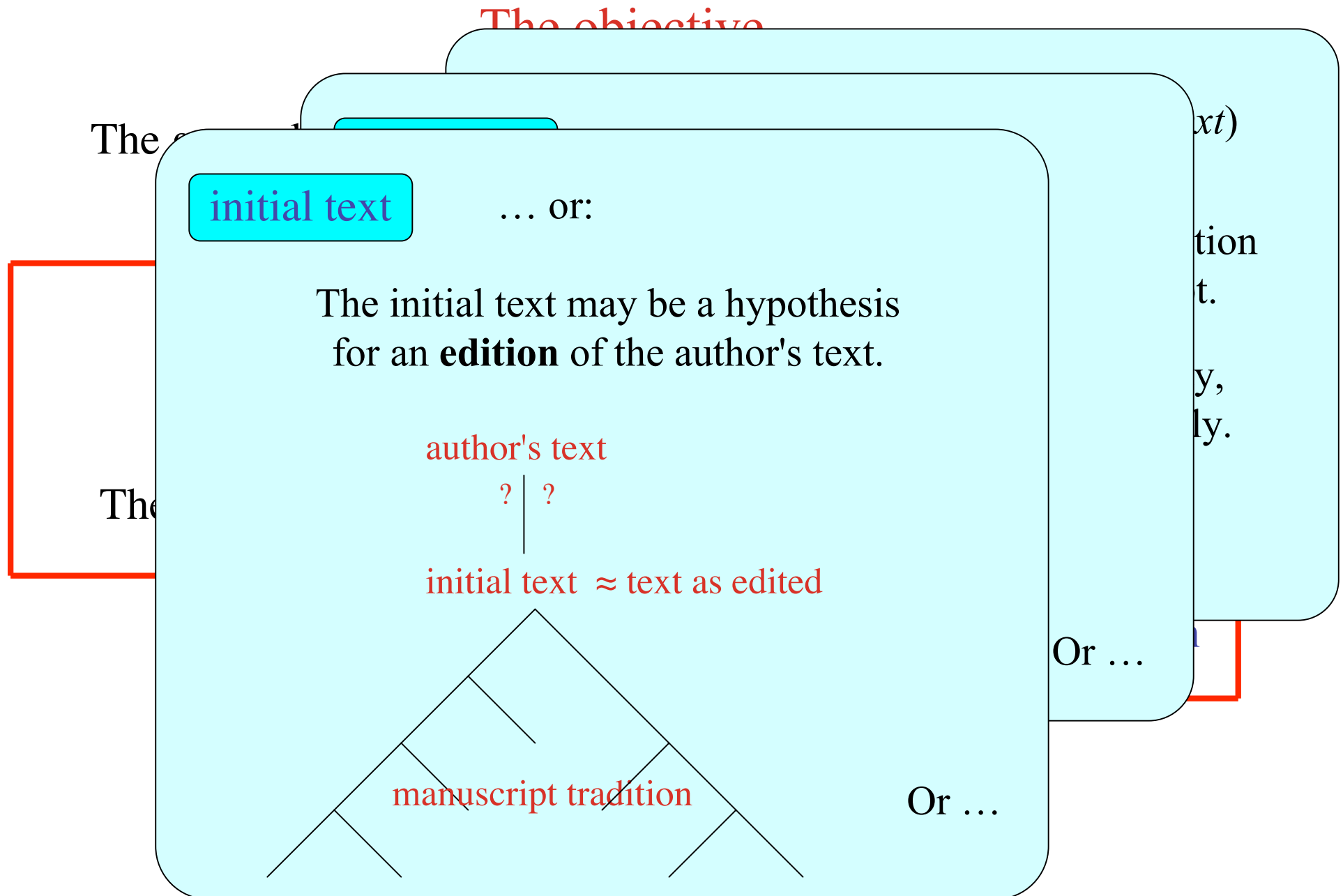
initial text (siglum "A" for *Ausgangstext*)

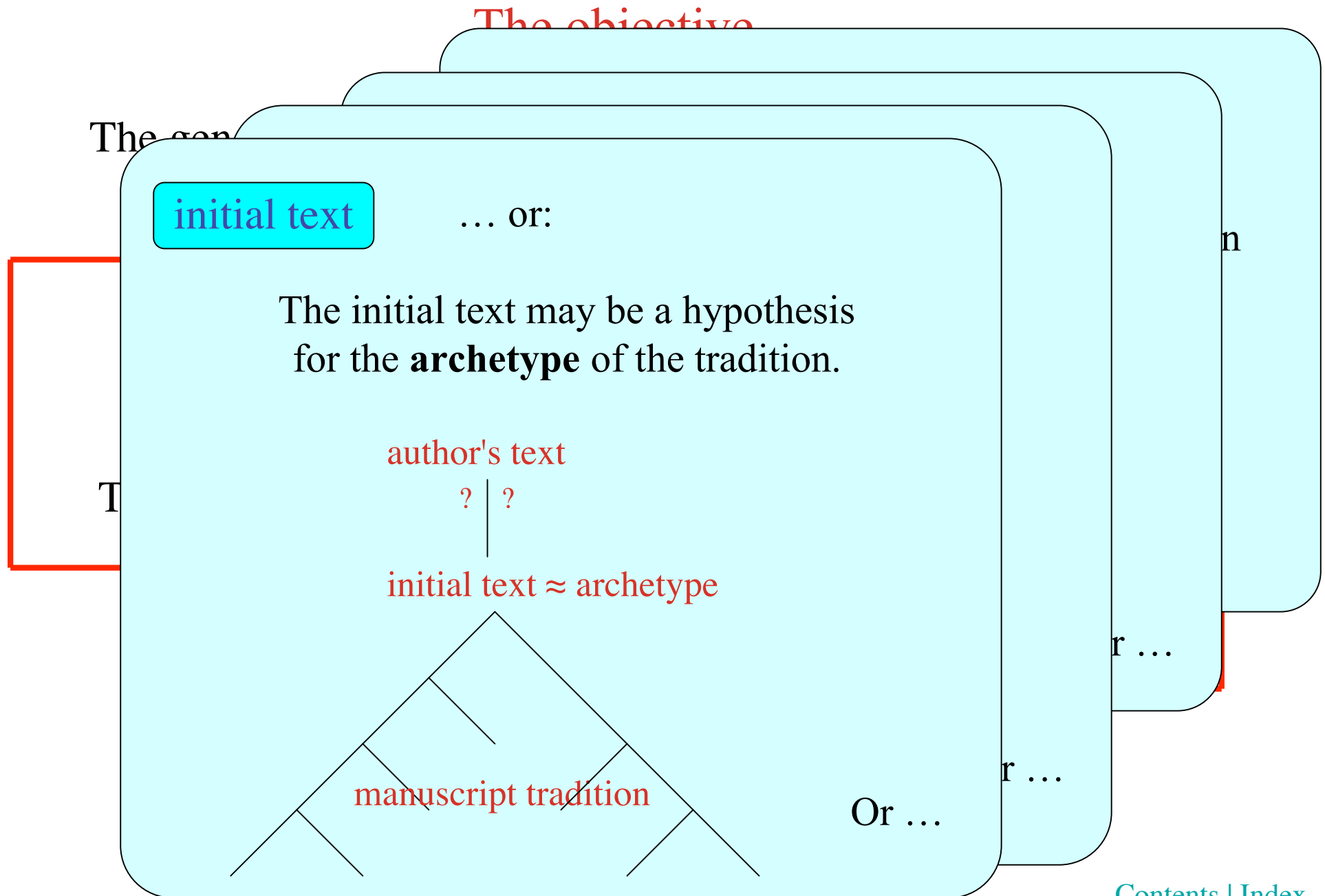
The initial text preceded the textual tradition and has not survived in any manuscript.

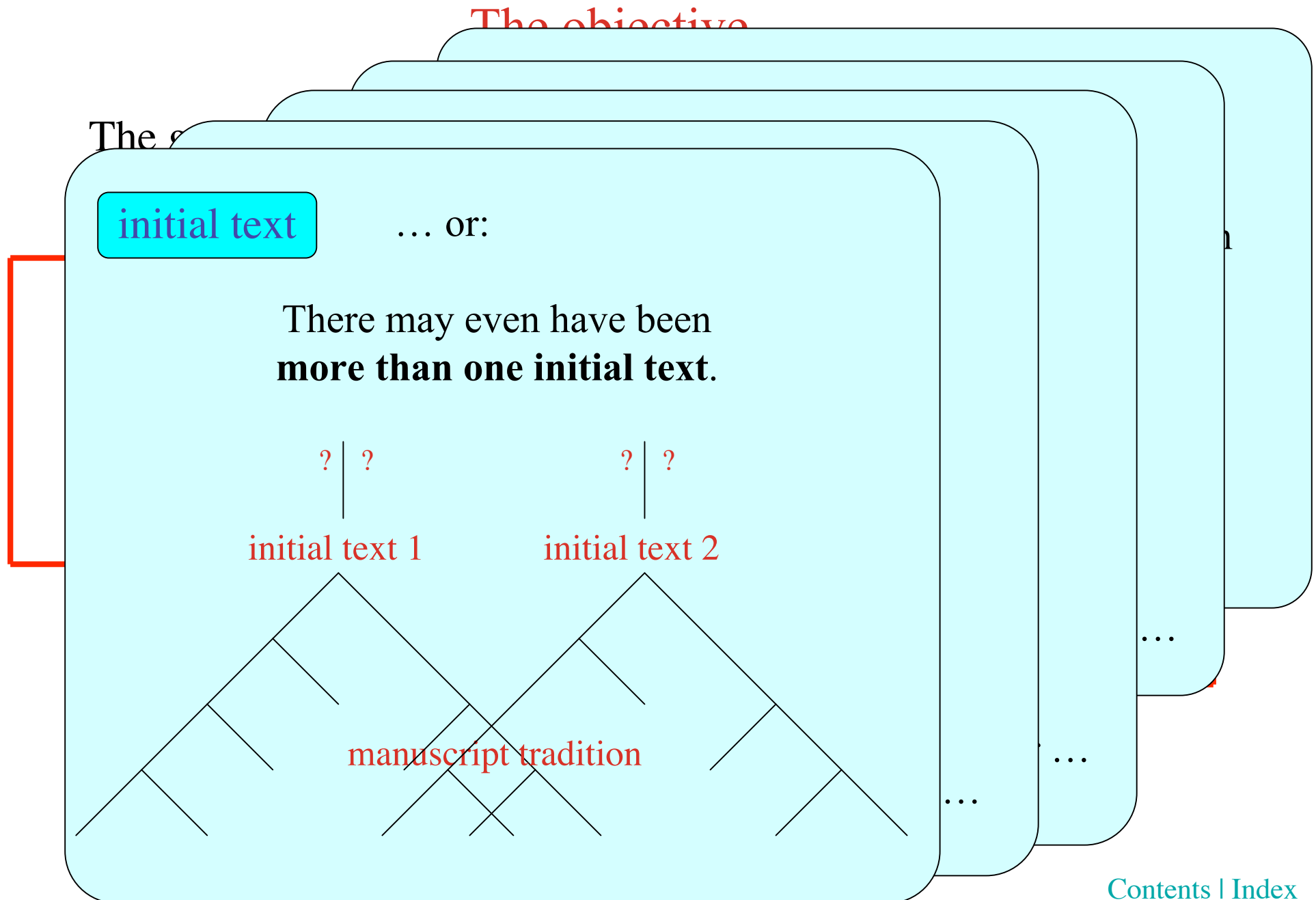
We cannot know this text with certainty, but can only reconstruct it hypothetically.

Various scenarios are possible ...









The objective

For each writing or corpus the term "initial text" must be specified.

Is the initial text a hypothesis for the authorial text, an edition, or for only the archetype of the preserved manuscript tradition?

This definition is important because it governs which internal criteria can be used.

The simplest assumption may be that the initial text is a hypothesis for the author's text.

If whatever we reconstruct from the extant copies cannot, for whatever reason, be the author's text, then we must consider other options.

NB: In any case, the initial text is a hypothetical reconstruction of a starting point, and thus should not necessarily be equated with any actual historical reality.

The objective

The general objective is

- to improve understanding of **textual history**
- in light of all available information
- to **reconstruct** its starting point,
i.e. the **initial text** (*Ausgangstext*). ←

The objective of the CBGM is

- to establish a **comprehensive hypothesis**
for the genealogical structure of the textual tradition
- to **examine the validity of textual decisions.**

The objective

The general objective is

- to improve understanding of **textual history**
- in light of all available information
- to **reconstruct** its starting point,
i.e. the **initial text** (*Ausgangstext*). ←

The objective of the CBGM is

- to establish a **comprehensive hypothesis**
for the genealogical structure of the textual tradition
- to **examine the validity of textual decisions.**

The objective

Examining the validity of textual decisions

Any textual decision, any assessment of the priority of variants compared with others, presupposes:

- (i) evaluation of attestations, i.e. witnesses, and
- (ii) evaluation of variants, i.e. assessing which variant is likely to be the source of other variants.

We need some knowledge of the witnesses and of the usual development of variants, but what we know at the very beginning of our work is rather patchy.

Thus, first decisions are preliminary and must be open to revision as our work proceeds and our knowledge develops.

The objective

Examining the validity of textual decisions

Examining the validity of textual decisions

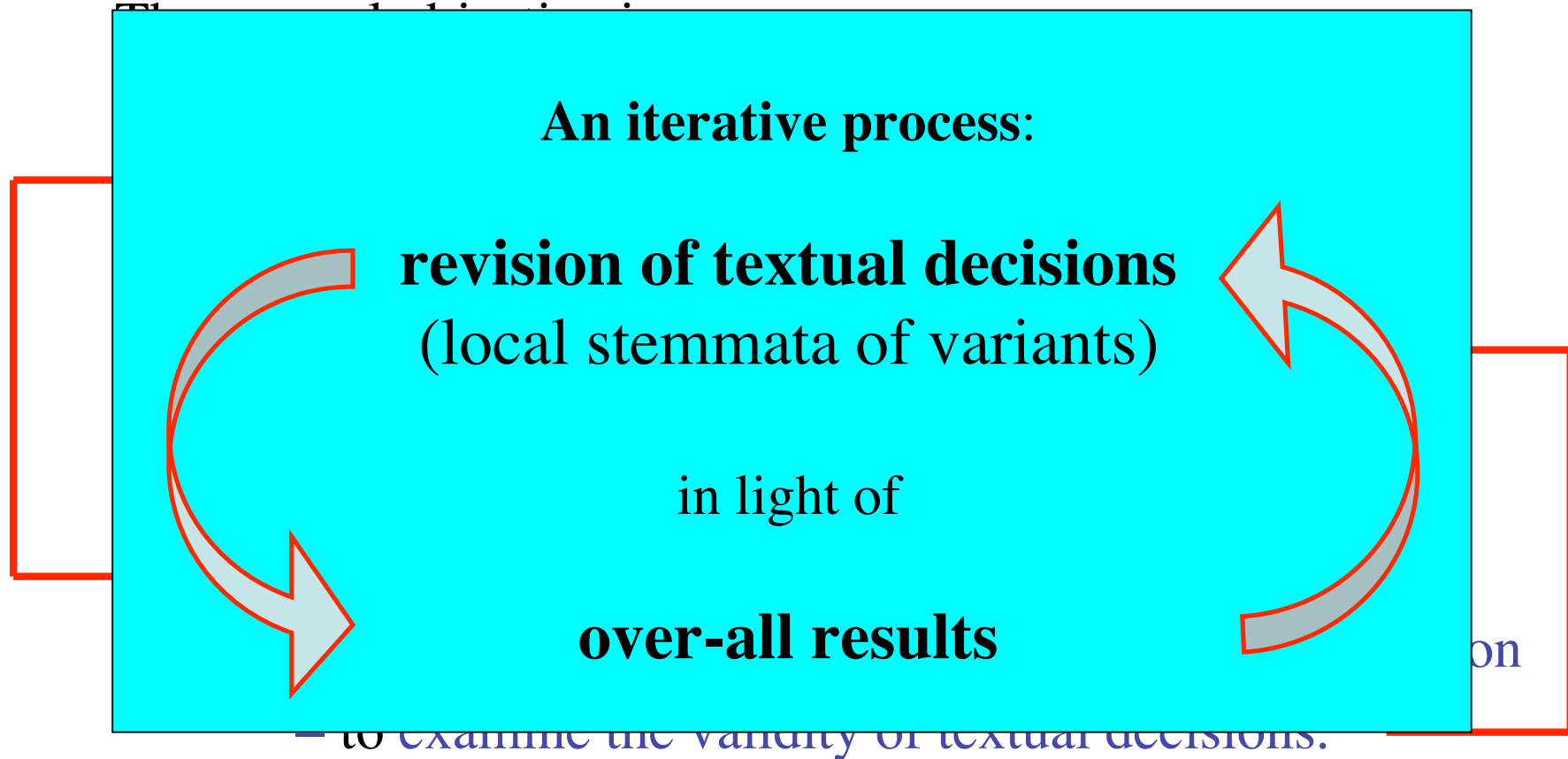
Additionally, a **circular argument** emerges:

Witnesses are rated highly because of their variants,
yet variants are preferred because they occur in highly rated witnesses.

**This circularity must be controlled
in light of an over-all view of variants and witnesses.**

Using the increasing insight into the interrelationships
between witnesses and controlling the witnesses-variants-circle,
both require an **iterative process of approximation**.

The objective



The objective

The general objective is

- to improve understanding of **textual history**
- in light of all available information
- to **reconstruct** its starting point,
i.e. the **initial text** (*Ausgangstext*). ←

The objective of the CBGM is

- to establish a **comprehensive hypothesis**
for the genealogical structure of the textual tradition
- to **examine the validity of textual decisions.**

The objective

The general objective is

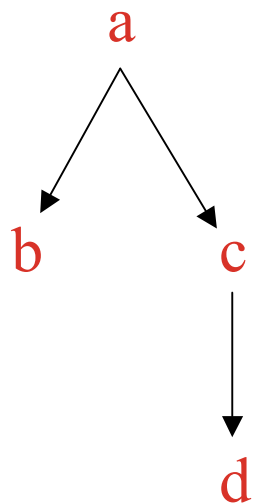
- to improve understanding of textual history
- in light of all available information
- to reconstruct its starting point,
i.e. the initial text (*Ausgangstext*). ←

The objective of the CBGM is

- to establish a comprehensive hypothesis
for the genealogical structure of the textual tradition
- to examine the validity of textual decisions.

The objective

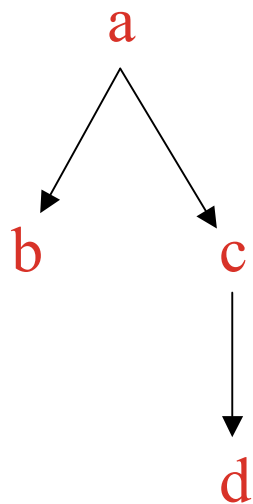
Hypothesis for the genealogical structure



If in a traditional stemma an arrow points from witness *a* to witness *b*, then we expect that in general witness *b* will have the same text as witness *a* but at some places of variation witness *b* will have variants derivative of witness *a*.

The objective

Hypothesis for the genealogical structure



If in a traditional stemma an arrow points from witness *a* to witness *b*, then we expect that in general witness *b* will have the same text as witness *a* but at some places of variation witness *b* will have variants derivative of witness *a*.

It is similar in the CBGM.

We have, however, to consider contamination.

Therefore ...

[Contents](#) | [Index](#)

The objective

Hypothesis for the genealogical structure

Elements of the hypothesis are:
statements on the texts of all witnesses.

The structure of these genealogical statements should be:

For every passage of text it is true that

- witness x agrees with certain witnesses (a or b or ...),
- or witness x has a variant derived from these witnesses.

The objective

Hypothesis for the genealogical structure

Elements of the hypothesis are:
statements on the texts of all witnesses.

The structure of these genealogical statements should be:

For every passage of text it is true that

- witness x agrees with certain witnesses (a or b or ...),
- or witness x has a variant derived from these witnesses.

The rule of parsimony:
The number of witnesses involved is as small as possible.

The challenge

large number of witnesses

high grade contamination

coincidental emergence

of identical variants

conflicting data

The challenge

large number of witnesses

high grade contamination

coincidental emergence

of identical variants

conflicting data

One witness when compared with any other contains
(i) variants that are younger
and (ii) variants that are older
than those of the other witness.

The challenge

large number of witnesses

high grade contamination

coincidental emergence

of identical variants

conflicting data

One witness when compared with any other contains
(i) variants that are younger
and (ii) variants that are older
than those of the other witness.

„Gegen die Kontamination ist noch kein Kraut gewachsen.“
(Paul Maas, Textkritik)

There is no cure for contamination.

The challenge

large number of witnesses

high grade contamination

coincidental emergence

of identical variants

conflicting data

One witness when compared with any other contains
(i) variants that are younger
and (ii) variants that are older
than those of the other witness.

„Gegen die Kontamination ist noch kein Kraut gewachsen.“

(Paul Maas, Textkritik)

There is no cure for contamination.

The objective

... is to establish a
comprehensive hypothesis for
the structure of the tradition.

What can be achieved?

We know	manuscripts and their dates (which may be certain for some, less so for others).
We know	texts and their variants.

The objective

... is to establish a
comprehensive hypothesis for
the structure of the tradition.

What can be achieved?

We know manuscripts and their dates
(which may be certain for some, less so for others).
We know texts and their variants.

We do not know the dates of the texts, i.e. the dates of their variants.

The date of a manuscript gives only
the *terminus post quem non* of the text.

We do not know the manuscripts / texts / variants which are lost –
the links between preserved copies.

The objective

... is to establish a
comprehensive hypothesis for
the structure of the tradition.

What can be achieved?

We cannot find out the exact ways of transmission
("how it really was").
We cannot construct a stemma of manuscripts.

We do not know the manuscripts / texts / variants which are lost –
the links between preserved copies.

The objective

... is to establish a
comprehensive hypothesis for
the structure of the tradition.

What can be achieved?

~~We cannot find out the exact ways of transmission
("how it really was").
We cannot construct a stemma of manuscripts.~~

We can search for structures within the development of the texts.

The objective

... is to establish a
comprehensive hypothesis for
the structure of the tradition.

What can be achieved?

~~We cannot find out the exact ways of transmission
("how it really was").
We cannot construct a stemma of manuscripts.~~

We can search for structures within the development of the texts.

The objective

The objective of the CBGM is to find these structures.

The CBGM deals with texts, not with manuscripts.

The text is the witness.

What can be achieved?

Exact ways of transmission
("how it really was").
Summa of manuscripts.

We can search for structures within the development of the texts.

Coherence-Based Genealogical Method

Coherence within a tradition – a truism?

Yes, of course, it is.

Yet, we must get involved with some questions.

Coherence-Based Genealogical Method

Are there different kinds of coherence?

How can coherence be quantified and described?

How can coherence contribute to an over-all view of the tradition?

Coherence-Based Genealogical Method

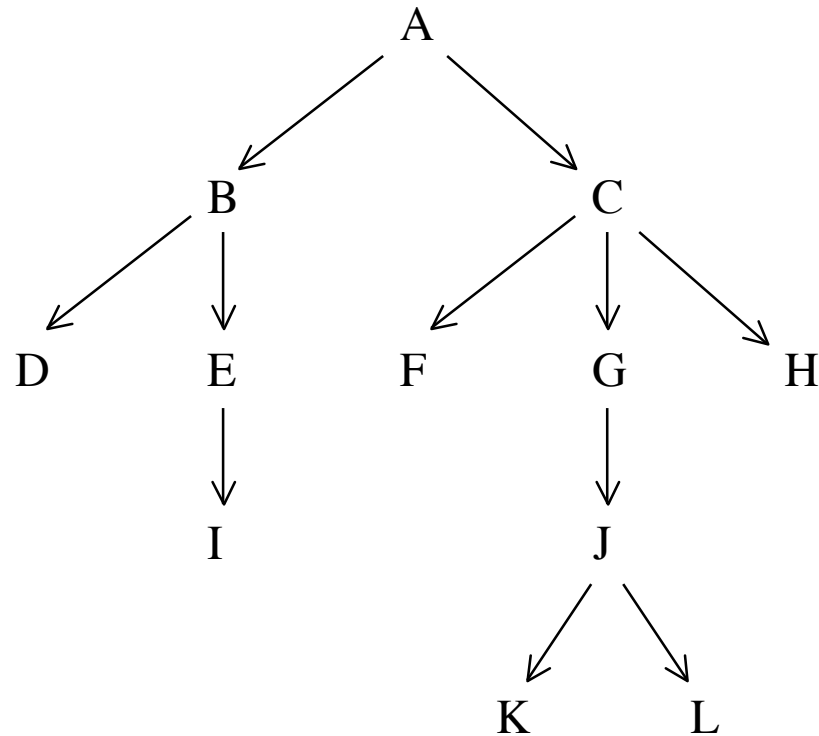
Are there different kinds of coherence?

How can coherence be quantified and described?

How can coherence contribute to an over-all view of the tradition?

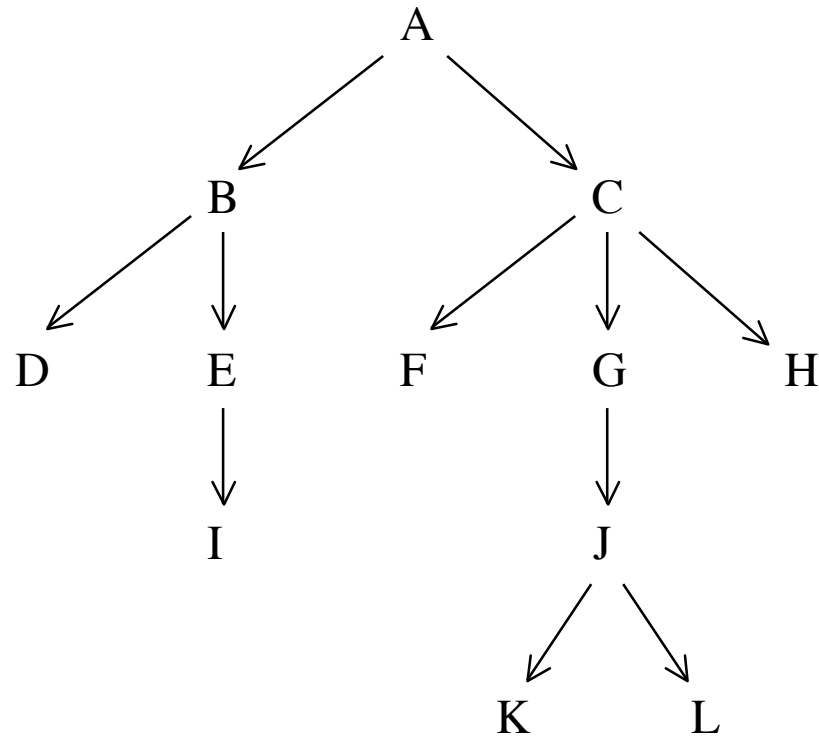
The over-all view – a stemma?

The over-all view – a stemma?



traditional stemma of manuscripts
(not displaying contamination –
one ancestor per descendant)

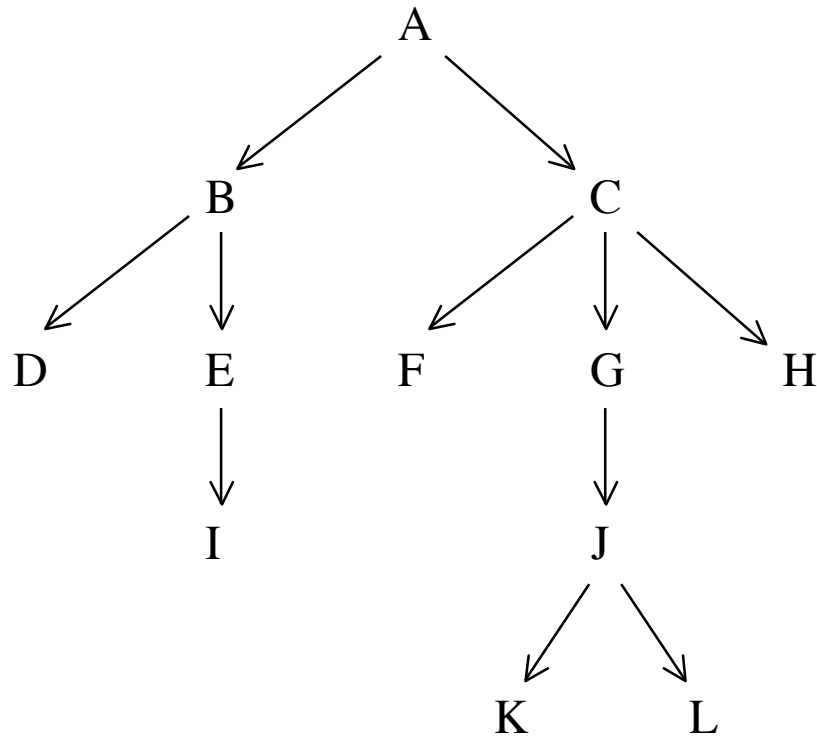
The over-all view – a stemma?



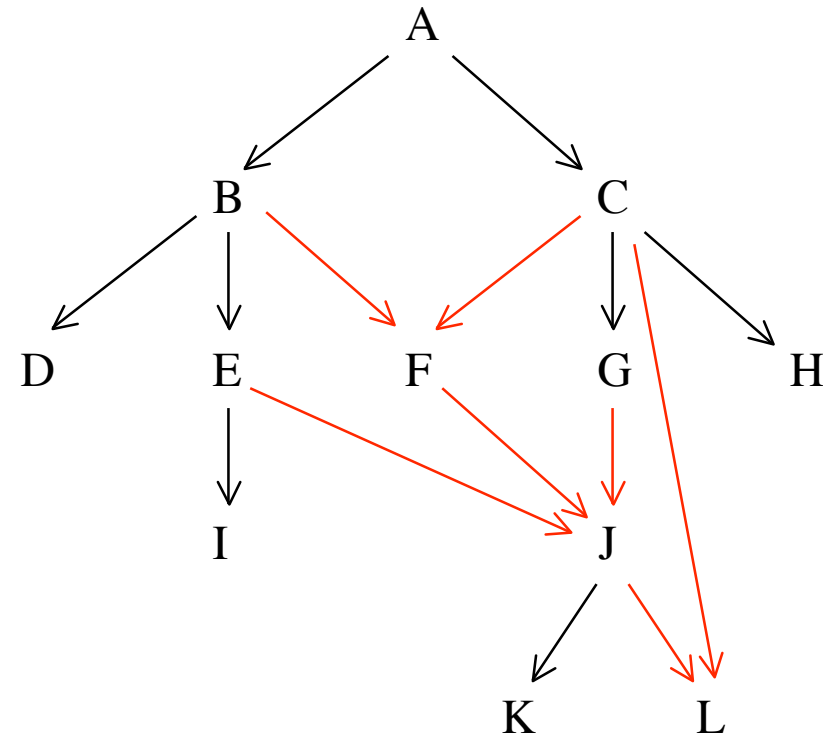
traditional stemma of manuscripts
(not displaying contamination –
one ancestor per descendant)

For a contaminated tradition
we need another design.

The over-all view – a stemma?

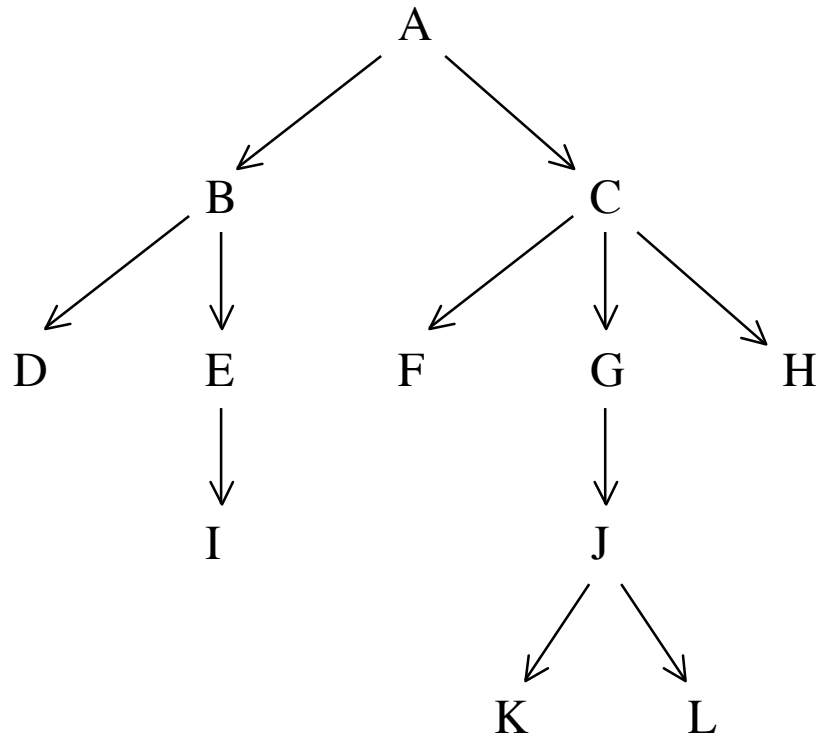


traditional stemma of manuscripts
(not displaying contamination –
one ancestor per descendant)

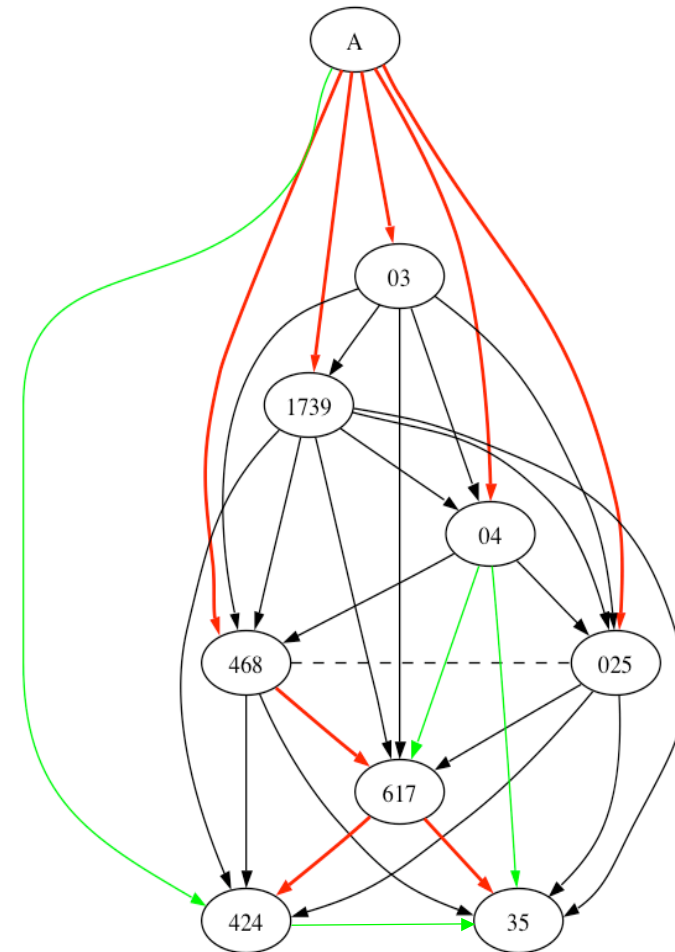


stemma of texts
(allowing for more than one ancestor per
descendant)

The over-all view – a stemma?

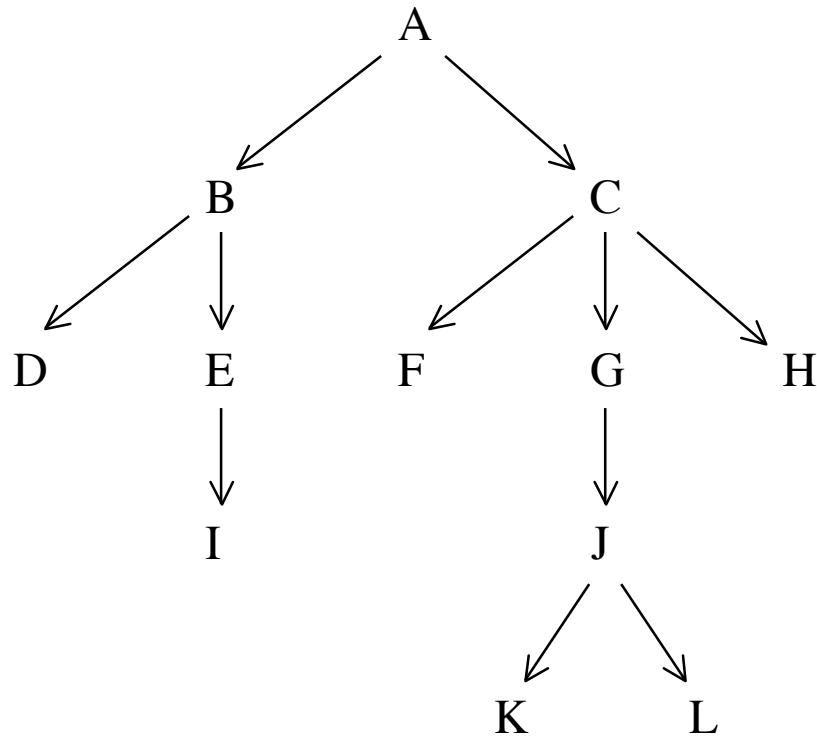


traditional stemma of manuscripts
(not displaying contamination –
one ancestor per descendant)

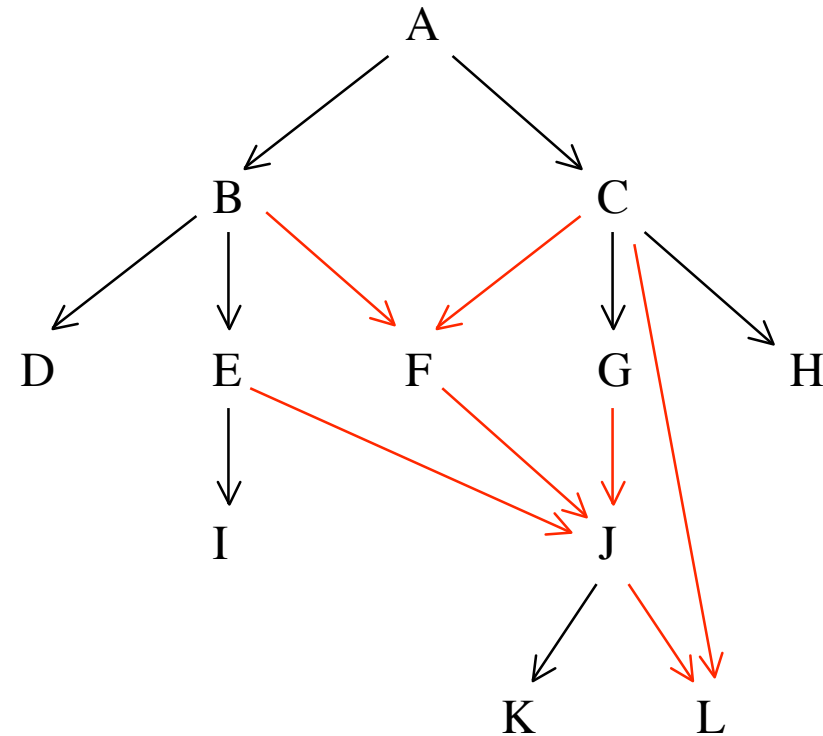


stemma of texts
(allowing for more than one ancestor per
descendant)

The over-all view – a stemma?



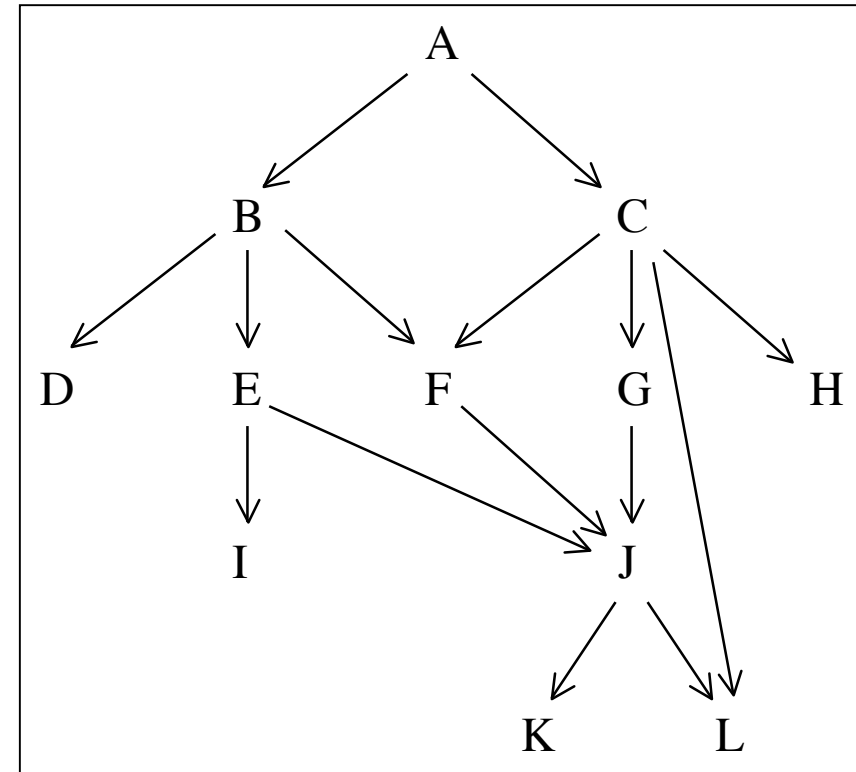
traditional stemma of manuscripts
(not displaying contamination –
one ancestor per descendant)



stemma of texts
(allowing for more than one ancestor per
descendant)

A more complex concept of stemma

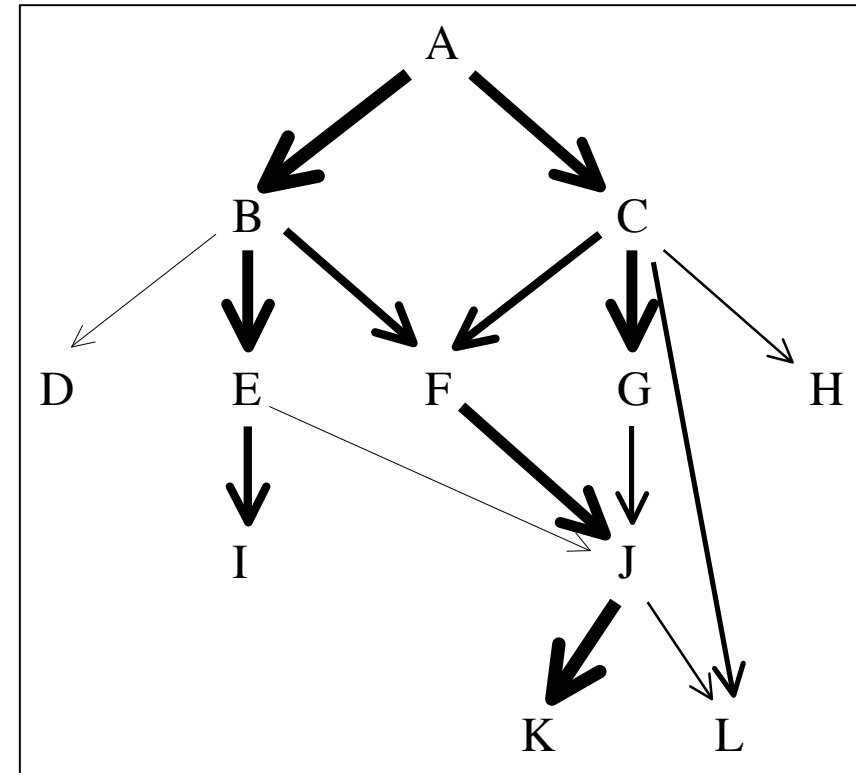
Every arrow stands
for a genealogical hypothesis.



A more complex concept of stemma

Every arrow stands
for a genealogical hypothesis.

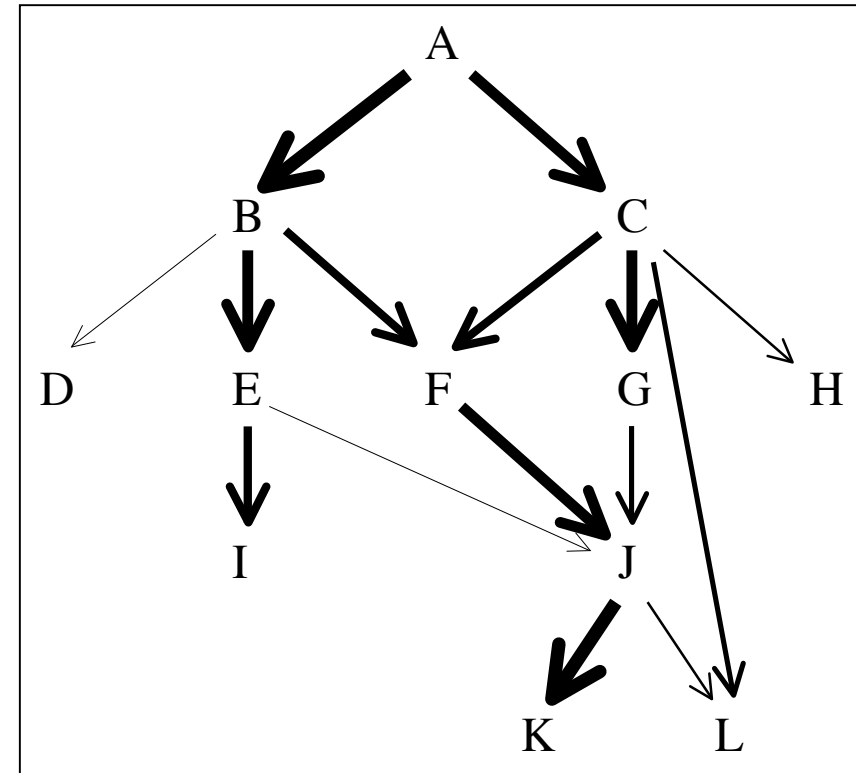
Many of the hypotheses may be based
on strong evidence,
others may be less reliable or only slightly
better than the alternatives.



A more complex concept of stemma

Every arrow stands
for a genealogical hypothesis.

Many of the hypotheses may be based
on strong evidence,
others may be less reliable or only slightly
better than the alternatives.



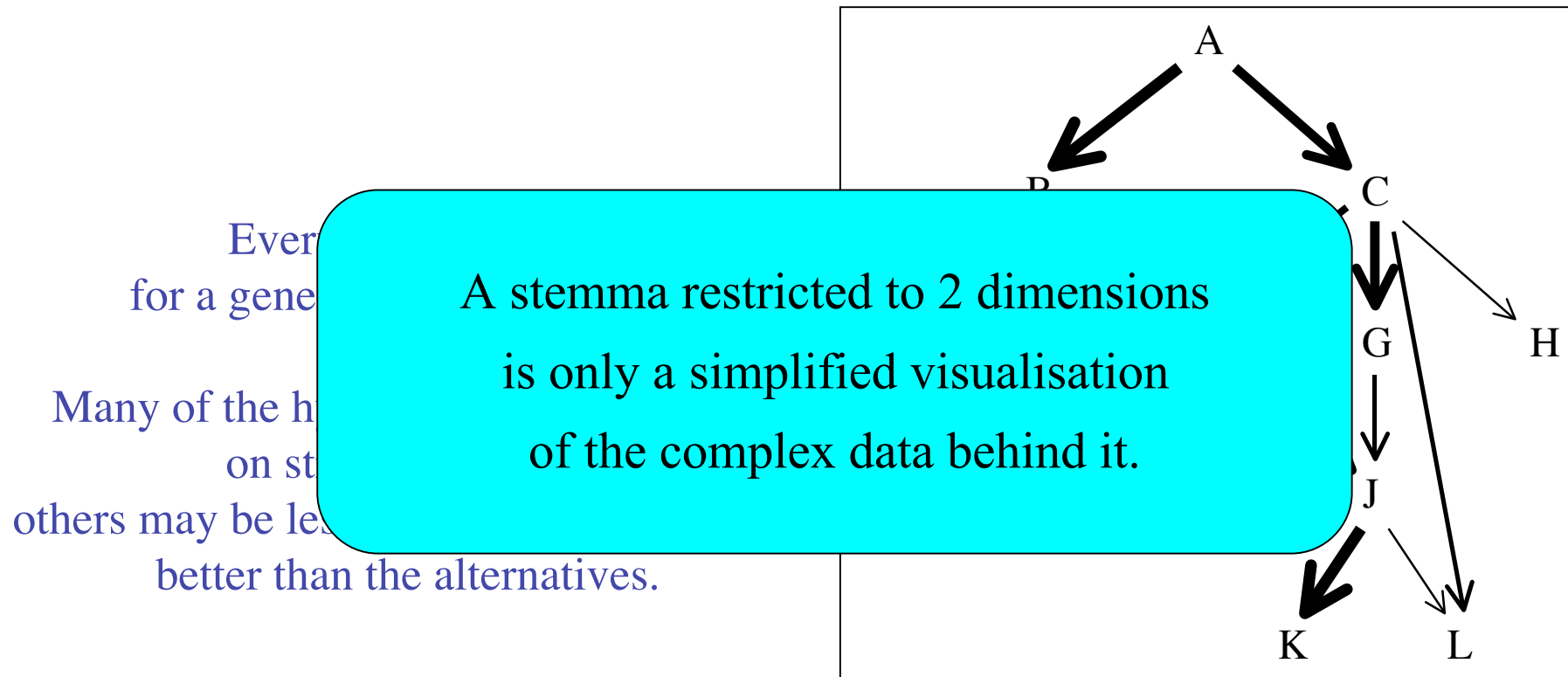
The data behind the stemmatic connections are the substance of the stemma.

How many variant relations support this arrow?

On what passages are the variant relations based?

[Contents](#) | [Index](#)

A more complex concept of stemma



The data behind the stemmatic connections are the substance of the stemma.

How many variant relations support this arrow?

On what passages are the variant relations based?

Special requirements the CBGM must meet

An adequate method has to be able to deal with contamination and coincidental rise of variants.

Special requirements the CBGM must meet

An adequate method has to be able to deal with contamination and coincidental rise of variants.

A method which results in a graph displaying exclusively linear or bifurcated edges is not suitable for representing contamination.

(As in graph theory, the lines are called *edges*, and they connect *nodes* representing witnesses.)

Special requirements the CBGM must meet

An adequate method has to be able to deal with contamination and coincidental rise of variants.

A method which results in a graph displaying exclusively linear or bifurcated edges is not suitable for representing contamination.

The resulting hypotheses cannot be falsified at any passage of text.

Special requirements the CBGM must meet

An adequate method has to be able to deal with contamination and coincidental rise of variants.

A method which results in a graph displaying exclusively linear or bifurcated edges is not suitable for representing contamination.

The resulting hypotheses cannot be falsified at any passage of text.

An exclusively statistical approach to stemmatology is not appropriate because the results would not apply to each individual case.

Special requirements the CBGM must meet

An adequate method has to be able to deal with contamination and coincidental rise of variants.

A method which does not use genealogically relevant data cannot yield genealogical results.

The resulting hypotheses cannot be falsified at any passage of text.

Special requirements the CBGM must meet

An adequate method has to be able to deal with contamination and coincidental rise of variants.

The resulting hypotheses cannot be falsified at any passage of text.



The resulting hypotheses must be as simple as possible, i.e. the number of ancestors of each descendant must be as small as possible.

The Coherence-Based Genealogical Method CBGM

1. The objective

➡ 2. Some basics

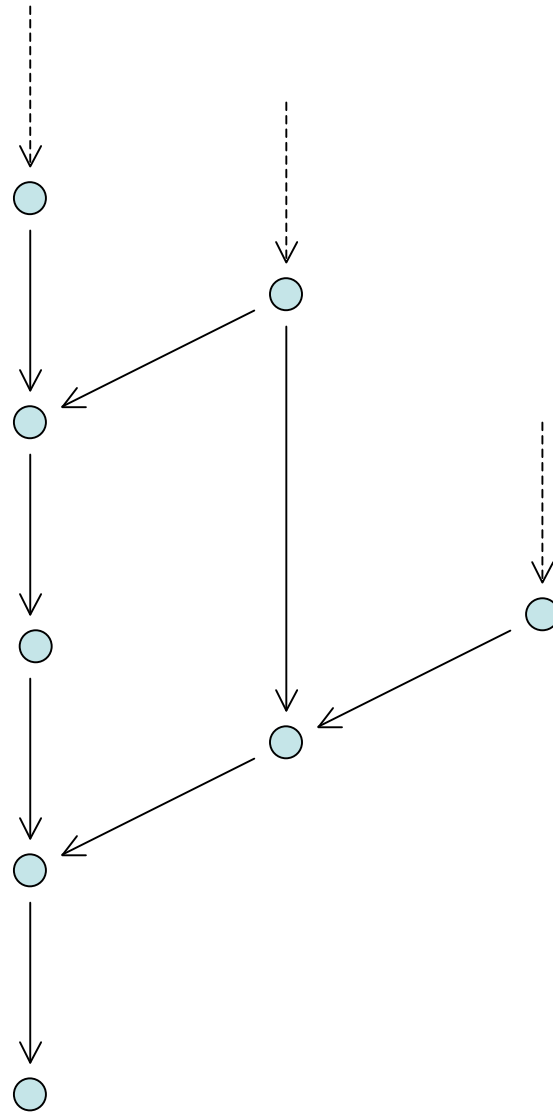
3. Key terms and procedures

4. Interpreting coherence

5. How to find stemmatic coherencies

[Contents](#) | [Index](#)

Contamination as a process

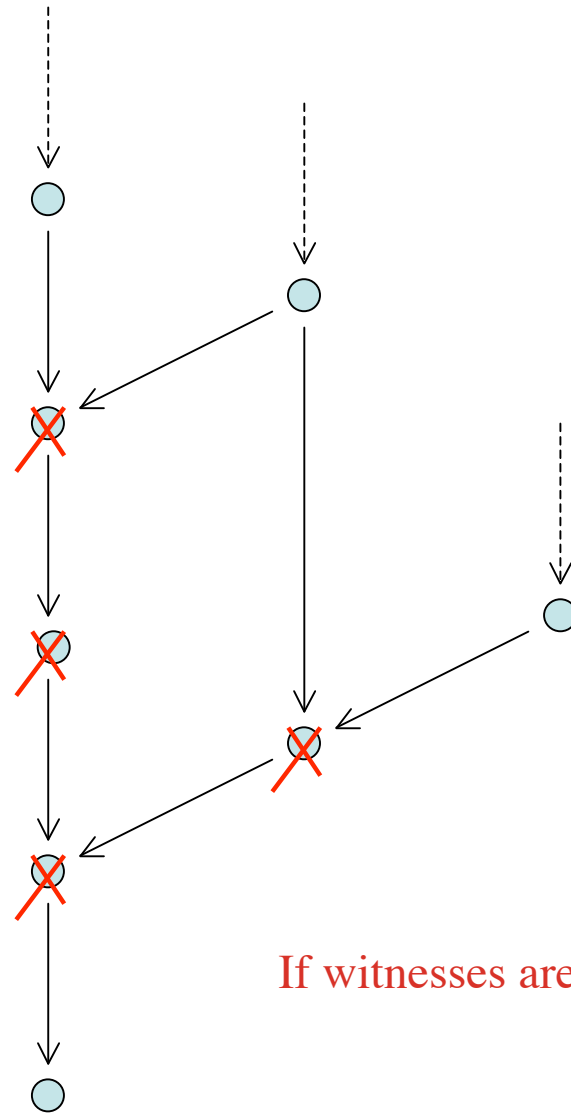


The circles stand for manuscripts.

Every manuscript has its ancestor, and some of them derived their text from two sources.

That is contamination.

Contamination as a process



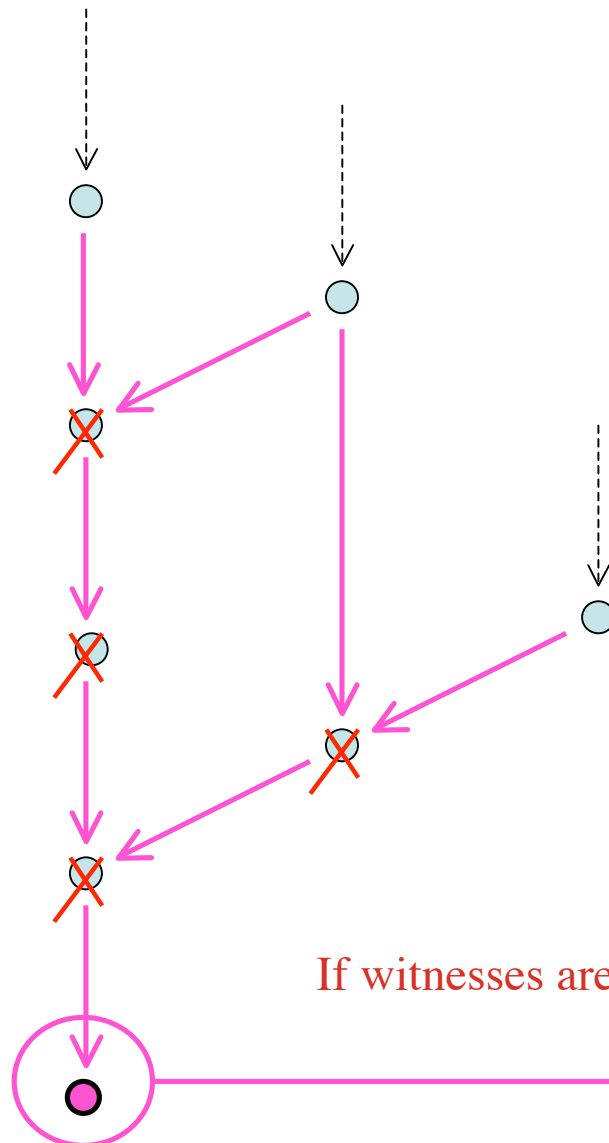
The circles stand for manuscripts.

Every manuscript has its ancestor, and some of them derived their text from two sources.

That is contamination.

If witnesses are lost ...

Contamination as a process



The circles stand for manuscripts.

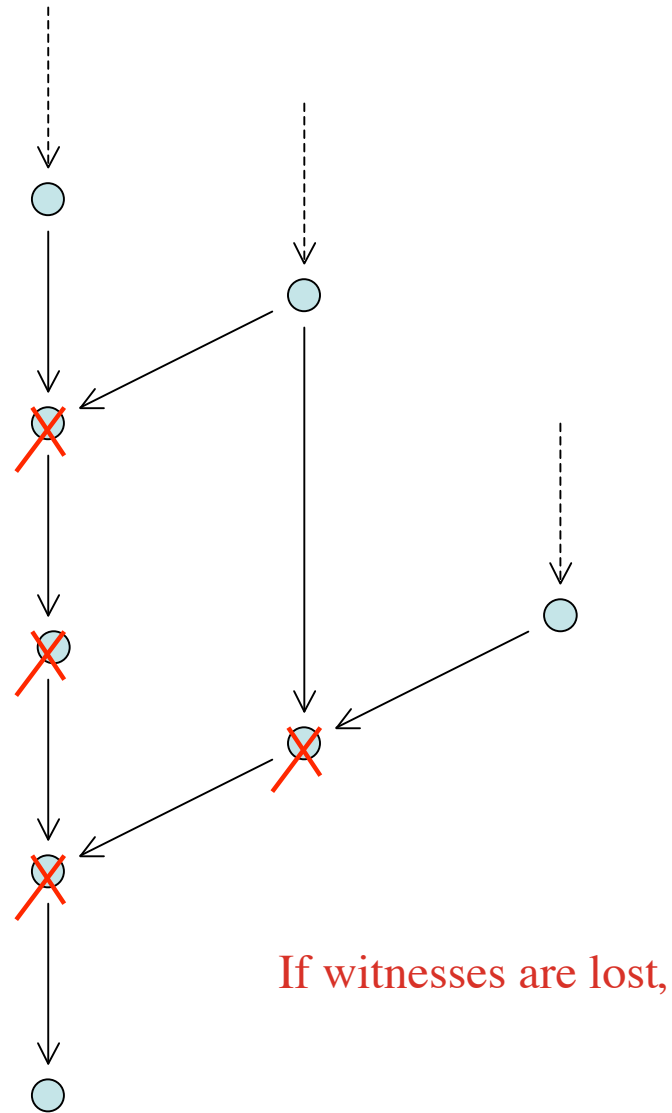
Every manuscript has its ancestor, and some of them derived their text from two sources.

That is contamination.

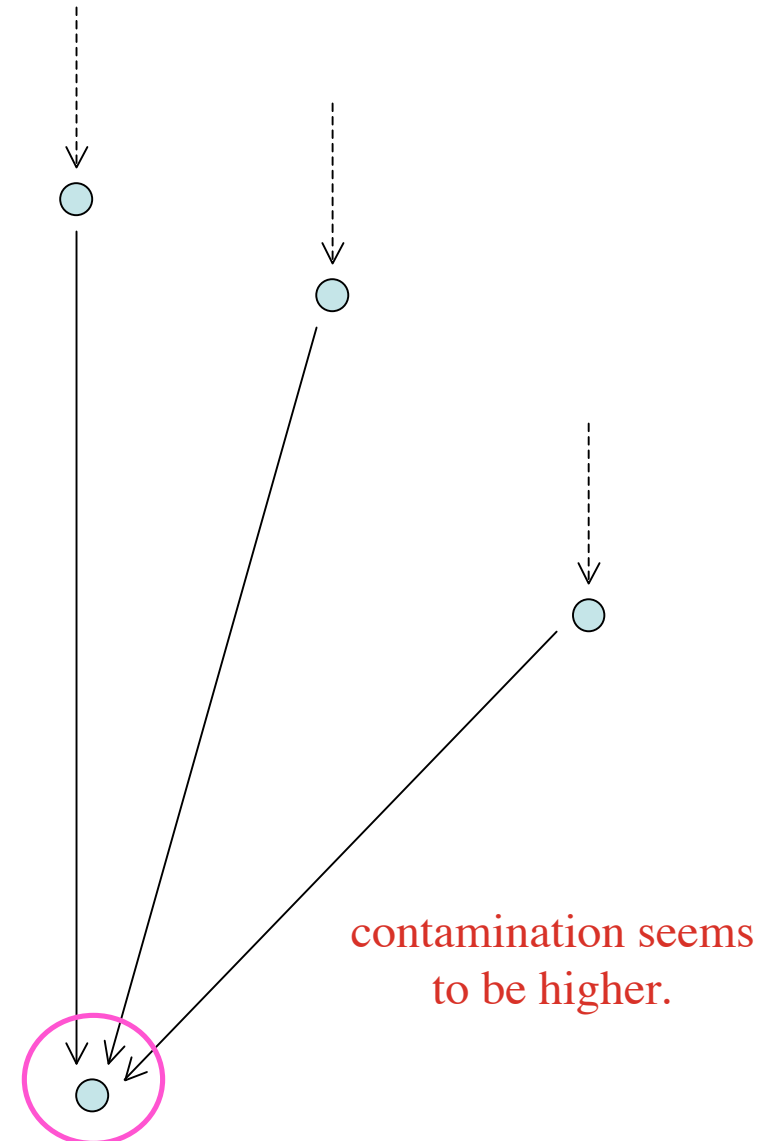
If witnesses are lost,

their changes may accumulate
in the next preserved witness.

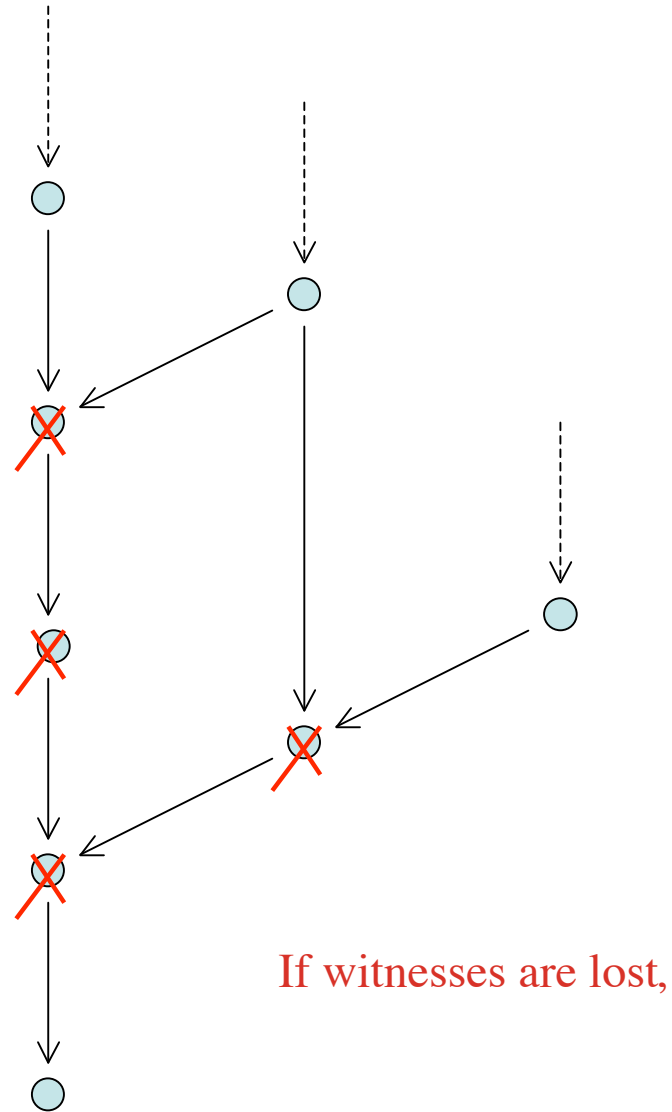
Contamination as a process



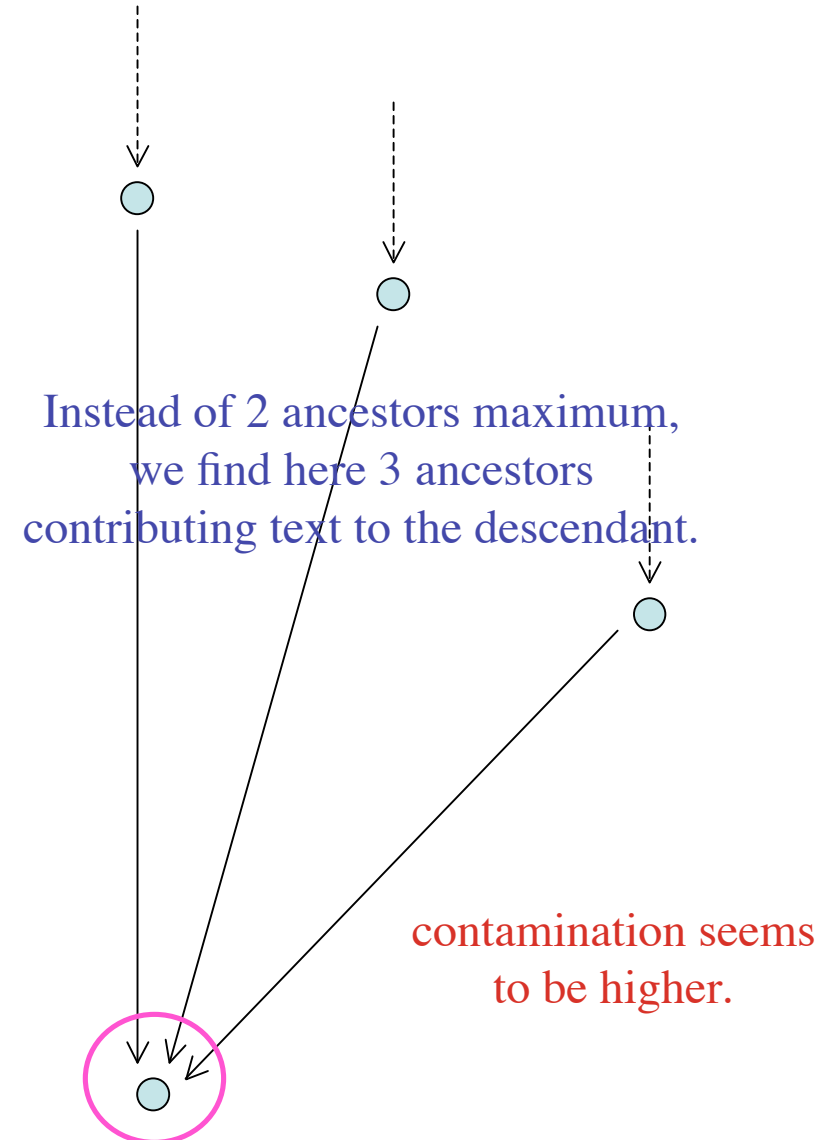
Contamination as a result



Contamination as a process



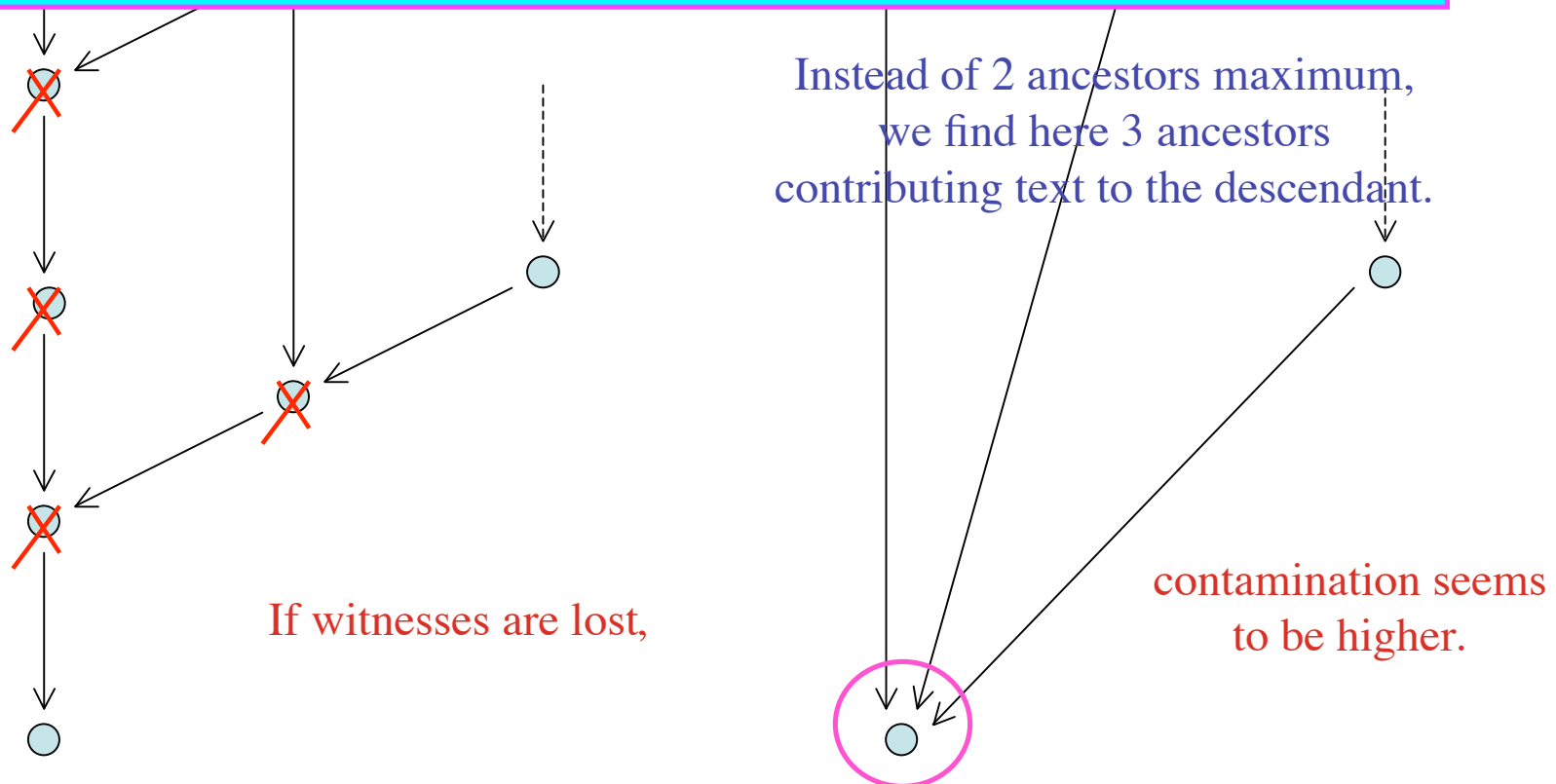
Contamination as a result



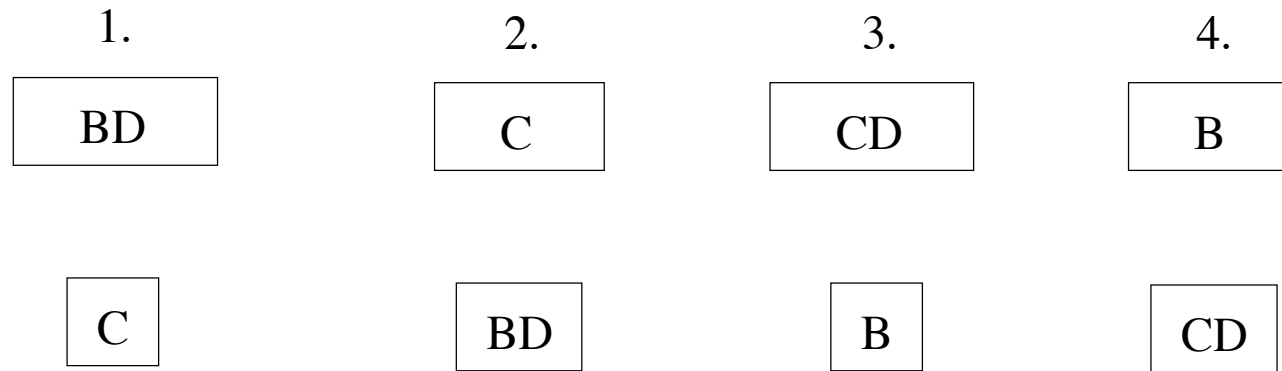
The more sources of contamination there are,
the more combinations of a descendant and ancestors are possible.

As a result, the descendant sometimes agrees with one part
of the ancestors, sometimes with another.

In consequence, the composition of the individual attestations
is varying considerably.



Traces of contamination: varying combinations of witnesses

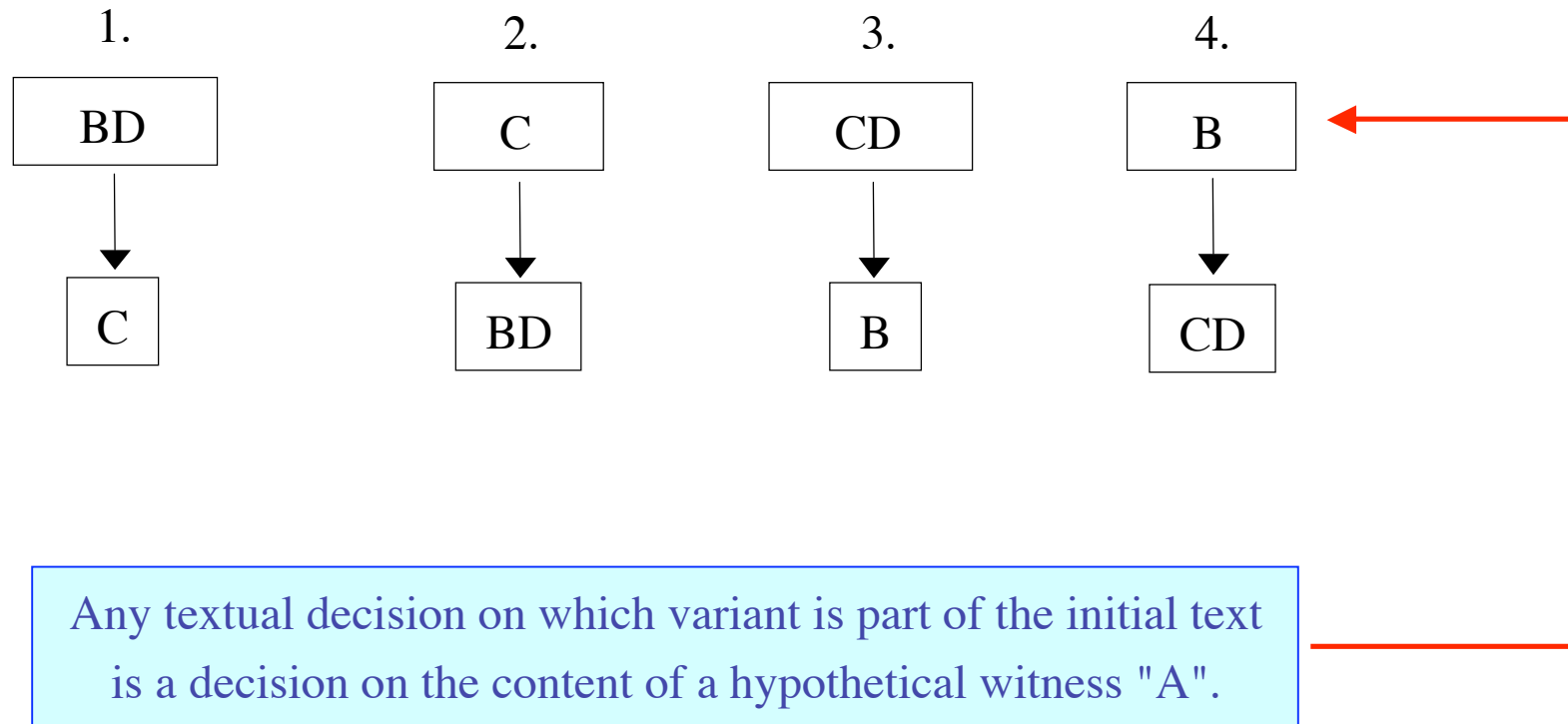


a model:

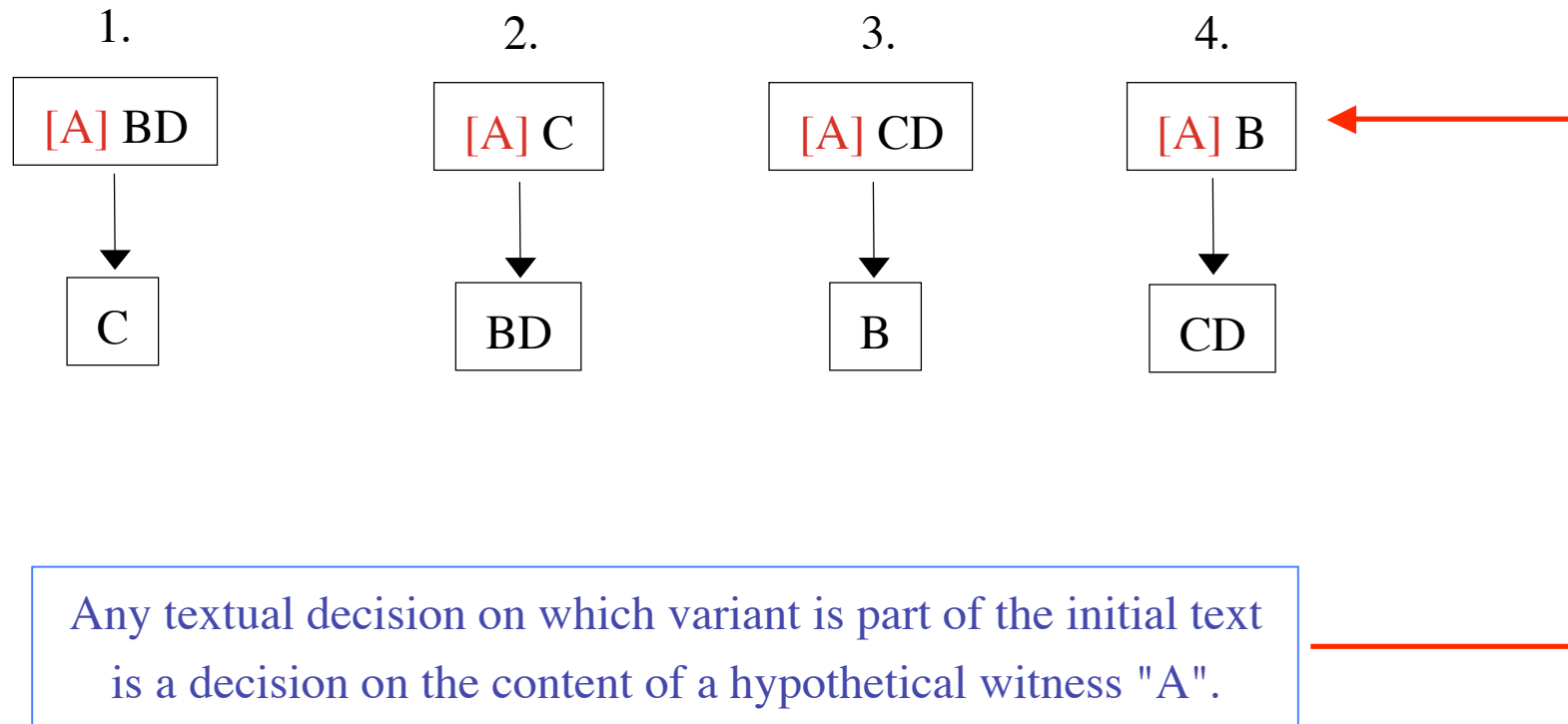
4 variant passages

3 witnesses: B, C, D

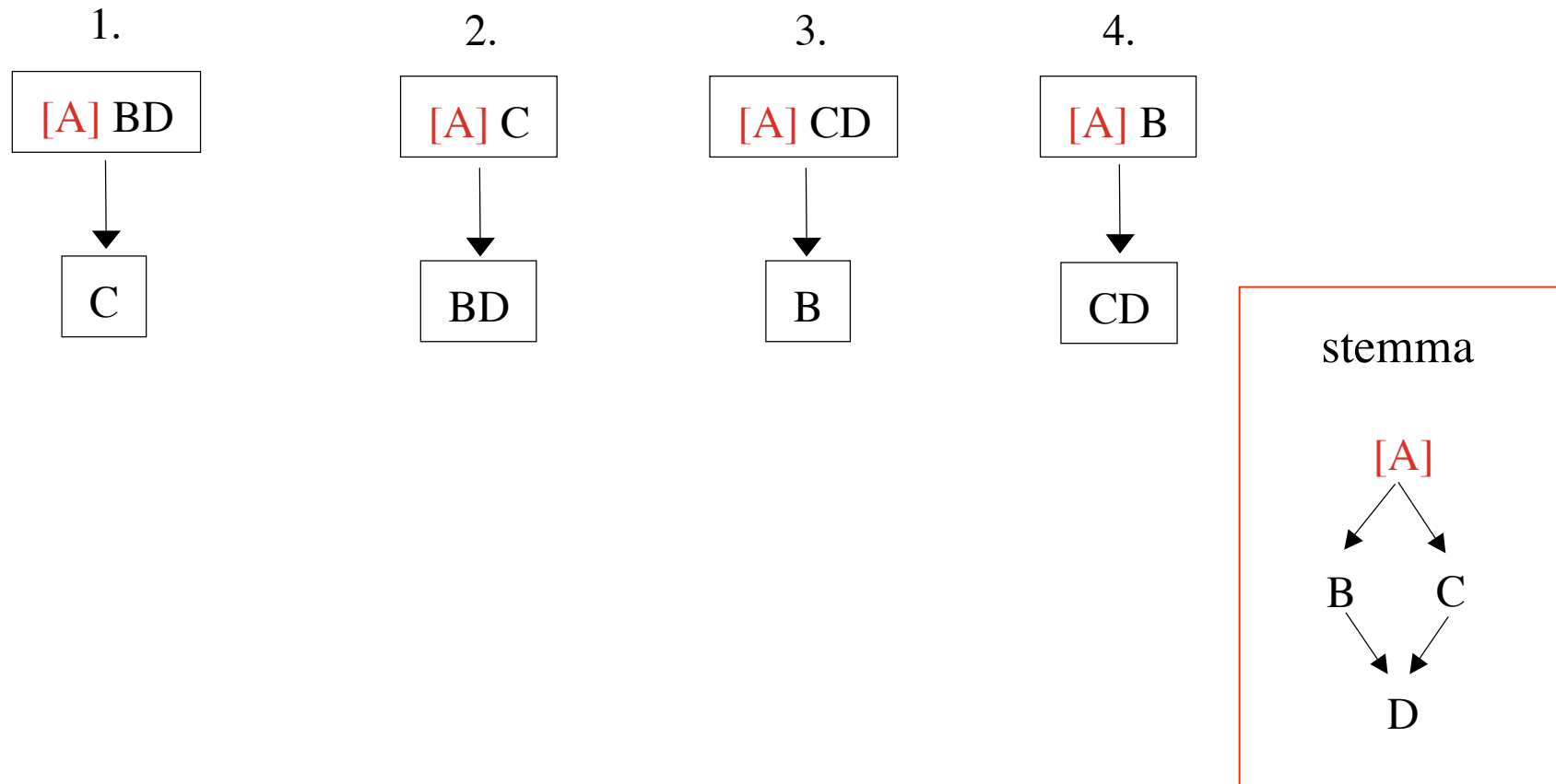
Traces of contamination: varying combinations of witnesses



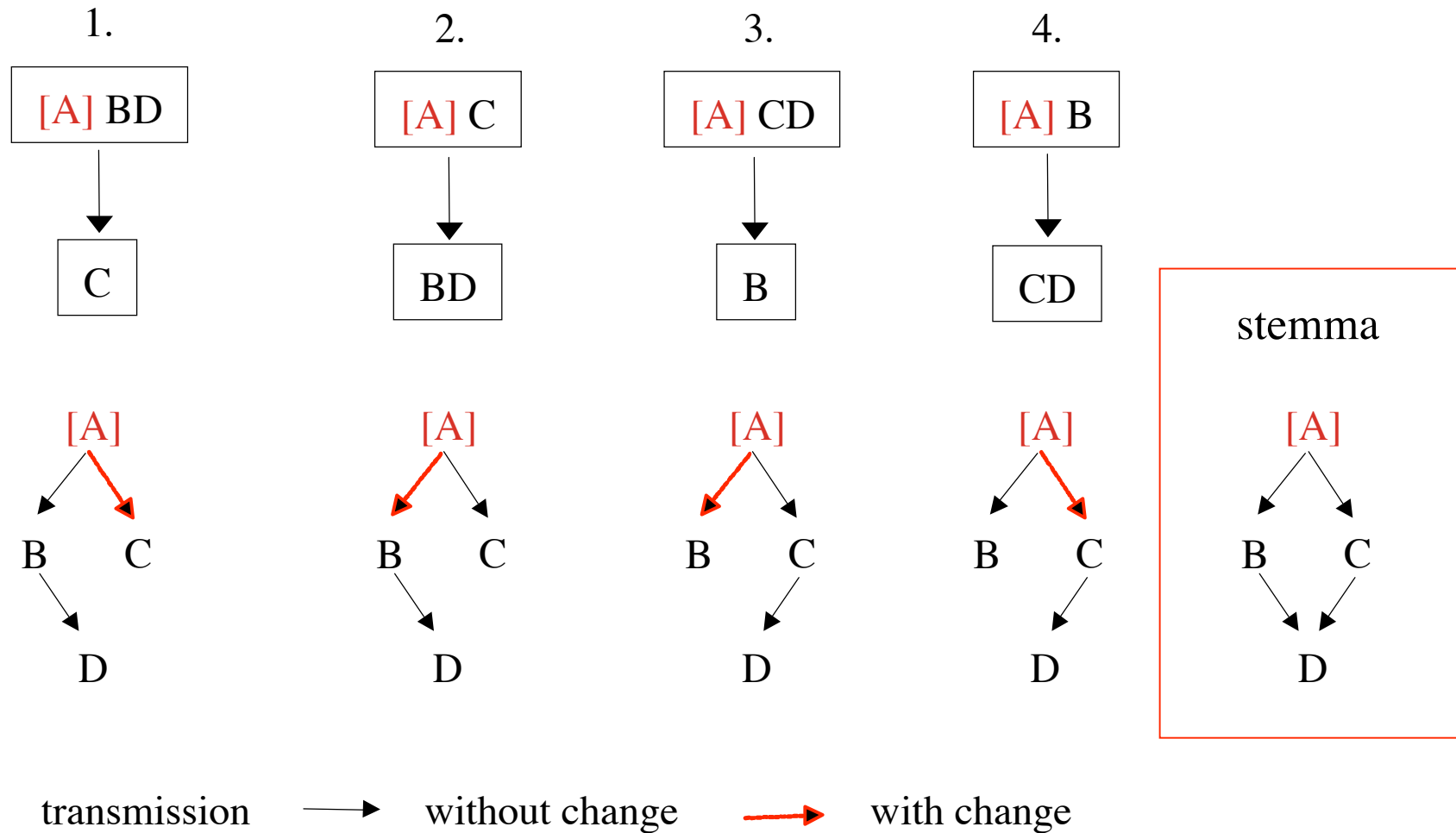
The initial text "A"



The stemma reflects the situation at each variant passage.



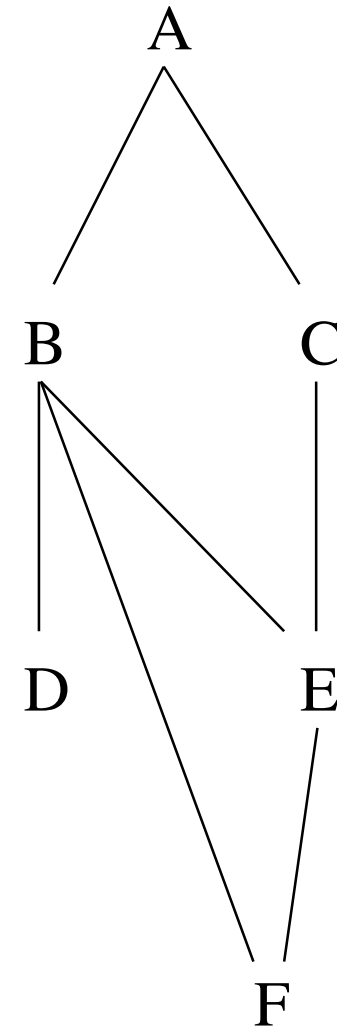
The stemma reflects the situation at each variant passage.



A model of transmission

If we knew everything about a tradition,
all variants, their origin,
and the exact way of their transmission,
then the stemma could be easily constructed.

For example this one:



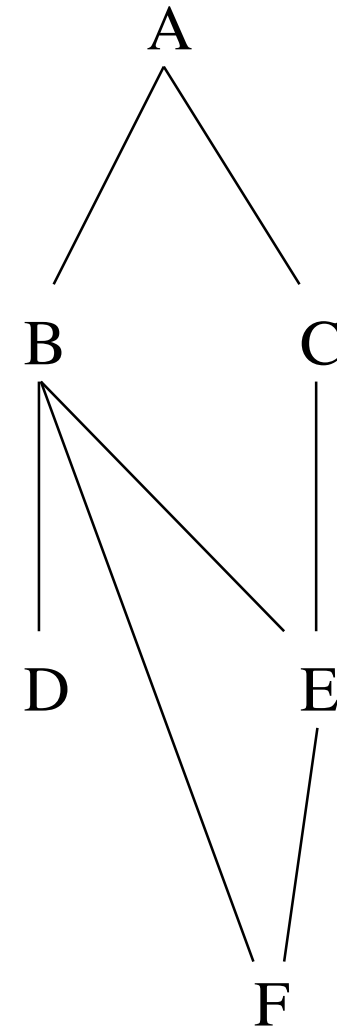
Let us assume that it is the result
of the development of text as follows ...

A model of transmission

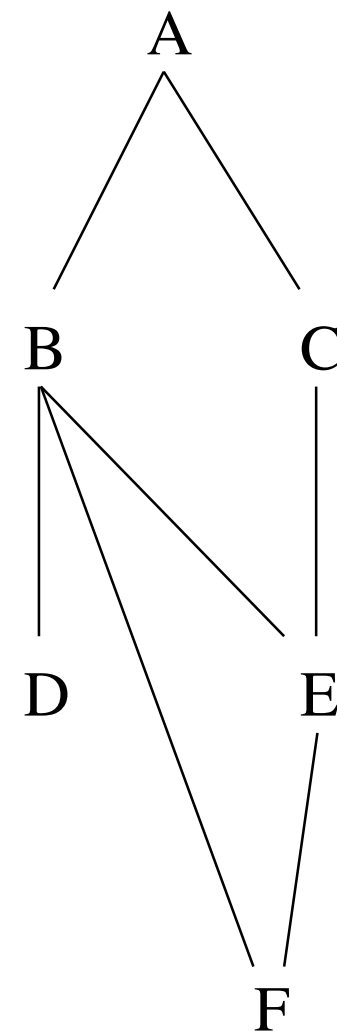
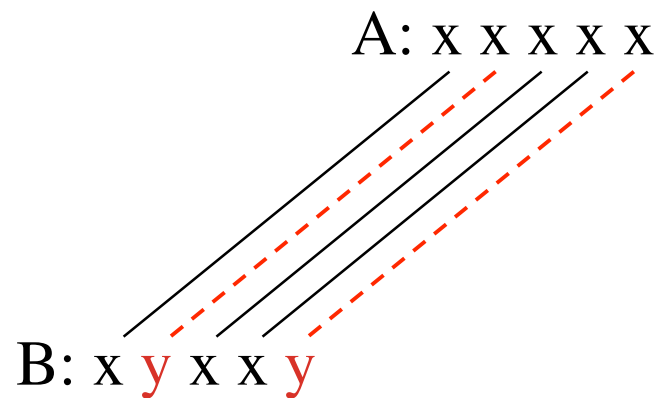
A: x x x x x

The initial text "A" contains 5 passages which will be subject to variation in the copies of the text.

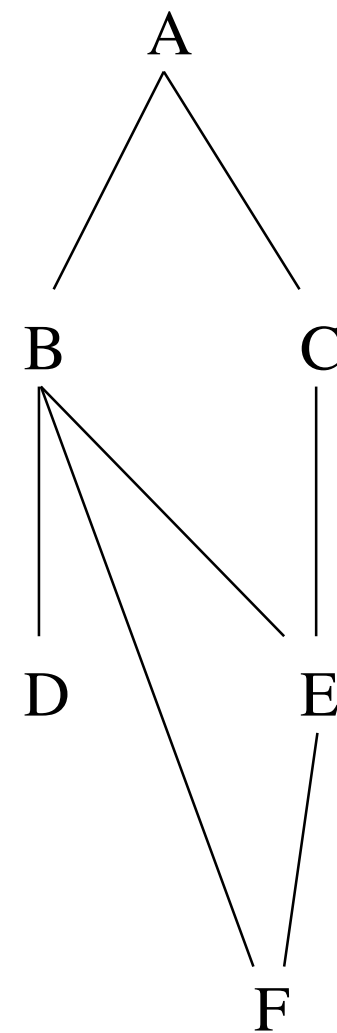
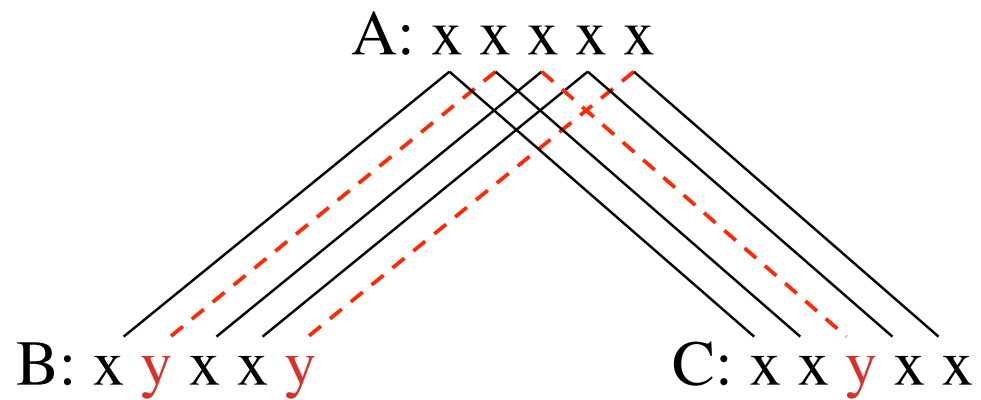
"x" is the original reading at every passage, and sometimes "x" will be changed to "y" ...



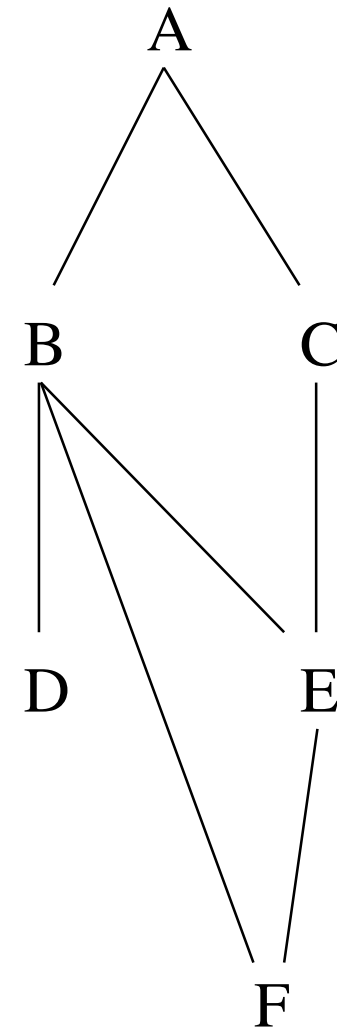
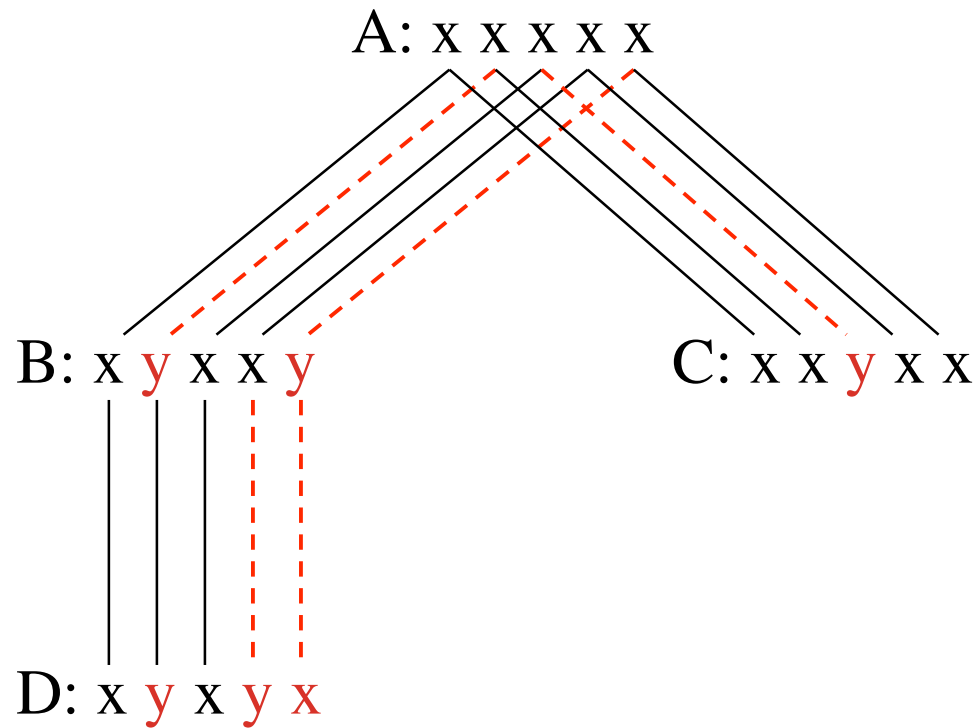
A model of transmission



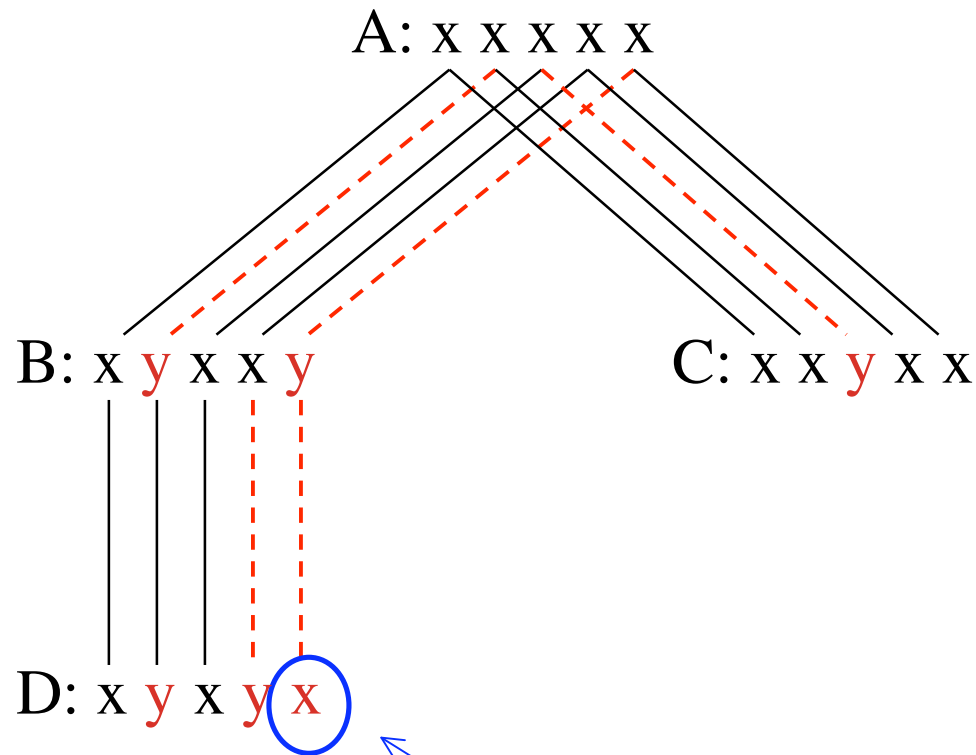
A model of transmission



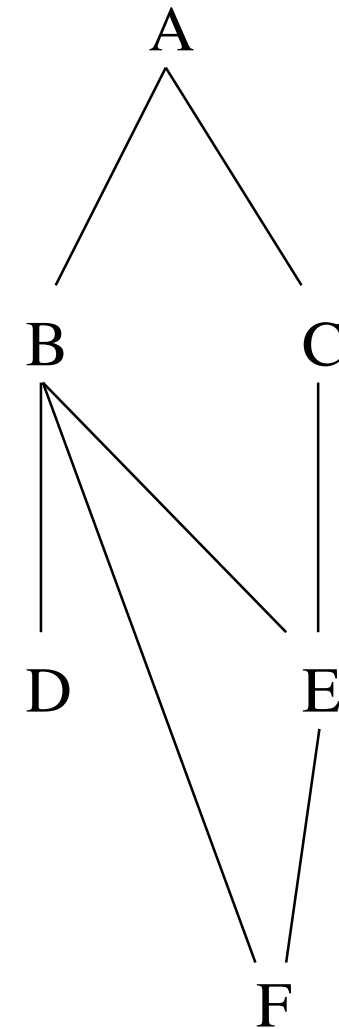
A model of transmission



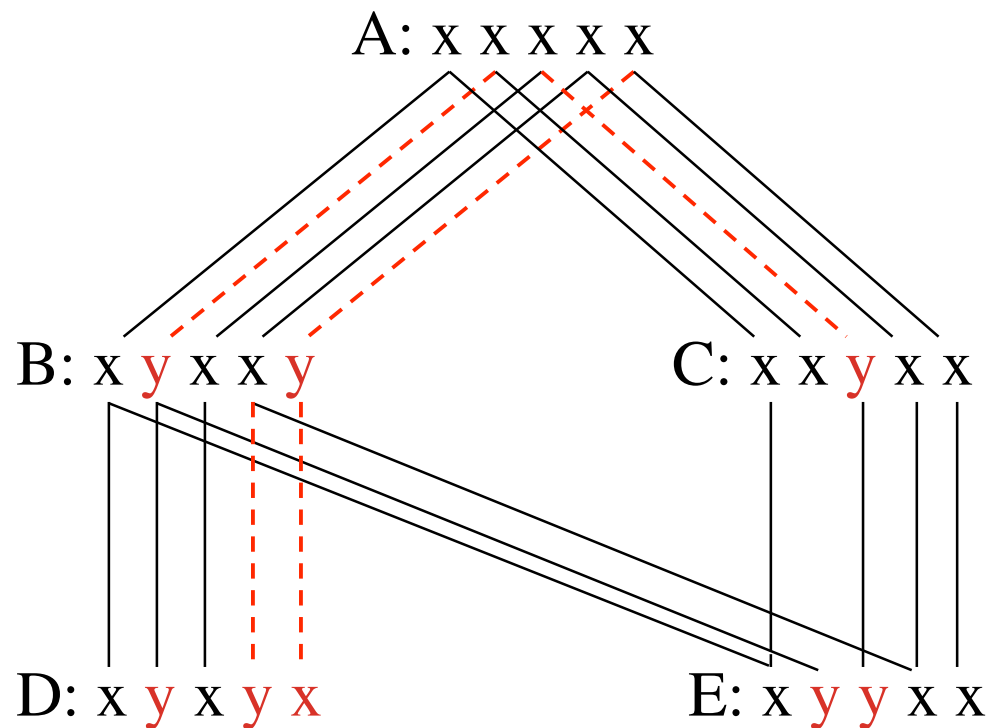
A model of transmission



In this case, witness D originates variant "x" on the basis of "y" without knowing the initial text. The agreement is coincidental.

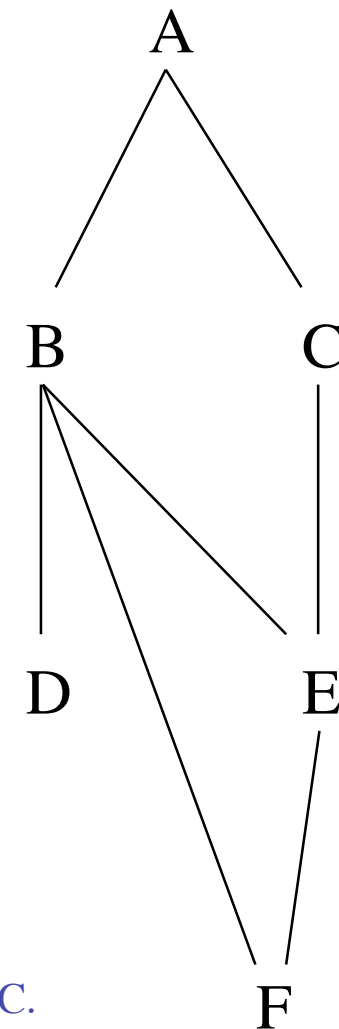


A model of transmission

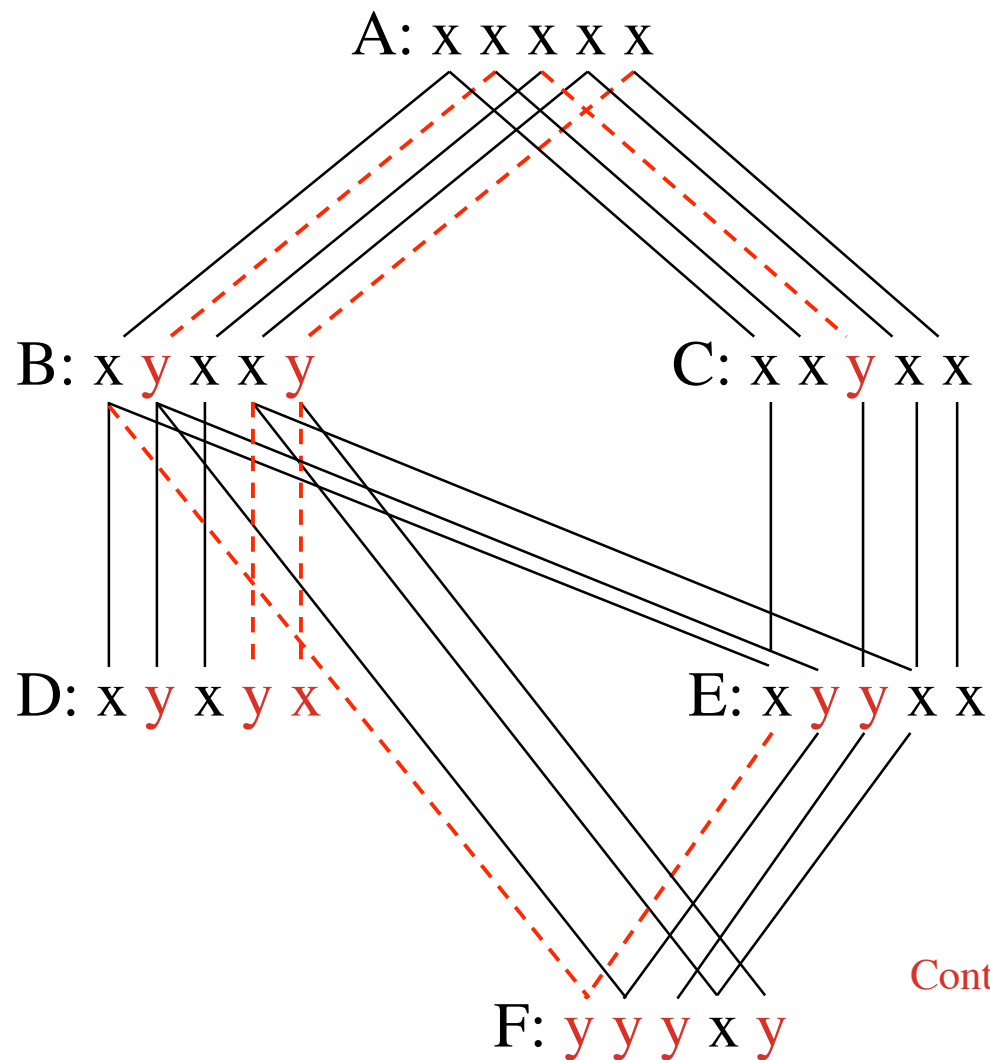


Contamination!

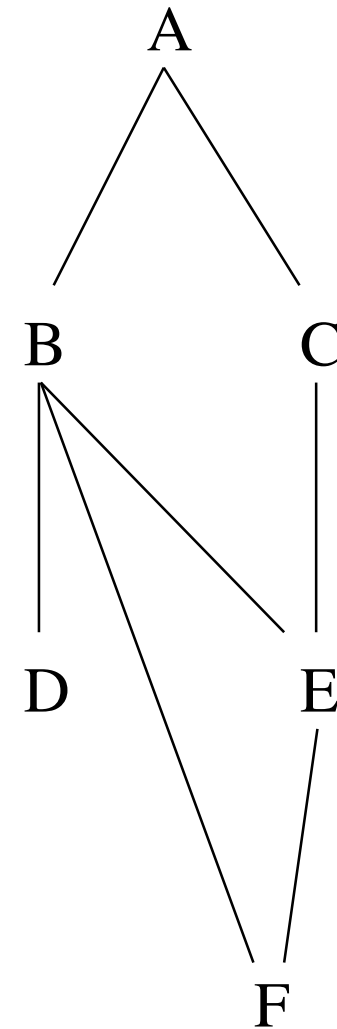
- At passage 2 "y" in witness E has been copied from witness B.
- At variant passage 3 "y" in witness E has been copied from witness C.
- At variant passage 5 "x" in witness E has been copied from witness C.
- At variant passages 1 and 4 witness E agrees with both, witness B and witness C.



A model of transmission



Contamination!



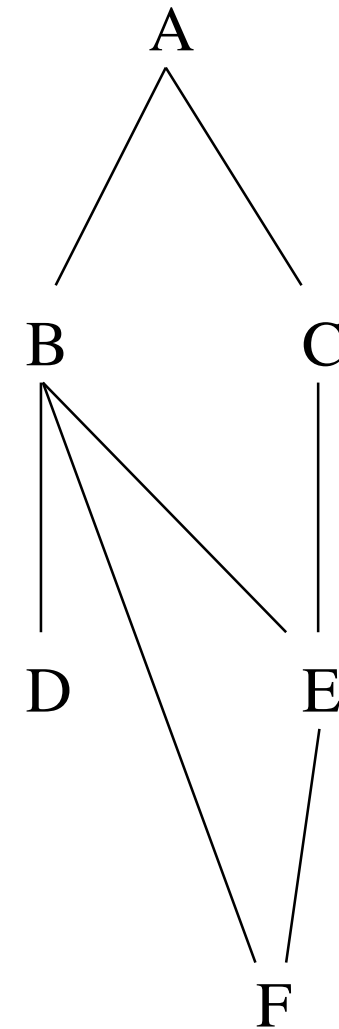
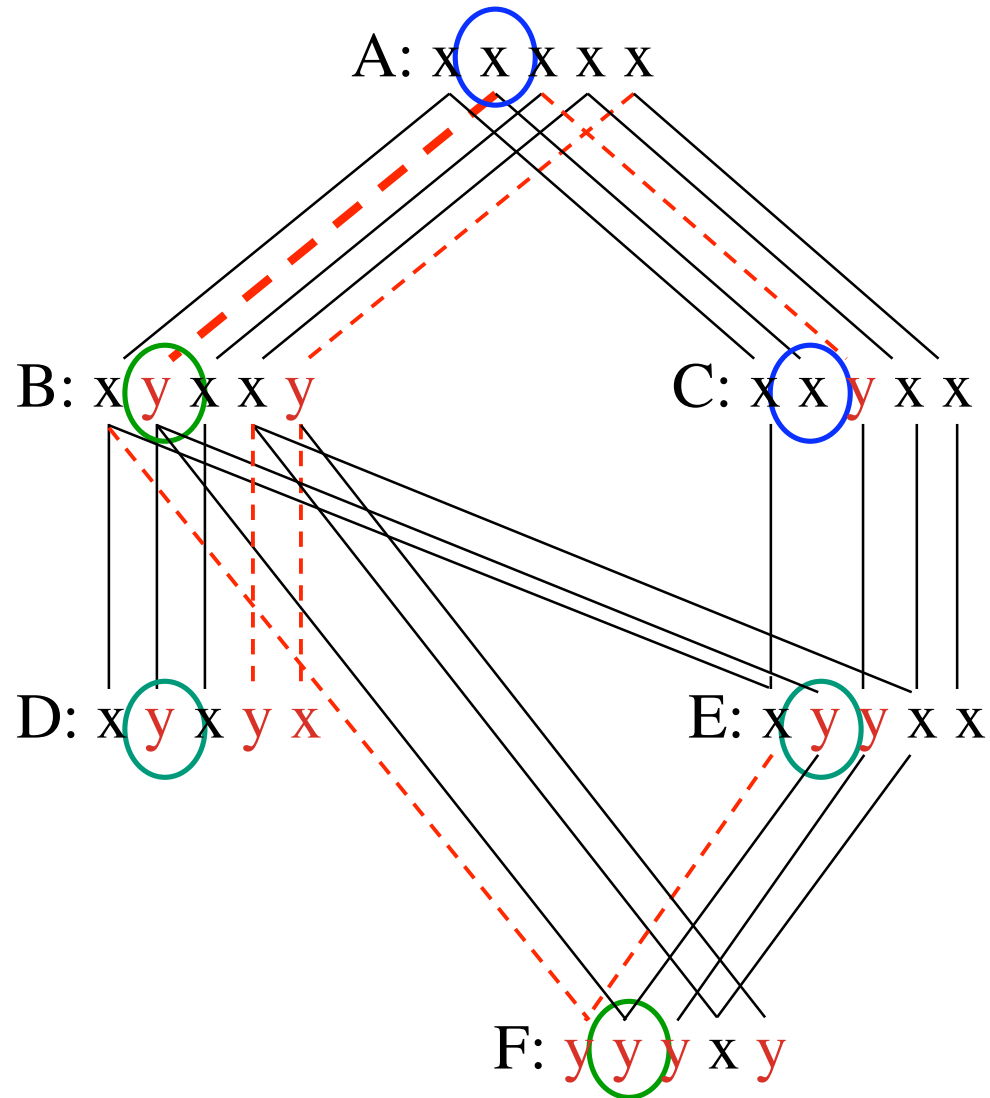
At passage 3 "y" in witness F has been copied from witness E.

At passage 5 "y" in witness F has been copied from witness B.

At passages 2 and 4 witness F agrees with witnesses B and E, passage 1 disagrees with both.

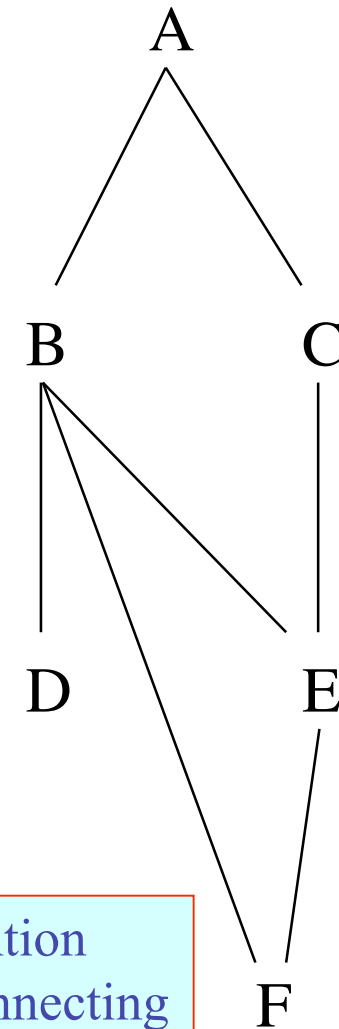
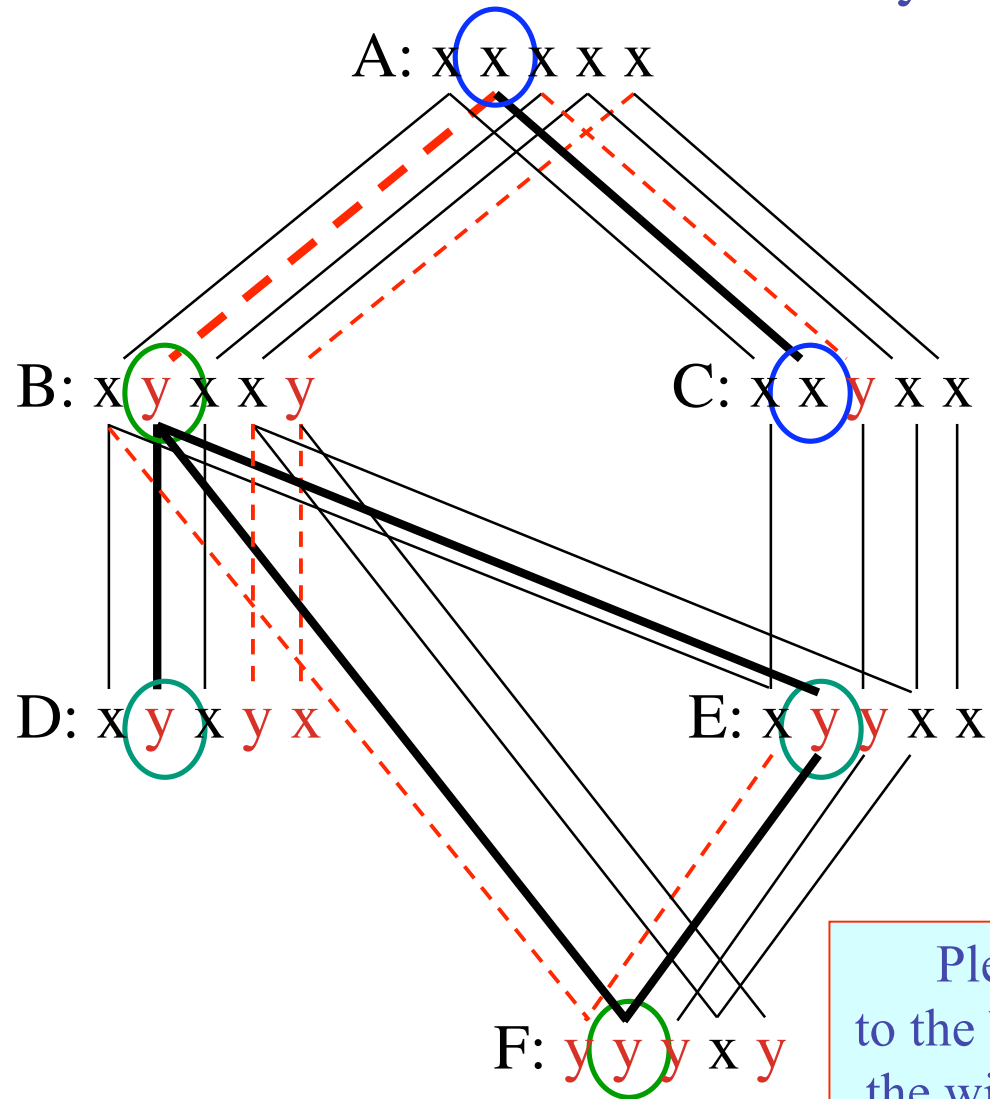
A model
of transmission

In a critical apparatus we would find that the 2nd passage has two variants: "x" and "y." The attestation of "x" is A.C., "y" is witnessed by B.D.E.F.



A model
of transmission

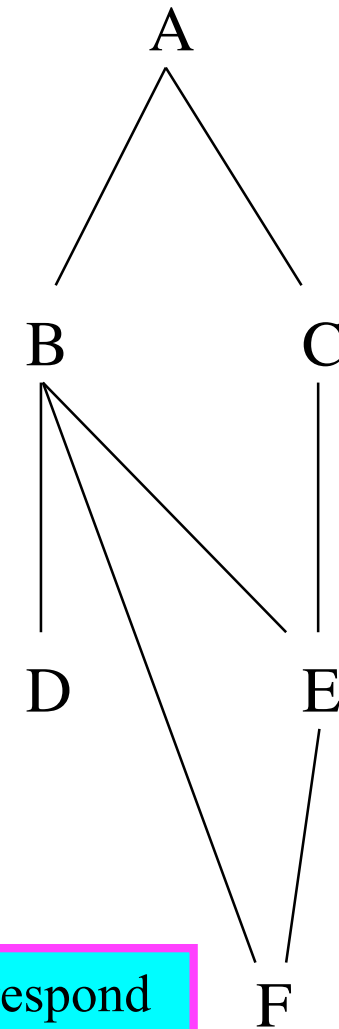
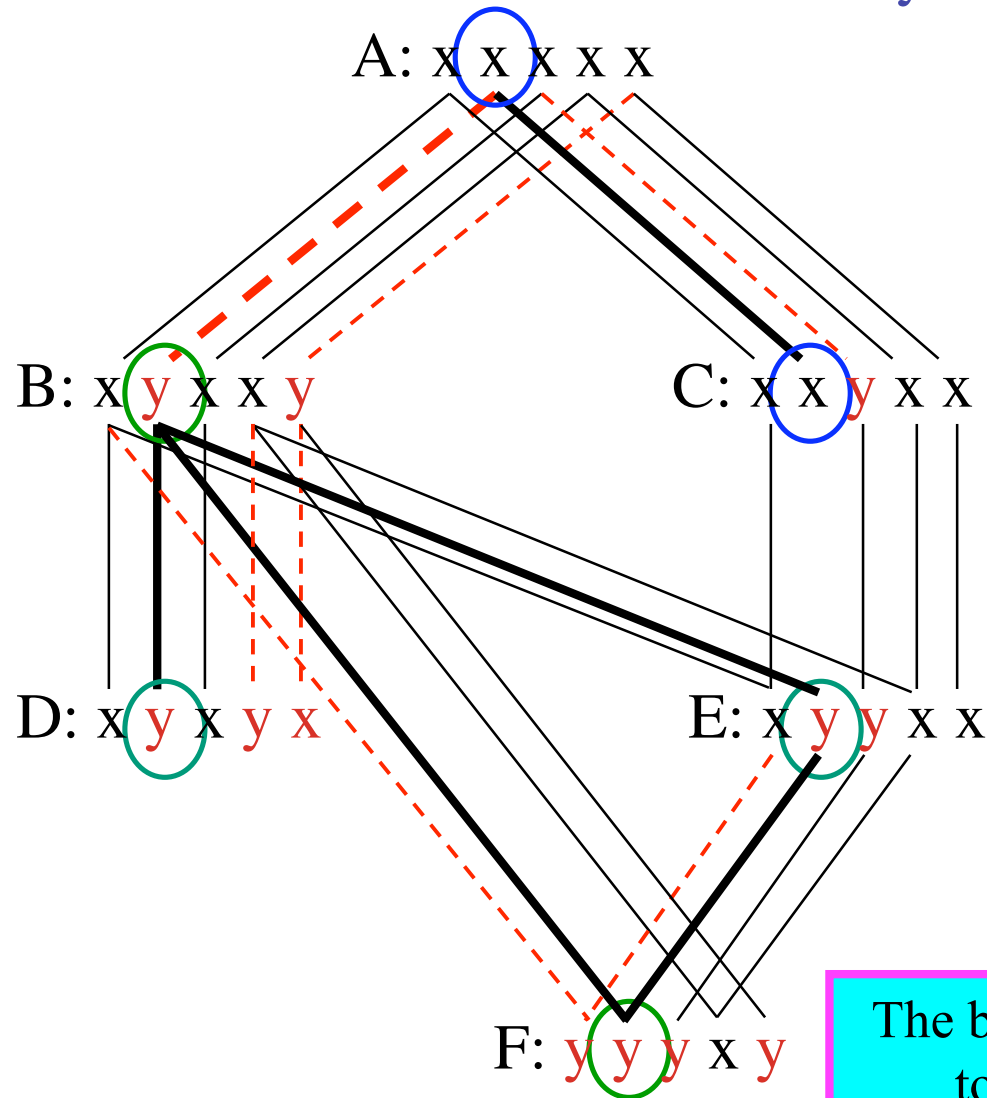
2nd passage: x A. C.
y B. D. E. F.



Please pay attention
to the bold lines connecting
the witnesses at passage 2.

A model
of transmission

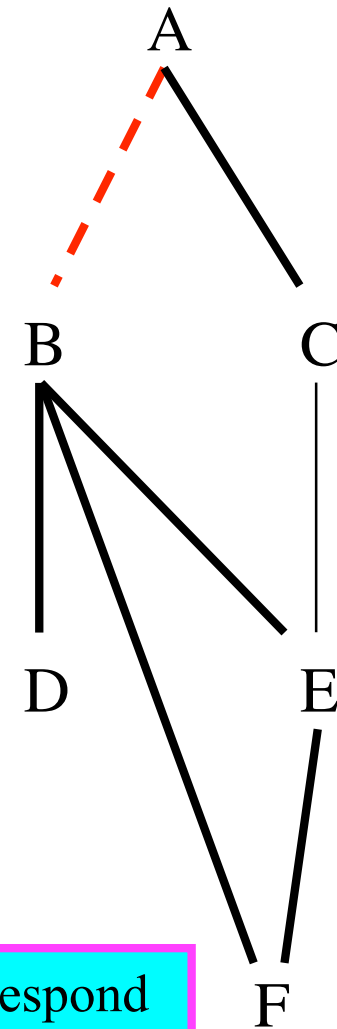
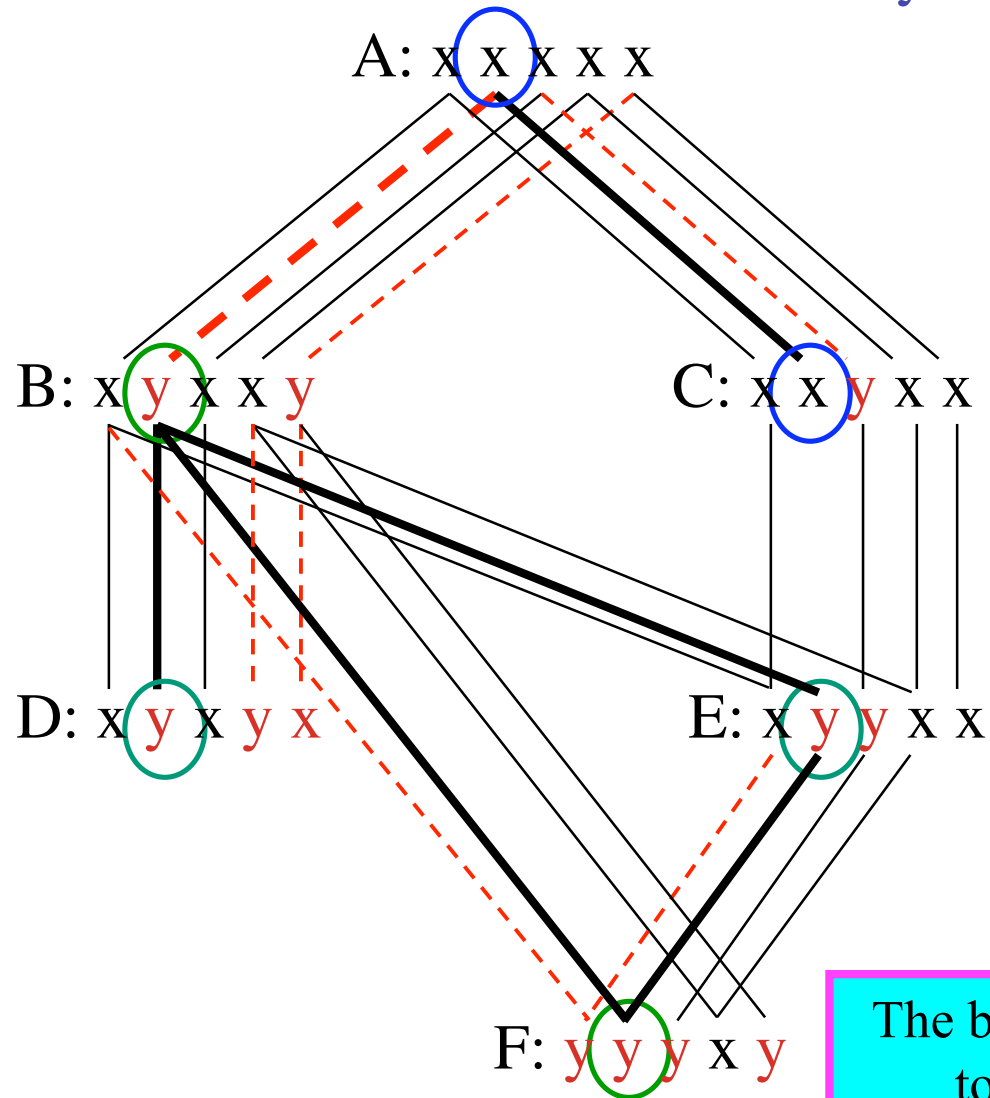
2nd passage: x A. C.
y B. D. E. F.



The bold lines correspond
to the connections
in the stemma.

A model
of transmission

2nd passage: x A. C.
y B. D. E. F.

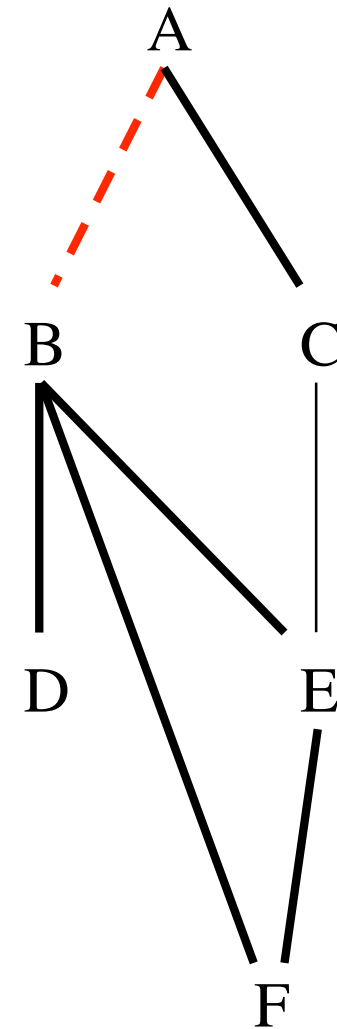
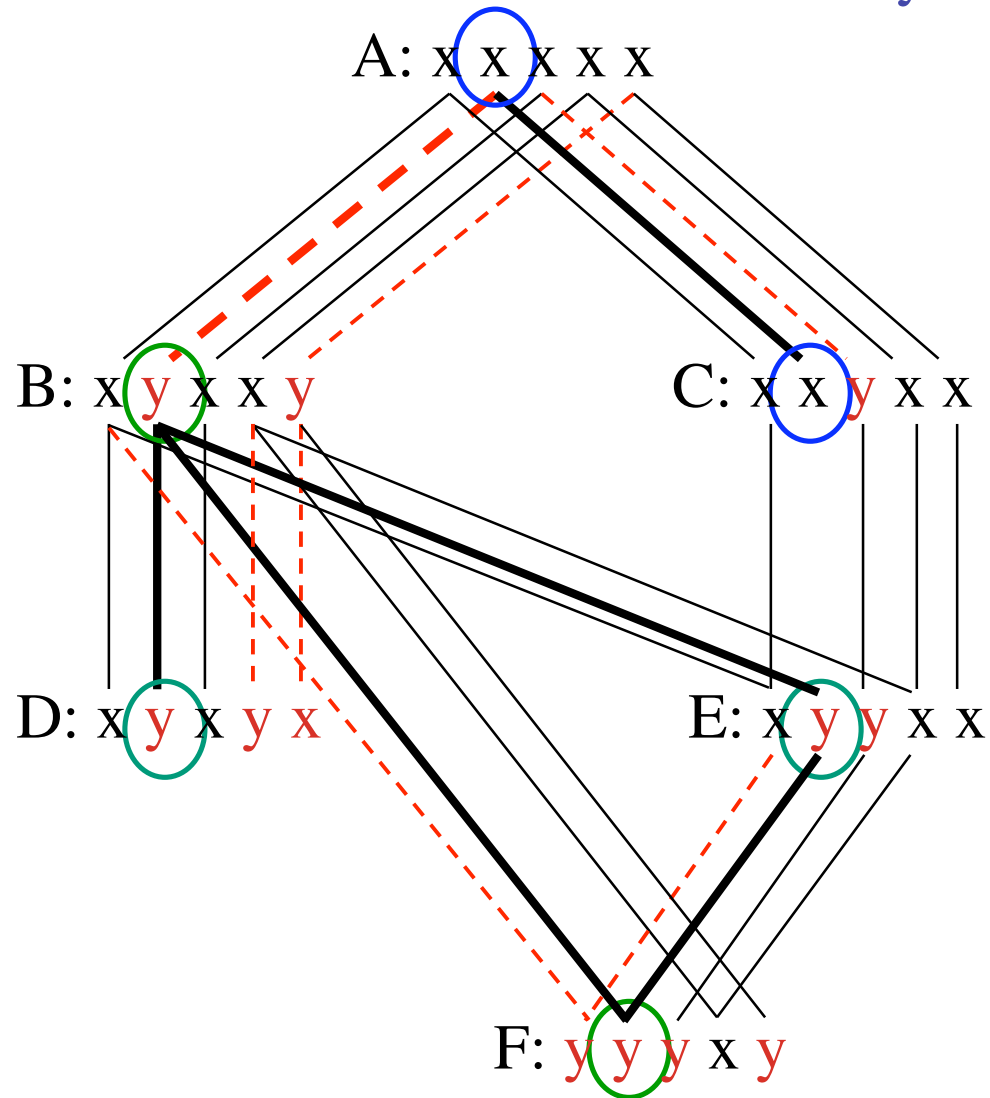


The bold lines correspond
to the connections
in the stemma.

[Contents](#) | [Index](#)

A model
of transmission

2nd passage: x A. C.
y B. D. E. F.

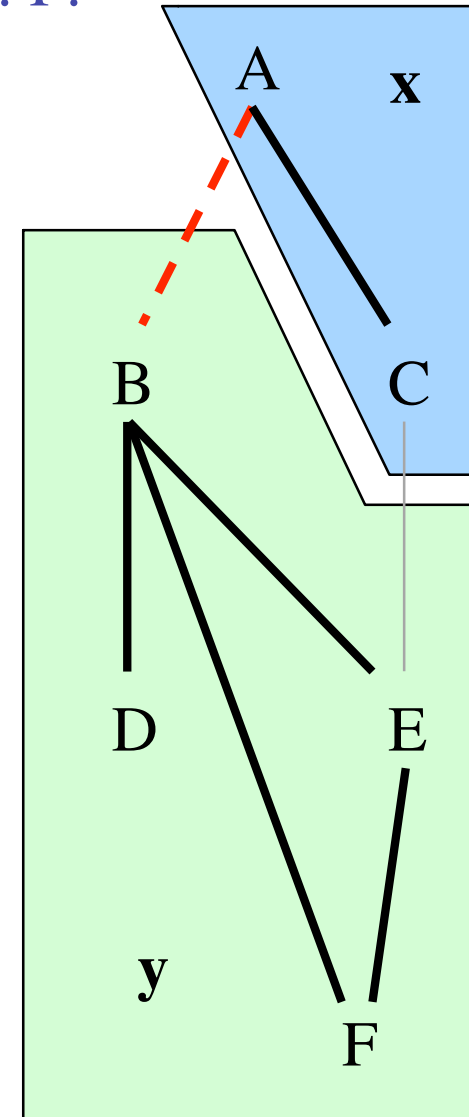
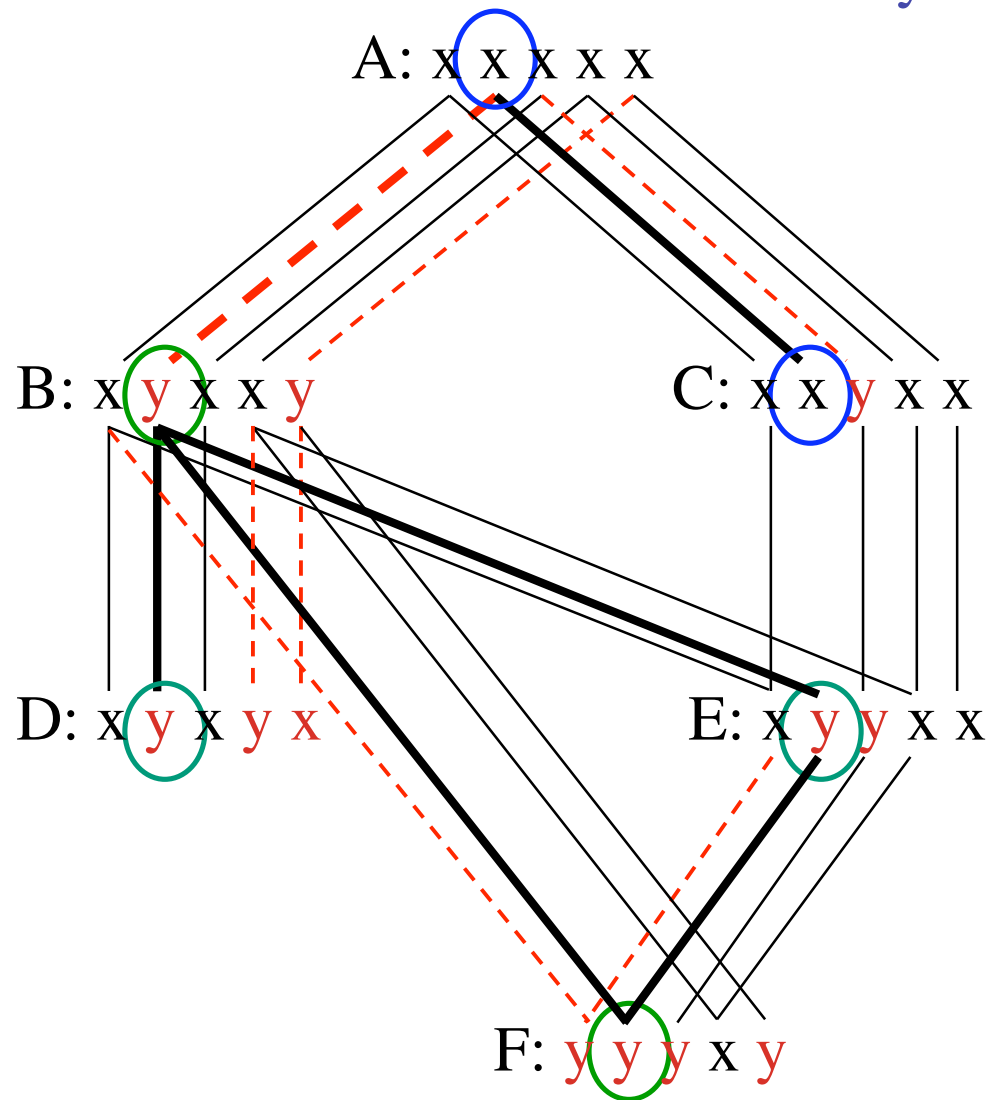


In the stemma the witnesses of each variant are in a coherent field.

Index

A model
of transmission

2nd passage: x A. C.
y B. D. E. F.

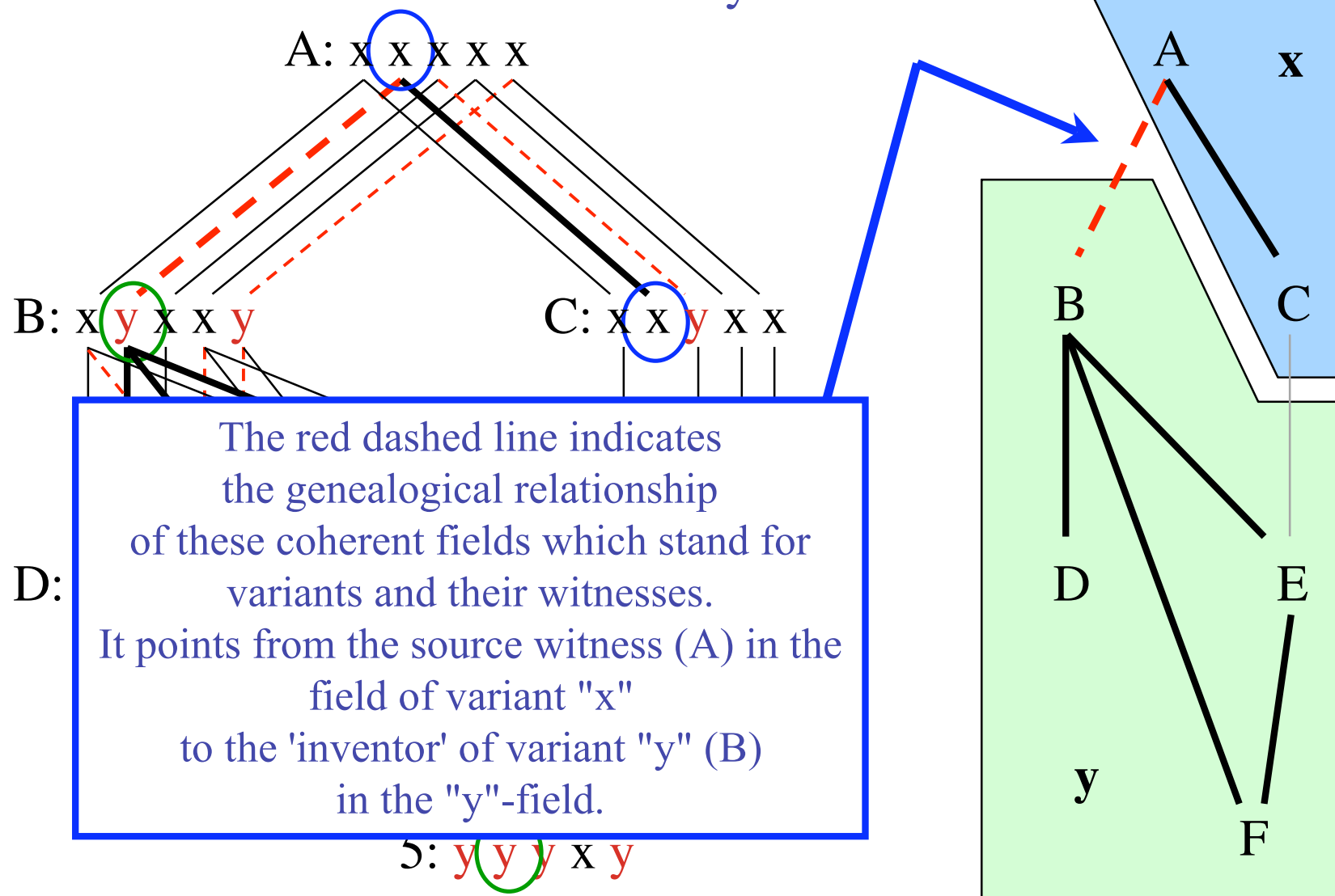


In the stemma the witnesses of each variant are in a coherent field.

[Index](#)

A model
of transmission

2nd passage: x A. C.
y B. D. E. F.

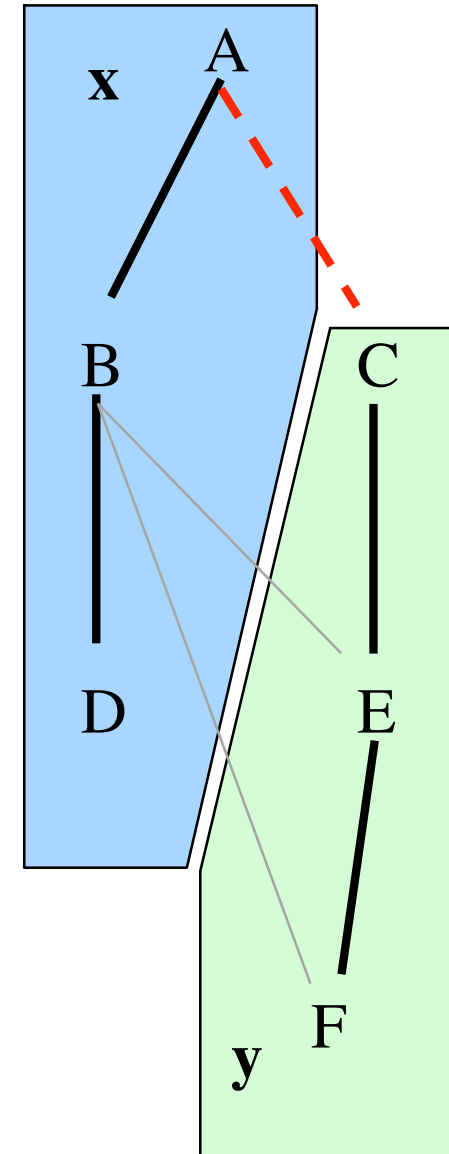
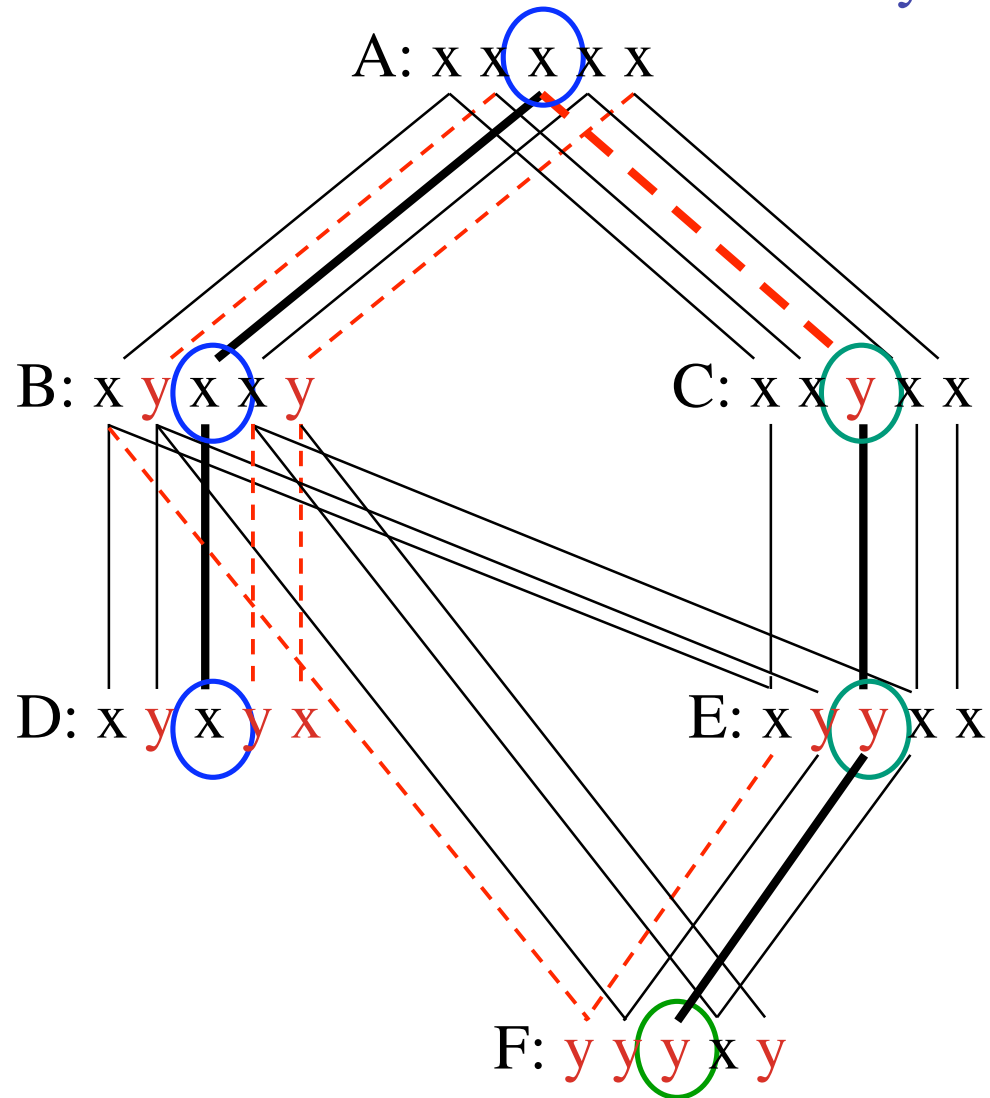


In the stemma the witnesses of each variant are in a coherent field.

[s | Index](#)

A model
of transmission

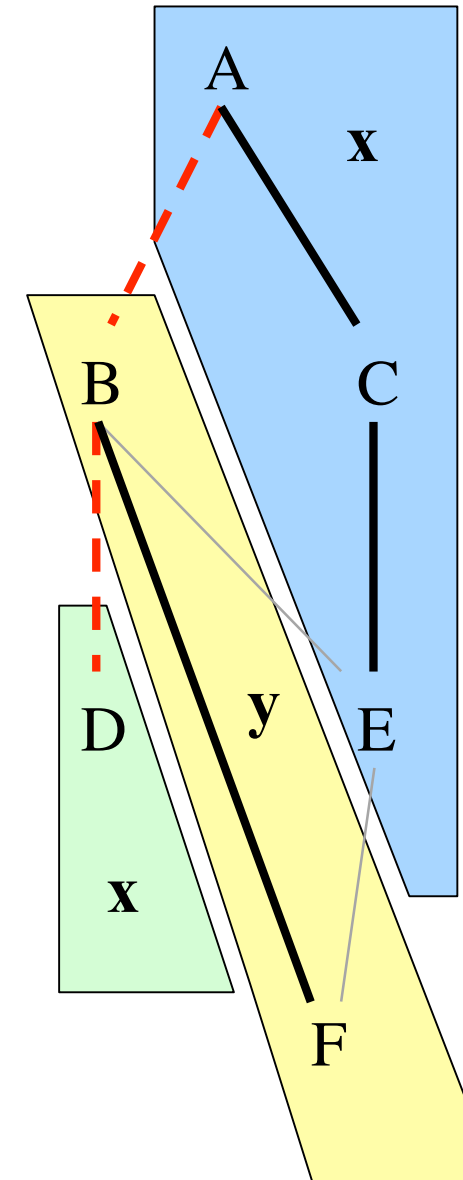
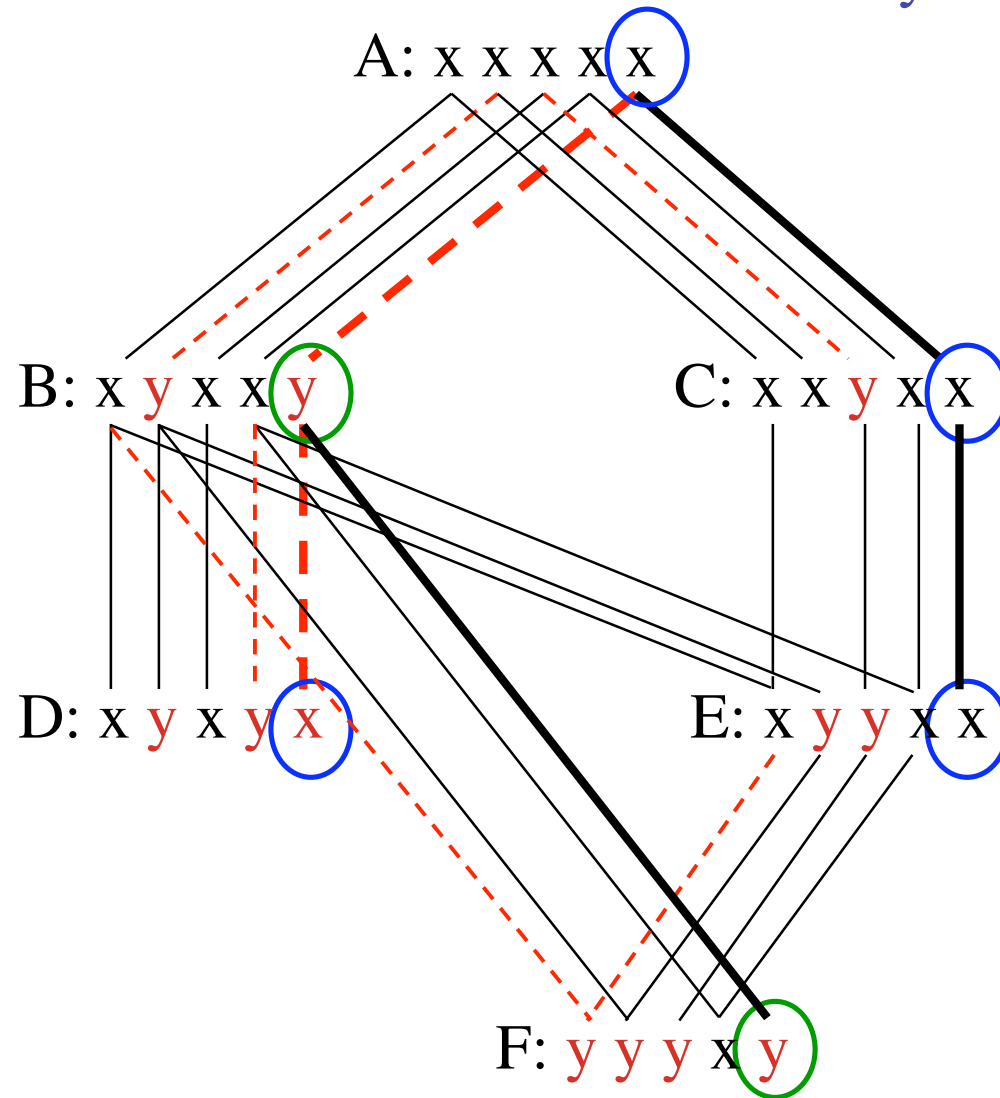
3rd passage: x A. B. D.
y C. E. F.



[Contents](#) | [Index](#)

A model
of transmission

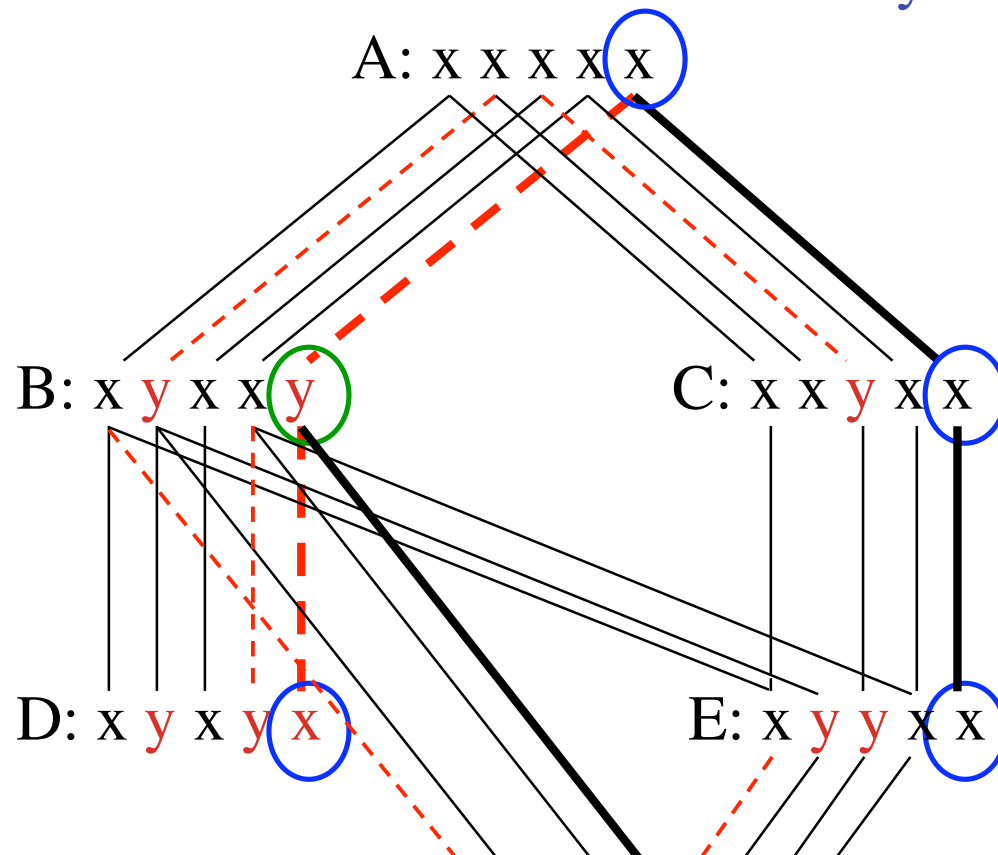
5th passage: x A. C. D. E.
y B. F.



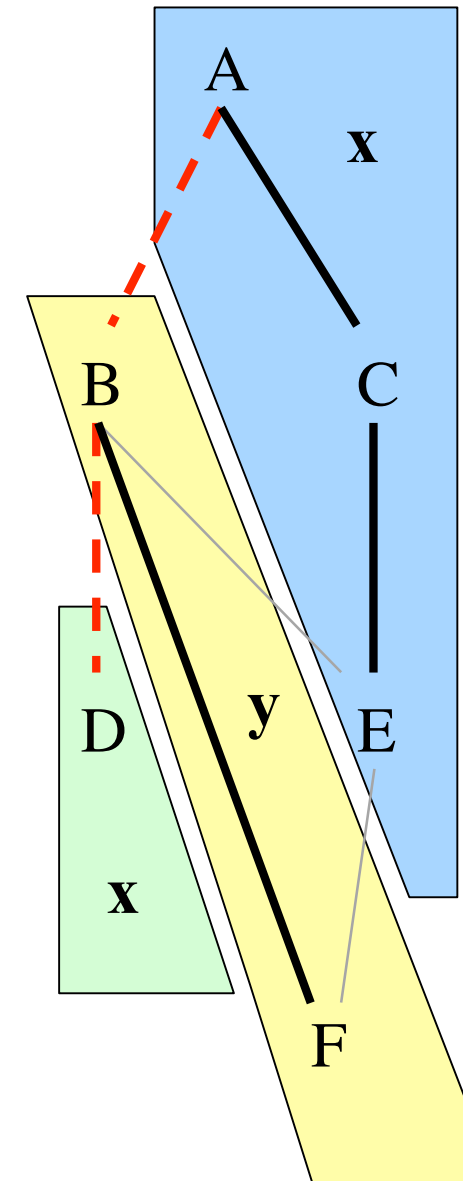
Contents | Index

A model
of transmission

5th passage: x A. C. D. E.
y B. F.



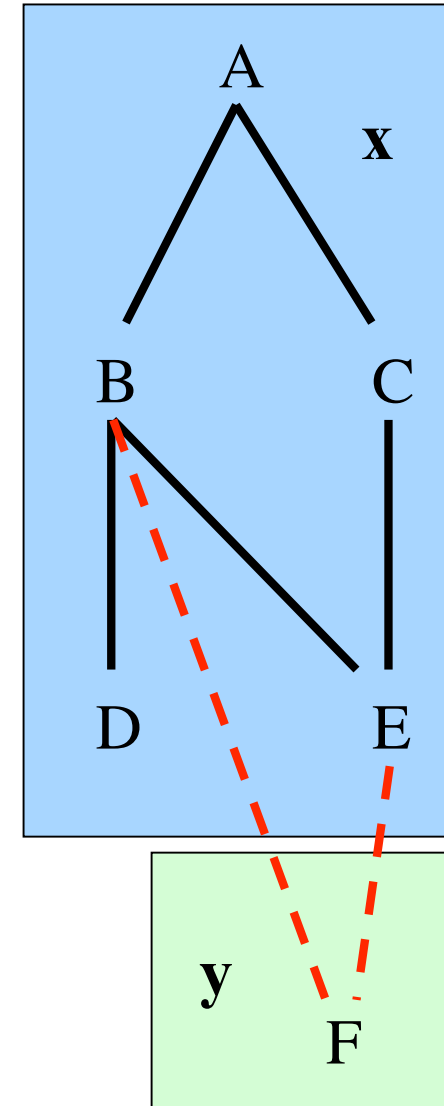
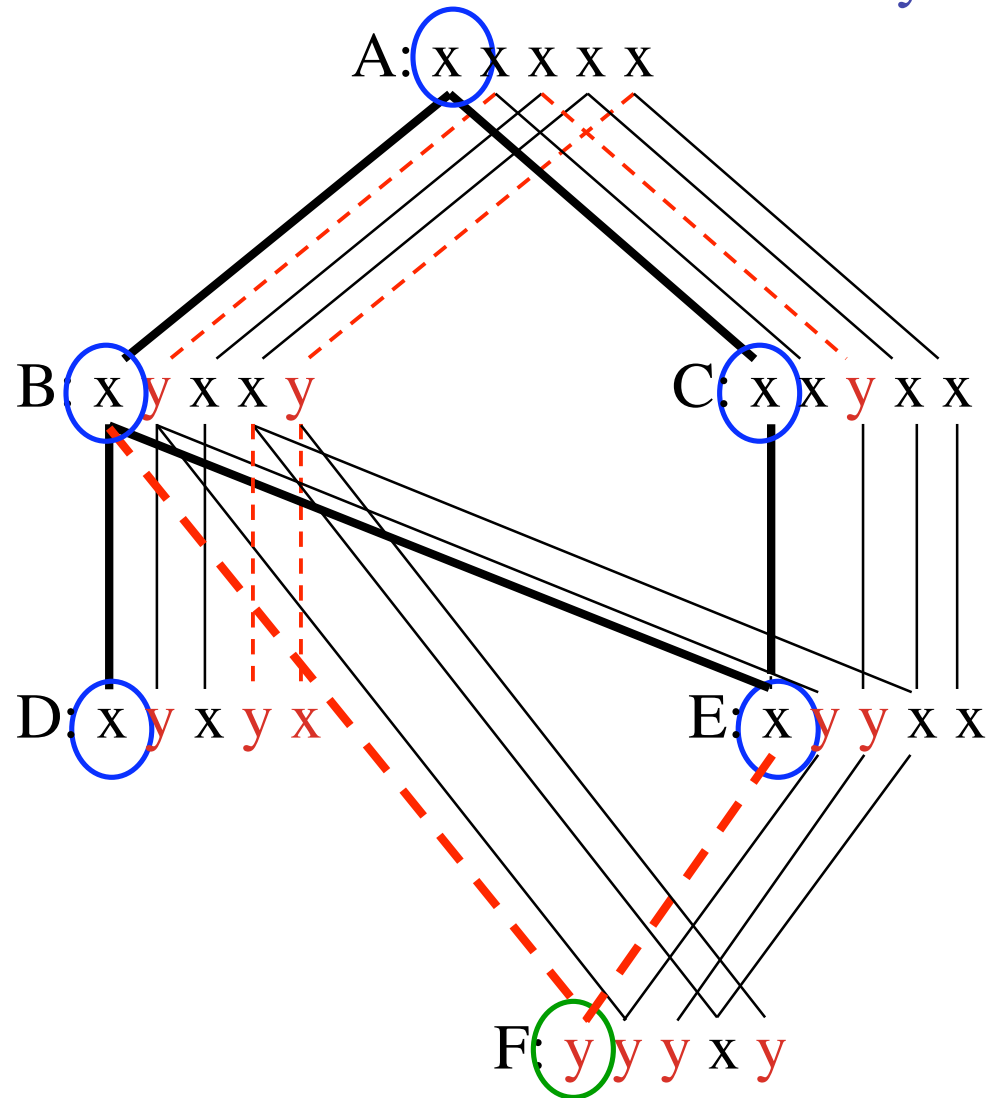
The witness in the green "x"-field
coincidentally agrees with the witnesses
in the blue "x"-field.
Consequently, there are two "x"-fields.



[Contents](#) | [Index](#)

A model
of transmission

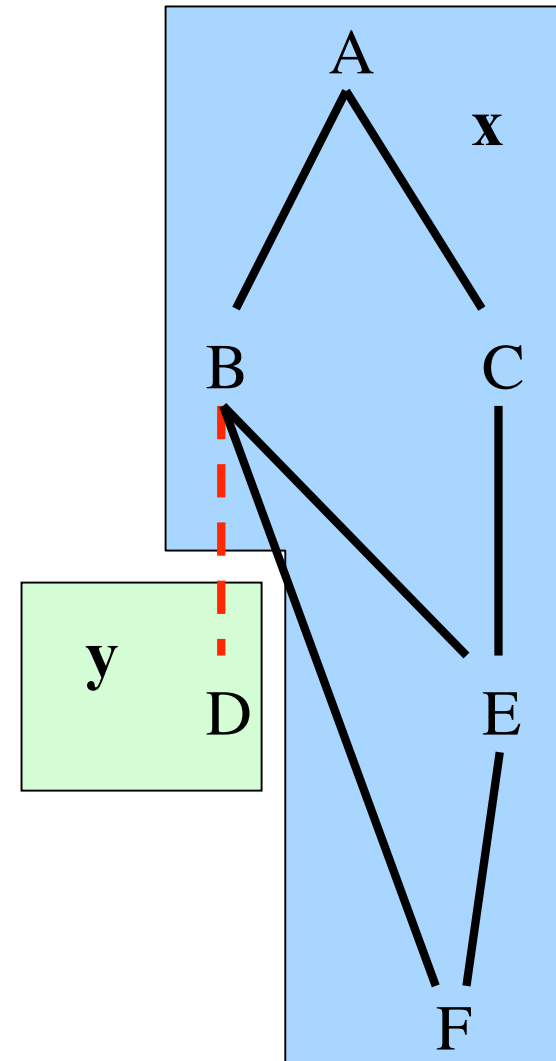
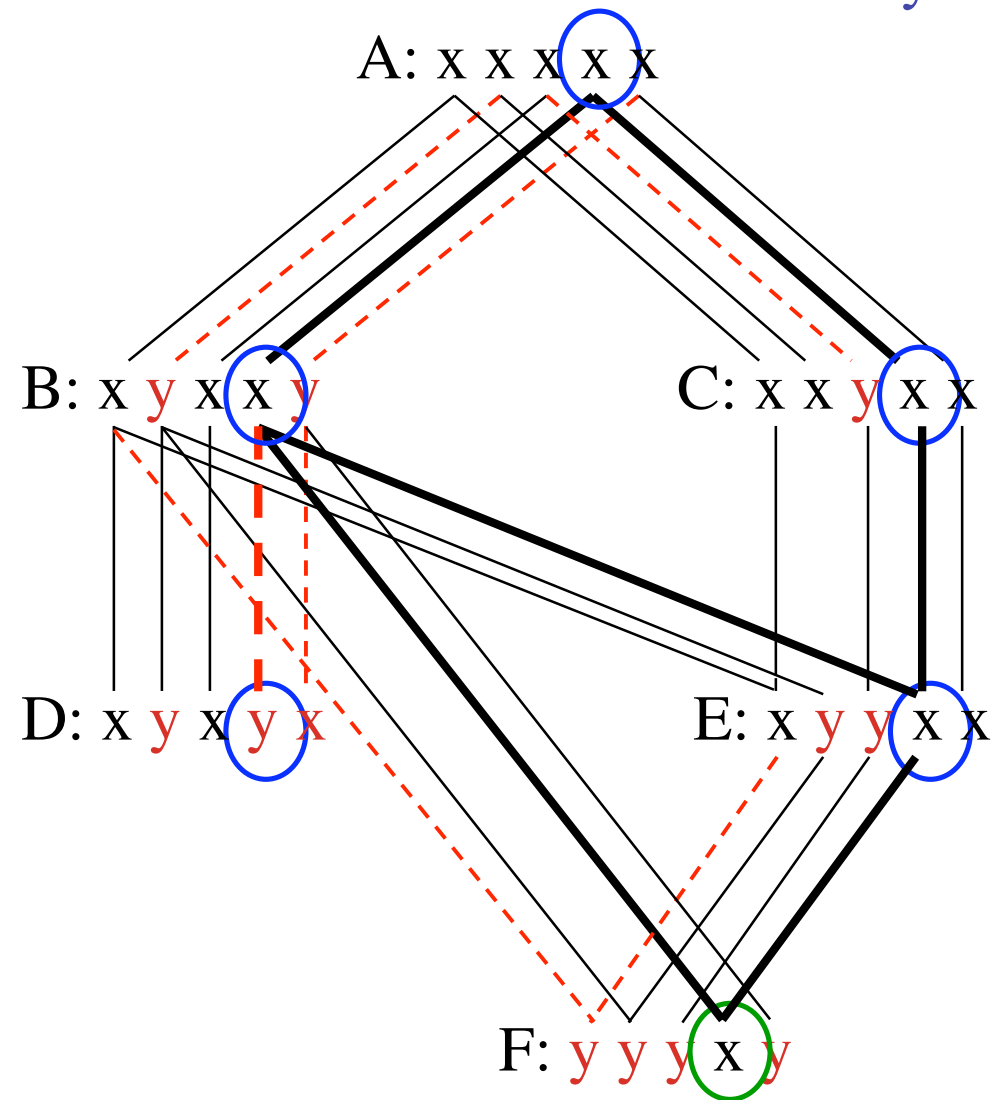
1st passage: x A. B. C. D. E.
y F.



[Contents](#) | [Index](#)

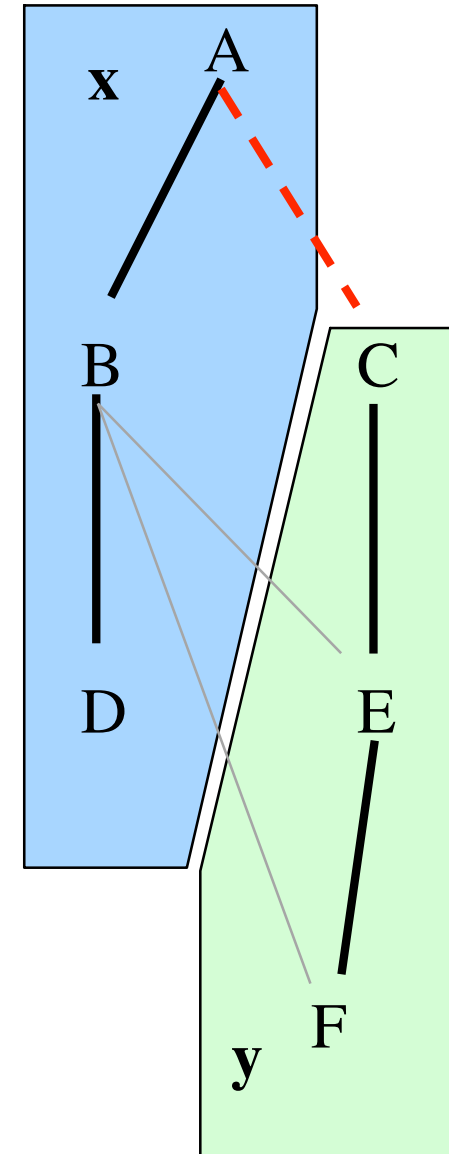
A model
of transmission

4th passage: x A. B.C. E. F.
y D.



In the stemma the witnesses of each variant are in a coherent field.

Consequently, witnesses being in non-coincidental agreement form coherent subsets of the global stemma of witnesses.



[Contents | Index](#)

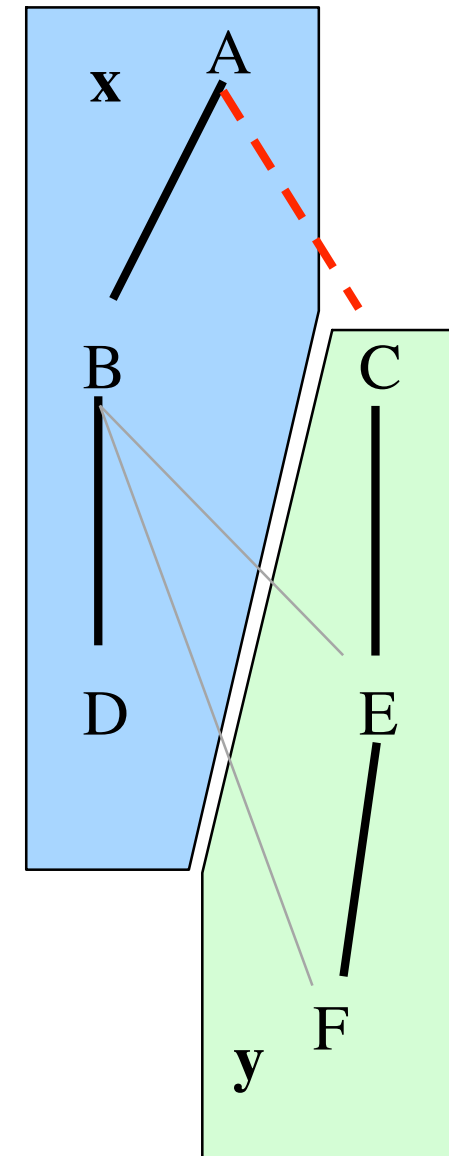
In the stemma the witnesses of each variant are in a coherent field.

Consequently, witnesses being in non-coincidental agreement form coherent subsets of the global stemma of witnesses.

NB: Due to their simplicity, two-dimensional visualisation is fully adequate for these examples.

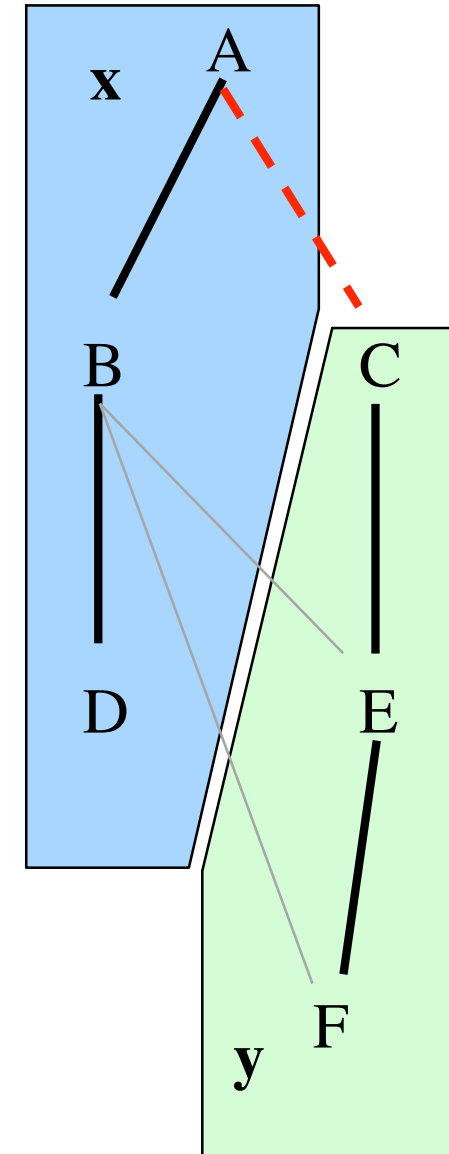
The logic of the data behind a stemma is multidimensional, but visualisation only allows for what can be projected onto two dimensions.

This applies to coherent fields too.



The principle

The genealogical interrelationships
between all the variants
at any place of variation must appear
in a *global stemma of the witnesses*
as *genealogical relationship between*
coherent fields of their witnesses.



The principle

The genealogical interrelationships between all the variants at any place of variation must appear in a *global stemma of the witnesses* as *genealogical relationship between coherent fields of their witnesses*.

The consequence

The first step is to establish local stemmata of variants for as many variant passages as possible.

The principle

The genealogical interrelationships between all the variants at any place of variation must appear in a *global stemma of the witnesses* as *genealogical relationship between coherent fields of their witnesses*.

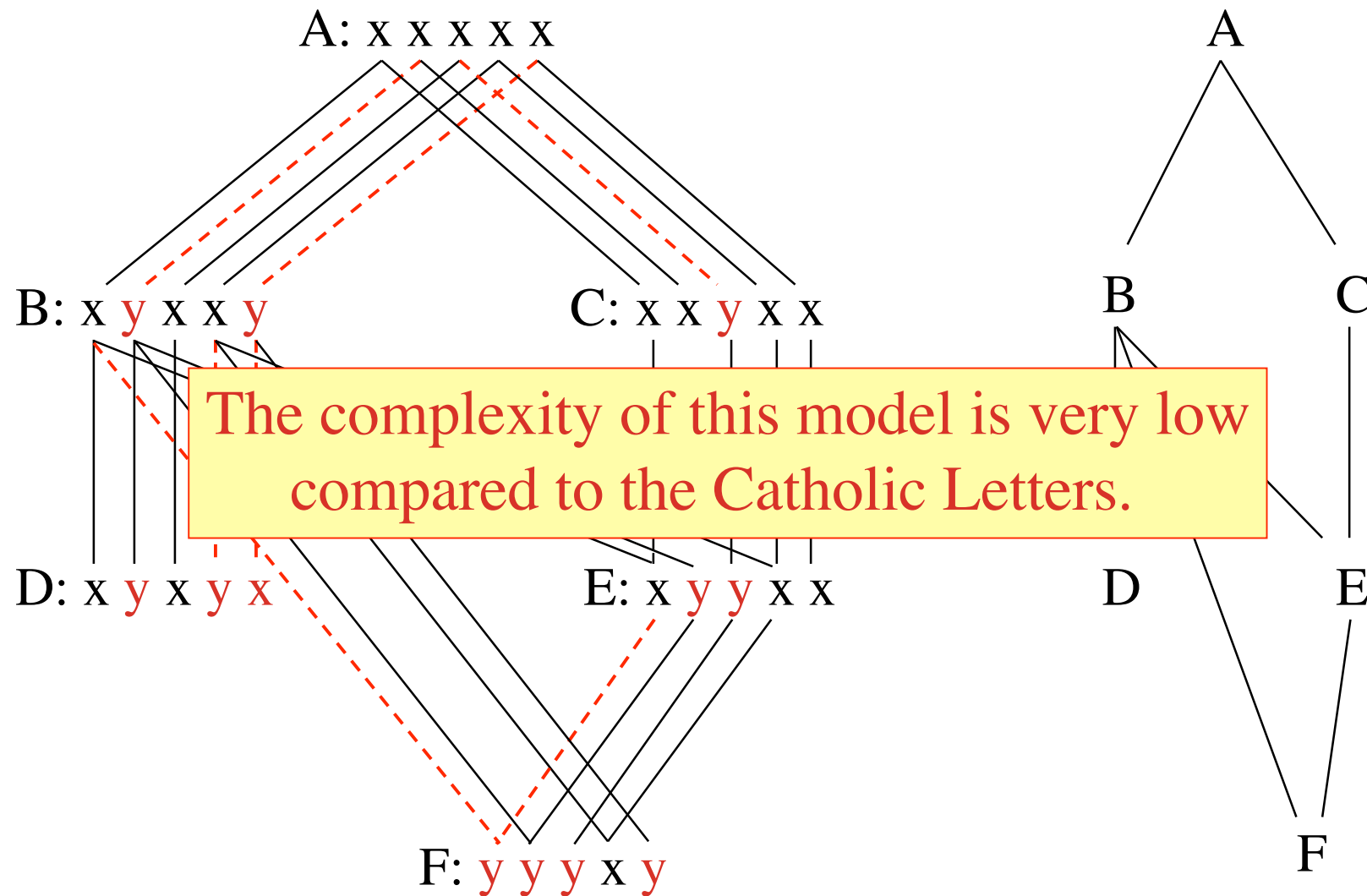
The consequence

The first step is to establish local stemmata of variants for as many variant passages as possible.

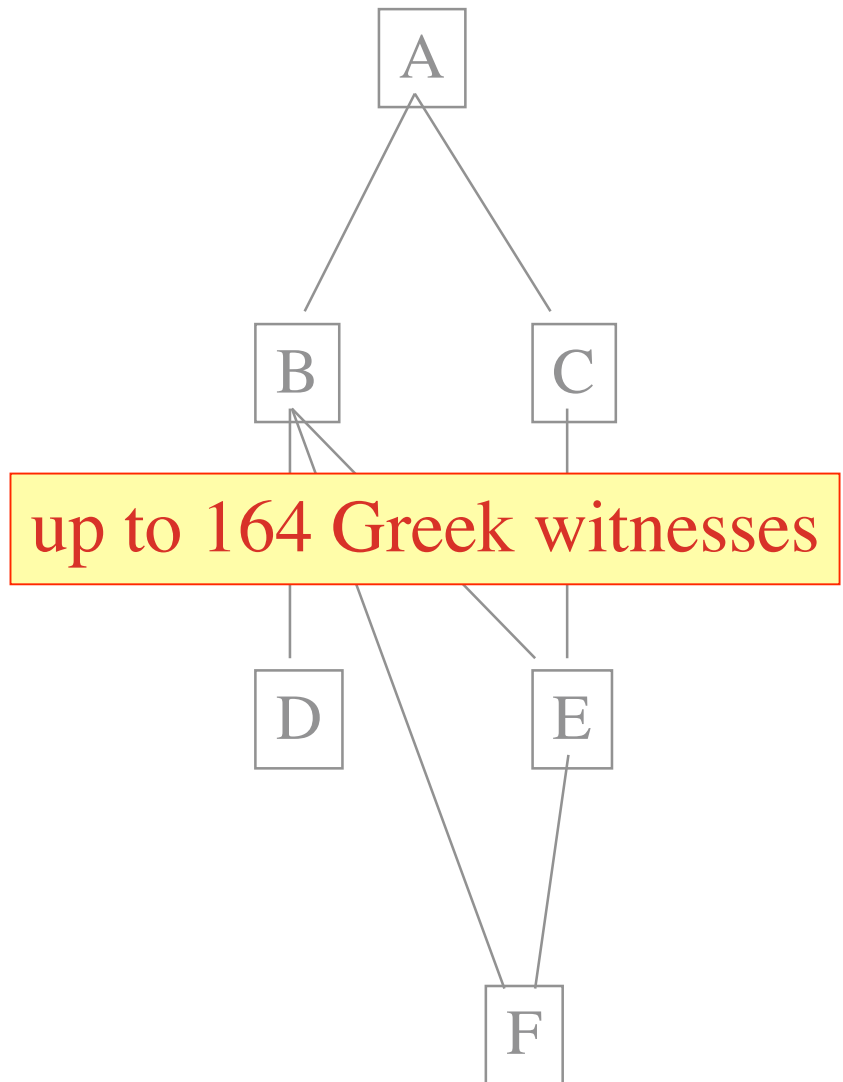
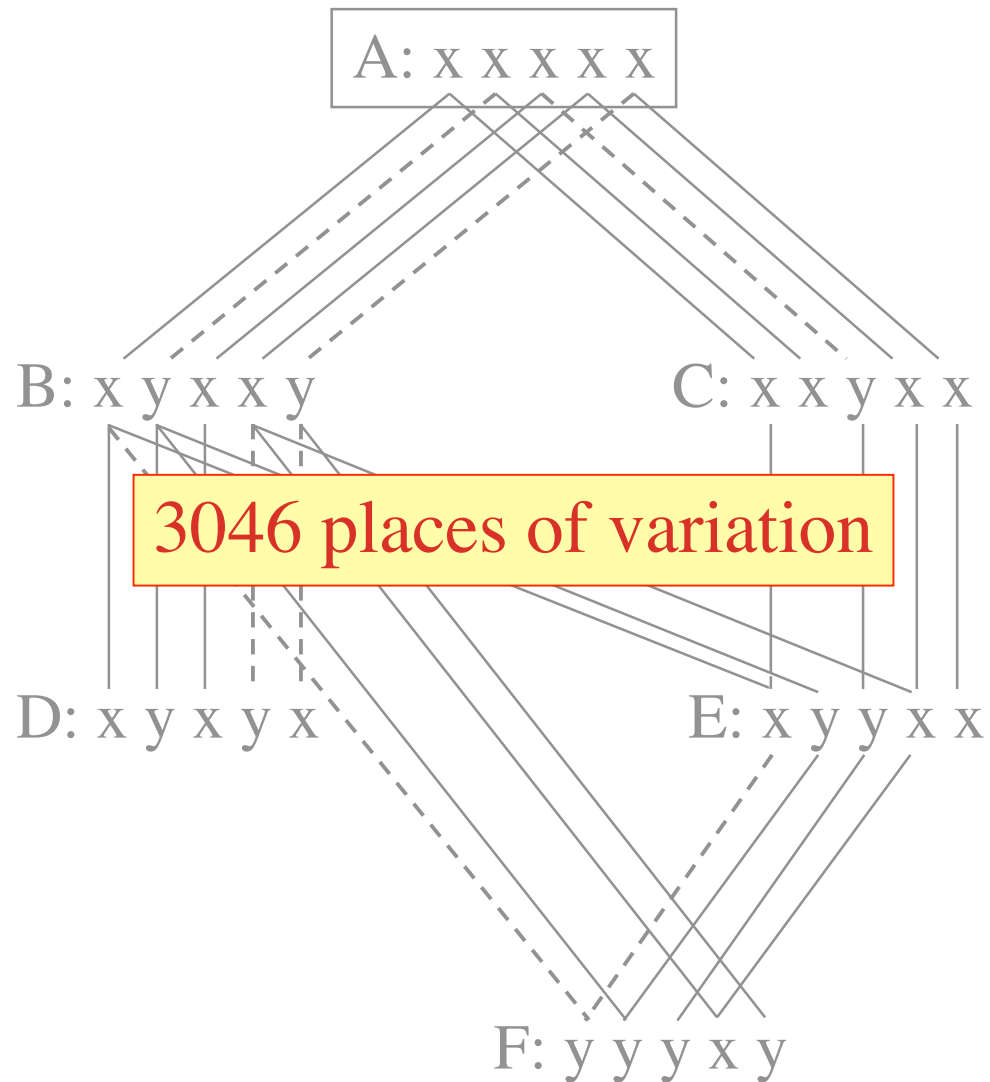
The task

... is to find the simplest stemma that matches the principle.

A model of transmission



The Catholic Letters:



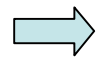
Some initial assumptions are necessary
in order to provide rules according to which
the relationships of texts and witnesses
should preferably be assessed.

These assumptions pertain to the average act
of copying texts in a given tradition.

Assumptions considered more probable than their contrary
(following the rule of parsimony)

➡ A scribe wants to copy the Vorlage with fidelity.

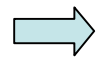
Assumptions considered more probable than their contrary
(following the rule of parsimony)



A scribe wants to copy the Vorlage with fidelity.

Fact: Nearly all the witnesses have close relatives.

Assumptions considered more probable than their contrary (following the rule of parsimony)



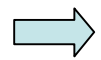
A scribe wants to copy the Vorlage with fidelity.

Fact: Nearly all the witnesses have close relatives.

Implication: When the same variant is found in a very close relative of its witness, coherence and non-coincidental agreement is assumed.

Assumptions considered more probable than their contrary
(following the rule of parsimony)

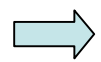
A scribe wants to copy the Vorlage with fidelity.



If a scribe introduces diverging variants,
they come from another source (are not 'invented').

Assumptions considered more probable than their contrary (following the rule of parsimony)

A scribe wants to copy the Vorlage with fidelity.

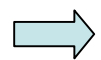


If a scribe introduces diverging variants,
they come from another source (are not 'invented').

Fact: Nearly all variants diverging from the main Vorlage
are found in close relatives.

Assumptions considered more probable than their contrary (following the rule of parsimony)

A scribe wants to copy the Vorlage with fidelity.



If a scribe introduces diverging variants,
they come from another source (are not 'invented').

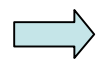
Fact: Nearly all variants diverging from the main Vorlage
are found in close relatives.

Implication: If a witness deviates from its main Vorlage,
the variant is searched for in its close relatives. If found,
coherence and non-coincidental agreement is assumed.

Assumptions considered more probable than their contrary (following the rule of parsimony)

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').

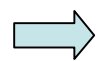


The scribe uses few rather than many sources.

Assumptions considered more probable than their contrary (following the rule of parsimony)

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').



The scribe uses few rather than many sources.

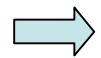
This assumption is required
by the rule of parsimony.

Assumptions considered more probable than their contrary (following the rule of parsimony)

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').

The scribe uses few rather than many sources.



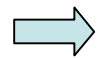
The sources feature closely related texts
rather than less related ones.

Assumptions considered more probable than their contrary (following the rule of parsimony)

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').

The scribe uses few rather than many sources.



The sources feature closely related texts
rather than less related ones.

This assumption is the
corollary of the first one.

Assumptions considered more probable than their contrary (following the rule of parsimony)

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').

The scribe uses few rather than many sources.

The sources feature closely related texts
rather than less related ones.

As a rule, these assumptions will explain the evidence sufficiently.
Where they do not, we have to look for an exceptional scenario
matching an exceptional case!

The Coherence-Based Genealogical Method CBGM

1. The objective

2. Some basics

3. Key terms and procedures

4. Interpreting coherence

5. How to find stemmatic coherencies

[Contents](#) | [Index](#)

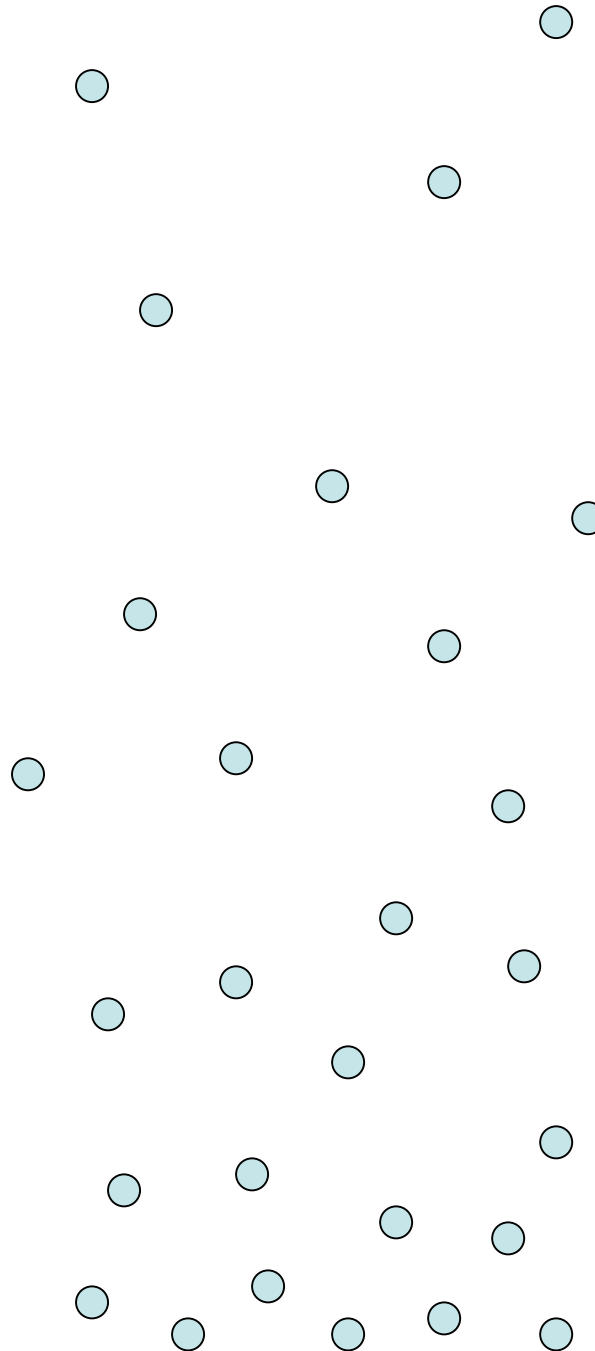
older texts

witnesses

(= texts, not
manuscripts)

younger texts

Older and younger
states of text



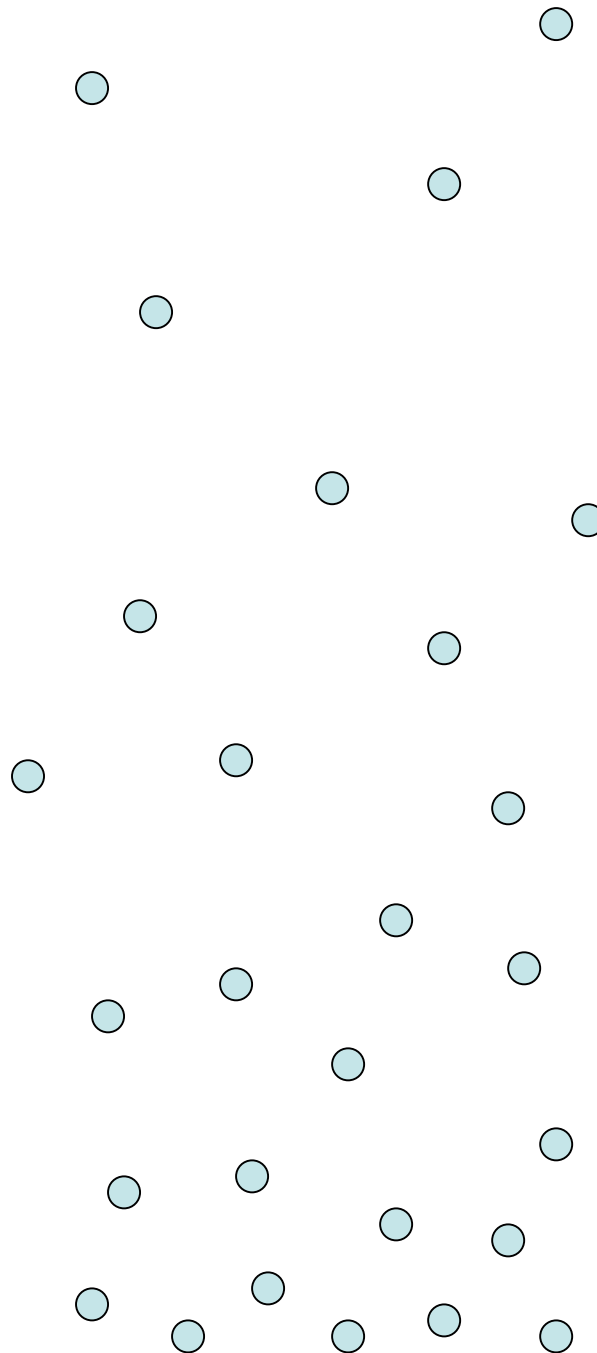
older texts

Prior and posterior variants

witnesses

(= texts, not
manuscripts)

younger texts



The **distance**
between witnesses
depends on the percentage
of their **agreements**.

It depends
on their **disagreements**
whether witnesses feature
older or younger states of text.

It must be evaluated
which disagreeing **variants** are
prior and which are **posterior**.

A **higher proportion**
of **prior variants** indicates
an **older text**.

older texts

Prior and posterior variants

The **distance**
between witnesses
depends on the percentage
of their **agreements**.

It depends
on their **disagreements**
whether witnesses feature
older or younger states of text.

It must be evaluated
which disagreeing **variants** are
prior and which are **posterior**.

A higher proportion
of prior variants indicates
an older text.

witnesses

(= texts, not
manuscripts)

If possible, local stemmata of variants
have to be constructed
(stemmata which present the genealogy
of variants for a variant passage).

Please remember ...

younger texts

The principle

The genealogical interrelationships between all the variants at any place of variation must appear in a *global stemma of the witnesses* as *genealogical relationship between coherent fields of their witnesses*.

The consequence

The first step is to establish local stemmata of variants for as many variant passages as possible.

The task

... is to find the simplest stemma that matches the principle.

The principle

The consequence

The genealogical interrelationships

An iterative process:

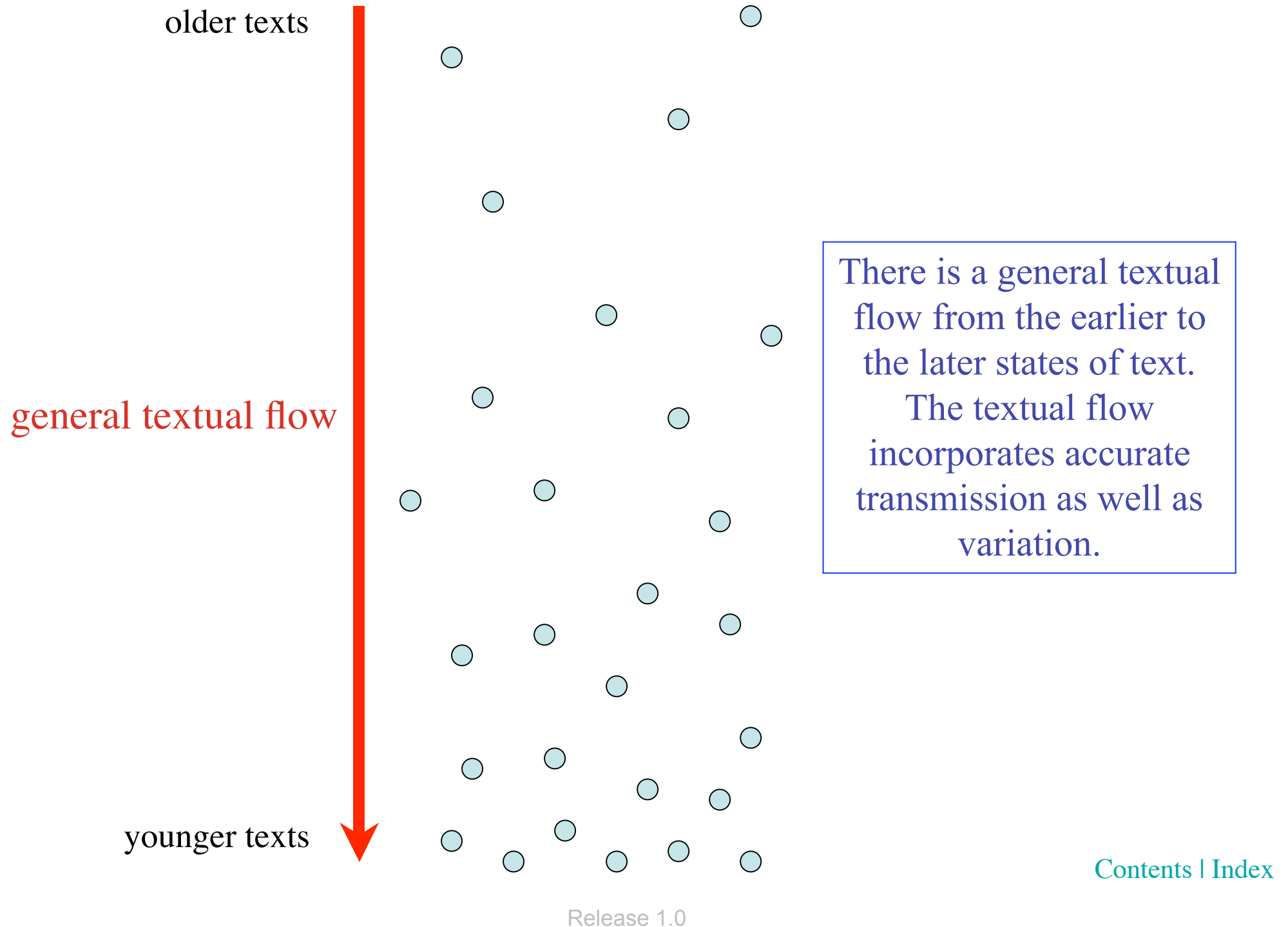
revision of textual decisions
(local stemmata of variants)

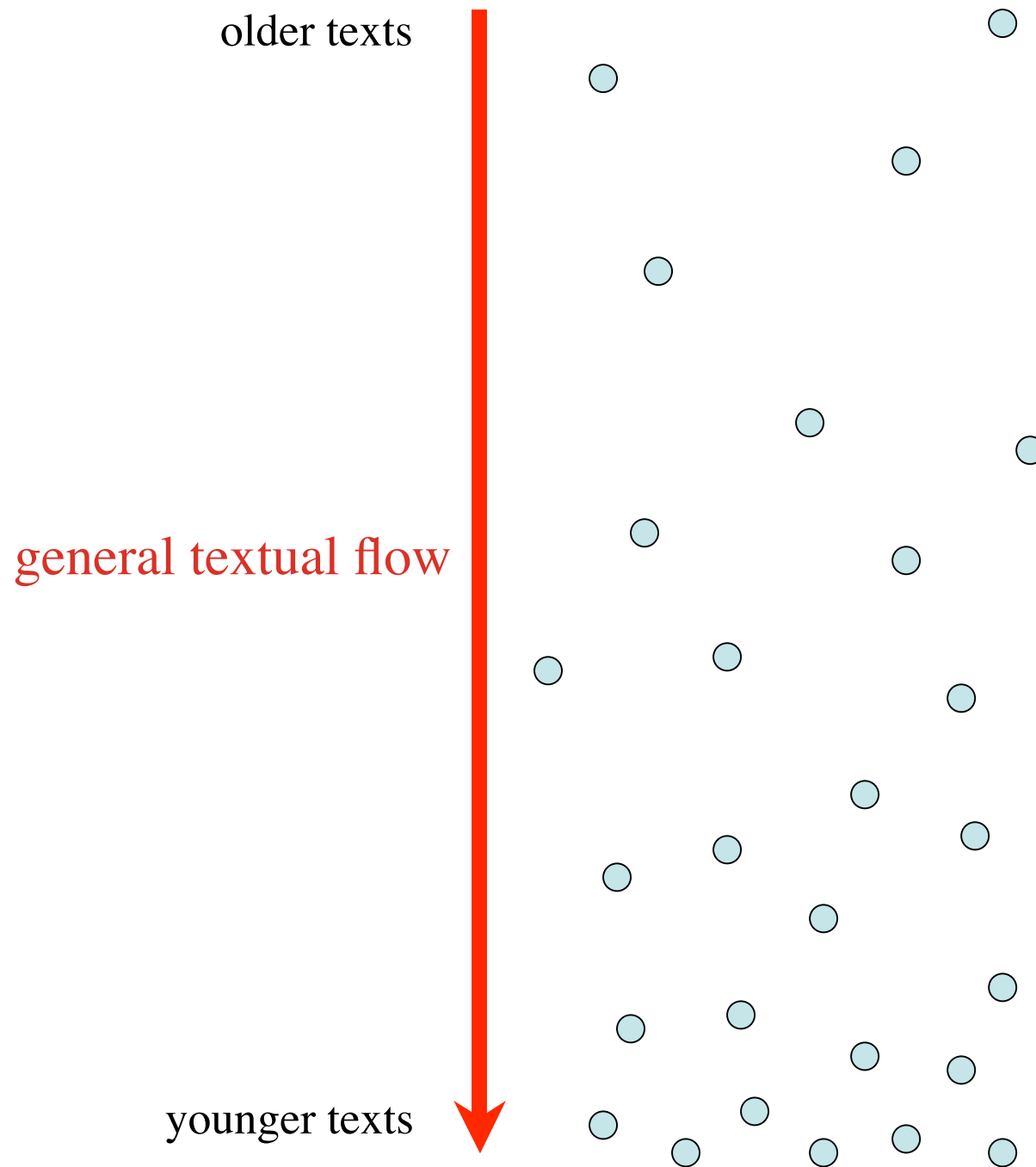
in light of

over-all results

The first step is to establish
local stemmata of variants
for as many variant passages
as possible.

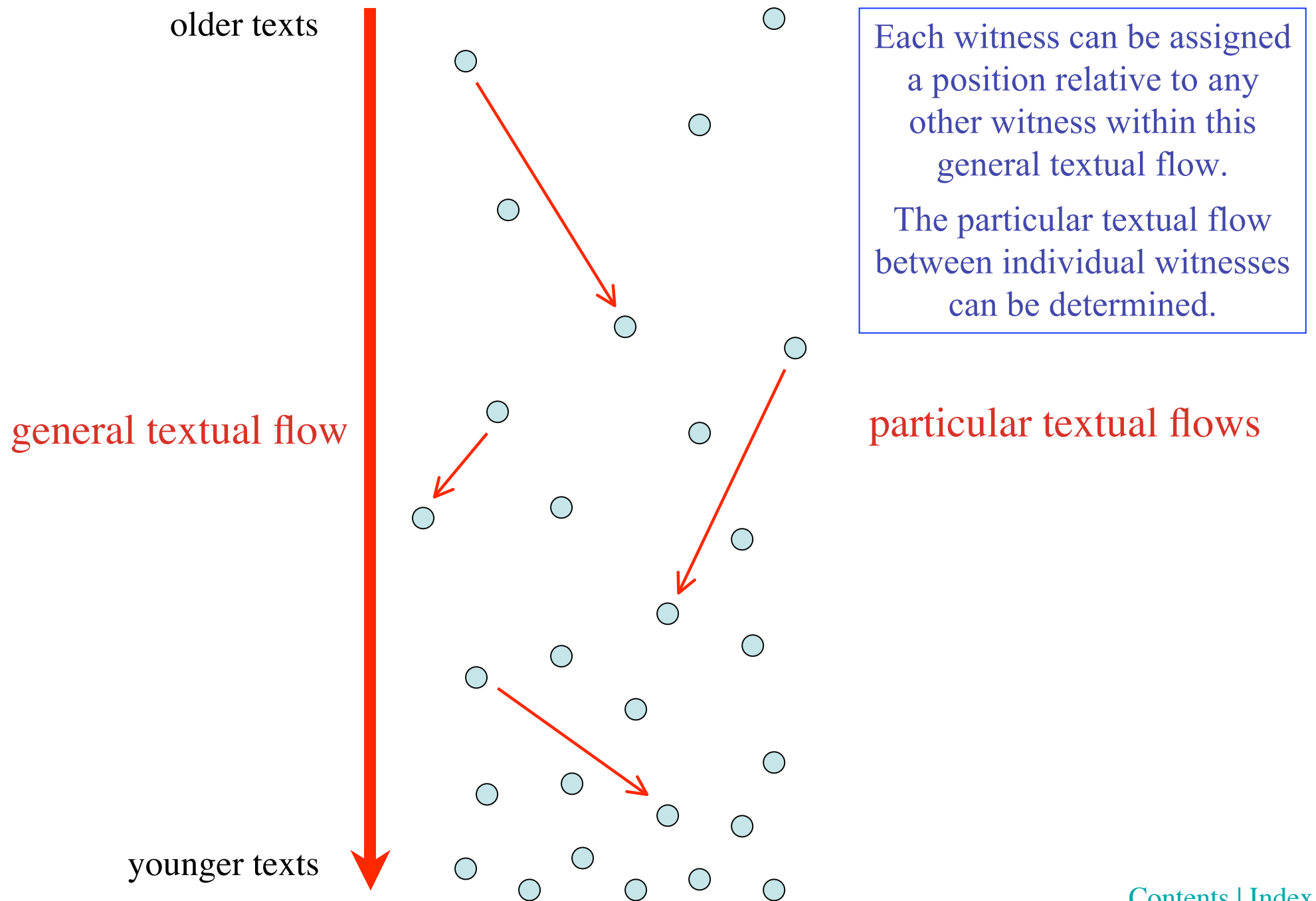
... is to find
the simplest stemma
that matches the principle.

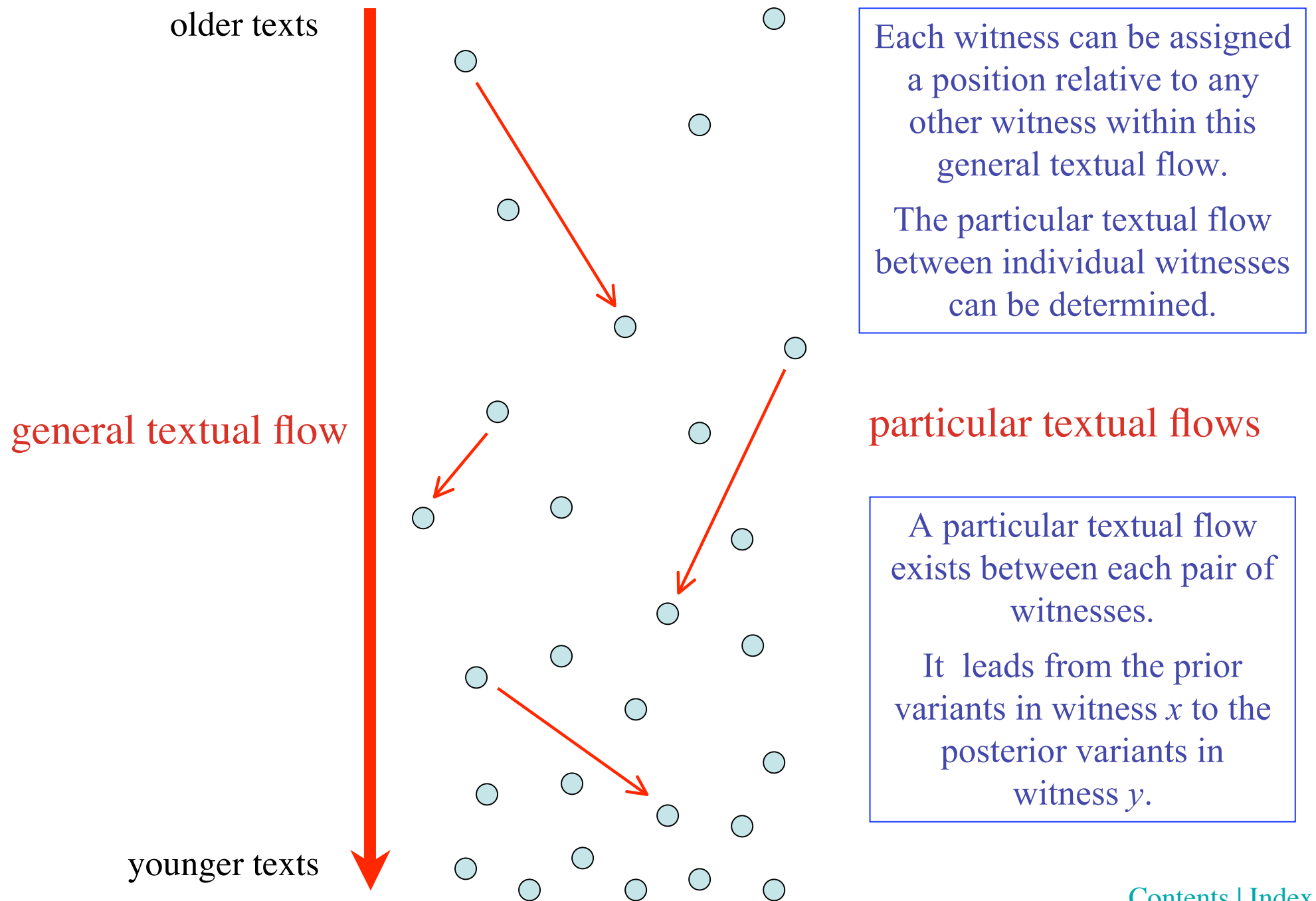


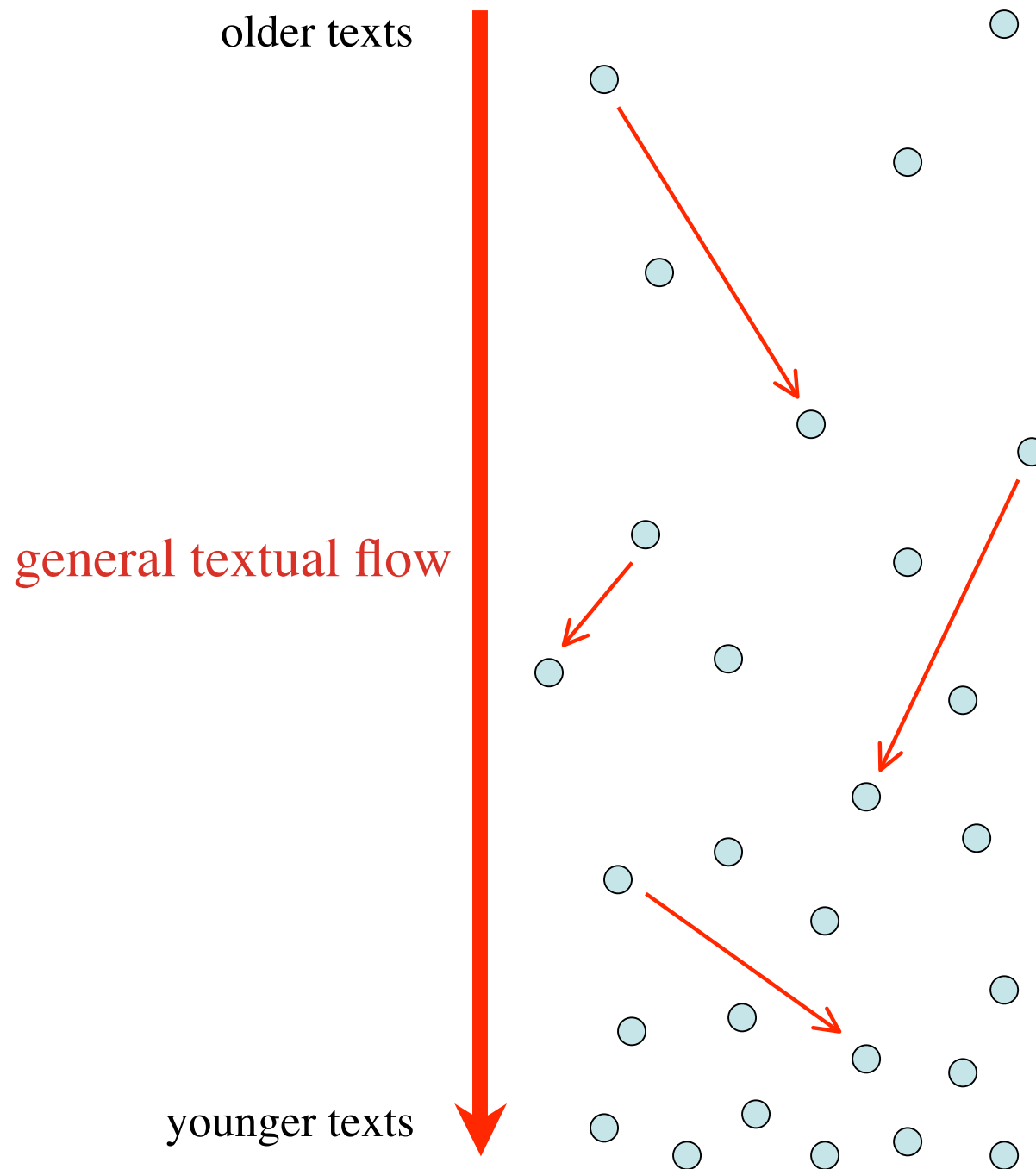


Each witness can be assigned a position relative to any other witness within this general textual flow.

The particular textual flow between individual witnesses can be determined.





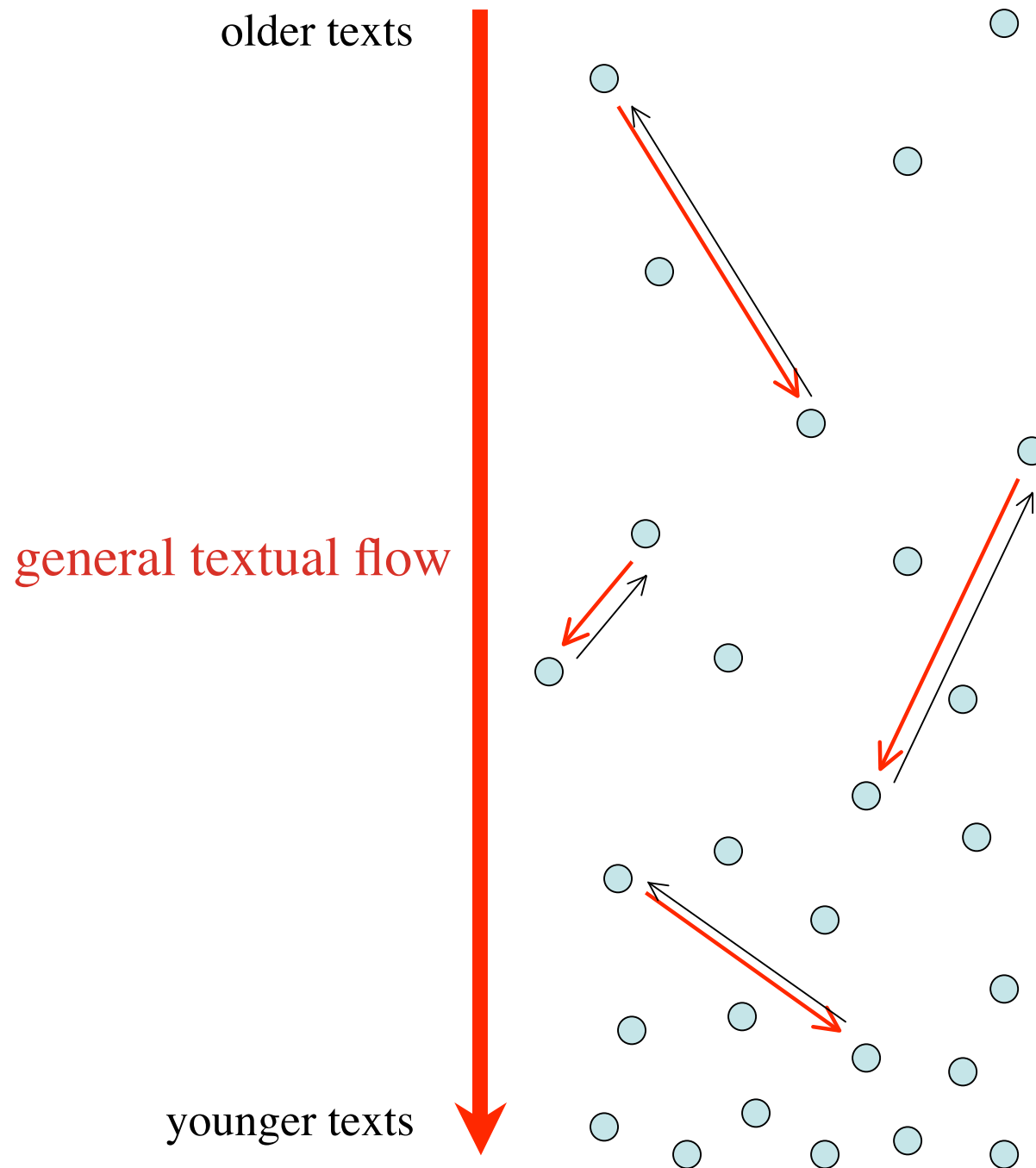


In a contaminated tradition
a flow in the opposite
direction will nearly always
be found at the same time.

particular textual flows

A particular textual flow
exists between each pair of
witnesses.

It leads from the prior
variants in witness x to the
posterior variants in
witness y .



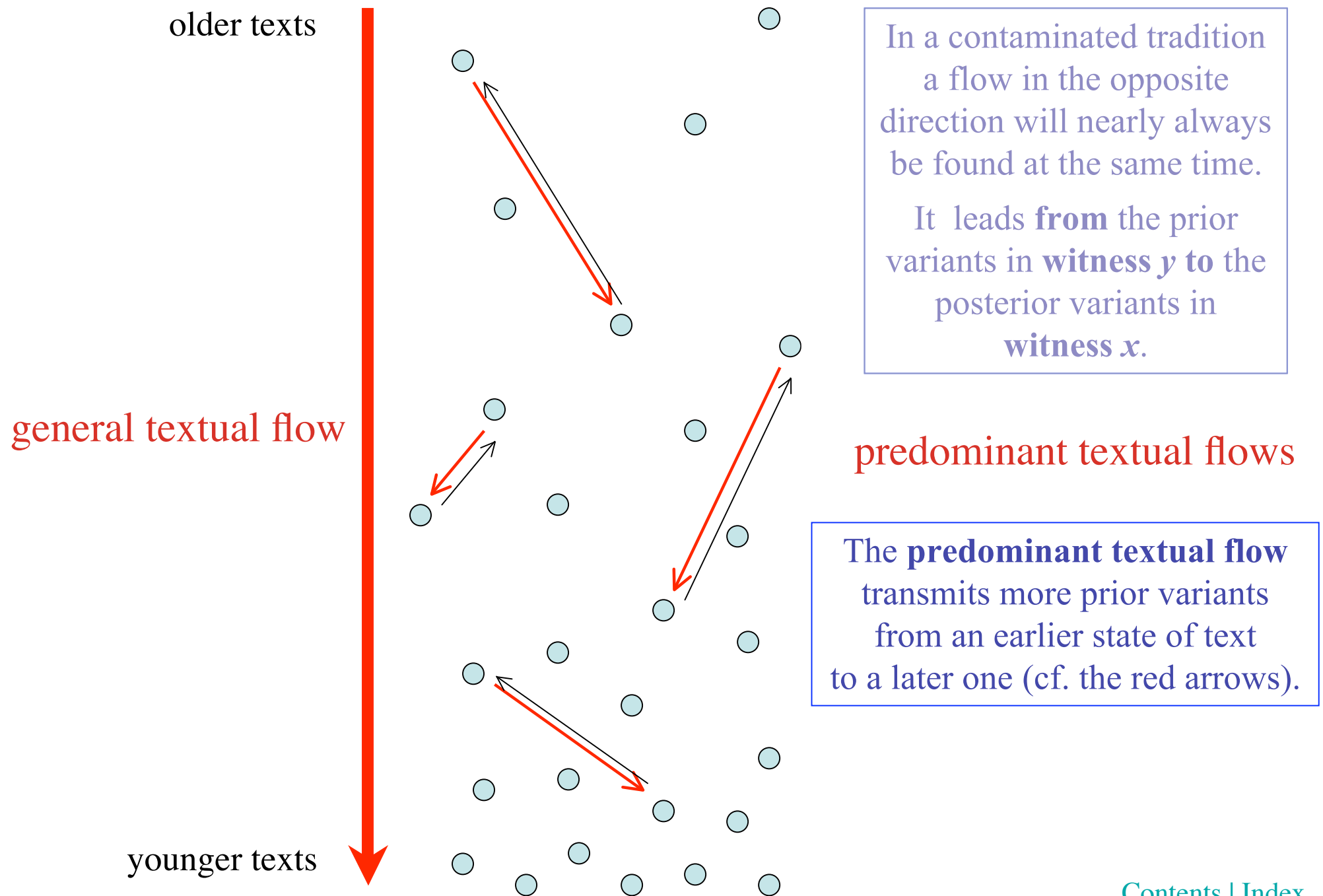
In a contaminated tradition a flow in the opposite direction will nearly always be found at the same time.

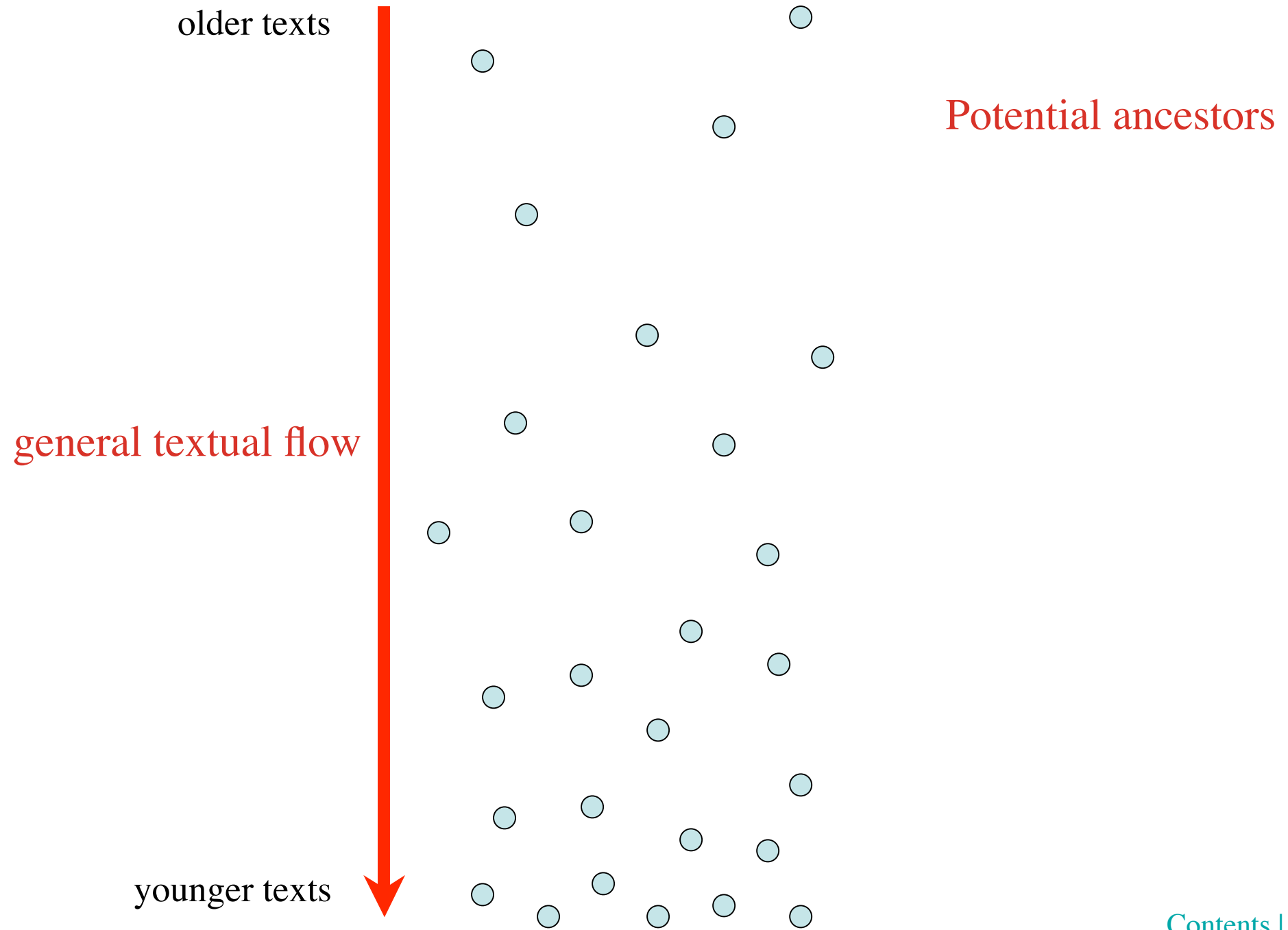
It leads **from** the prior variants in **witness y** to the posterior variants in **witness x**.

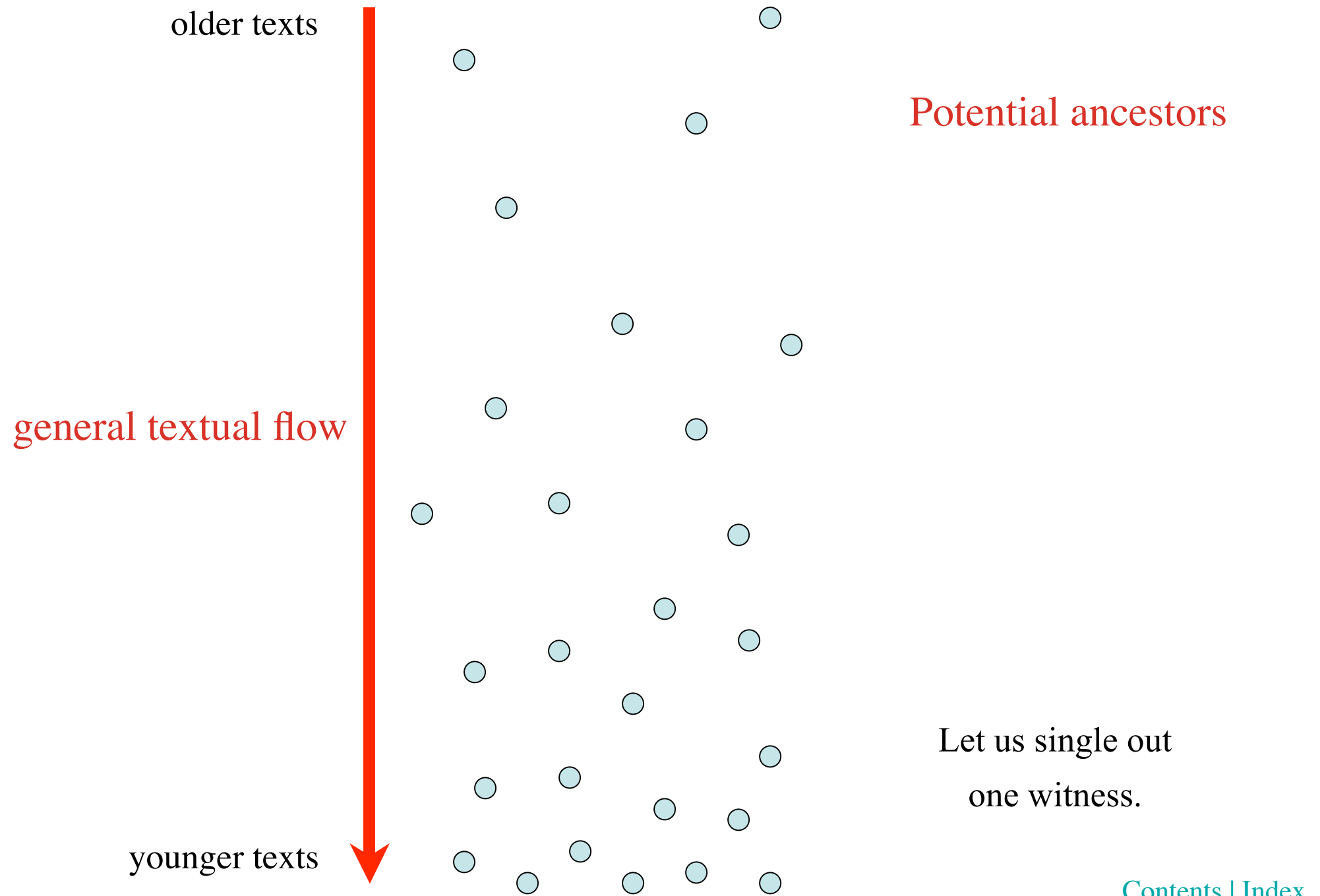
particular textual flows

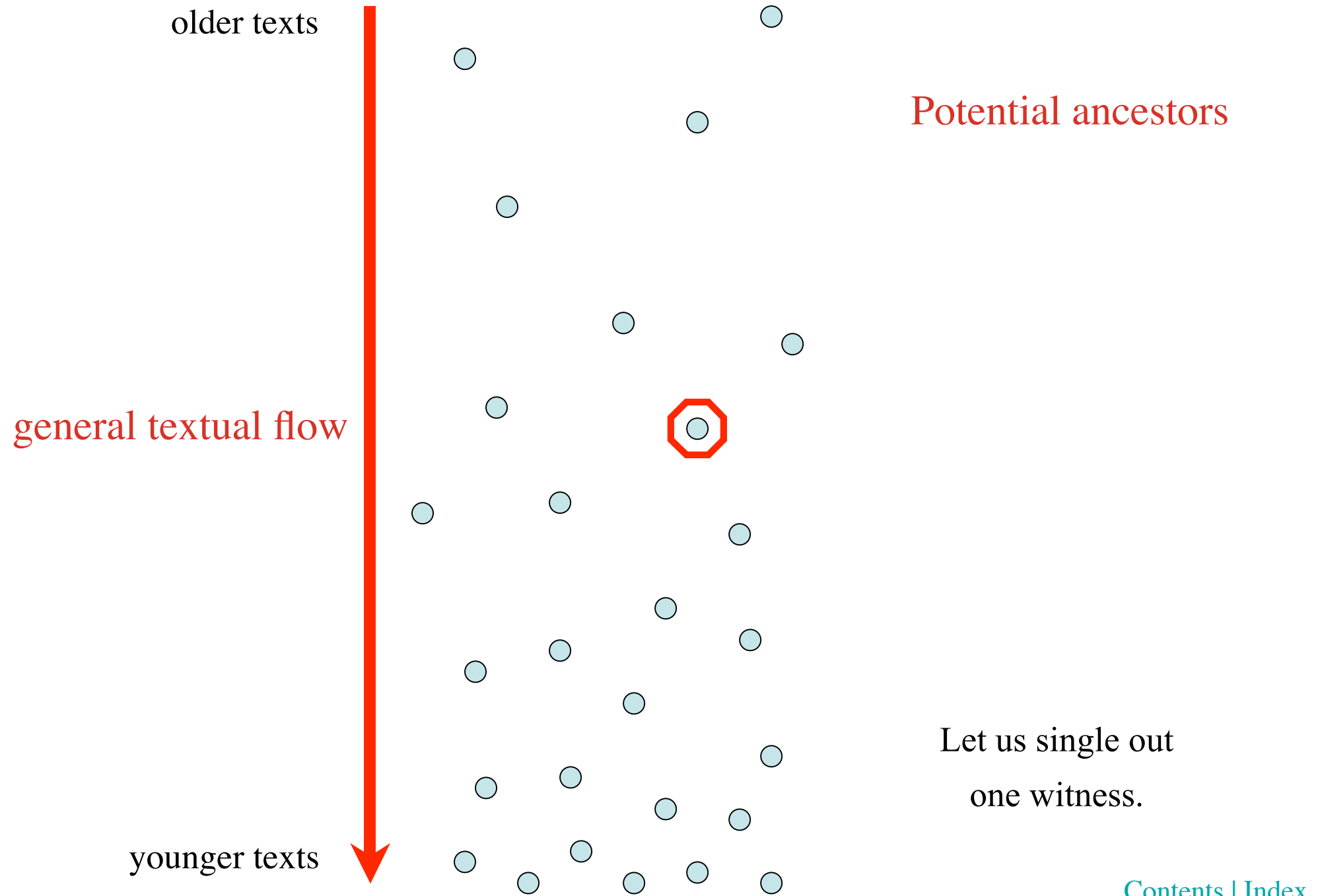
A particular textual flow exists between each pair of witnesses.

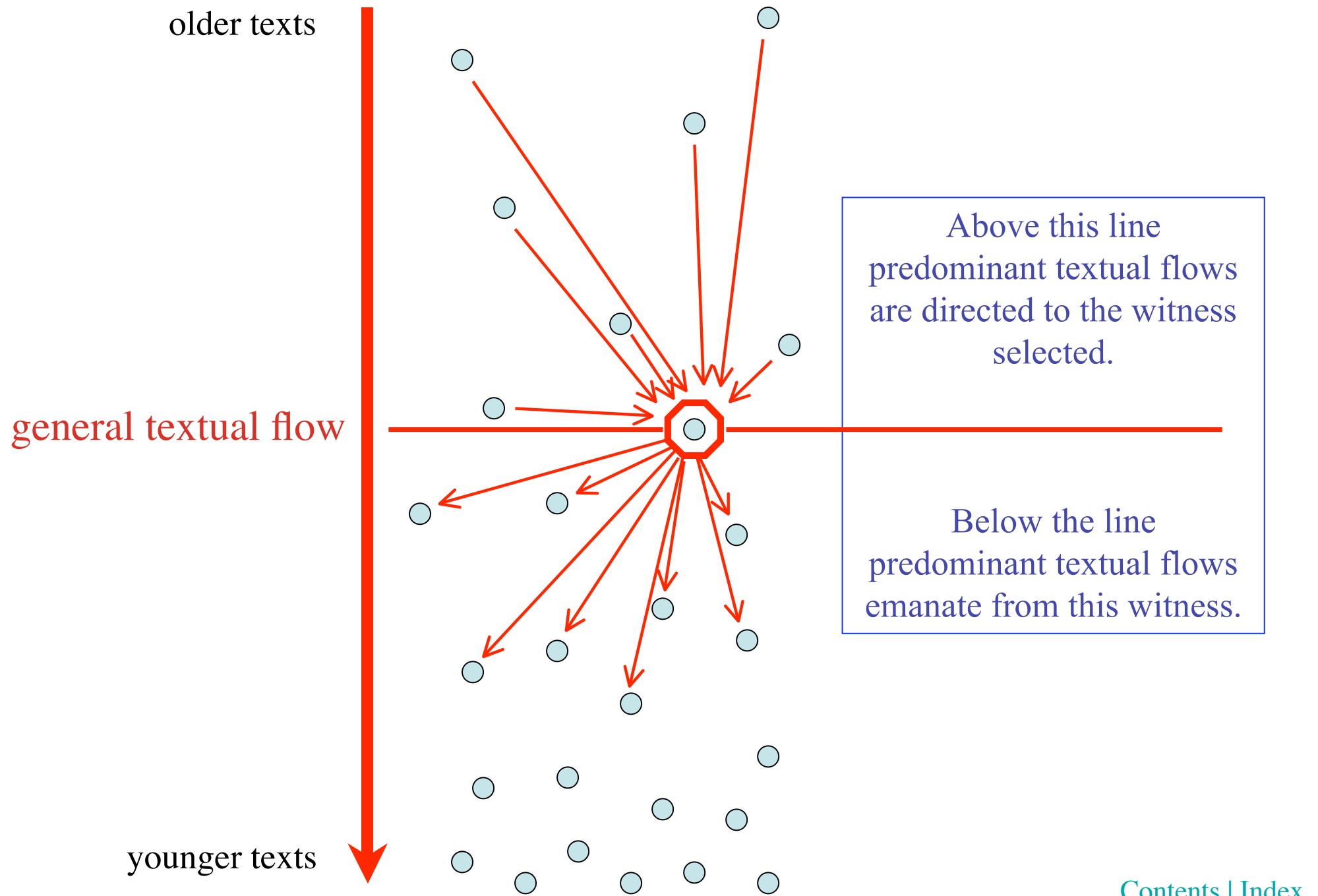
It leads from the prior variants in witness *x* to the posterior variants in witness *y*.

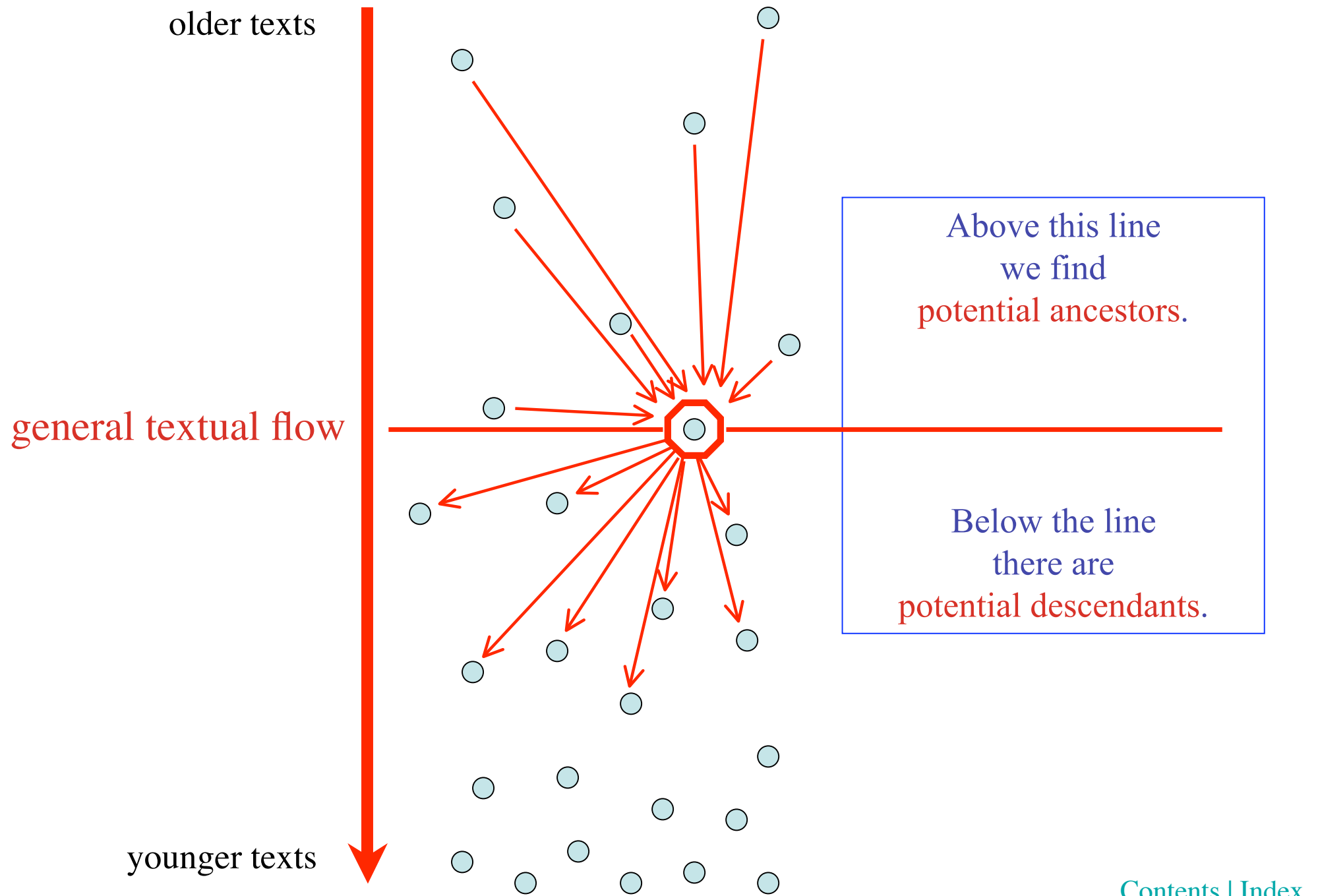


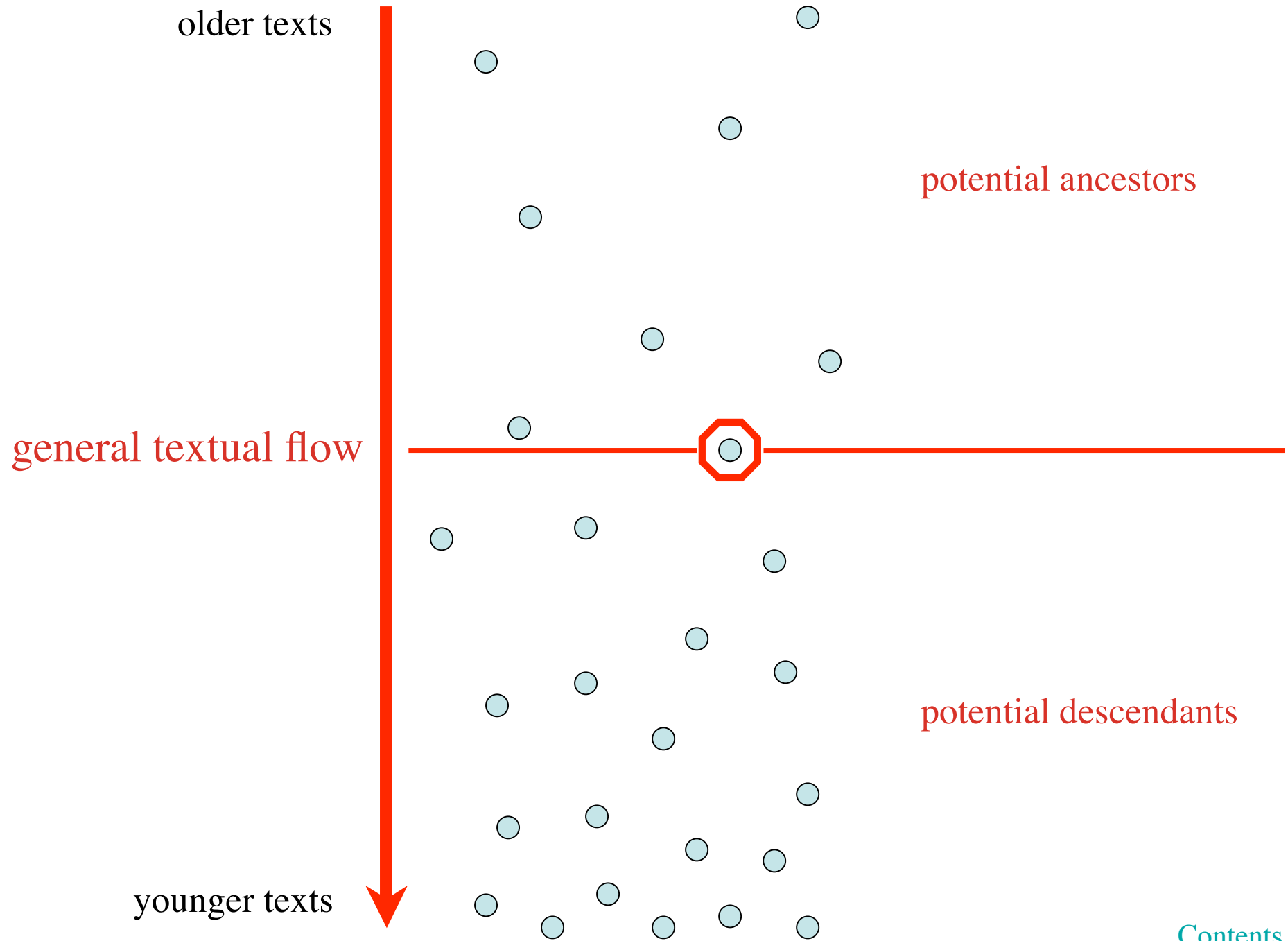


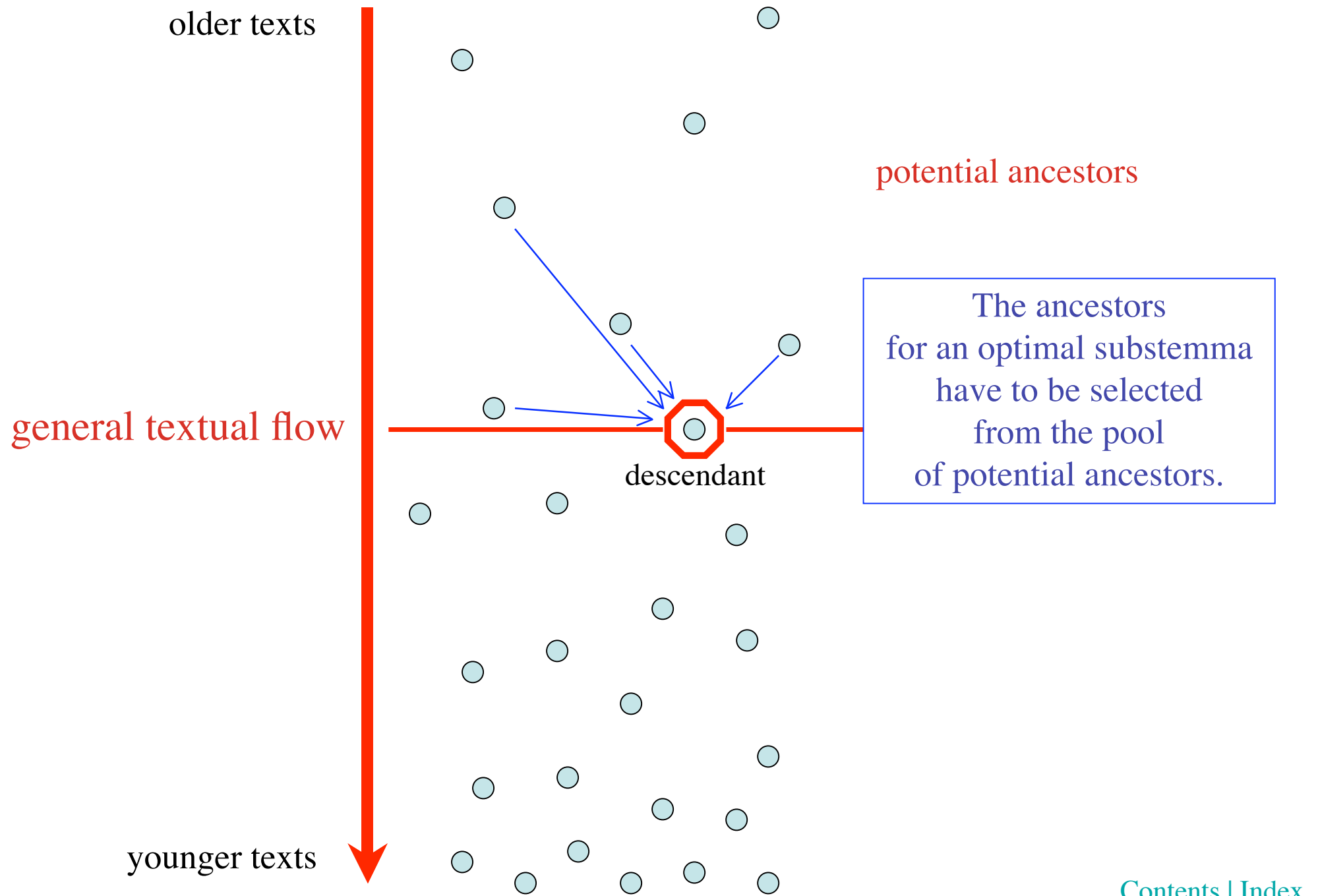


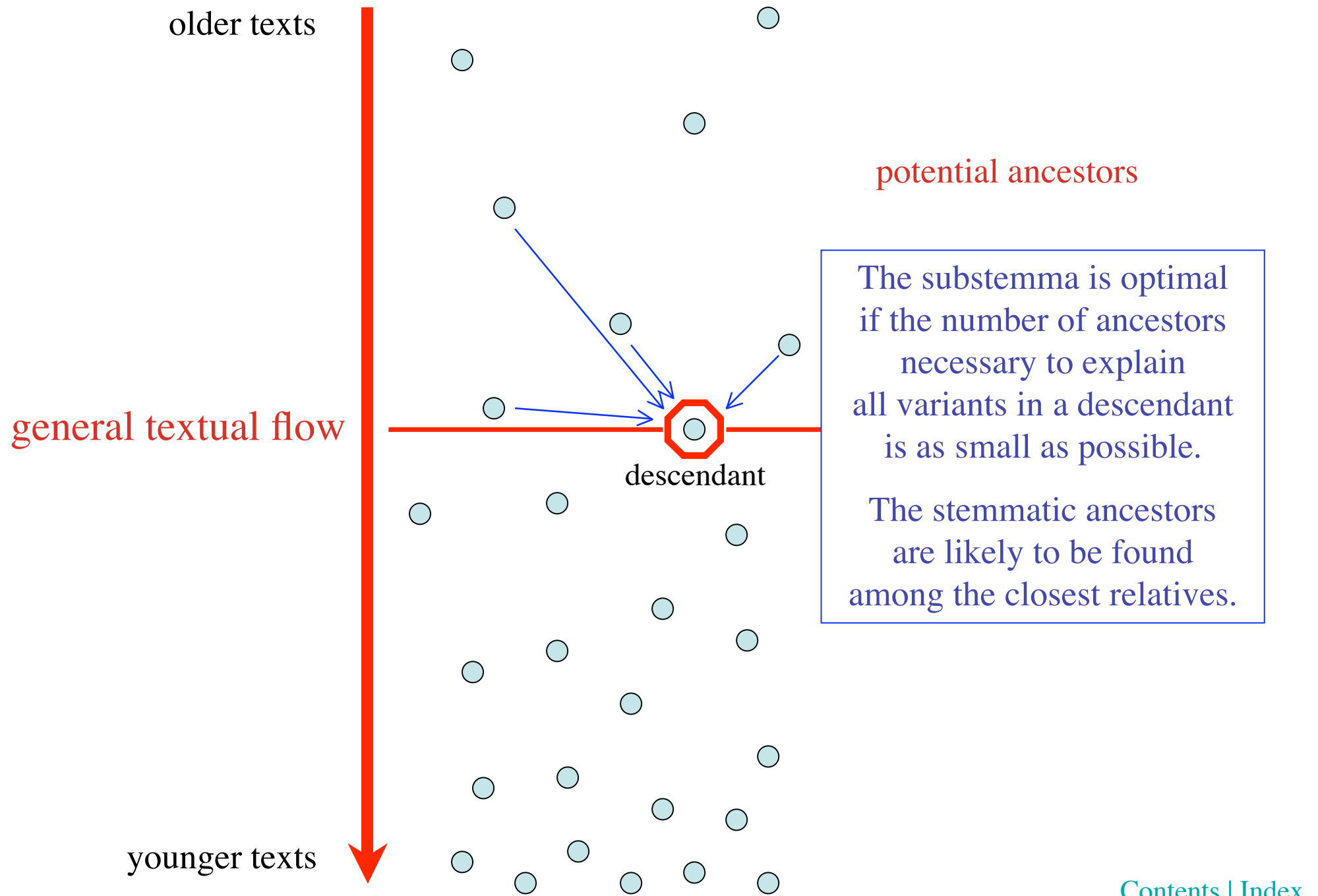


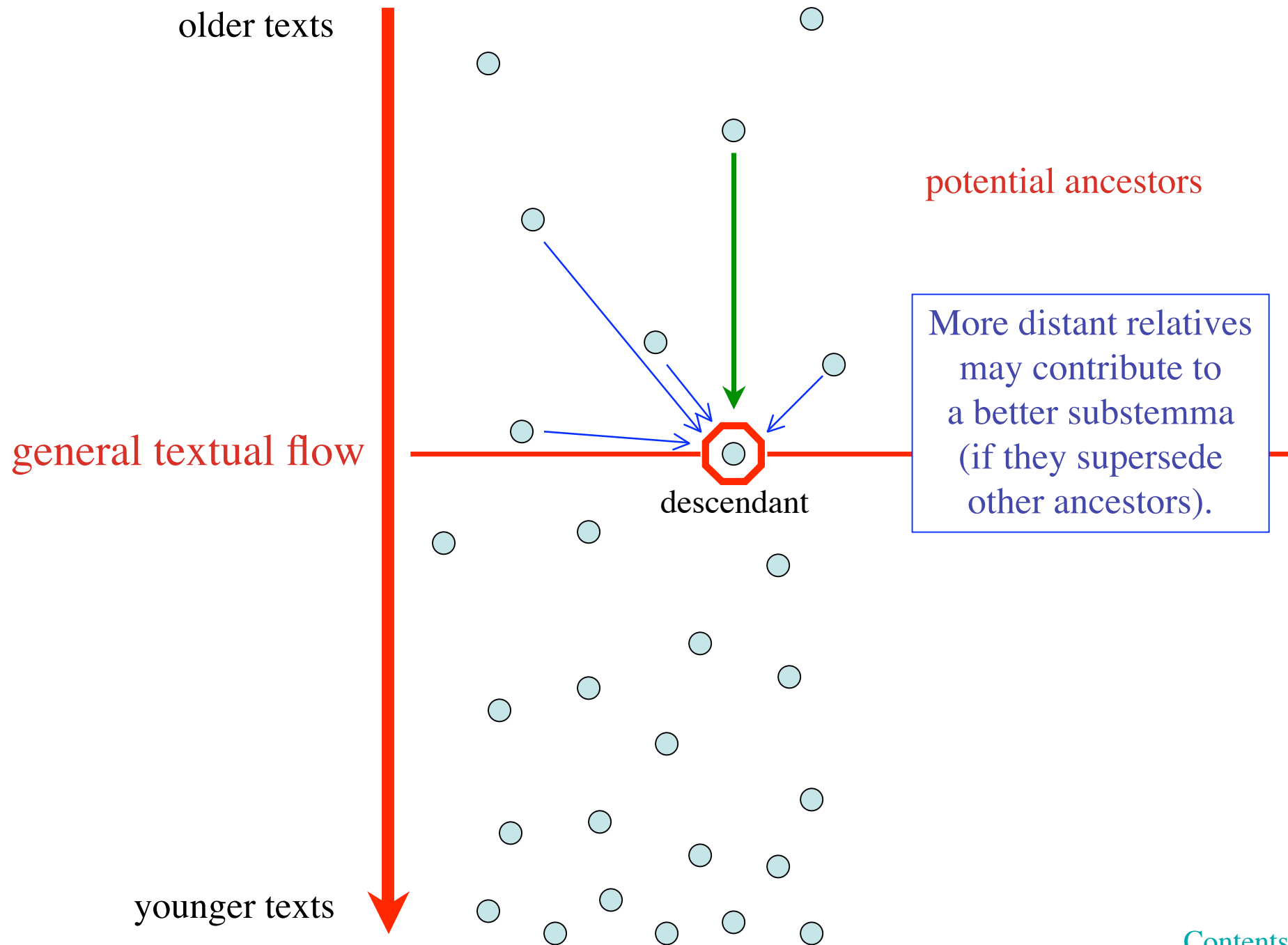


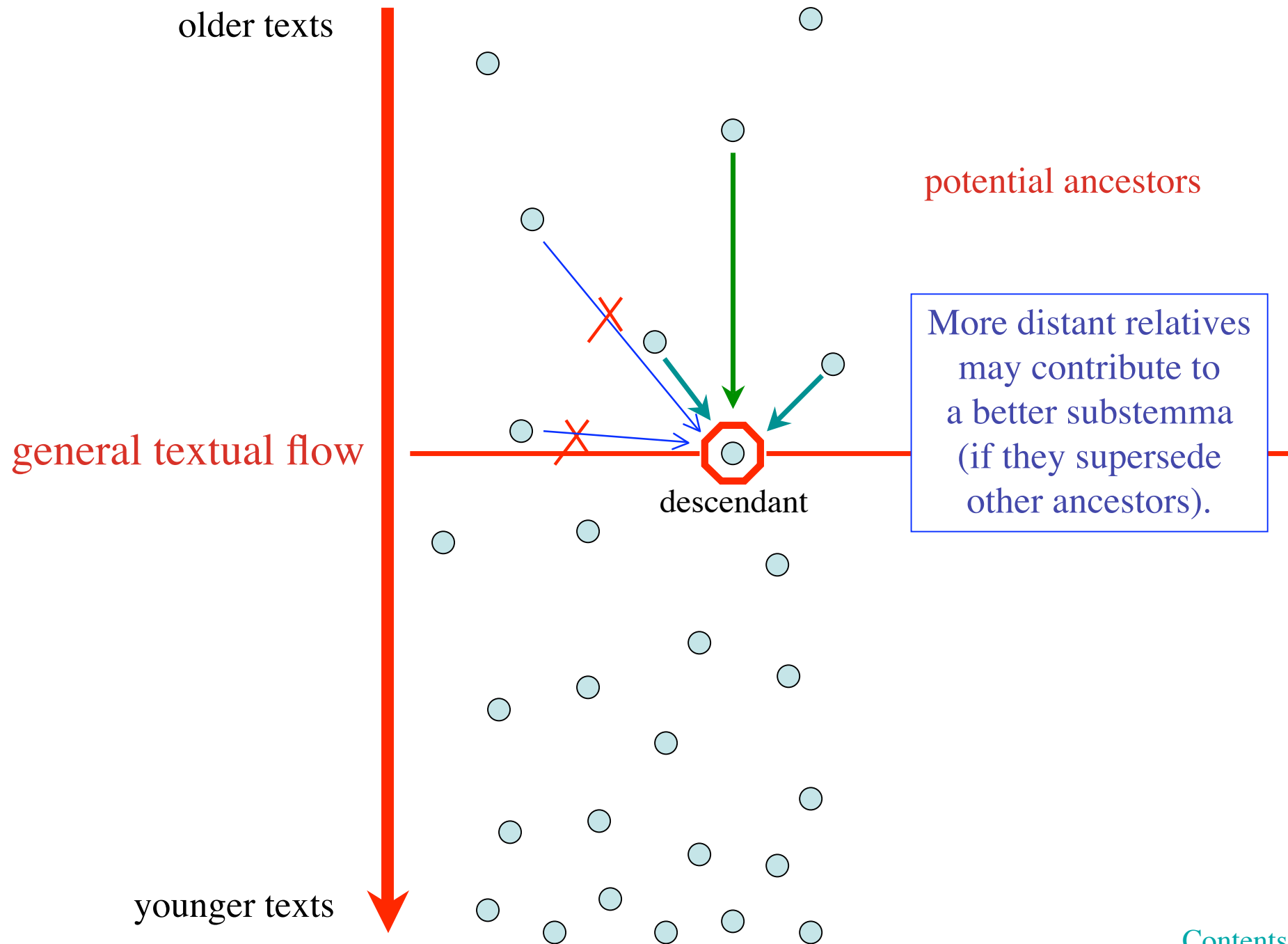


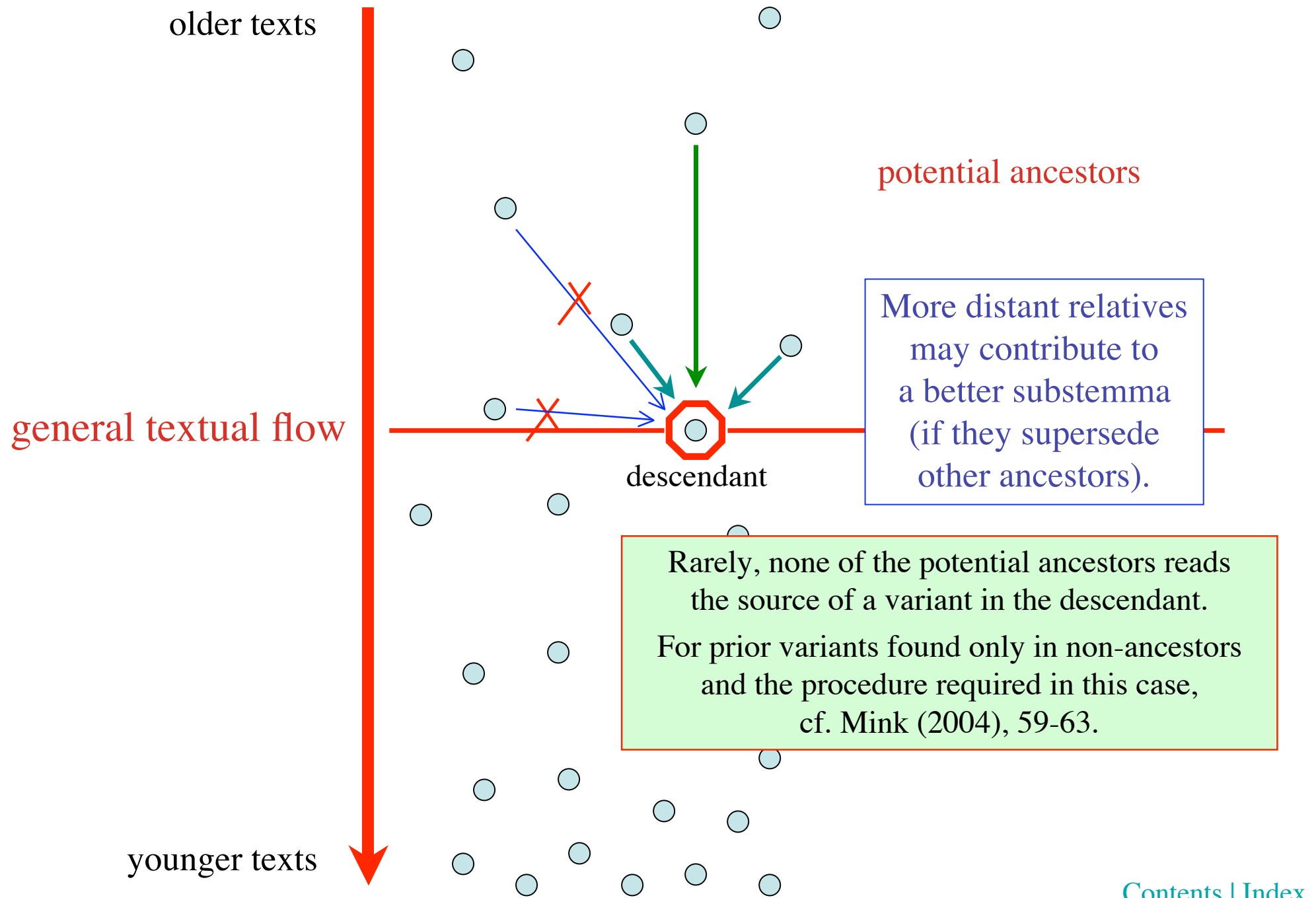


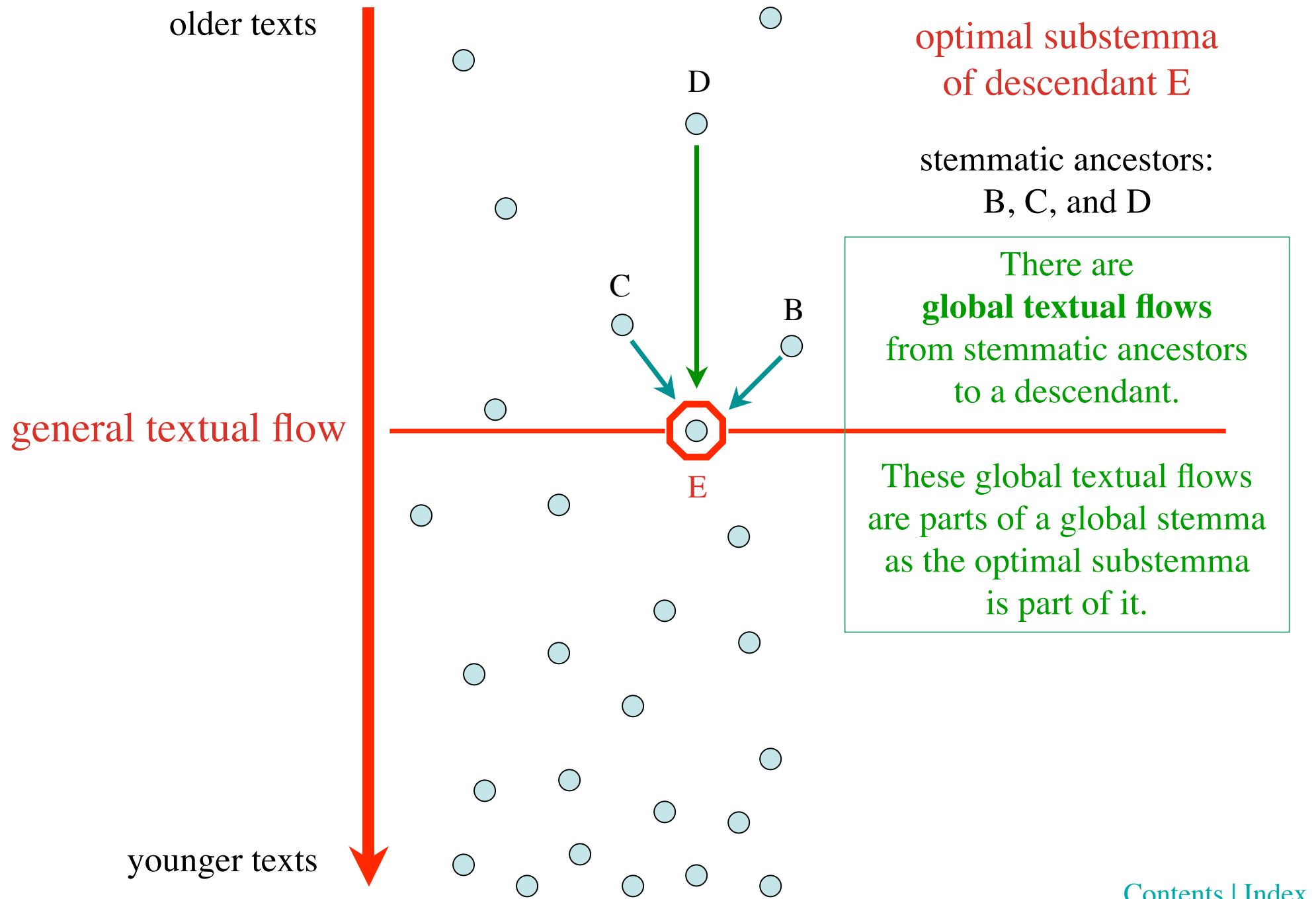


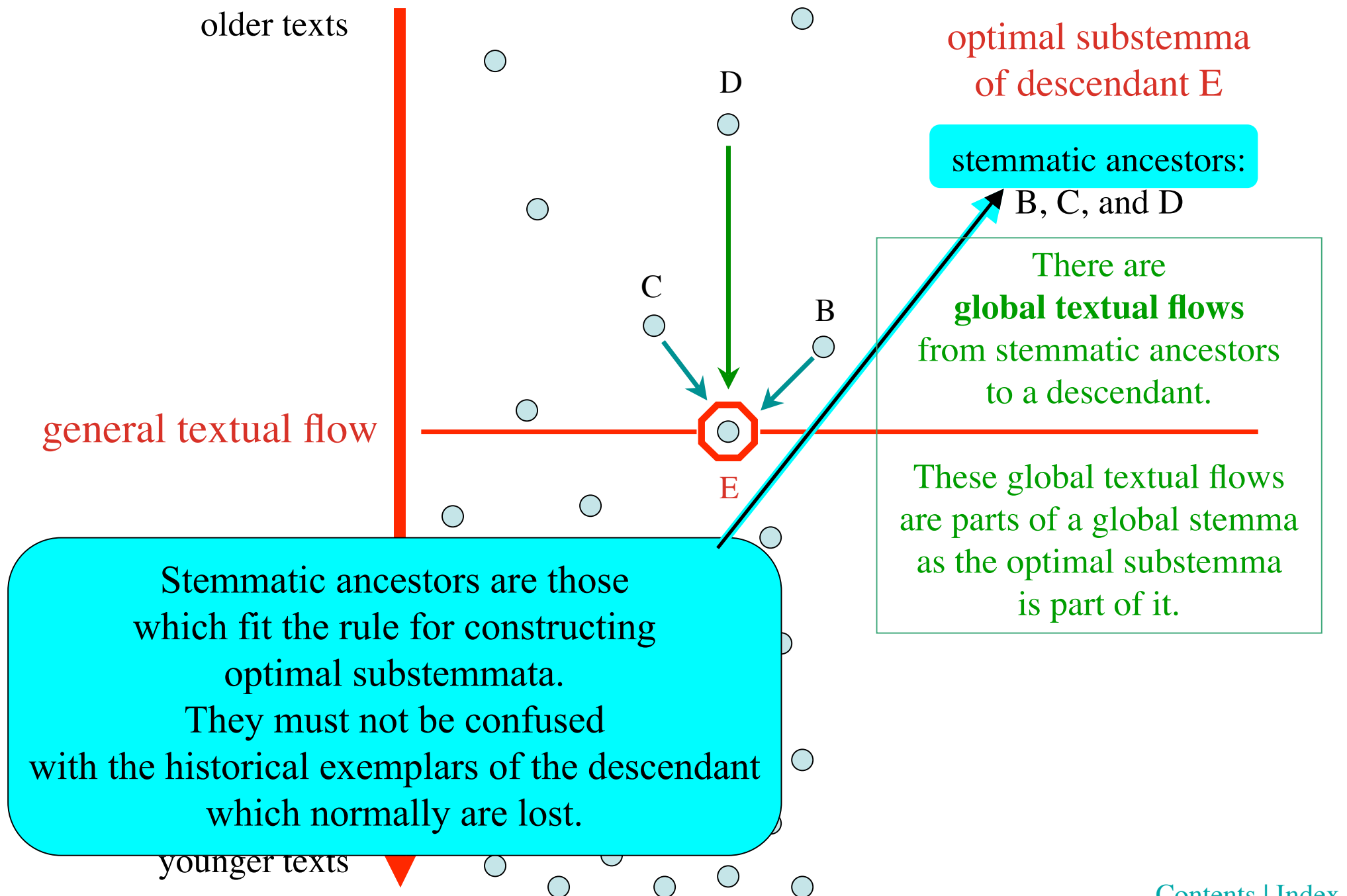


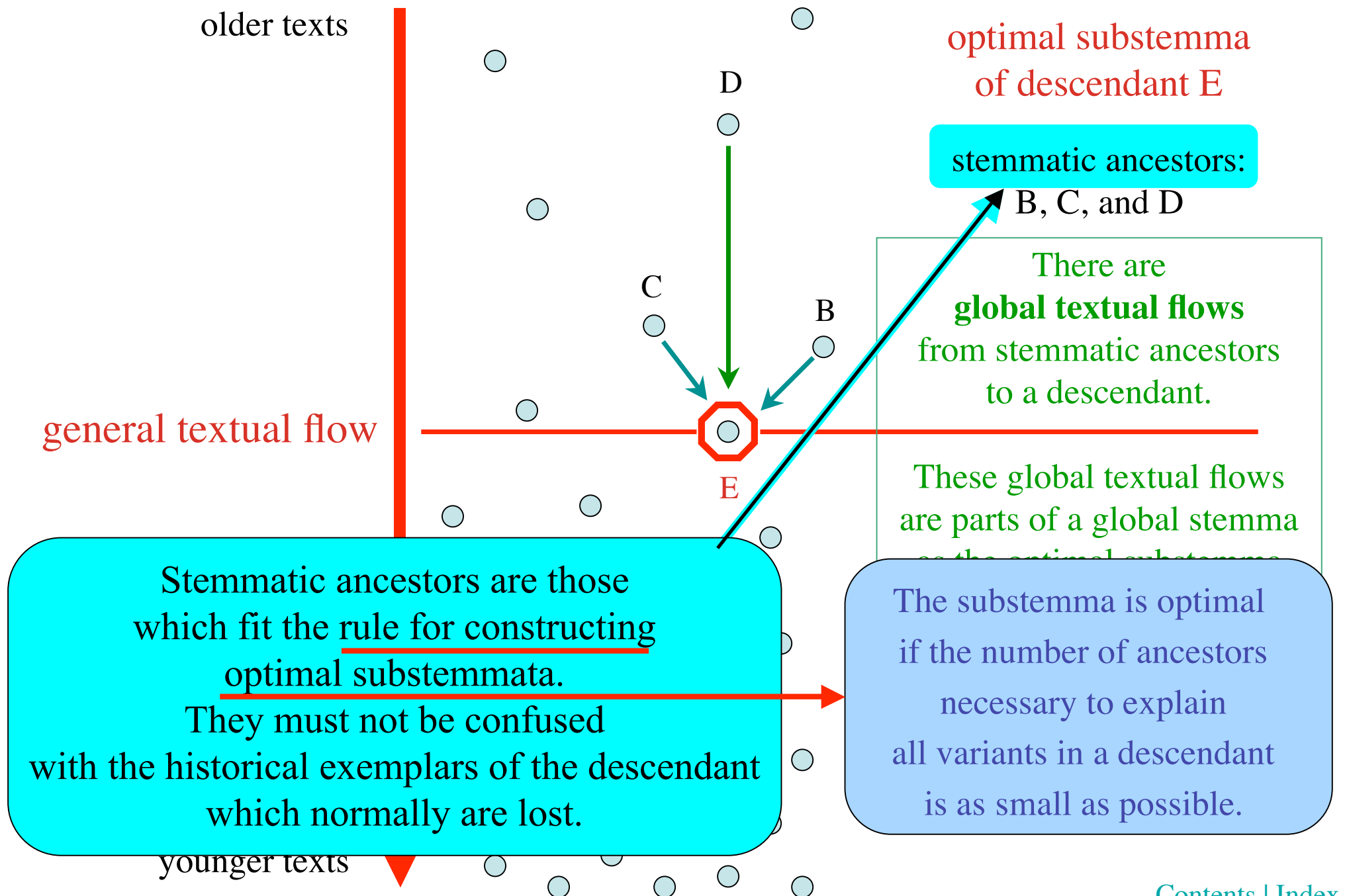


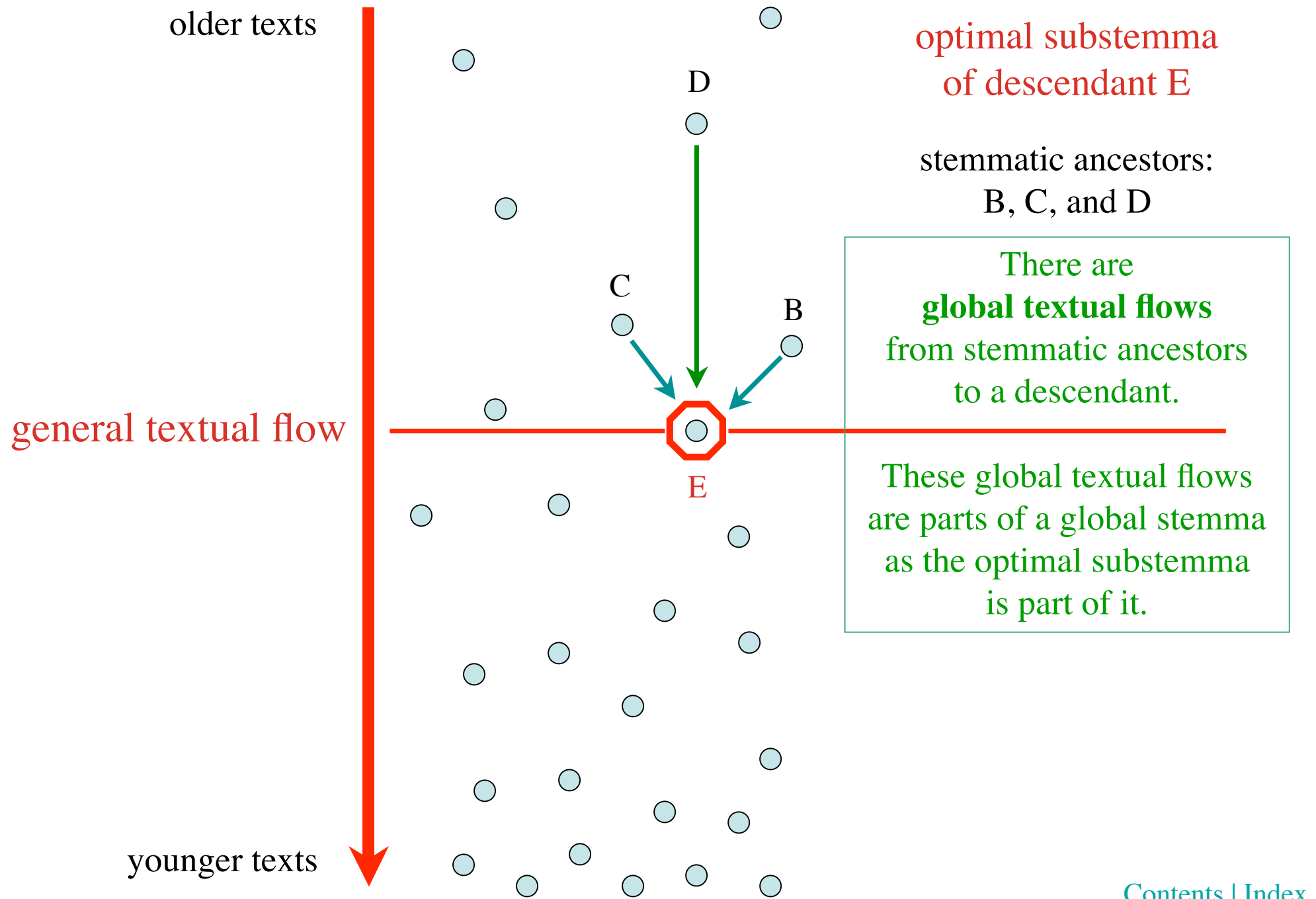


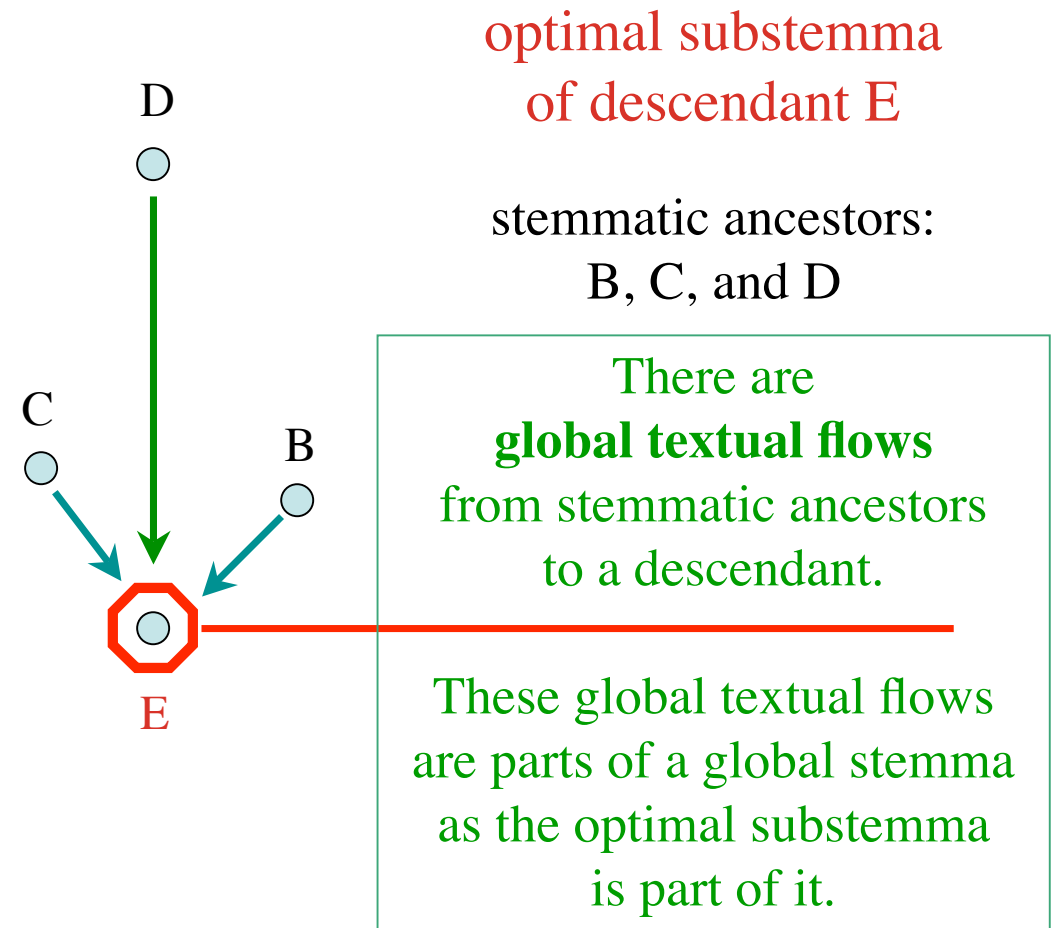






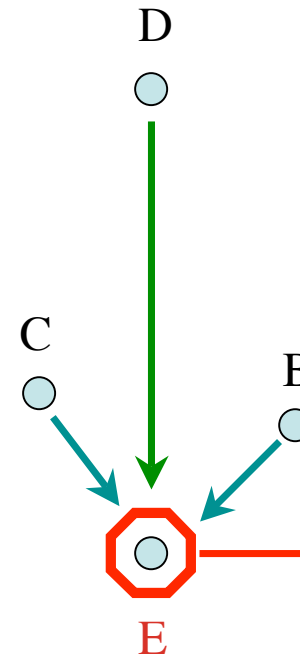






At each variant passage,
all **global textual flows**
or a subset of them correspond
to **local textual flows**.

At each variant passage,
local textual flows lead from
all ancestors or a subset of them
to the descendant.



optimal substemma
of descendant E

stemmatic ancestors:
B, C, and D

There are
global textual flows
from stemmatic ancestors
to a descendant.

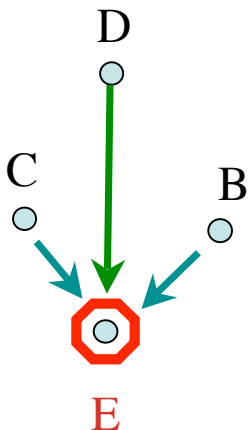
These global textual flows
are parts of a global stemma
as the optimal substemma
is part of it.

At each variant passage,
all **global textual flows**
or a subset of them correspond
to **local textual flows**.

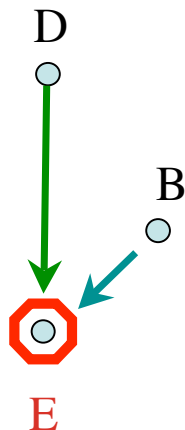
At each variant passage,
local textual flows lead from
all ancestors or a subset of them
to the descendant.

local textual flows at 3 variant passages
scenarios:

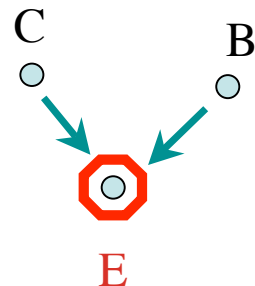
E reads
the same variant
as B, C and D.



E reads
the same variant
as B and D
but disagrees
with C.

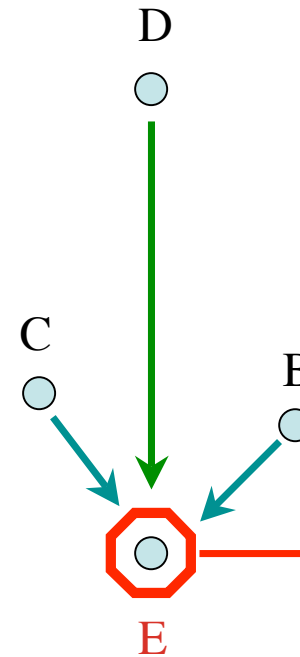


E changes
the variant
supported
by B and C,
and E disagrees
with D.



optimal substemma
of descendant E

stemmatic ancestors:
B, C, and D



There are
global textual flows
from stemmatic ancestors
to a descendant.

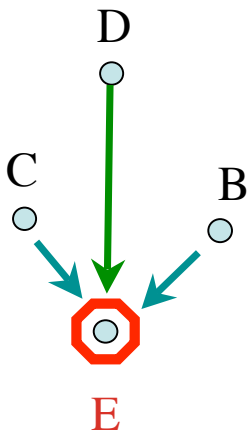
These global textual flows
are parts of a global stemma
as the optimal substemma
is part of it.

At each variant passage,
all **global textual flows**
or a subset of them correspond
to **local textual flows**.

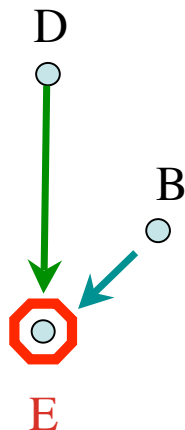
At each variant passage,
local textual flows lead from
all ancestors or a subset of them
to the descendant.

local textual flows at 3 variant passages
scenarios:

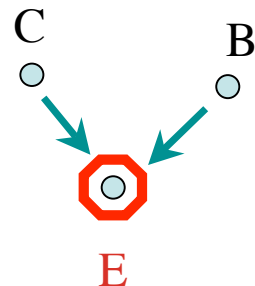
E reads
the same variant
as B, C and D.



E reads
the same variant
as B and D
but disagrees
with C.

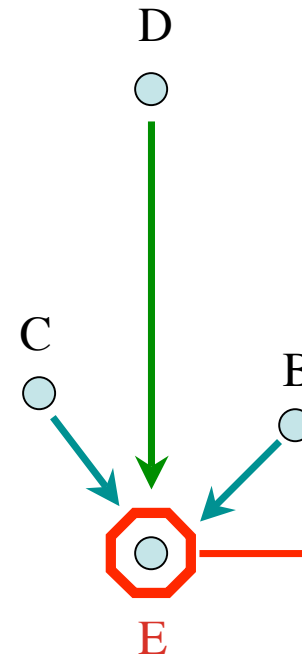


E changes
the variant
supported
by B and C,
and E disagrees
with D.



optimal substemma
of descendant E

stemmatic ancestors:
B, C, and D



There are
global textual flows
from stemmatic ancestors
to a descendant.

These global textual flows
are parts of a global stemma
as the optimal substemma
is part of it.

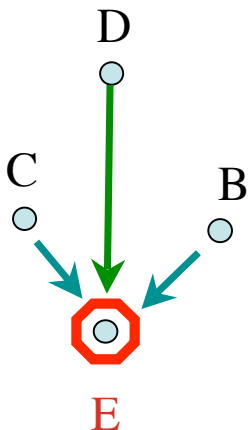
Local textual flows connect ancestors reading
the same variant or – if they do not agree –
ancestors reading the variant prior
to the one in the descendant.

At each variant passage,
all **global textual flows**
or a subset of them correspond
to **local textual flows**.

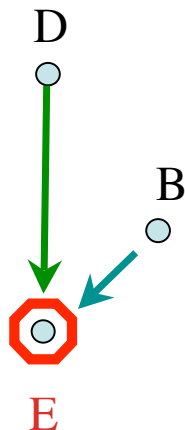
At each variant passage,
local textual flows lead from
all ancestors or a subset of them
to the descendant.

local textual flows at 3 variant passages
scenarios:

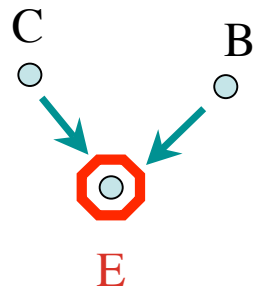
E reads
the same variant
as B, C and D.



E reads
the same variant
as B and D
but disagrees
with C.



E changes
the variant
supported
by B and C,
and E disagrees
with D.



optimal substemma
of descendant E

stemmatic ancestors:
B, C, and D

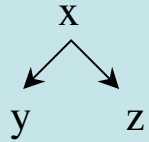
There are
global textual flows
from stemmatic ancestors

Local stemmata show the variants
in genealogical order.
The variant prior to the one
in a descendant can be determined.

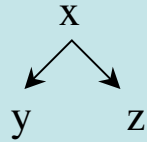
is part of it.

Local textual flows connect ancestors reading
the same variant or – if they do not agree –
ancestors reading **the variant prior**
to the one in the descendant.

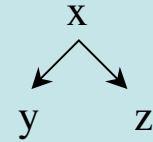
The local stemmata of variants (x, y, z) may be:



B, C, D and E support variant x.



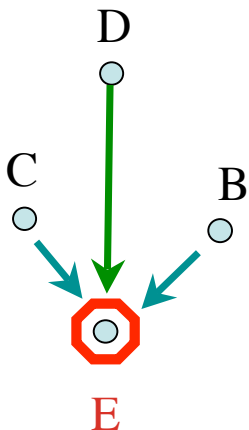
B, D and E support variant y. C reads variant z.



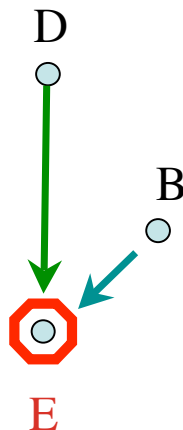
E reads variant y. B and C support variant x. D reads variant z.

local textual flows at 3 variant passages scenarios:

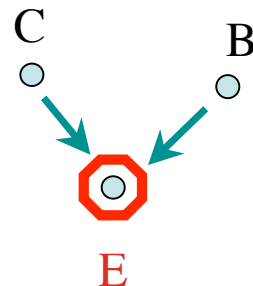
E reads the same variant as B, C and D.



E reads the same variant as B and D but disagrees with C.

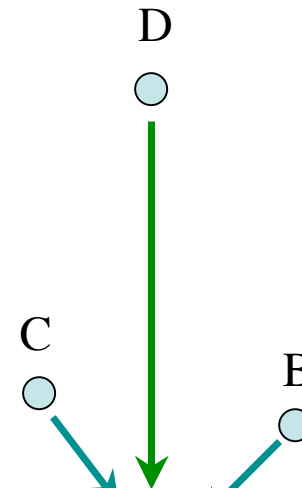


E changes the variant supported by B and C, and E disagrees with D.



optimal substemma of descendant E

stemmatic ancestors: B, C, and D



There are **global textual flows** from stemmatic ancestors

Local stemmata show the variants in genealogical order. The variant prior to the one in a descendant can be determined.

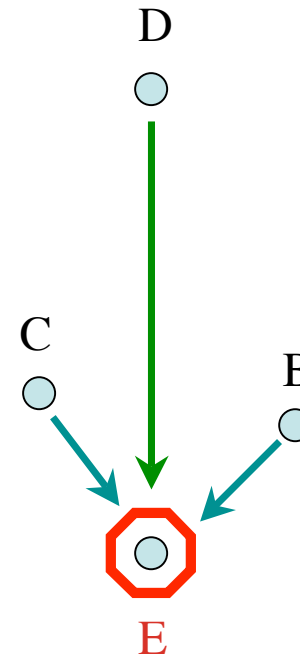
Local textual flows connect ancestors reading the same variant or – if they do not agree – ancestors reading **the variant prior** to the one in the descendant.

At each variant passage,
all **global textual flows**
or a subset of them correspond
to **local textual flows**.

At each variant passage,
local textual flows lead from
all ancestors or a subset of them
to the descendant.

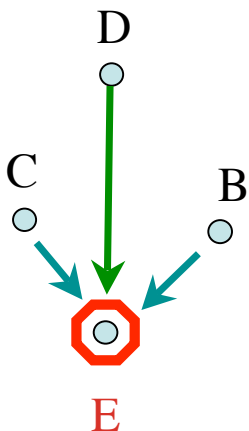
optimal substemma
of descendant E

stemmatic ancestors:
B, C, and D

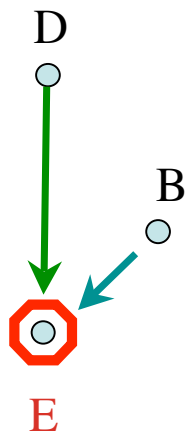


local textual flows at 3 variant passages
scenarios:

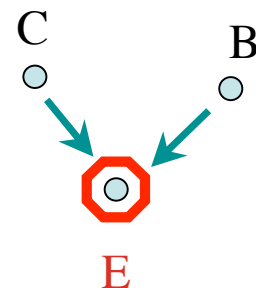
E reads
the same variant
as B, C and D.



E reads
the same variant
as B and D
but disagrees
with C.



E changes
the variant
supported
by B and C,
and E disagrees
with D.



The following statement is true
for each local textual flow:
The descendant agrees with at least one of the
stemmatic ancestors
or
the descendant reads a variant which has
developed from the variant in at least
one of the stemmatic ancestors.

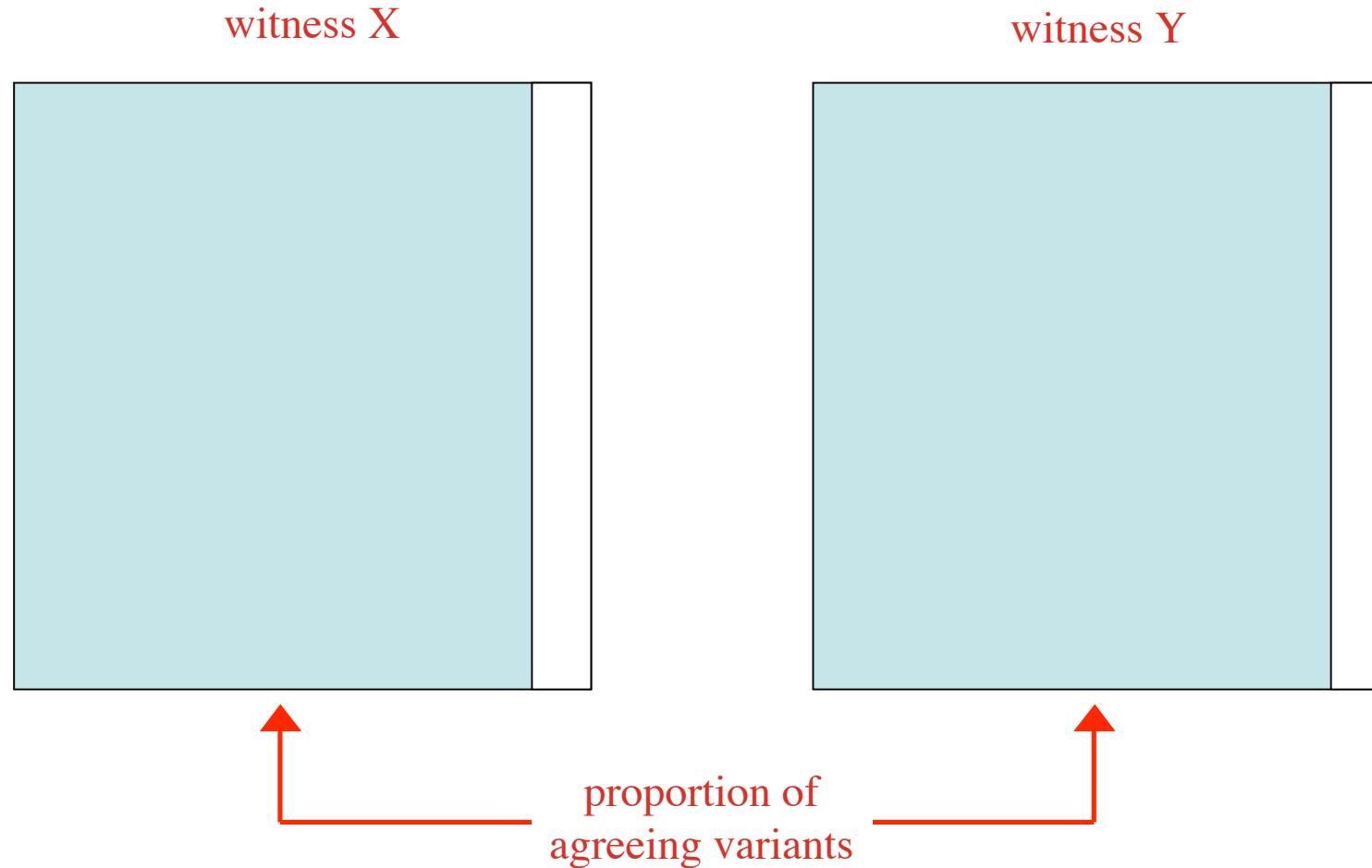
Types of coherence

pre-genealogical

genealogical

stemmatic

Pre-genealogical coherence

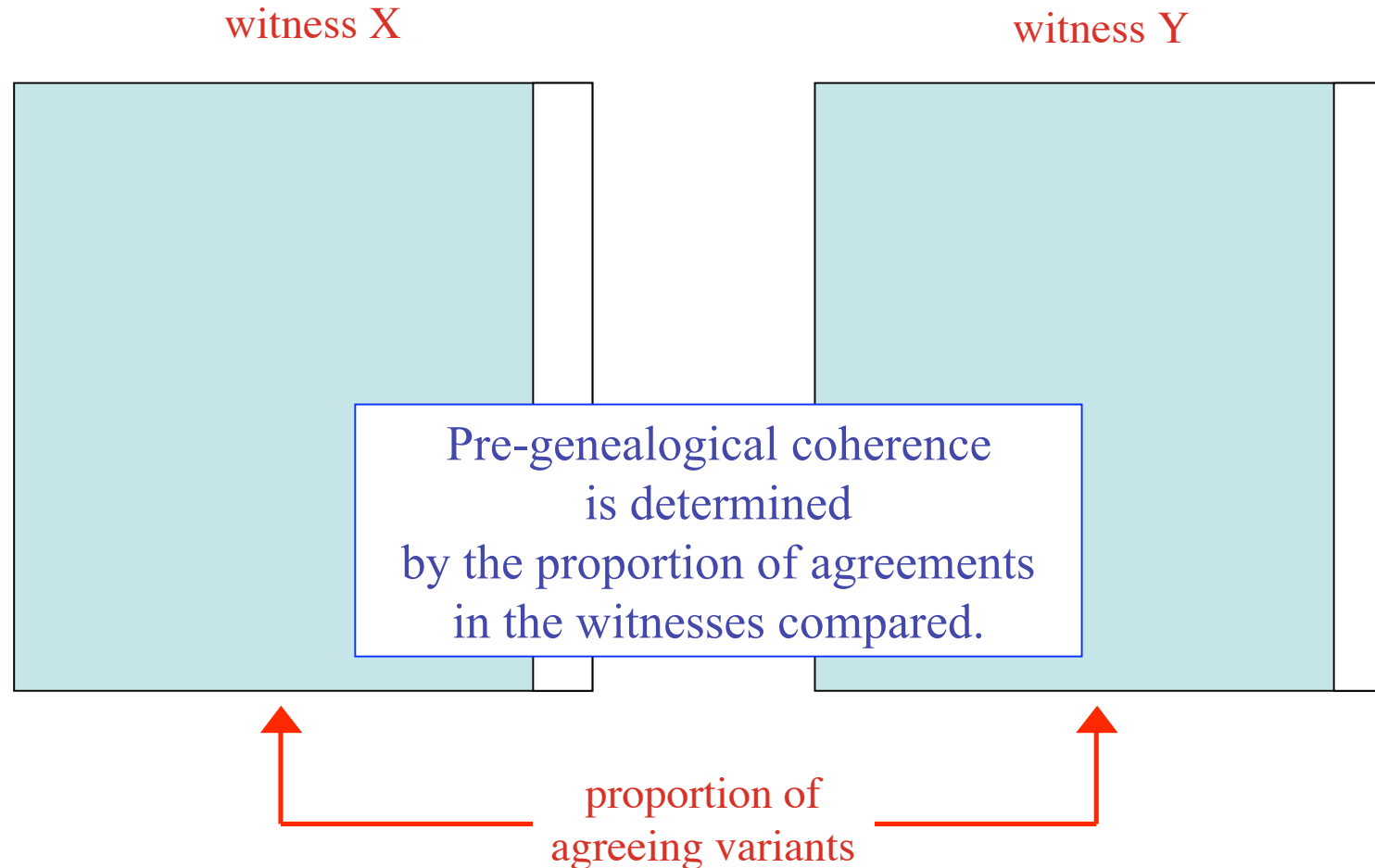


Pre-genealogical coherence is based on the agreements of witnesses only.

It does not presuppose any genealogical input.

We can use it immediately after transferring the collated material into a database.

Pre-genealogical coherence

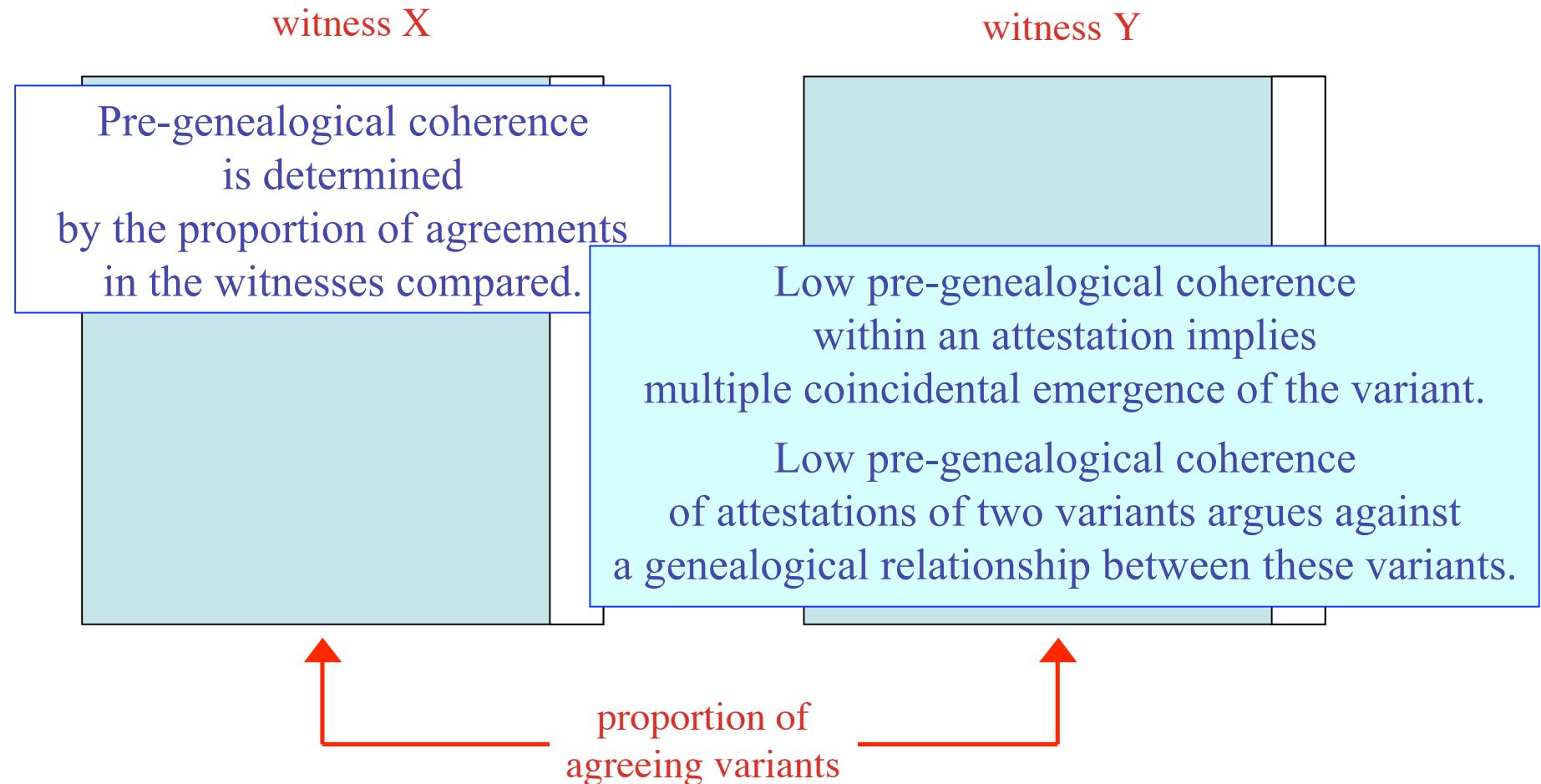


Pre-genealogical coherence is based on the agreements of witnesses only.

It does not presuppose any genealogical input.

We can use it immediately after transferring the collated material into a database.

Pre-genealogical coherence

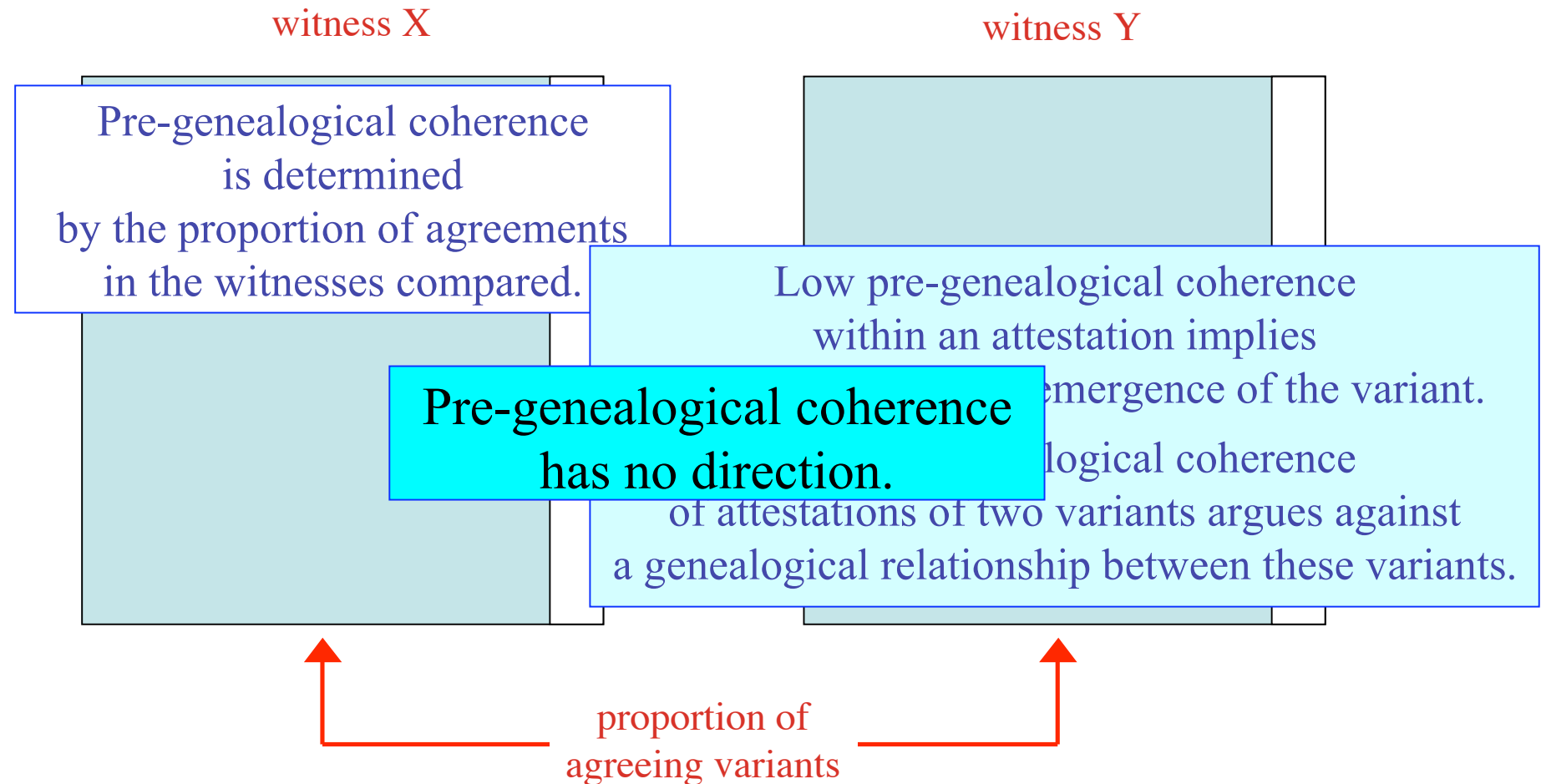


Pre-genealogical coherence is based on the agreements of witnesses only.

It does not presuppose any genealogical input.

We can use it immediately after transferring the collated material into a database.

Pre-genealogical coherence

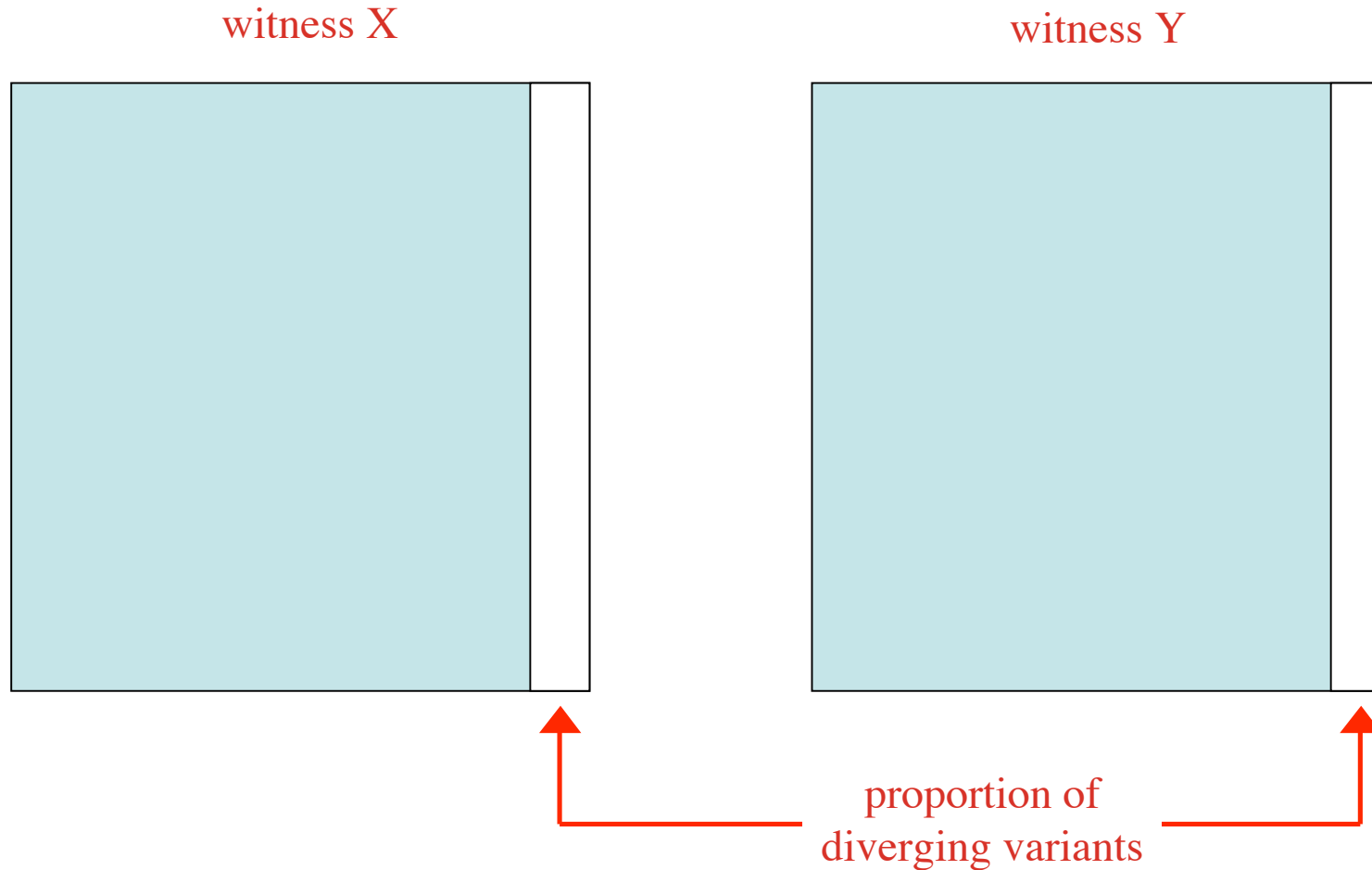


Pre-genealogical coherence is based on the agreements of witnesses only.

It does not presuppose any genealogical input.

We can use it immediately after transferring the collated material into a database.

Genealogical coherence

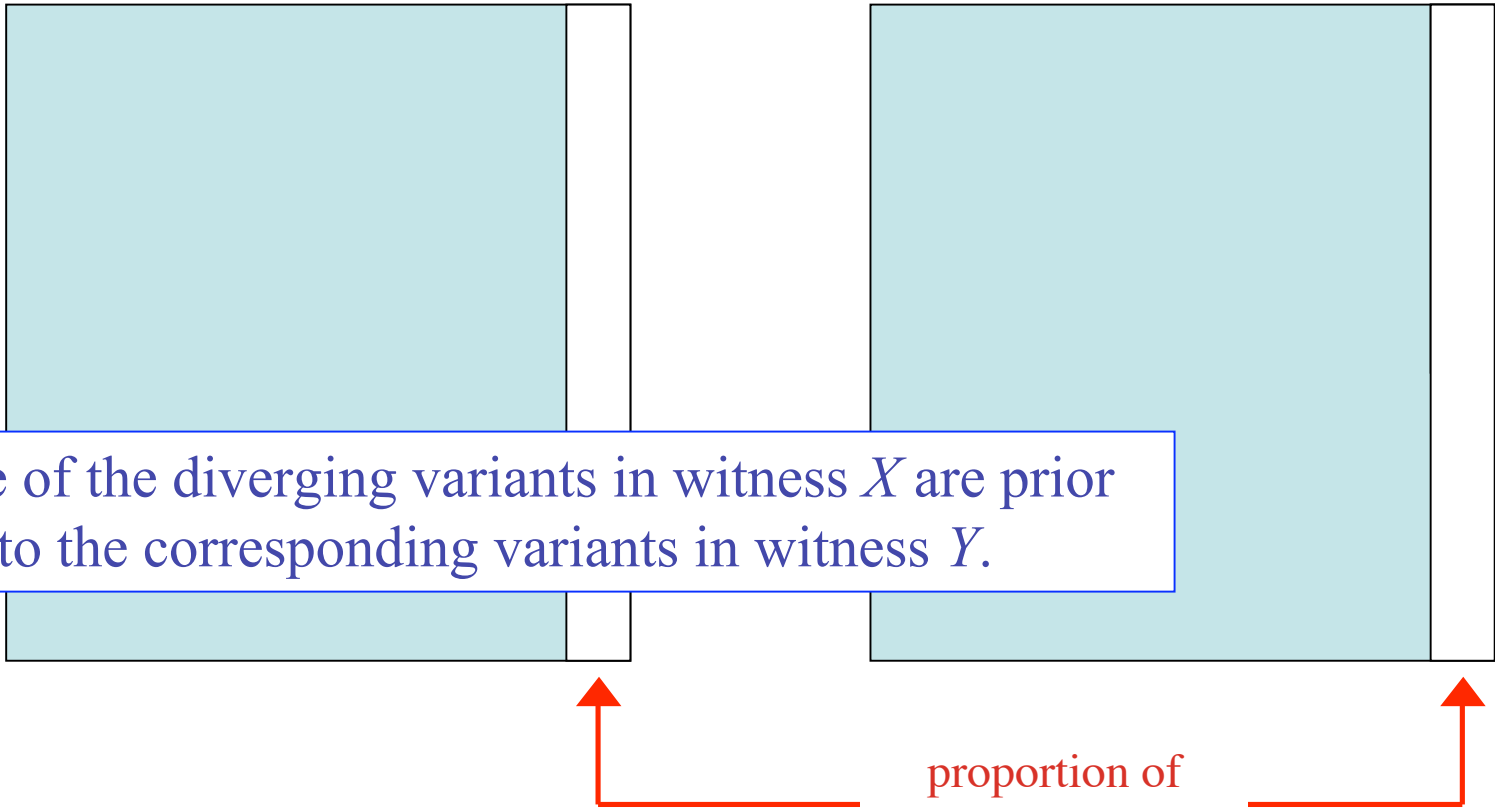


Genealogical coherence is based on agreements and the genealogical relationship between the diverging variants in the witnesses compared.

Genealogical coherence

witness X

witness Y



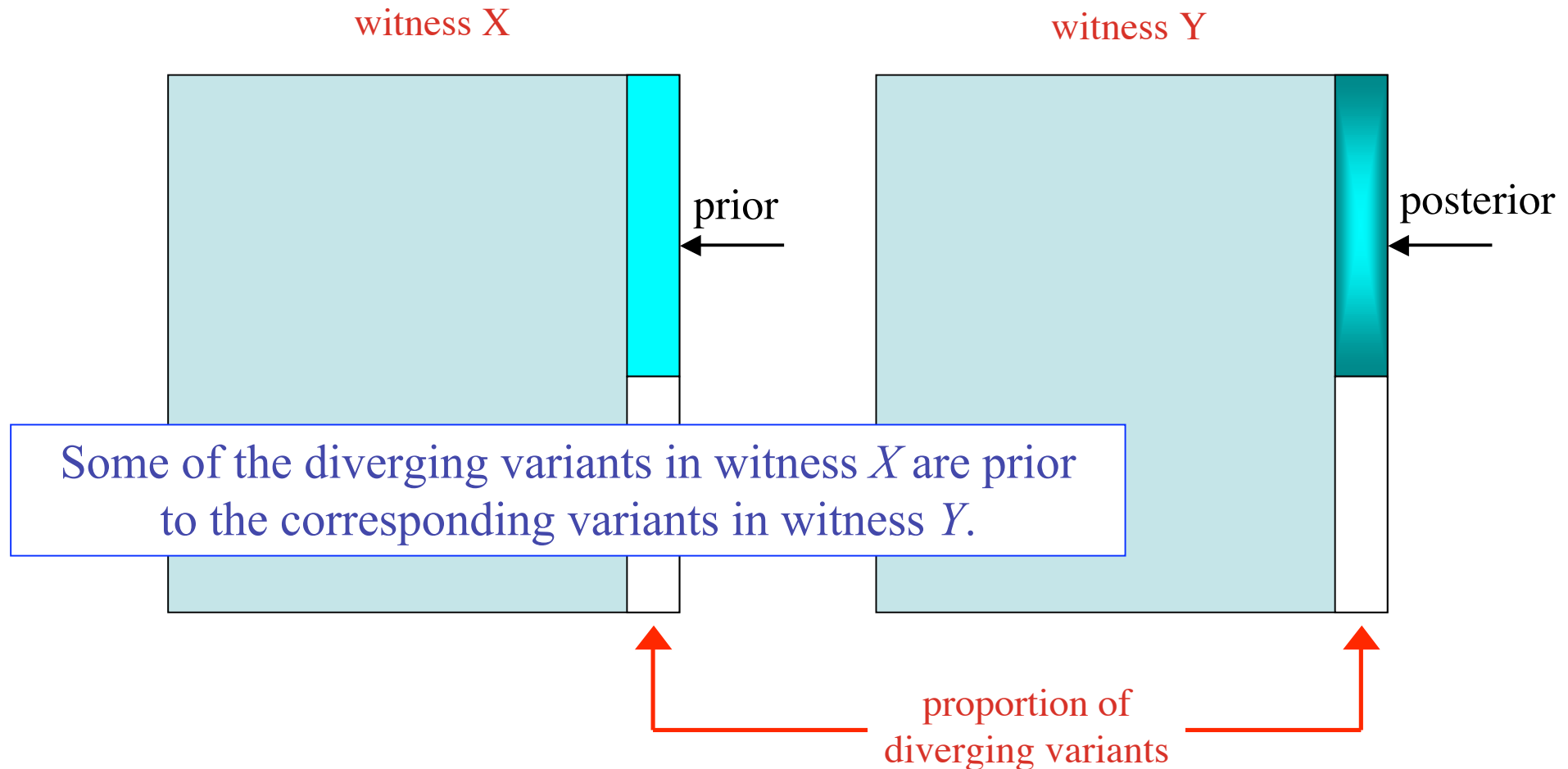
Some of the diverging variants in witness *X* are prior to the corresponding variants in witness *Y*.

proportion of
diverging variants

Genealogical coherence is based on agreements and the genealogical relationship between the diverging variants in the witnesses compared.

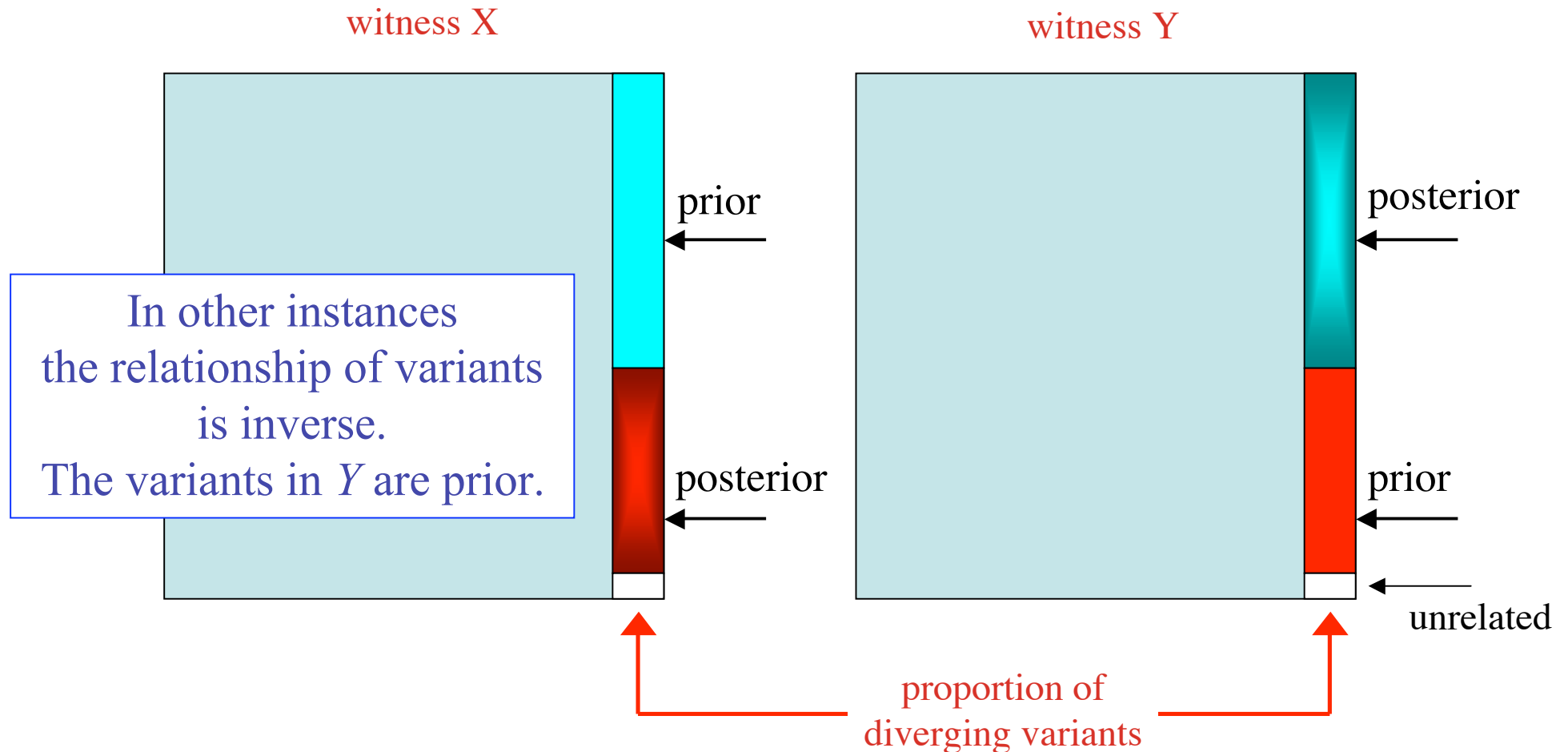
[Contents](#) | [Index](#)

Genealogical coherence



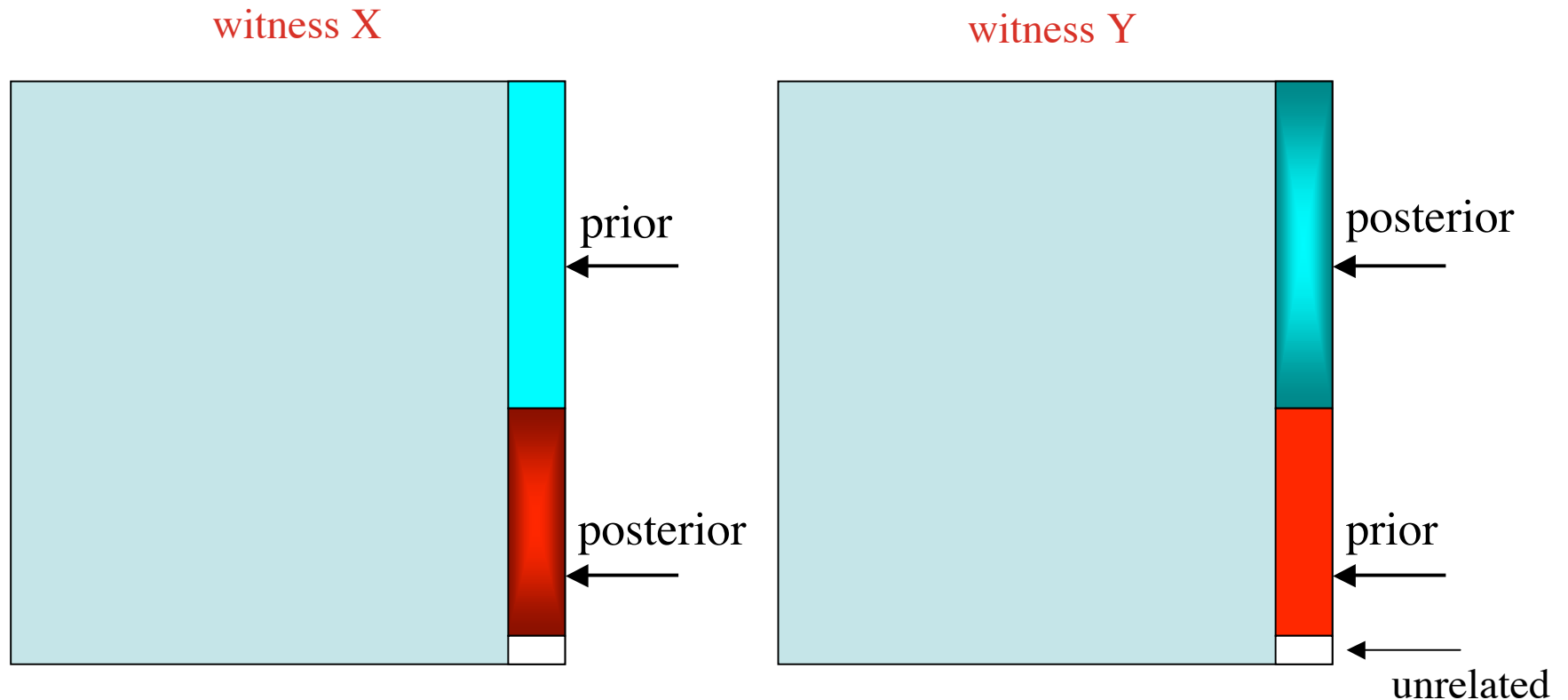
Genealogical coherence is based on agreements and the genealogical relationship between the diverging variants in the witnesses compared.

Genealogical coherence



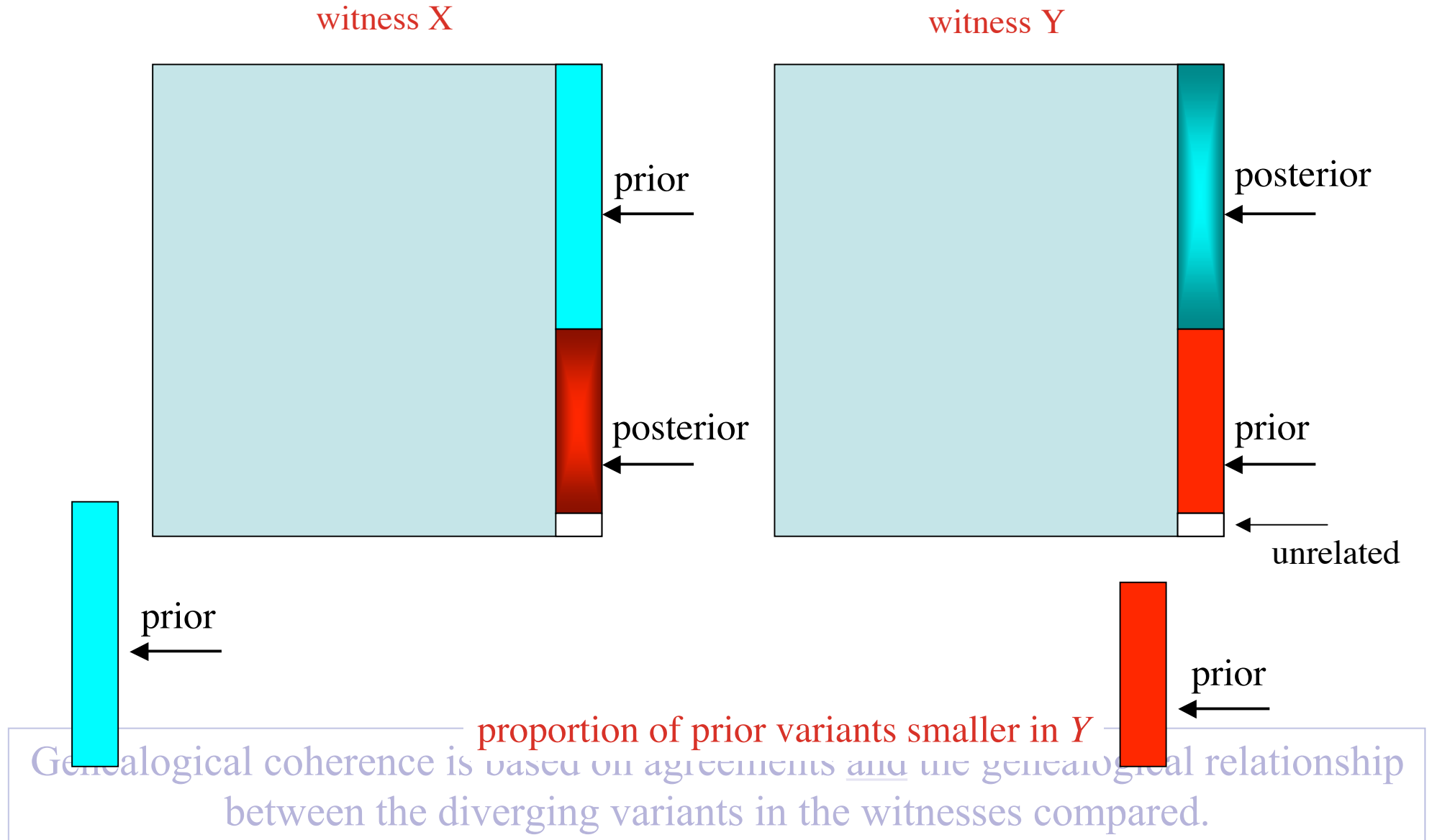
Genealogical coherence is based on agreements and the genealogical relationship between the diverging variants in the witnesses compared.

Genealogical coherence

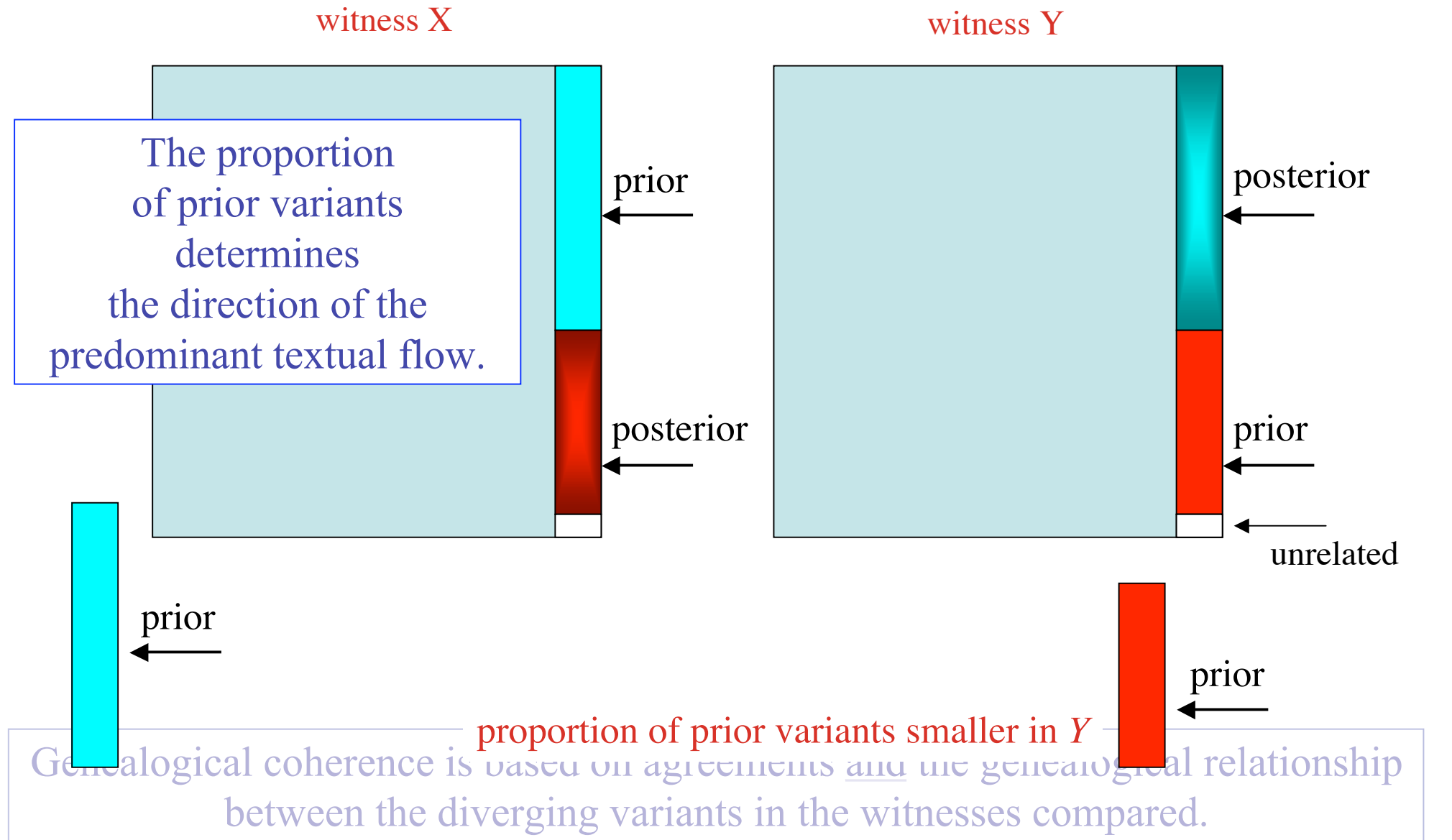


Genealogical coherence is based on agreements and the genealogical relationship between the diverging variants in the witnesses compared.

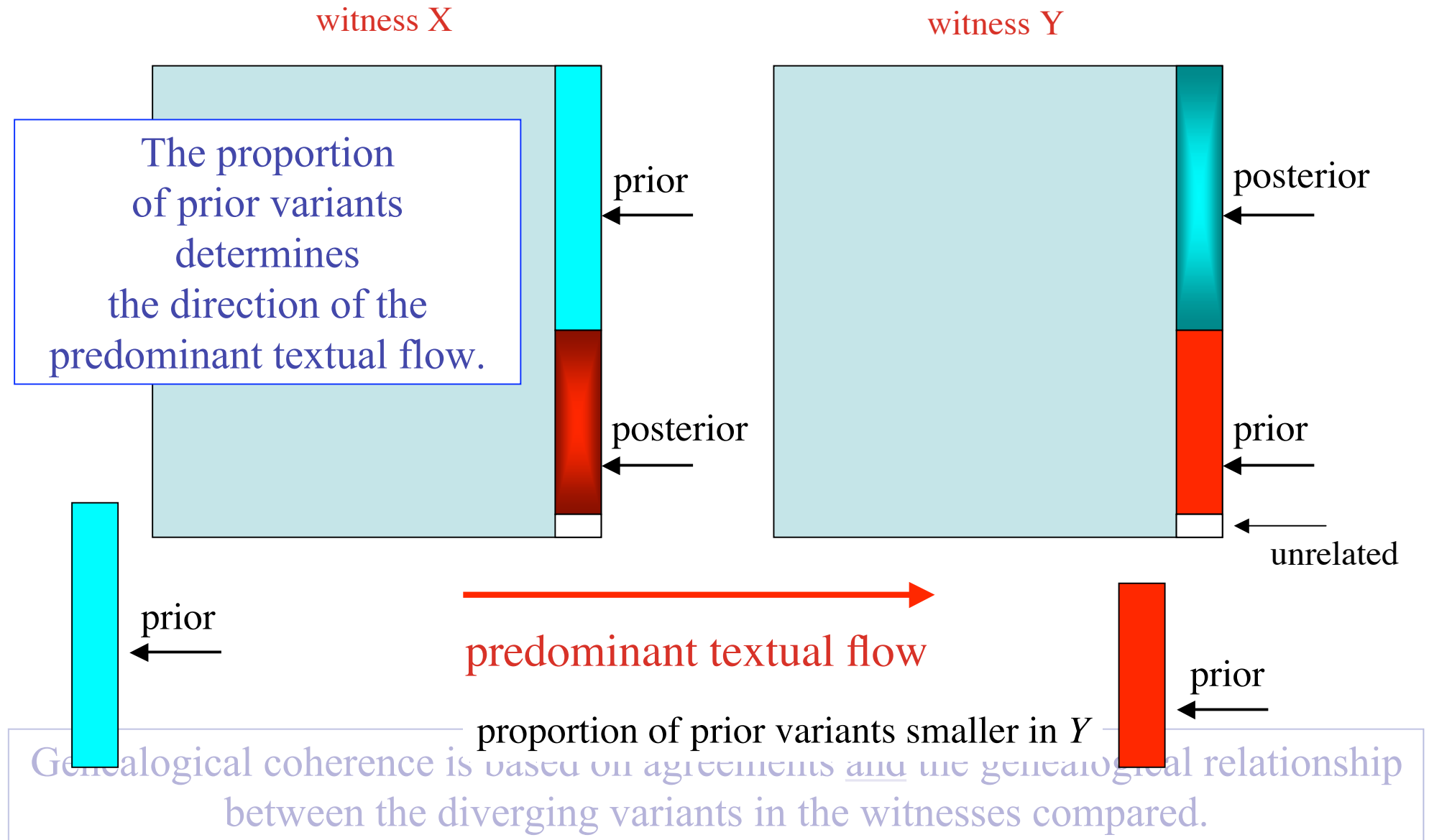
Genealogical coherence



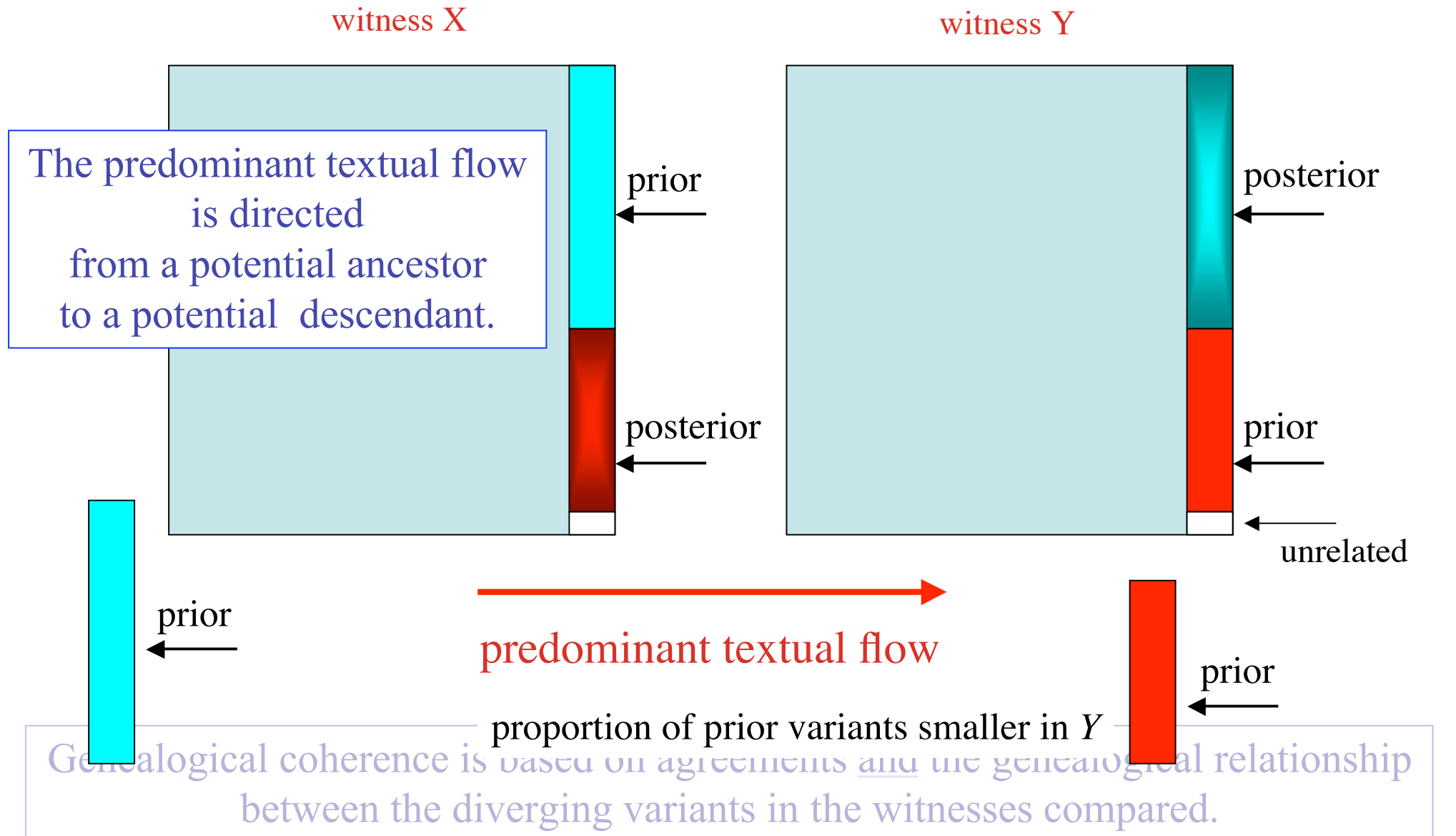
Genealogical coherence



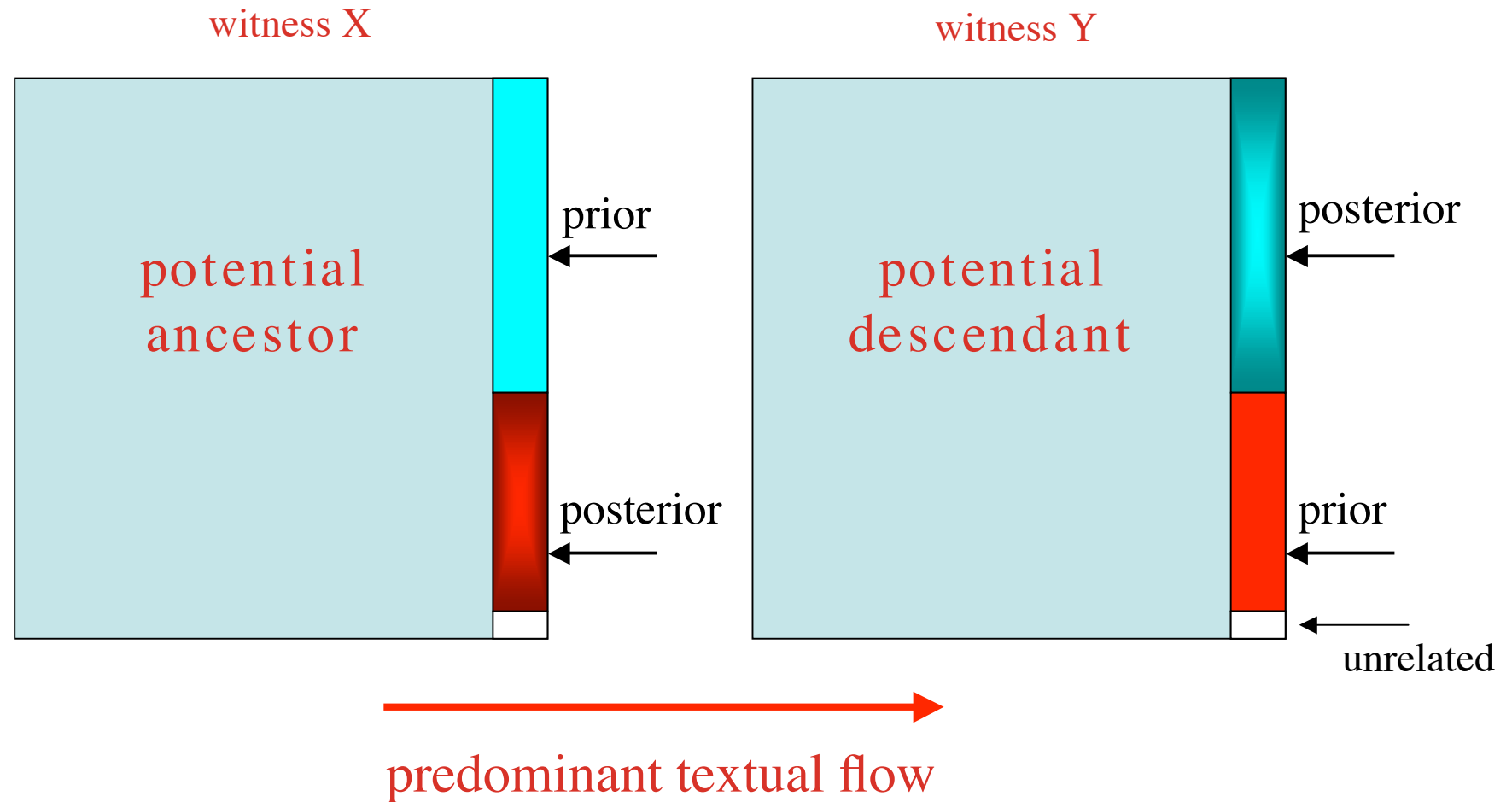
Genealogical coherence



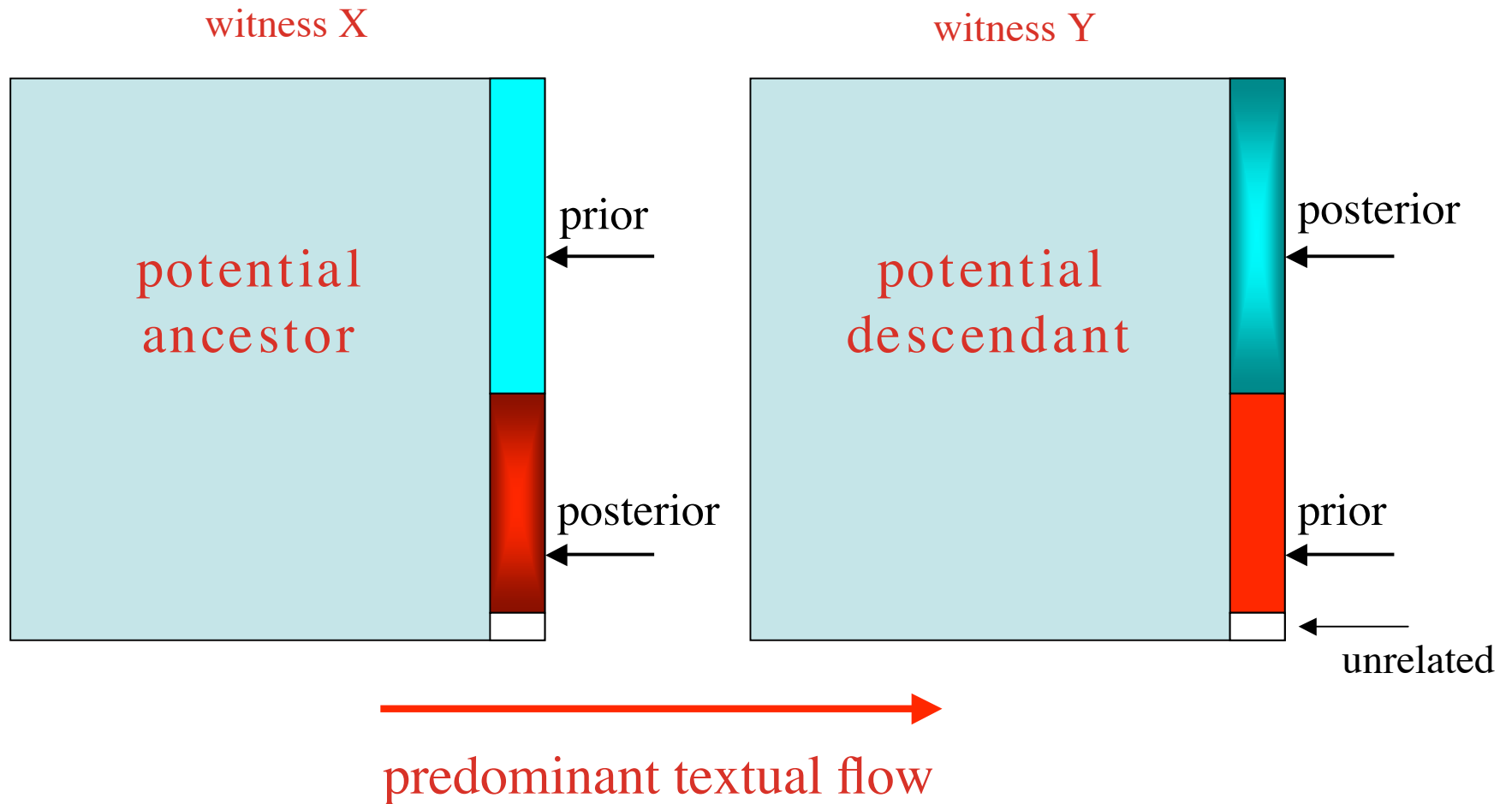
Genealogical coherence



Genealogical coherence

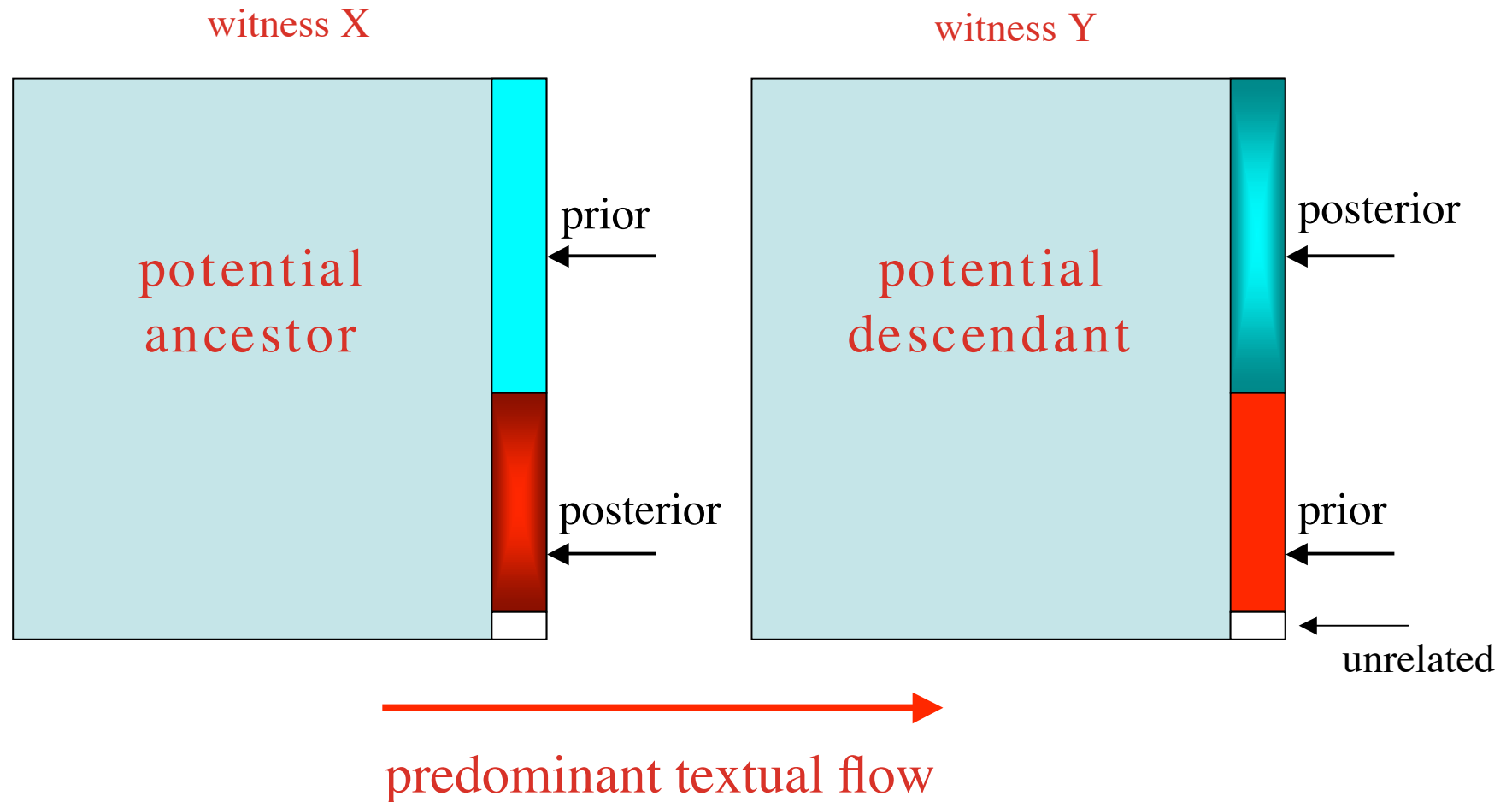


Genealogical coherence



Genealogical coherence is directed.

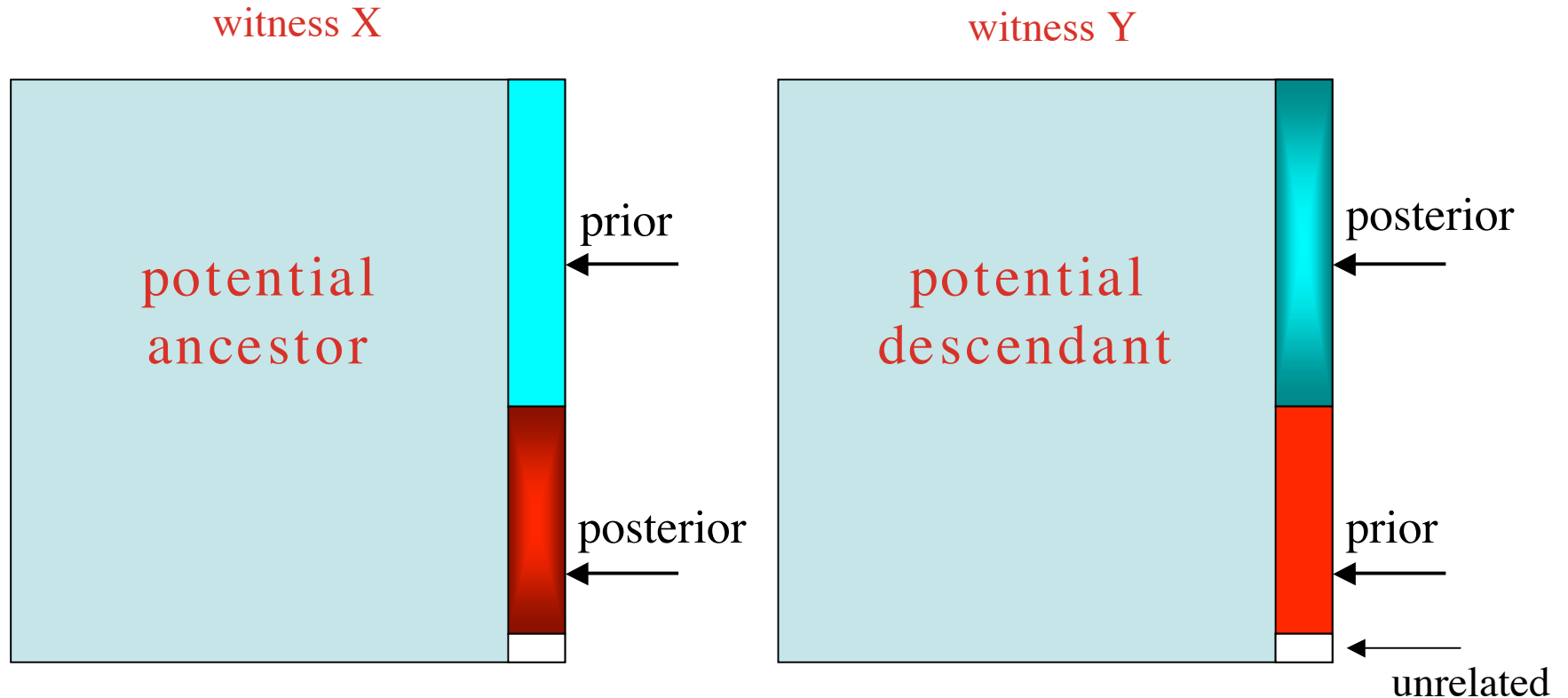
Genealogical coherence



Genealogical coherence is directed.

Exception: The proportion of prior variants in X and Y is equal.

Genealogical coherence



For undirected genealogical coherencies,
cf. Mink (2004), 63-67.

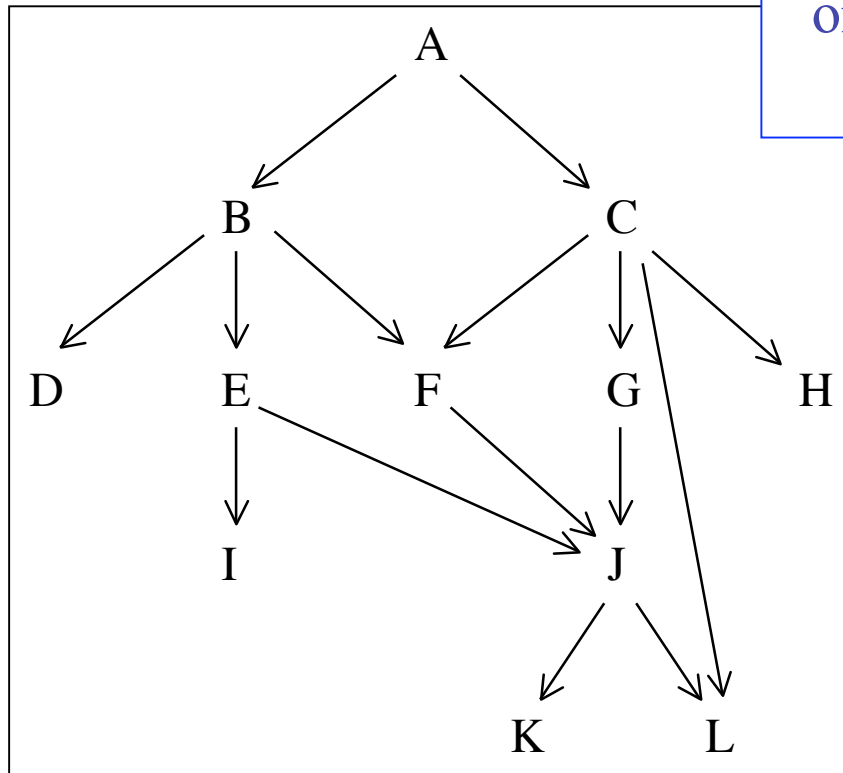
Genealogical coherence is directed.

Exception: The proportion of prior variants in X and Y is equal.

[Contents](#) | [Index](#)

Stemmatic coherence

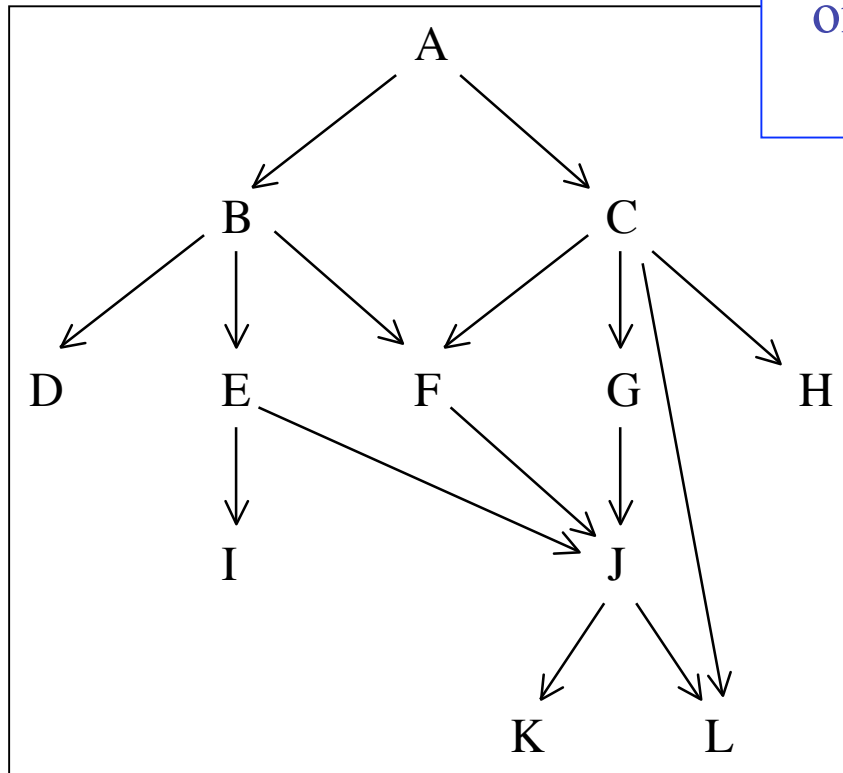
stemma of witnesses



Stemmatic coherence is based on the genealogical relationship of witnesses in an optimal substemma.

Stemmatic coherence

stemma of witnesses



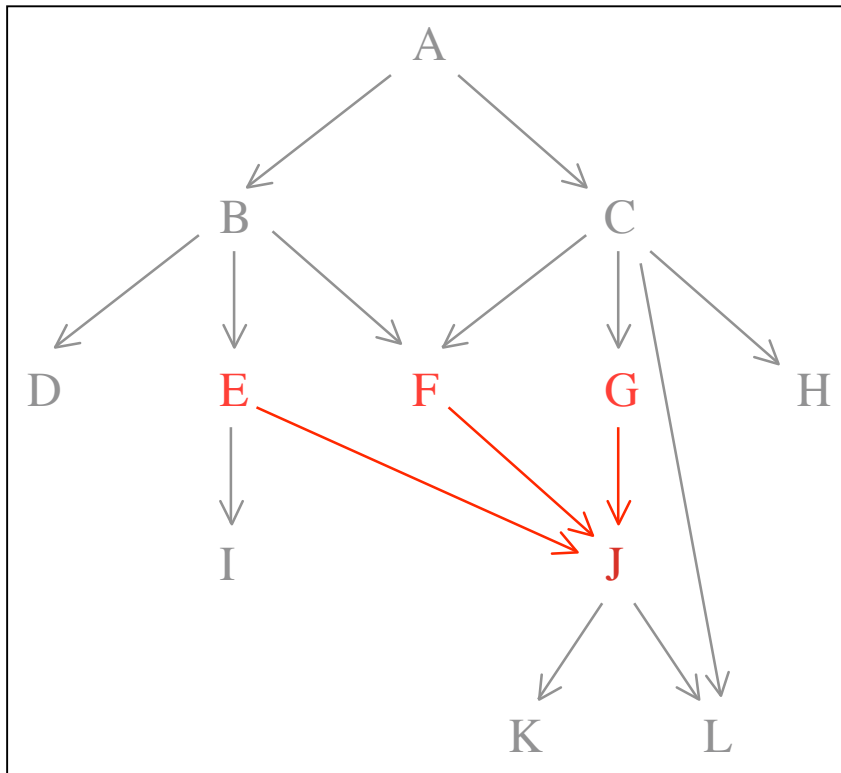
Stemmatic coherence is based on the genealogical relationship of witnesses in an optimal substemma.

The substemma is optimal if the number of ancestors necessary to explain all variants in a descendant is as small as possible.

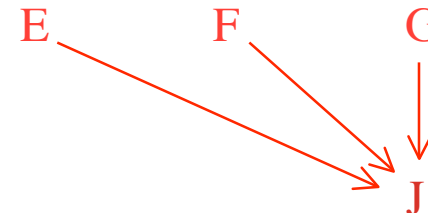
[Contents](#) | [Index](#)

Stemmatic coherence

stemma of witnesses



substemma



The substemma is optimal if the number of ancestors necessary to explain all variants in a descendant is as small as possible.

Optimal substemma

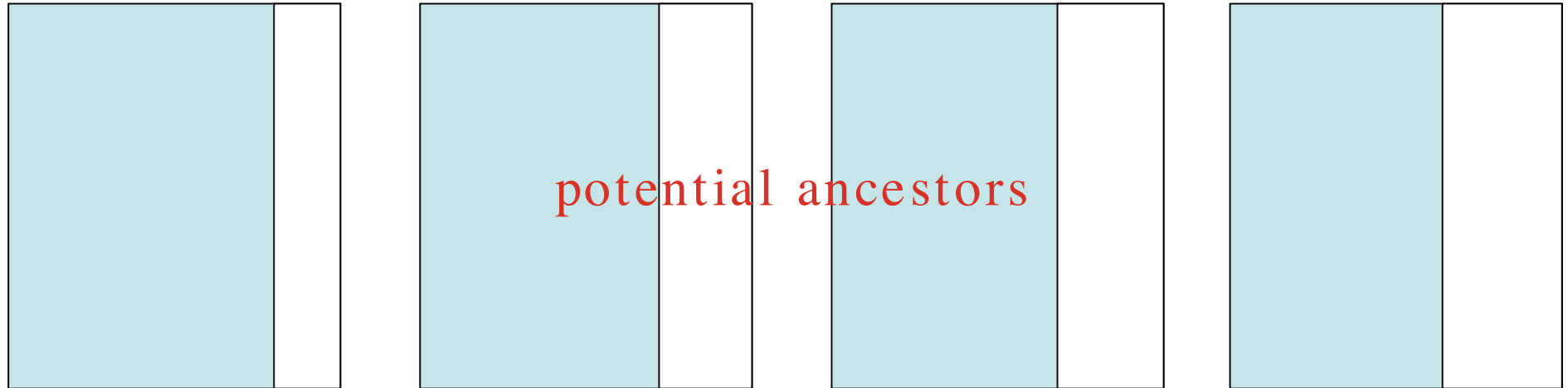
The stemmatic ancestors
– ancestors in an optimal substemma –
are to be searched among the potential ancestors,
the witnesses with a higher proportion of prior variants.



descendant

A diagram consisting of a large, empty square box with a black border. The word "descendant" is written in red, lowercase letters in the center of the box.

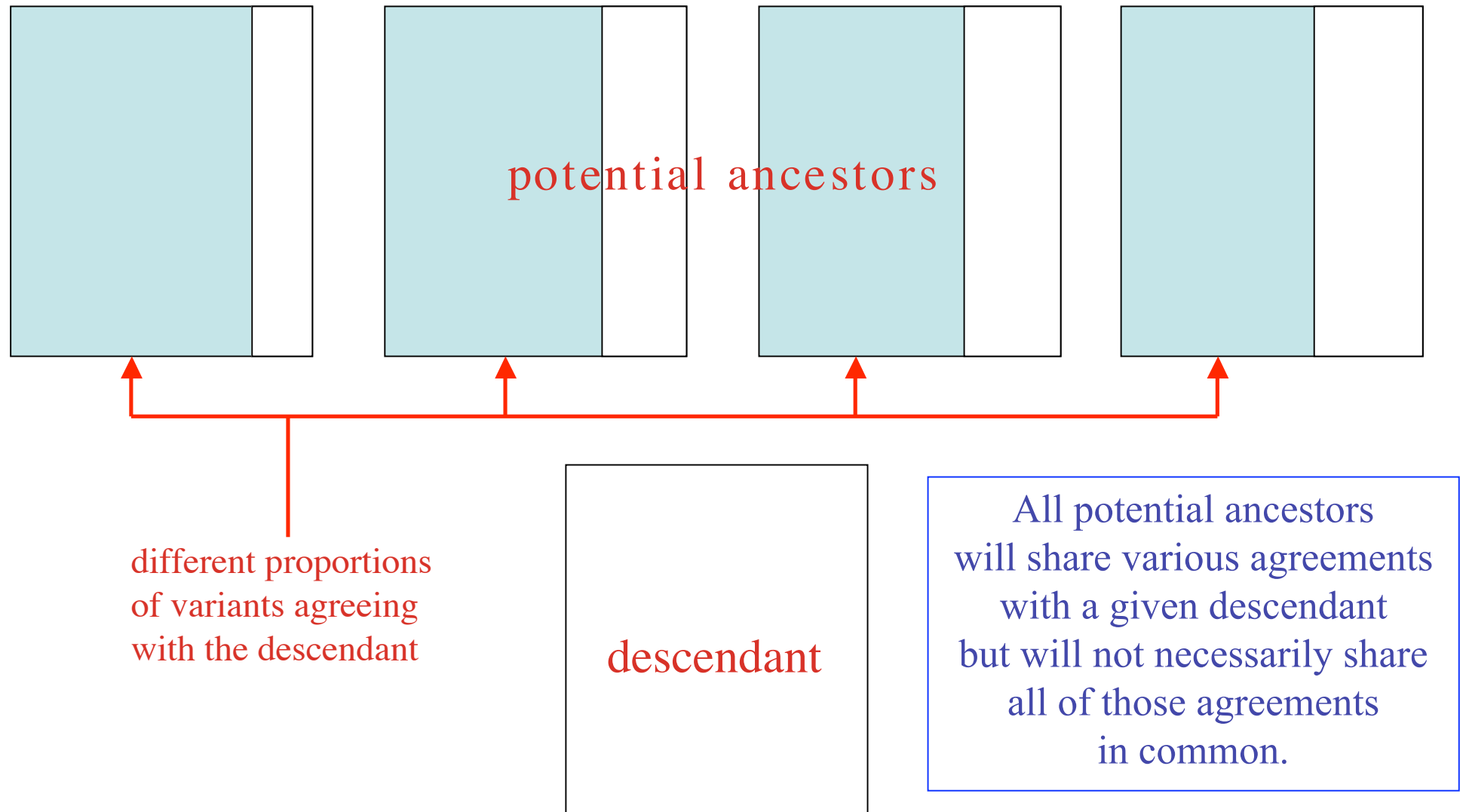
Optimal subtemma



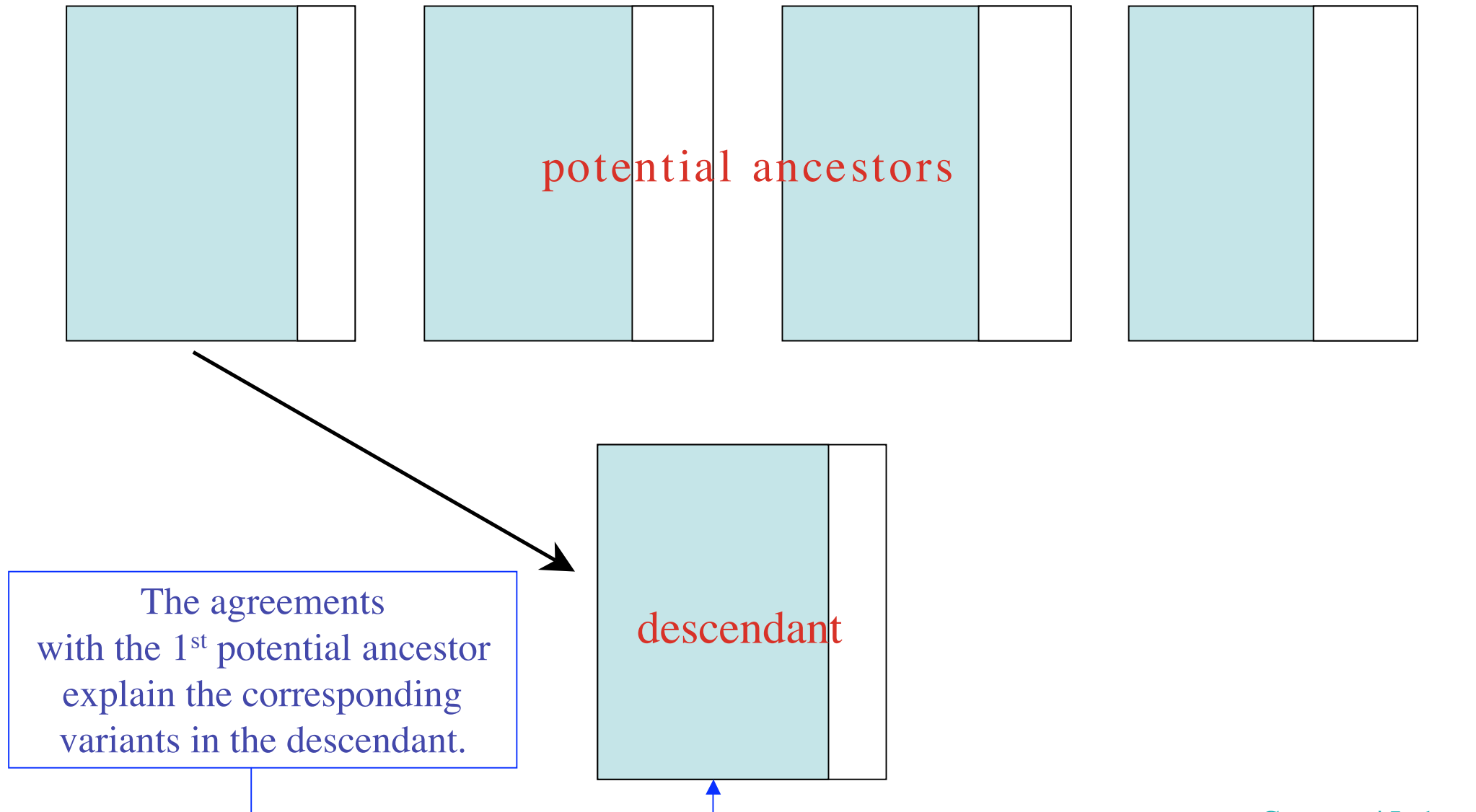
descendant

All potential ancestors
will share various agreements
with a given descendant
but will not necessarily share
all of those agreements
in common.

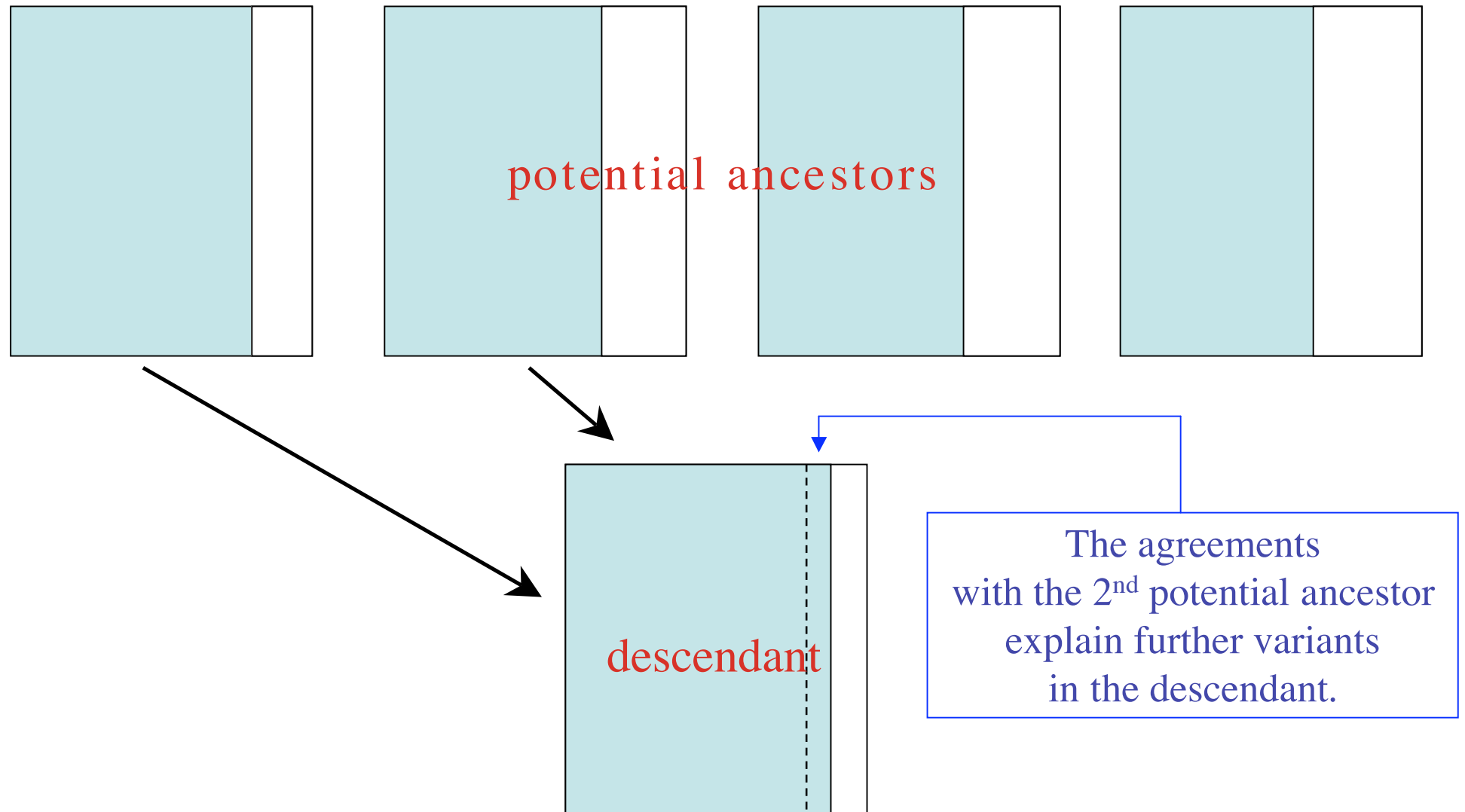
Optimal subtemma



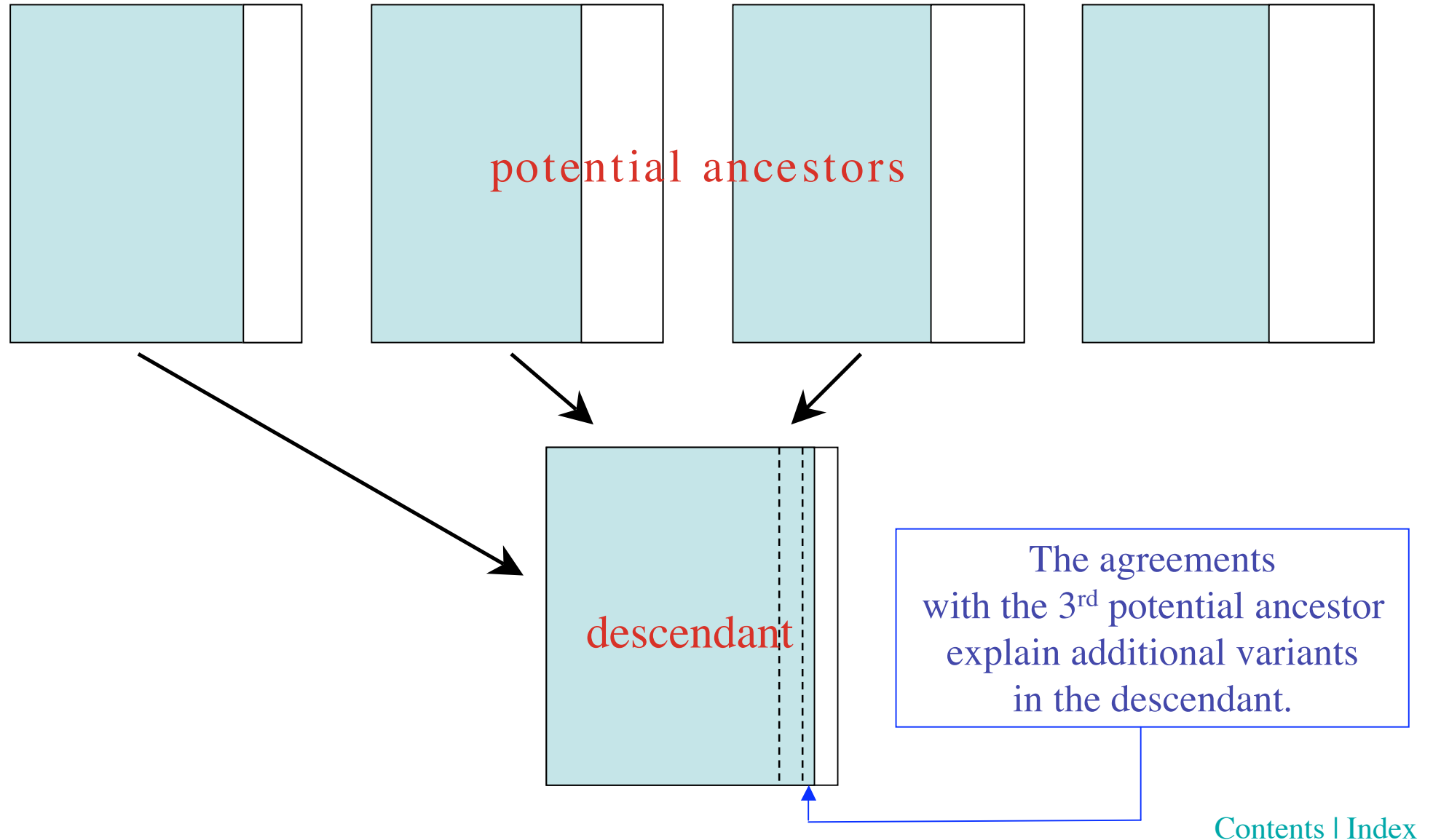
Optimal substemma



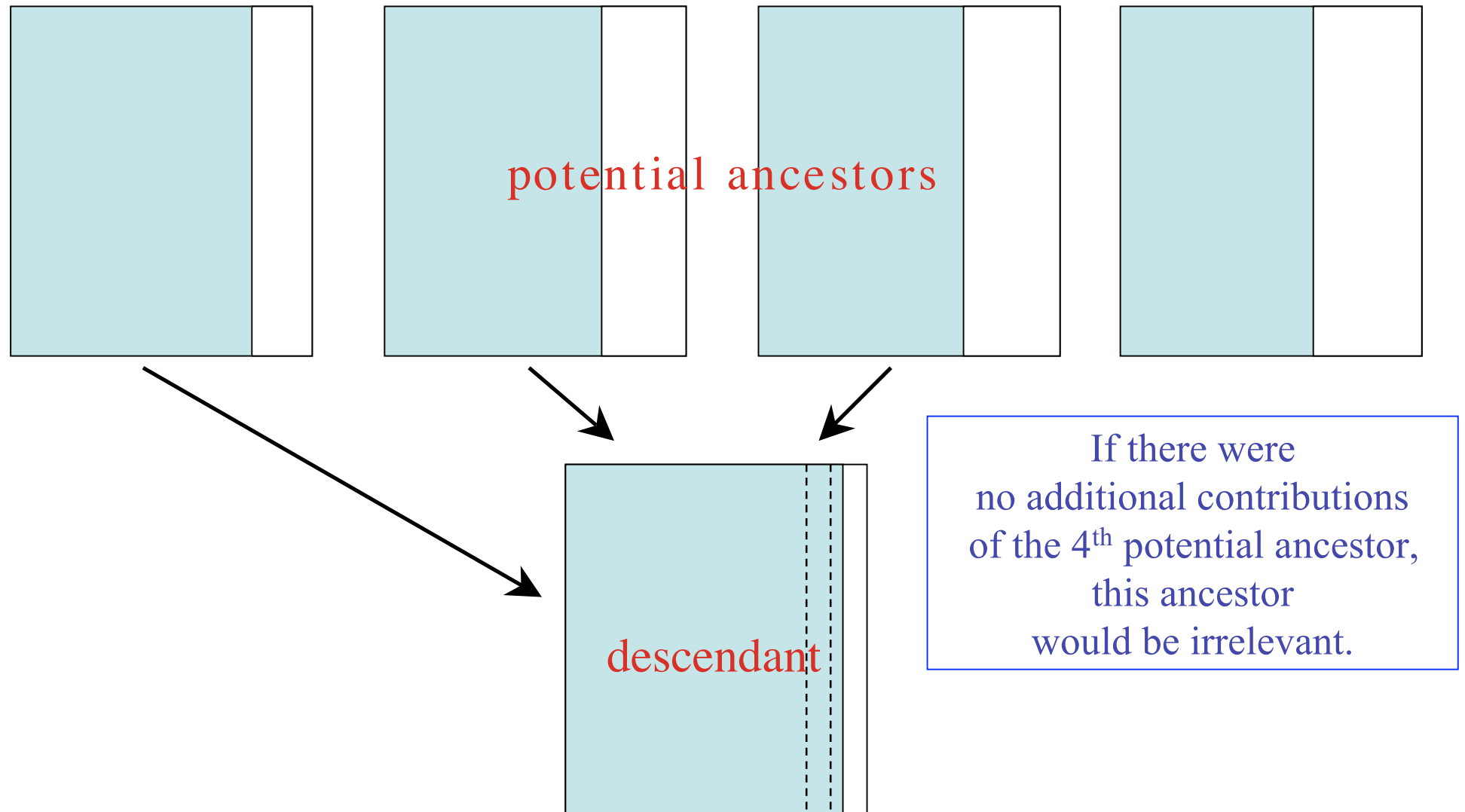
Optimal subtemma



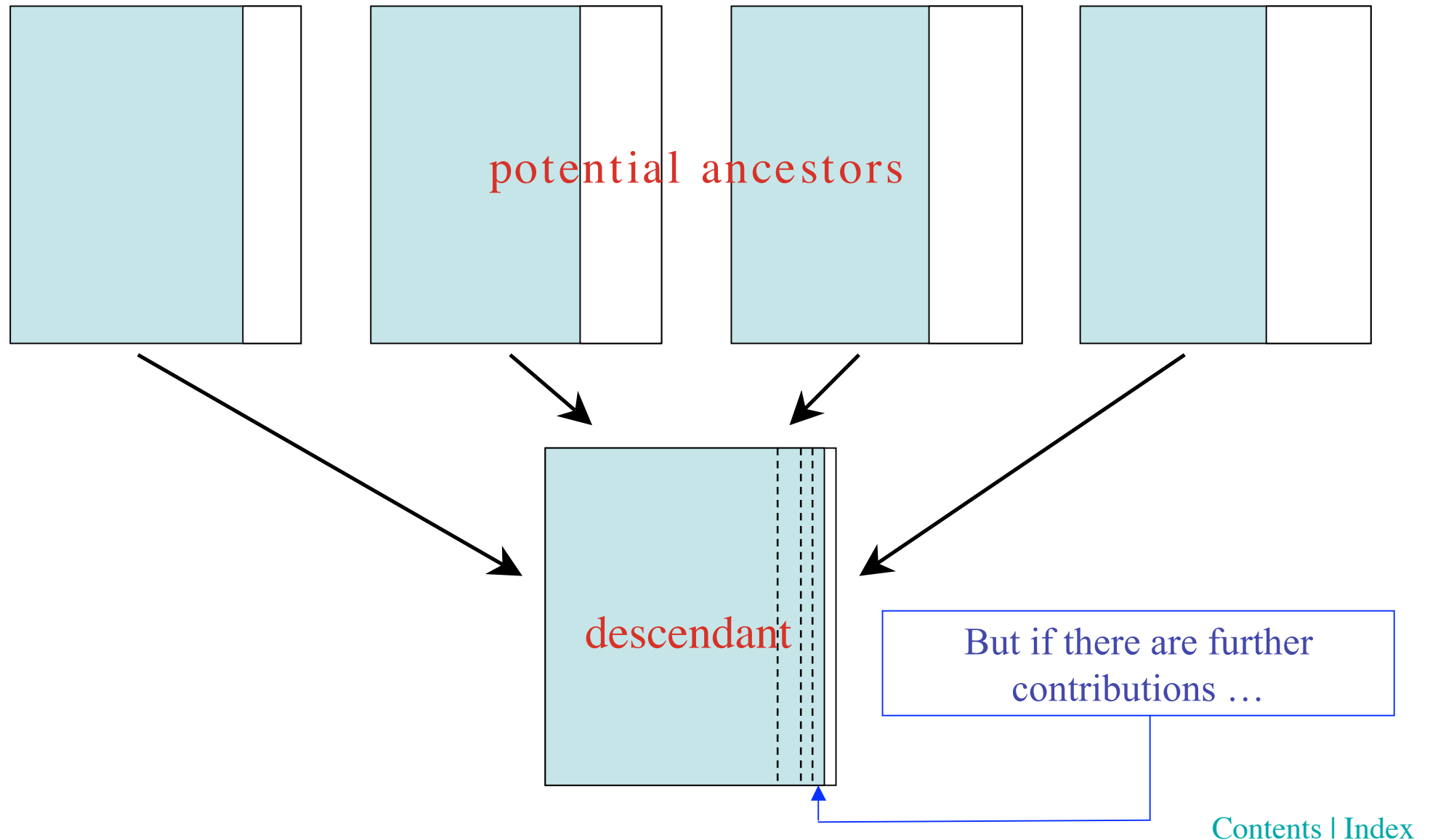
Optimal subtemma



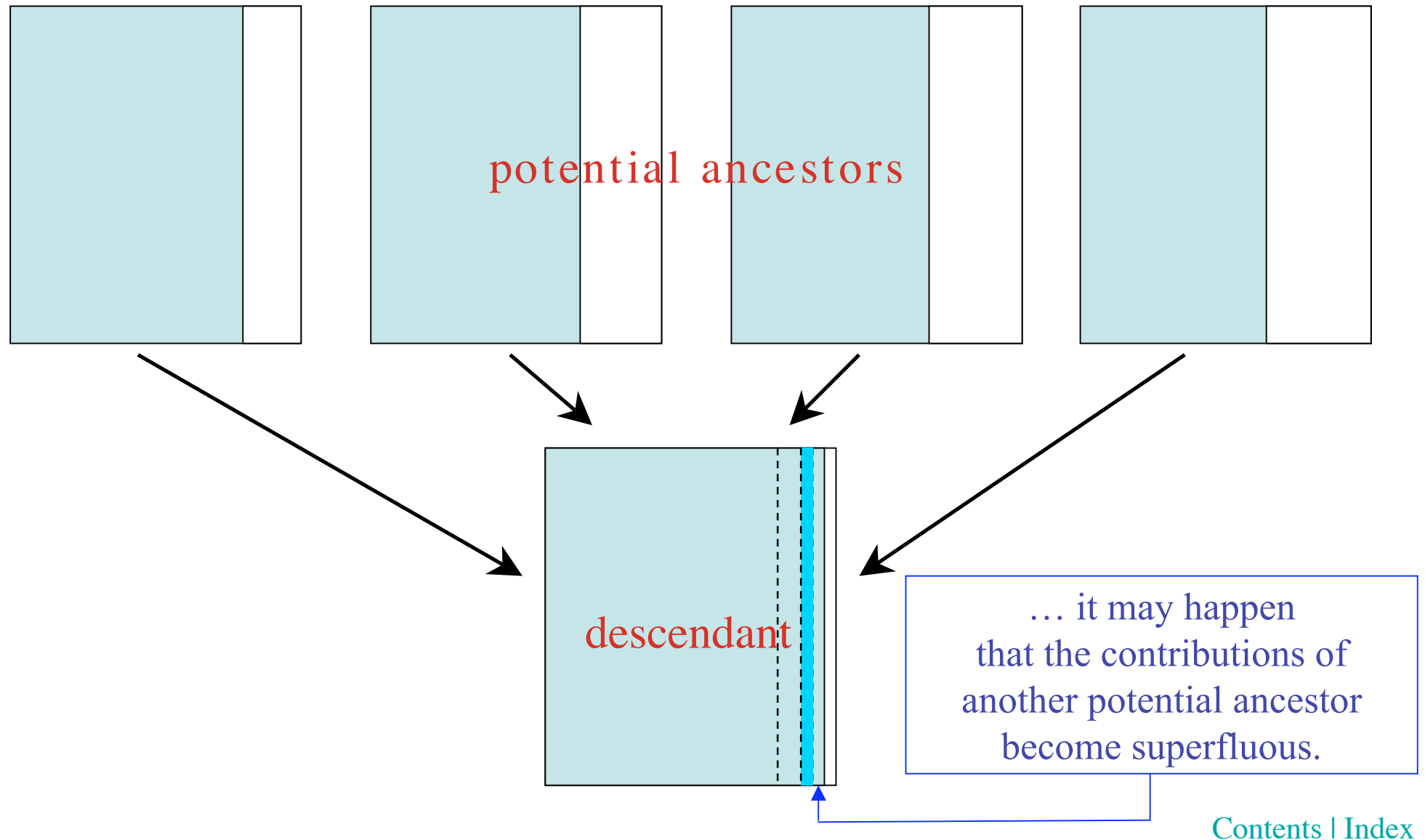
Optimal subtemma



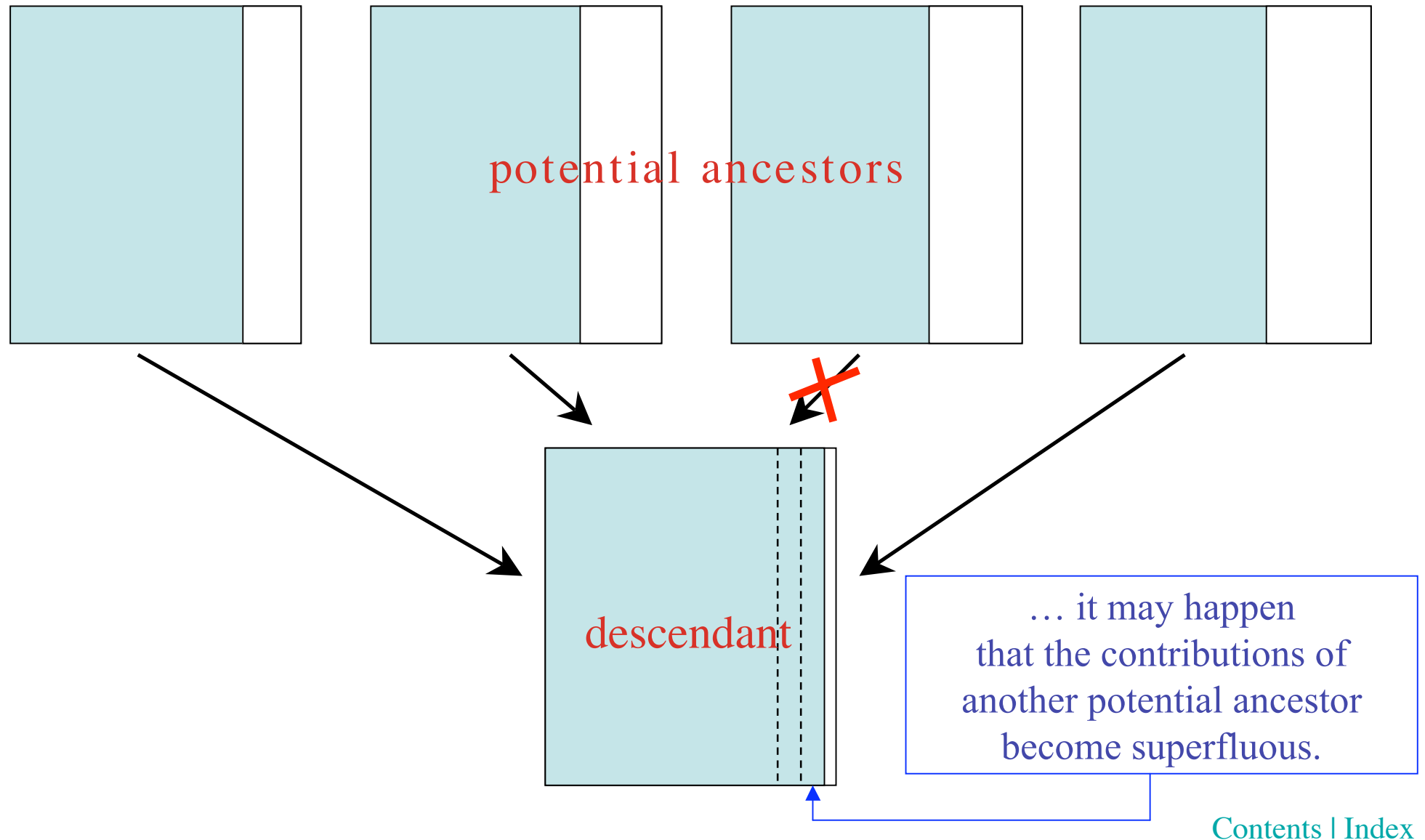
Optimal substemma



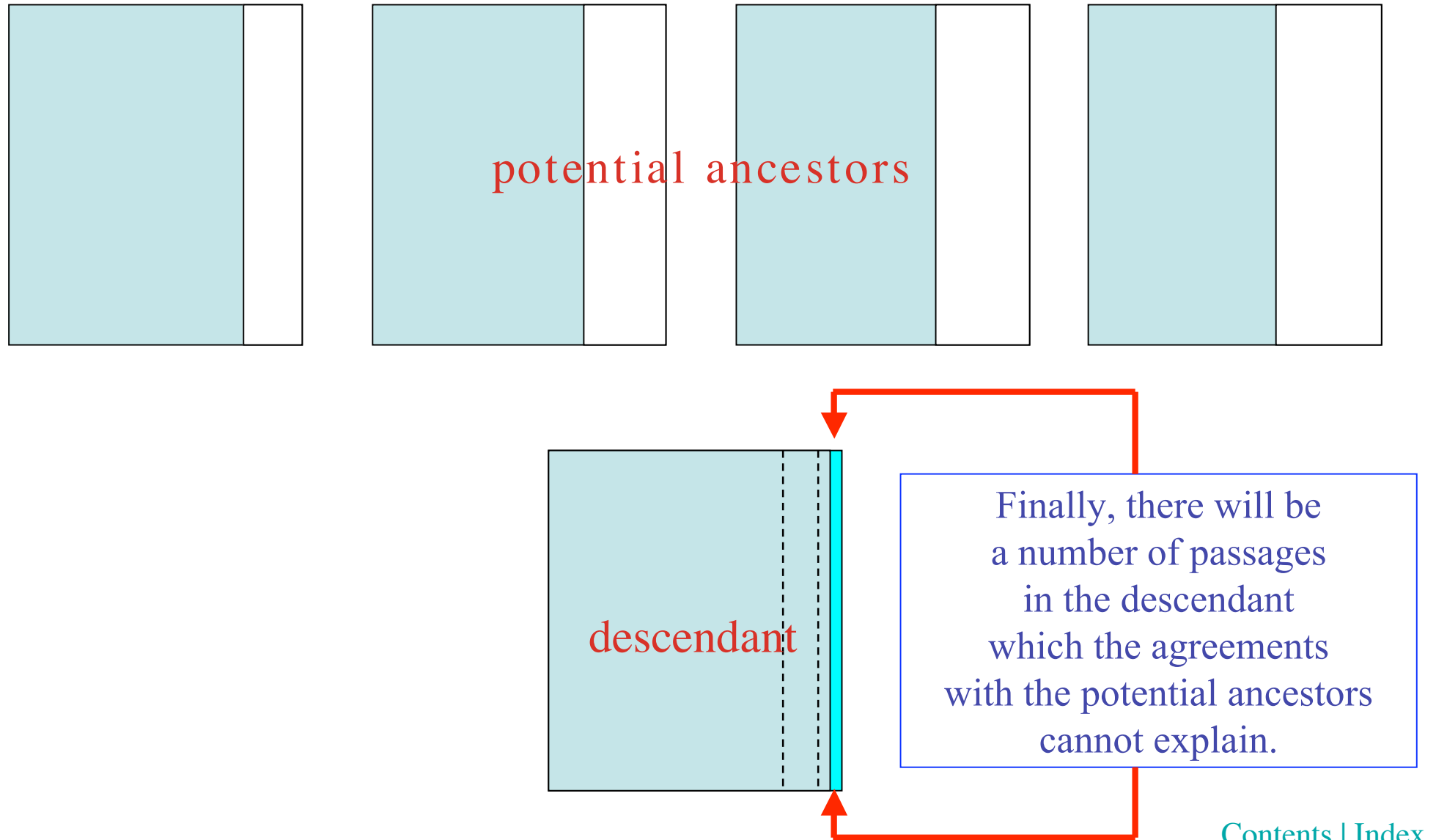
Optimal subtemma



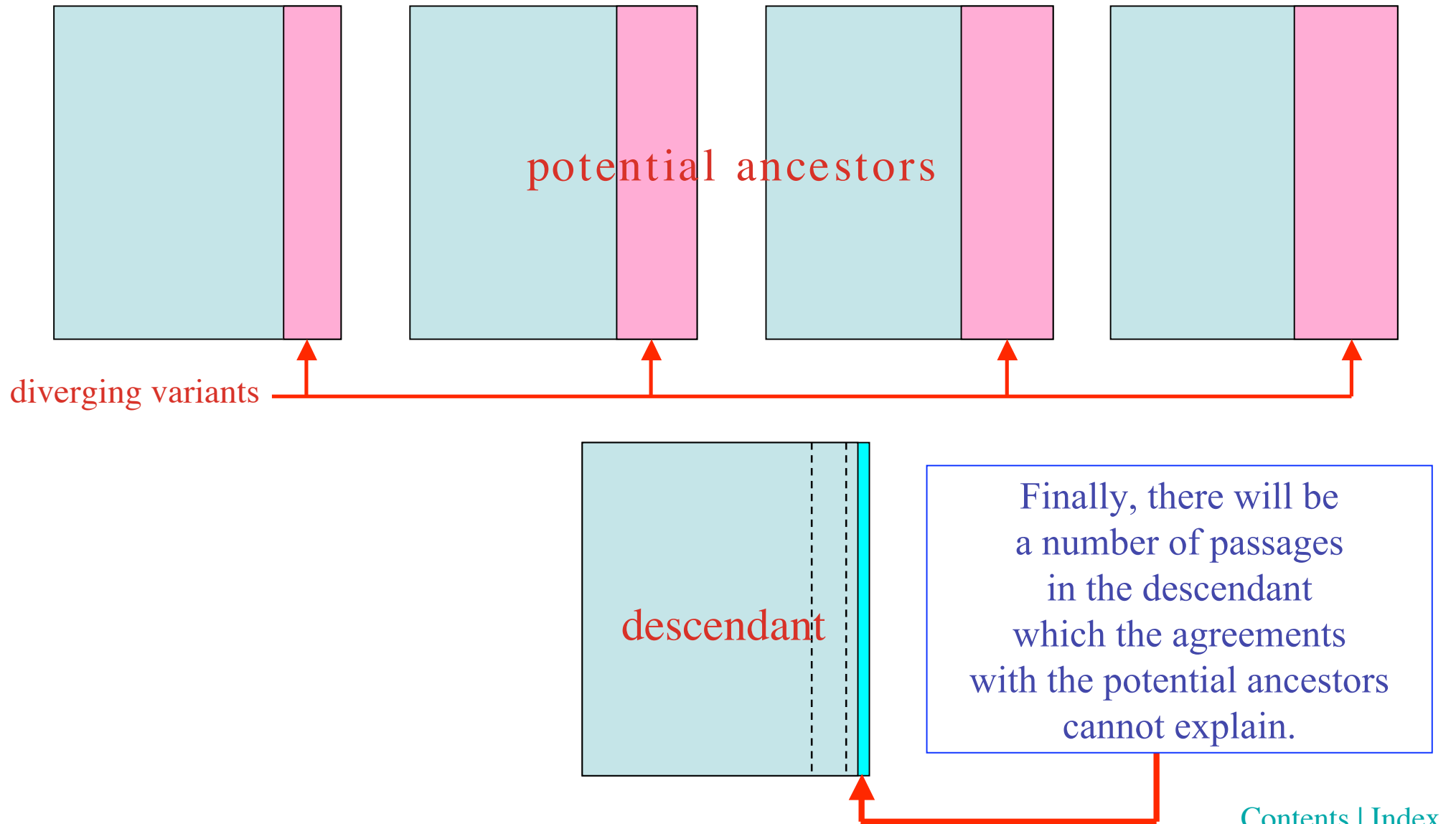
Optimal substemma



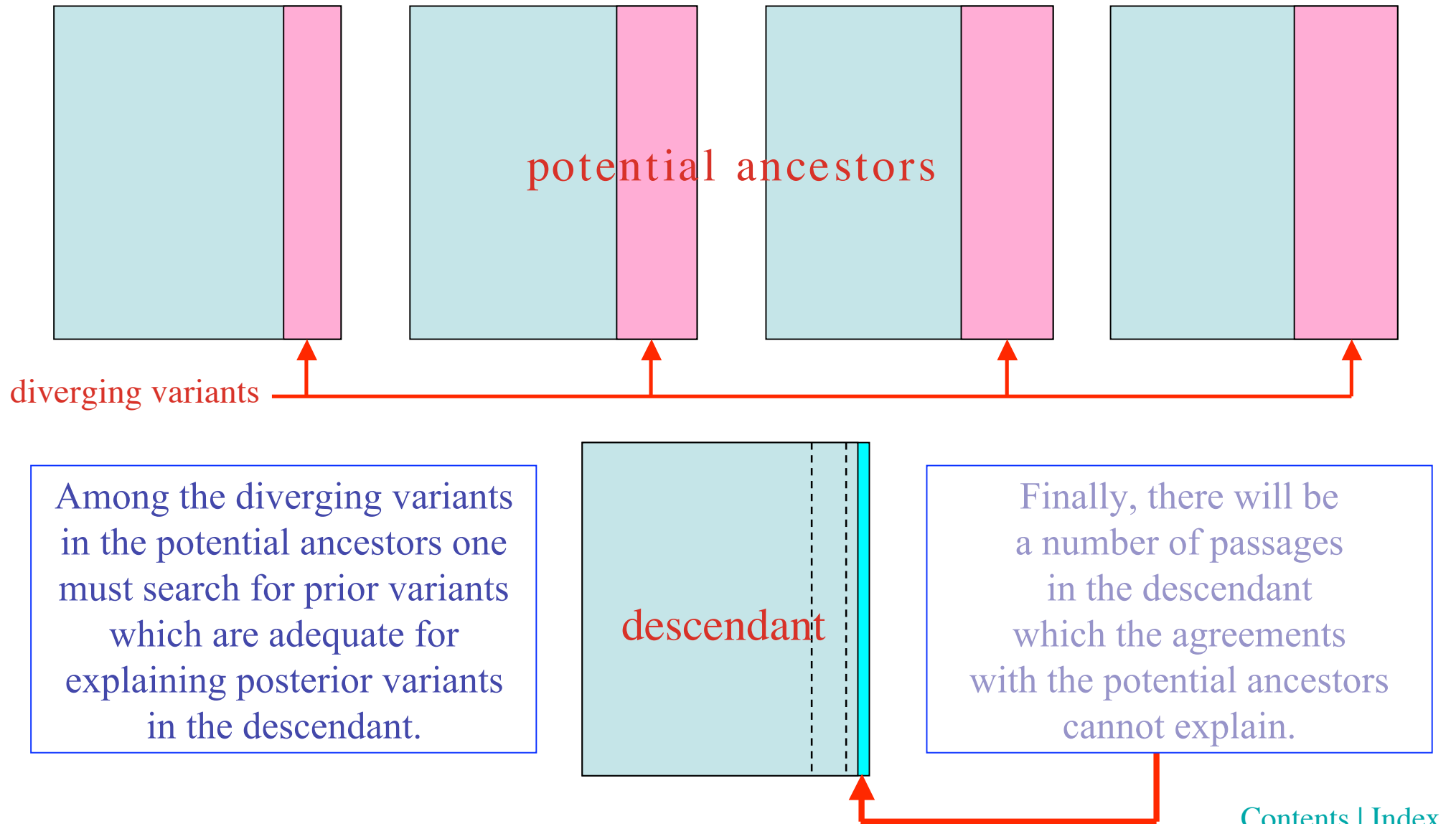
Optimal subtemma



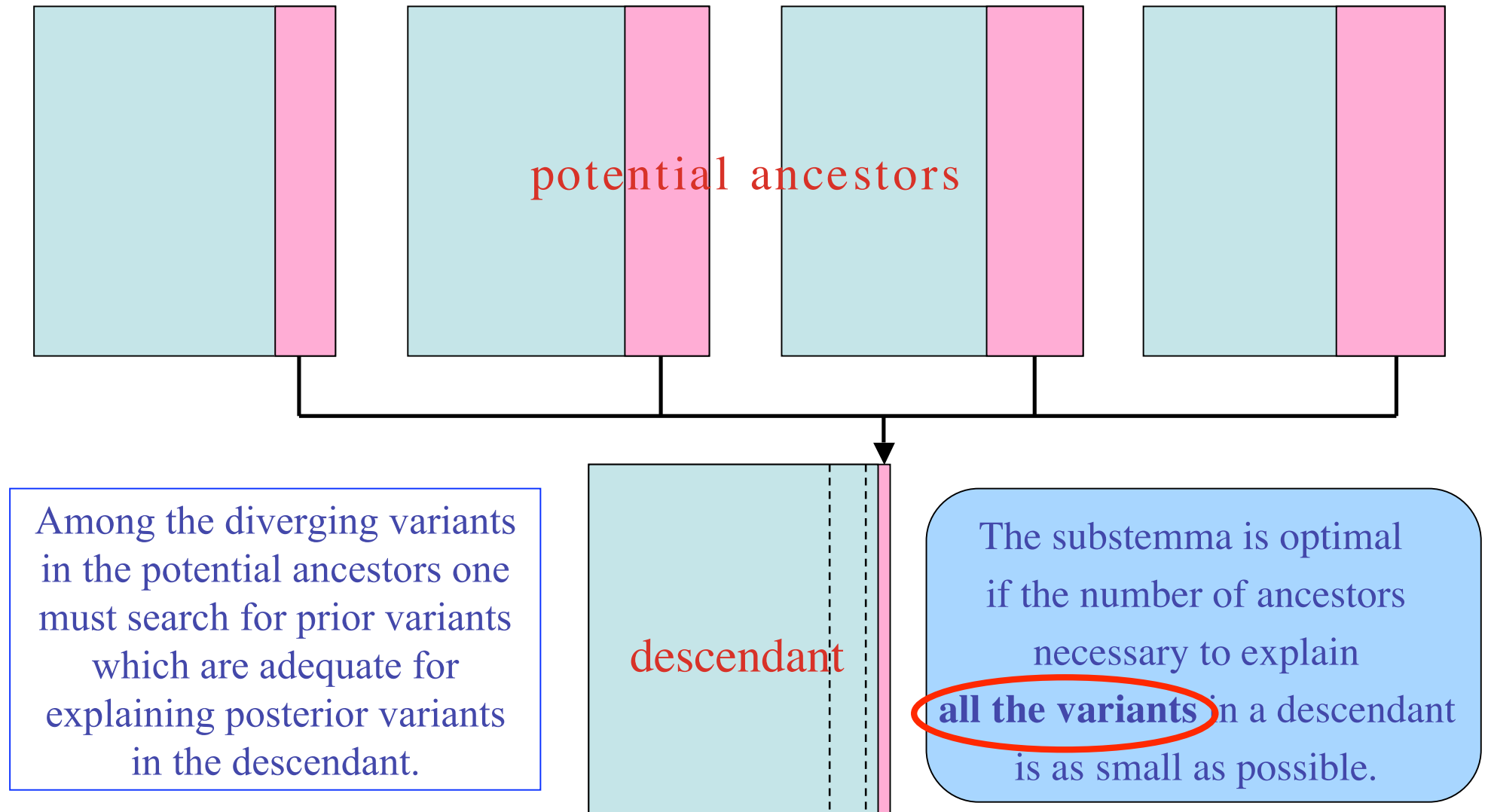
Optimal substemma



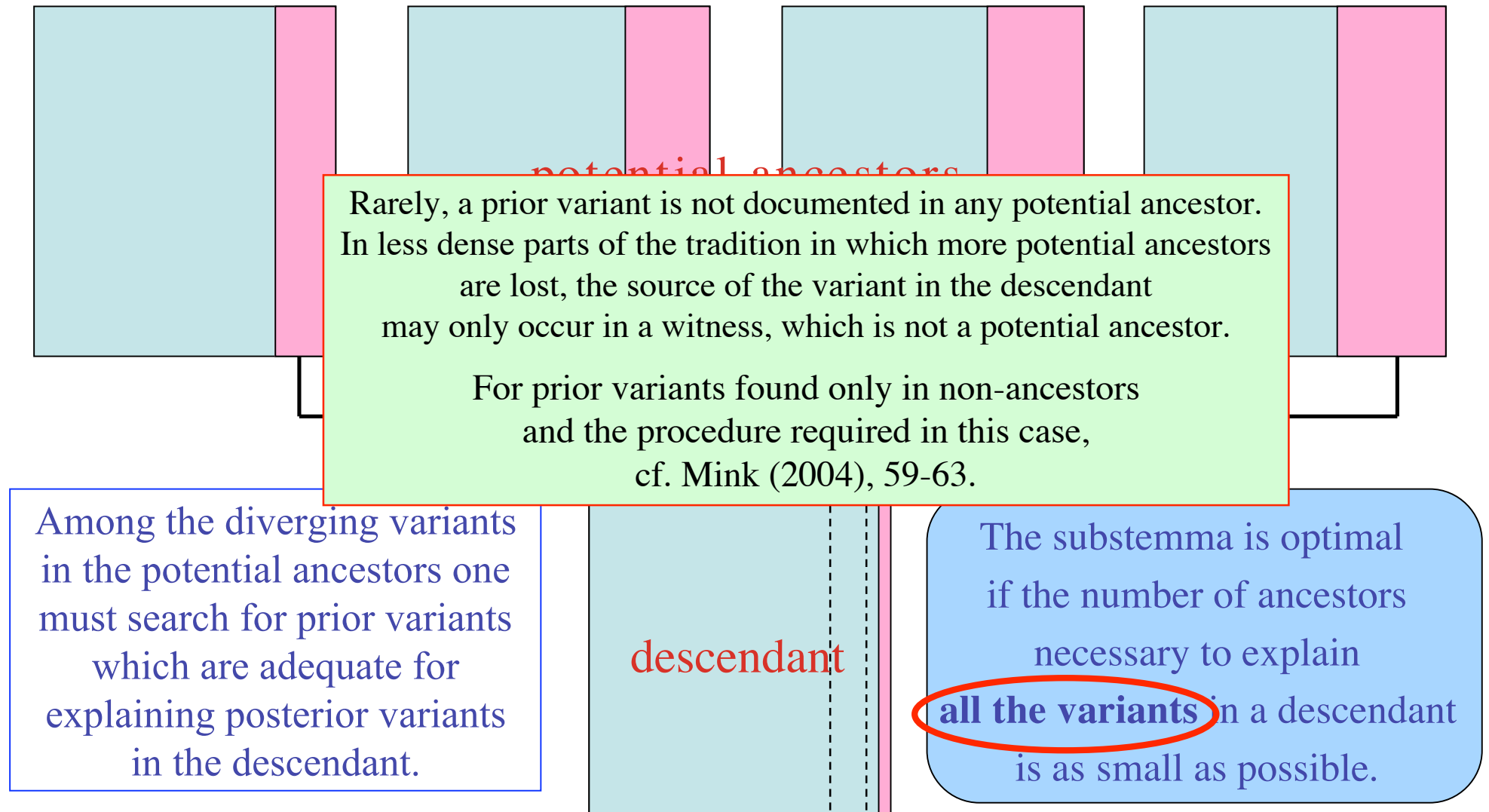
Optimal subtemma



Optimal subtemma



Optimal subtemma



The Coherence-Based Genealogical Method CBGM

1. The objective
2. Some basics
3. Key terms and procedures
4. Interpreting coherence
5. How to find stemmatic coherencies



Coherence

pre-genealogical

Pre-genealogical coherence is based on the **agreement** between witnesses.

Its strength is determined by the proportion of agreements between the witnesses compared.

Pre-genealogical coherence has no genealogical direction.

genealogical

Genealogical coherence is based on **agreements** and the genealogical relationship of **diverging variants** of witnesses.

The proportion of prior variants determines the genealogical direction between the witnesses compared.

The proportion of agreements determines the strength of the genealogical coherence.

Coherence

pre-genealogical

Pre-genealogical coherence is based on the **agreement** between witnesses.

Its strength is determined by the proportion of agreements between the witnesses compared.

Pre-genealogical coherence has no genealogical direction.

genealogical

Genealogical coherence is based on **agreements** and the genealogical relationship of **diverging variants** of witnesses.

The proportion of prior variants determines the genealogical direction between the witnesses compared.

The proportion of agreements determines the strength of the genealogical coherence.

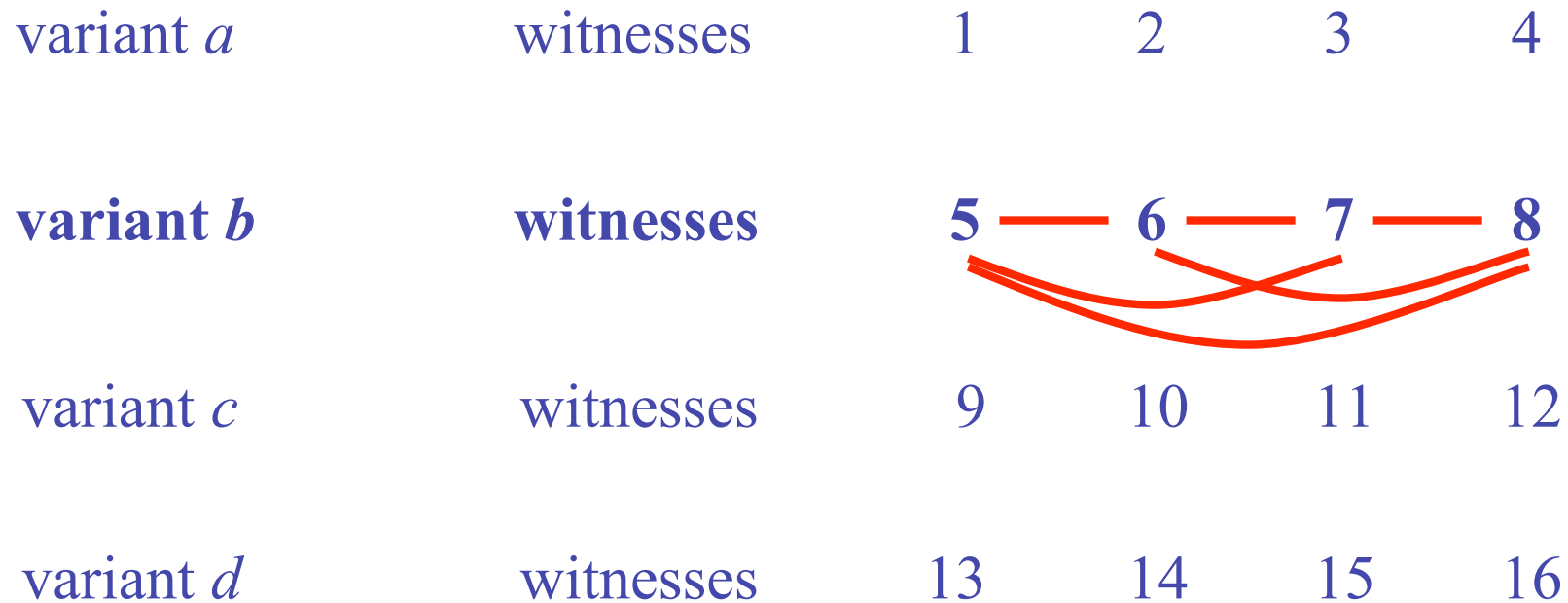
Coherence is a feature of the relationship between witnesses of either one or several different variants.

Pre-genealogical coherence at variant passages

variant <i>a</i>	witnesses	1	2	3	4
variant <i>b</i>	witnesses	5	6	7	8
variant <i>c</i>	witnesses	9	10	11	12
variant <i>d</i>	witnesses	13	14	15	16

Let us focus on variant *b*
and suppose that there is
high agreement, i.e.
pre-genealogical coherence,
within the attestation of *b*.
Cf. the red lines ...

Pre-genealogical coherence at variant passages



Let us focus on variant *b*
and suppose that there is
high agreement, i.e.
pre-genealogical coherence,
within the attestation of *b*.
Cf. the red lines ...

Pre-genealogical coherence at variant passages

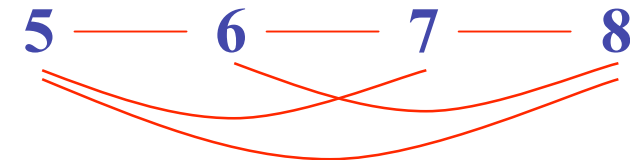
variant <i>a</i>	witnesses	1	2	3	4
variant <i>b</i>	witnesses	5	6	7	8
variant <i>c</i>	witnesses	9	10	11	12
variant <i>d</i>	witnesses	13	14	15	16

Let us focus on variant *b*
and suppose that there is
high agreement, i.e.
pre-genealogical coherence,
within the attestation of *b*.
Cf. the red lines ...

This argues
against multiple emergence
of variant *b*.

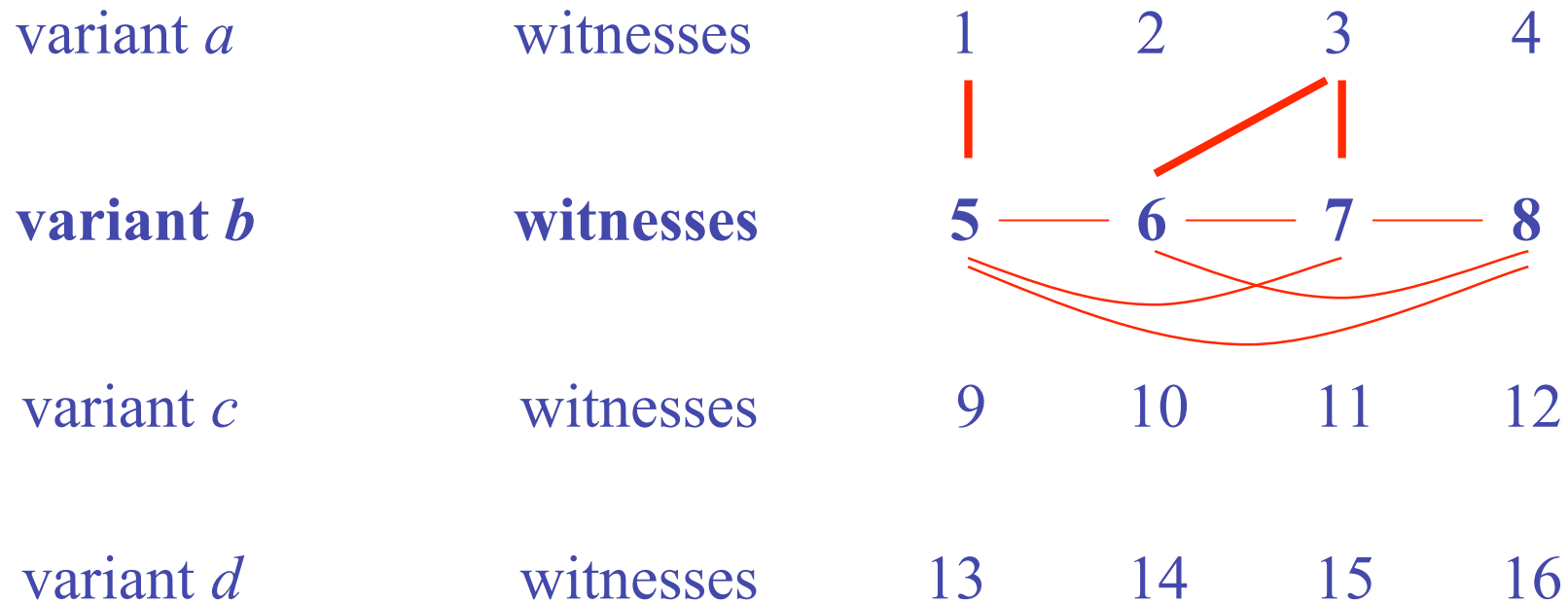
Pre-genealogical coherence at variant passages

variant <i>a</i>	witnesses	1	2	3	4
variant <i>b</i>	witnesses	5	6	7	8
variant <i>c</i>	witnesses	9	10	11	12
variant <i>d</i>	witnesses	13	14	15	16



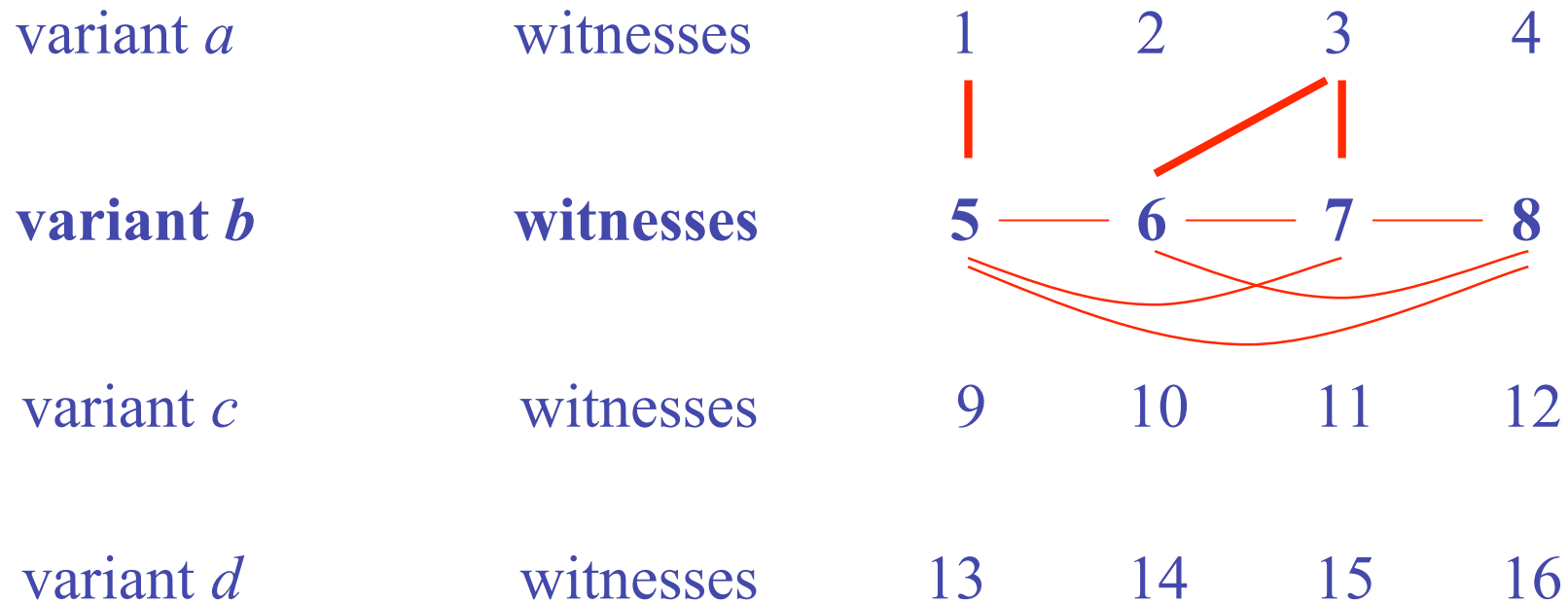
There also is strong
pre-genealogical coherence
between witnesses of *b*
and some witnesses of *a* ...

Pre-genealogical coherence at variant passages



There also is strong
pre-genealogical coherence
between witnesses of *b*
and some witnesses of *a* ...

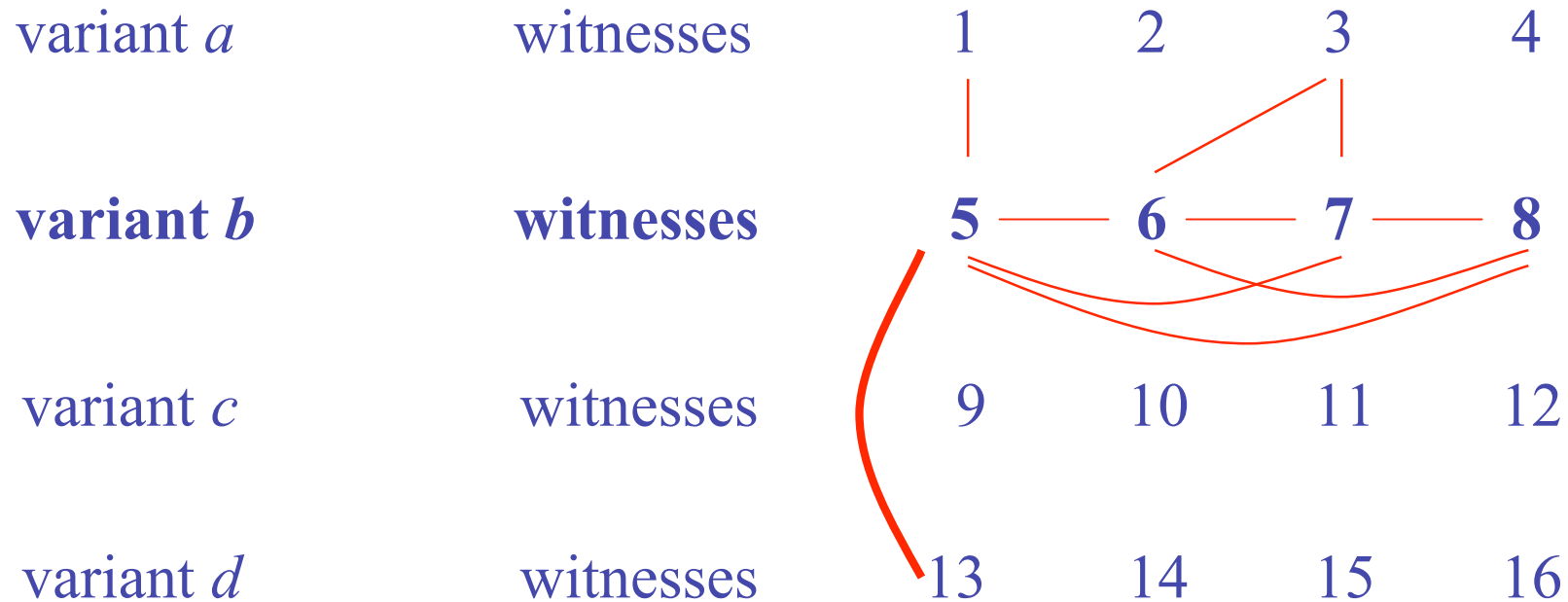
Pre-genealogical coherence at variant passages



There also is strong pre-genealogical coherence between witnesses of *b* and some witnesses of *a* ...

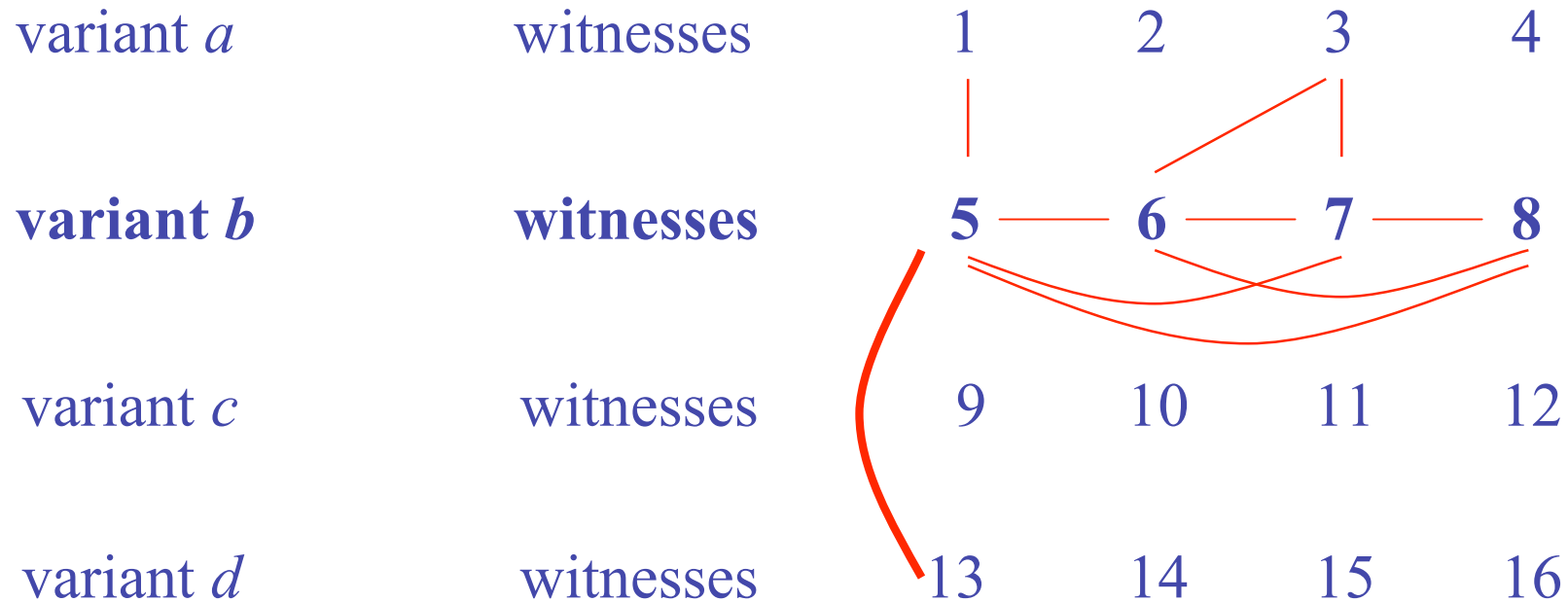
This suggests genealogical relationship of the variants *a* and *b*.
Variant *a* may be the source of *b* or *vice versa*.

Pre-genealogical coherence at variant passages



Pre-genealogical coherence between a witness of variant *b* and a witness of variant *d* is found, too.

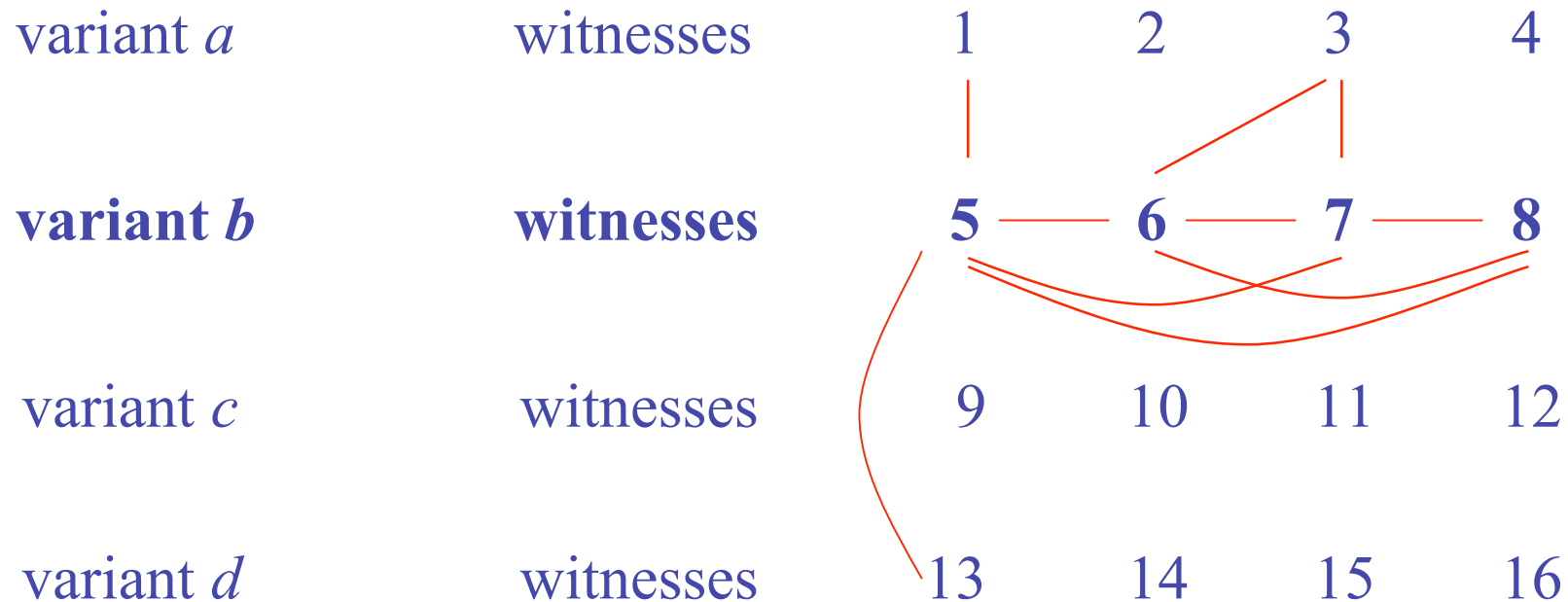
Pre-genealogical coherence at variant passages



Pre-genealogical coherence between a witness of variant *b* and a witness of variant *d* is found, too.

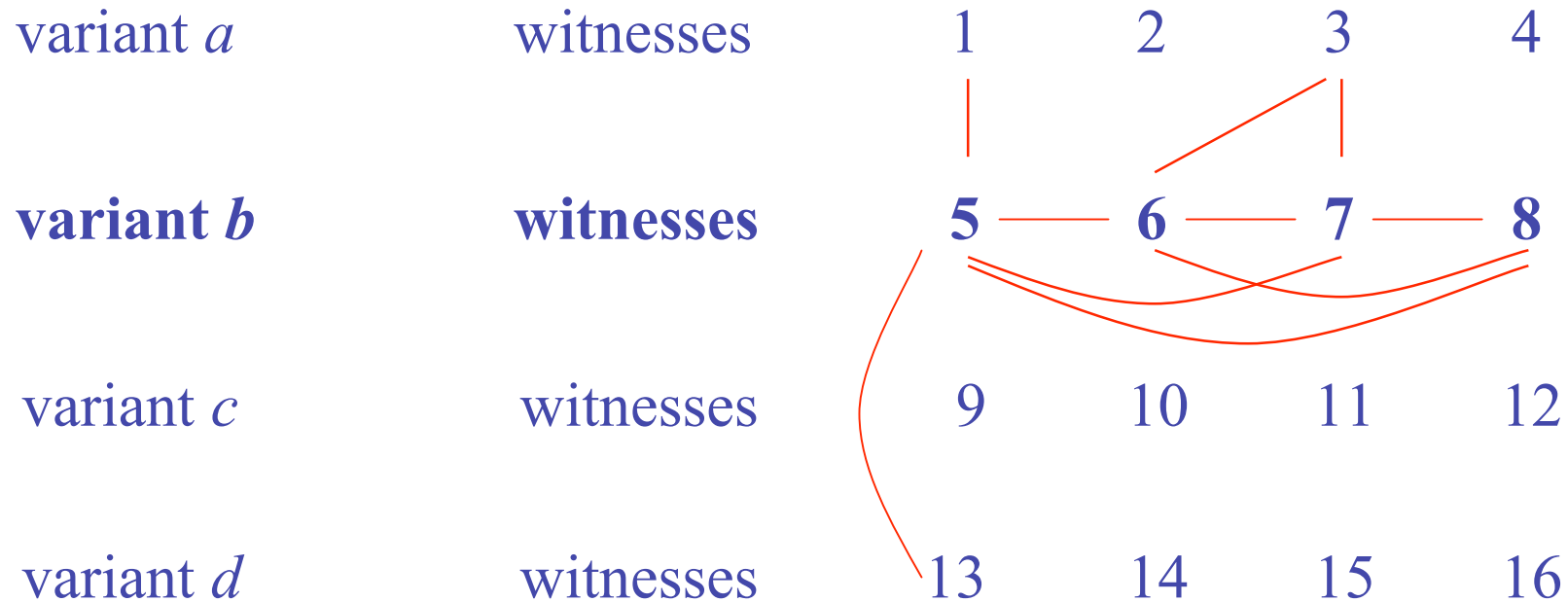
This may indicate genealogical relationship of variants *b* and *d*.

Pre-genealogical coherence at variant passages



There is no adequate pre-genealogical coherence between witnesses of variant *b* and witnesses of variant *c*.

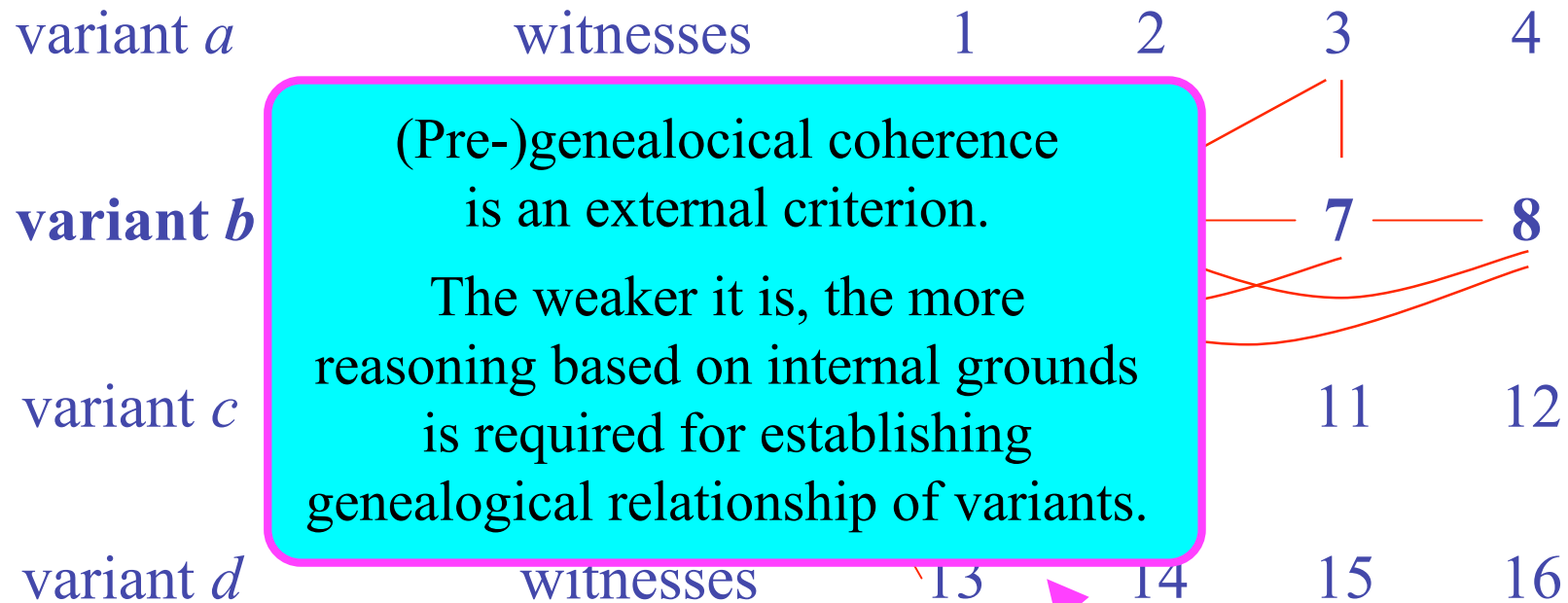
Pre-genealogical coherence at variant passages



There is no adequate pre-genealogical coherence between witnesses of variant *b* and witnesses of variant *c*.

Genealogical relationship of these variants is rather improbable.

Pre-genealogical coherence at variant passages



There is no adequate pre-genealogical coherence between witnesses of variant *b* and witnesses of variant *c*.

Genealogical relationship of these variants is rather improbable.

Genealogical coherence

Genealogical coherence
based on the genealogical relationship
of diverging variants in pairs of witnesses
is recognized by their high agreement values
and the particular textual flow
directed from the potential ancestor
to the potential descendant.



Genealogical coherence

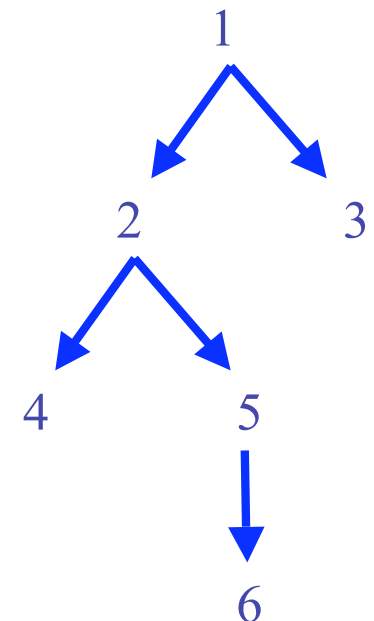
Genealogical coherence
based on the genealogical relationship
of diverging variants in pairs of witnesses
is recognized by their high agreement values
and the particular textual flow
directed from the potential ancestor
to the potential descendant.



Potential descendants may be
potential ancestors
of other highly agreeing relatives
in the same attestation.
Thus, chains
of genealogical coherencies
may materialize.



or



[Contents](#) | [Index](#)

Genealogical coherence at variant passages

perfect coherence

variant <i>a</i>	witnesses	1	2	3	4
variant <i>b</i>	witnesses	5 → 6 → 7 → 8			

In the attestation of variant *b* there is a chain of genealogical coherencies connecting **all** witnesses.

Genealogical coherence in this attestation is **perfect**.

All witnesses except witness 5 have a closely related potential ancestor within this attestation. Witness 5 is, metaphorically speaking, the 'inventor' of variant *b*.

A closely related potential ancestor of witness 5 must be looked for outside the attestation of variant *b*.

Genealogical coherence at variant passages

perfect coherence



In the attestation of variant *b* there is a chain of genealogical coherencies connecting witness 5 to witness 8.

Genealogical coherence in this attestation means:

All witnesses except witness 5 have a potential ancestor within this attestation. Witness 5 is, metaphorically speaking, the 'inventor' of variant *b*.

A closely related potential ancestor of witness 5 must be looked for outside the attestation of variant *b*.

In this case, e.g. witness 3 would be the most closely related potential ancestor of witness 5 at this variant passage.

There is **genealogical coherence** between the attestations of variant *a* and variant *b*.

Genealogical coherence at variant passages

perfect coherence



In the attestation of variant *b* the
of genealogical coherencies connect

Genealogical

All witnesses

potential

metaphor

A close

must be looked for outside the attestation of variant *b*.

The appropriate
local stemma of variants is:



In this case, e.g. witness 3 would be
the most closely related potential ancestor
of witness 5 at this variant passage.

There is **genealogical coherence**
between the attestations
of variant *a* and variant *b*.

Witness 3 is,
of variant *b*.

of witness 5
of variant *b*.

Genealogical coherence at variant passages

imperfect coherence

variant <i>a</i>	witnesses	1	2	3	4
variant <i>b</i>	witnesses	5 → 6	7 → 8		
variant <i>c</i>	witnesses	9	10	11	12

In the attestation of variant *b* witness 6 and witness 8 are derived from their respective potential ancestors.

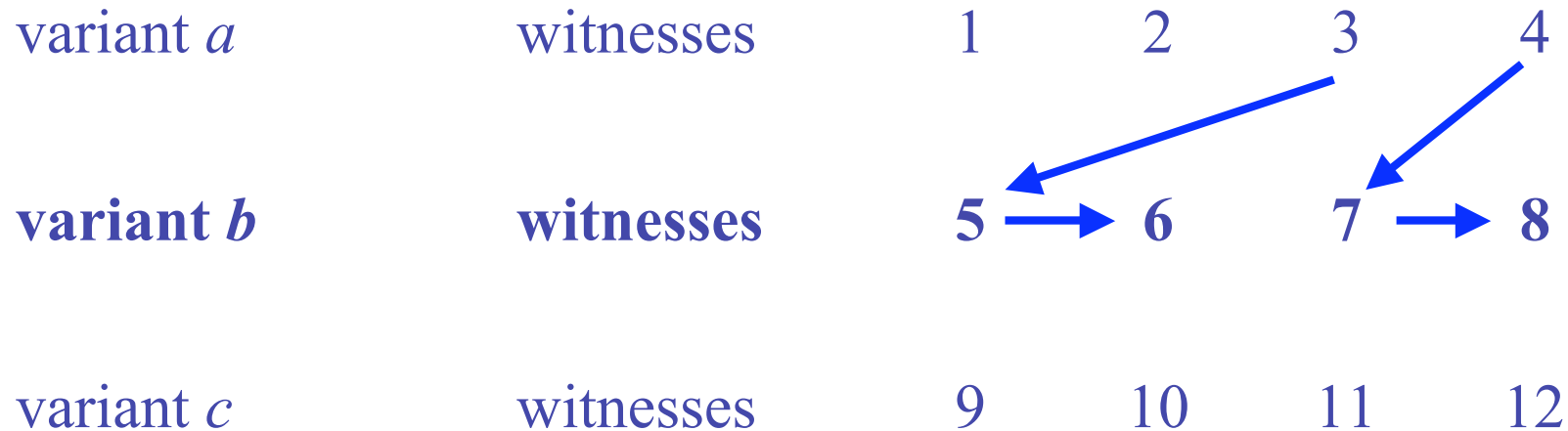
Yet, neither witness 5 nor witness 7 have potential ancestors within this attestation.

Genealogical coherence in this attestation is **imperfect**.

Closely related potential ancestors of witness 5 and witness 7 must be looked for outside the attestation of variant *b*.

Genealogical coherence at variant passages

imperfect coherence



In the attestation of variant *b* witness 6 is derived from their respective potential ancestors. Yet, neither witness 5 nor witness 7 have potential ancestors within this attestation. Genealogical coherence in this attestation of variant *b* is therefore imperfect. Closely related potential ancestors of witnesses 5 and 7 must be looked for outside the attestation of variant *b*.

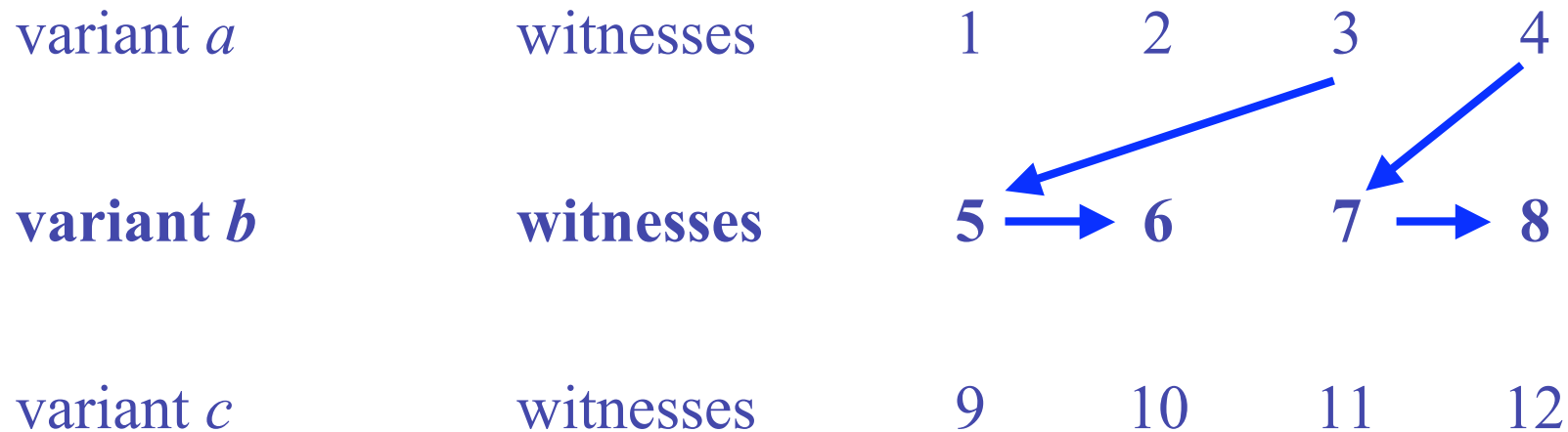
In this case, witness 3 would be the most closely related potential ancestor of witness 5, while witness 7 is derived from witness 4

(multiple emergence of variant *b*).

There is **genealogical coherence** between the attestations of variant *a* and variant *b*.

Genealogical coherence at variant passages

imperfect coherence



The appropriate
local stemma of variants remains:

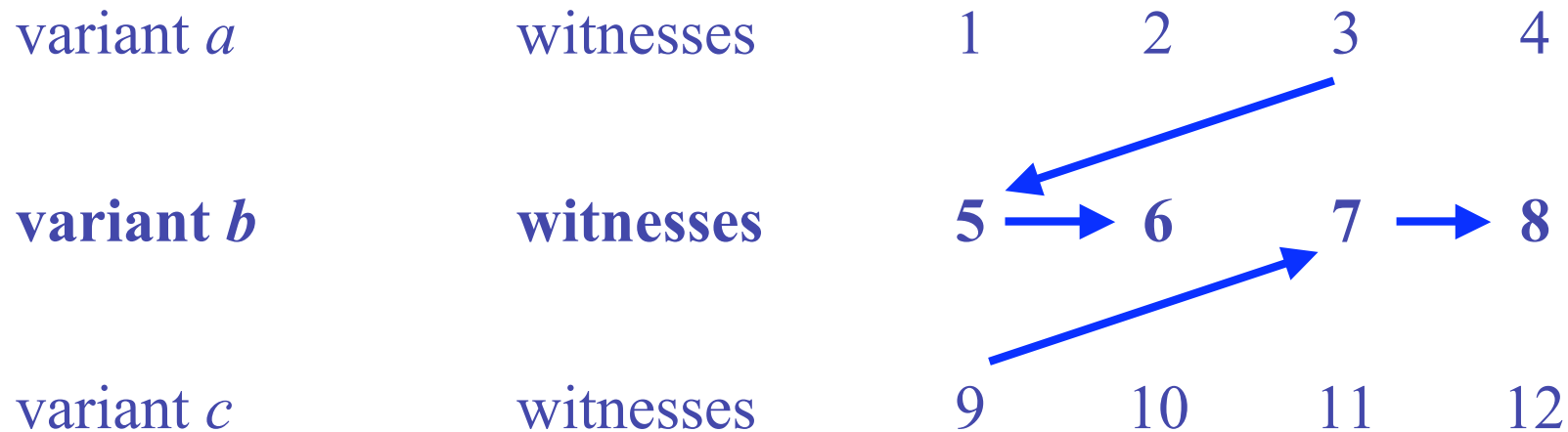


In this case, witness 3 would be the most closely related potential ancestor of witness 5, while witness 7 is derived from witness 4
(multiple emergence of variant *b*).

There is **genealogical coherence** between the attestations of variant *a* and variant *b*.

Genealogical coherence at variant passages

imperfect coherence



In the attestation of variant *b* witness 6 and witness 8 are

derived from their respective potential ancestors.

Yet, neither witness 5 nor witness 9

have potential ancestors within this attestation.

Genealogical coherence in this attestation

Closely related potential ancestors of witness 5

must be looked for outside the attestation of variant *b*.

In this case, however, witness 7 would be derived from witness 9.

There is **genealogical coherence**

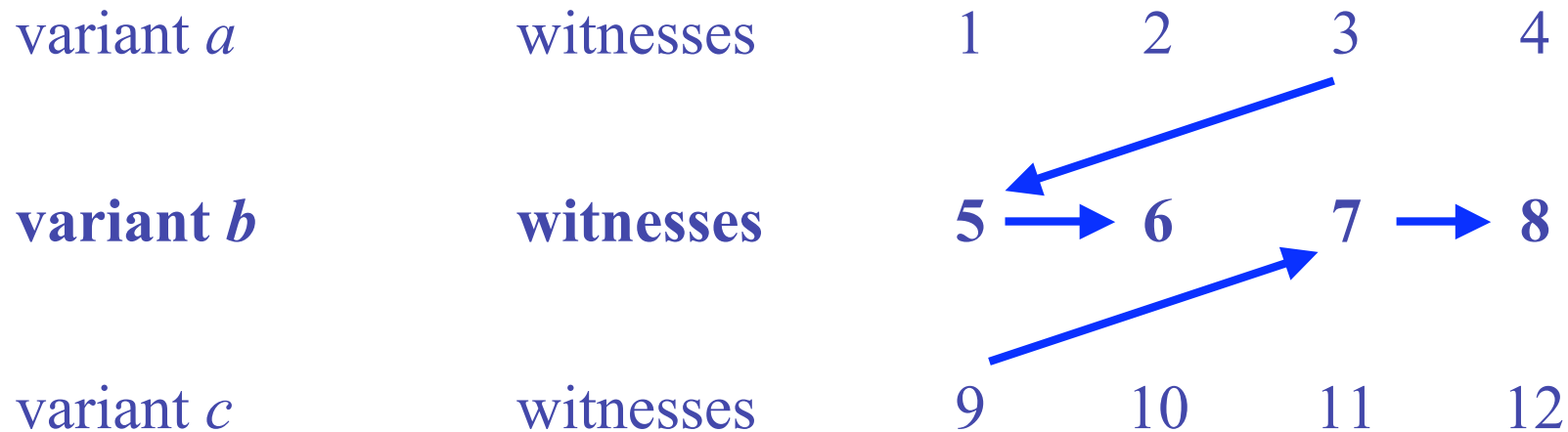
between the attestation of variant *a* and

a part of the attestation of variant *b*.

The same is true for the attestation of variant *c* and another part of the attestation of variant *b*.

Genealogical coherence at variant passages

imperfect coherence



In order to mirror the different genealogical coherencies the attestation of variant *b* is split into two parts, and they are assigned to two instances of *b* (*b1* and *b2*) which coincidentally have the same wording – a case of **multiple emergence of a variant and different source variants**.

are

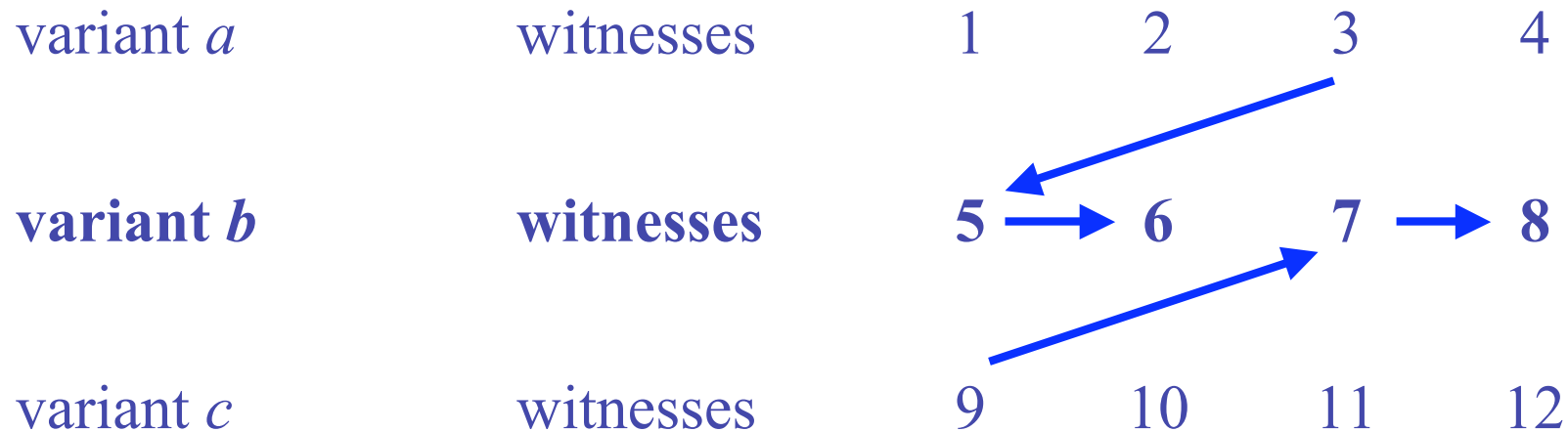
se, however, witness 7 would be derived from witness 9.

There is **genealogical coherence** in the attestation of variant *a* and a part of the attestation of variant *b*.

The same is true for the attestation of variant *c* and another part of the attestation of variant *b*.

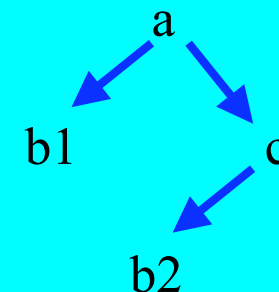
Genealogical coherence at variant passages

imperfect coherence



In order to mirror the different genealogical coherencies the attestation of variant *b* is split into two parts and they are assigned to two instances of *b* (*b1* and *b2*) which coincidentally have the same wording – a case of **multiple emergence of a variant and different source variants**.

Assuming that variant *c* emerged from variant *a*, the local stemma of variants is:



Closely related potential ancestors or witnesses must be looked for outside the attestation

The s
and a

t *c*
b.

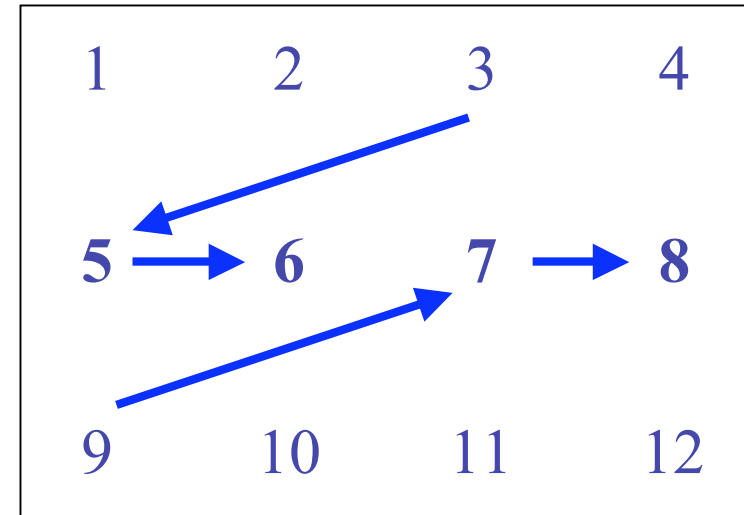
Genealogical coherence at variant passages

Analysis of genealogical coherence helps to assess multiple origins of variants and find their potential sources.

The result can be displayed graphically:

textual flow diagrams

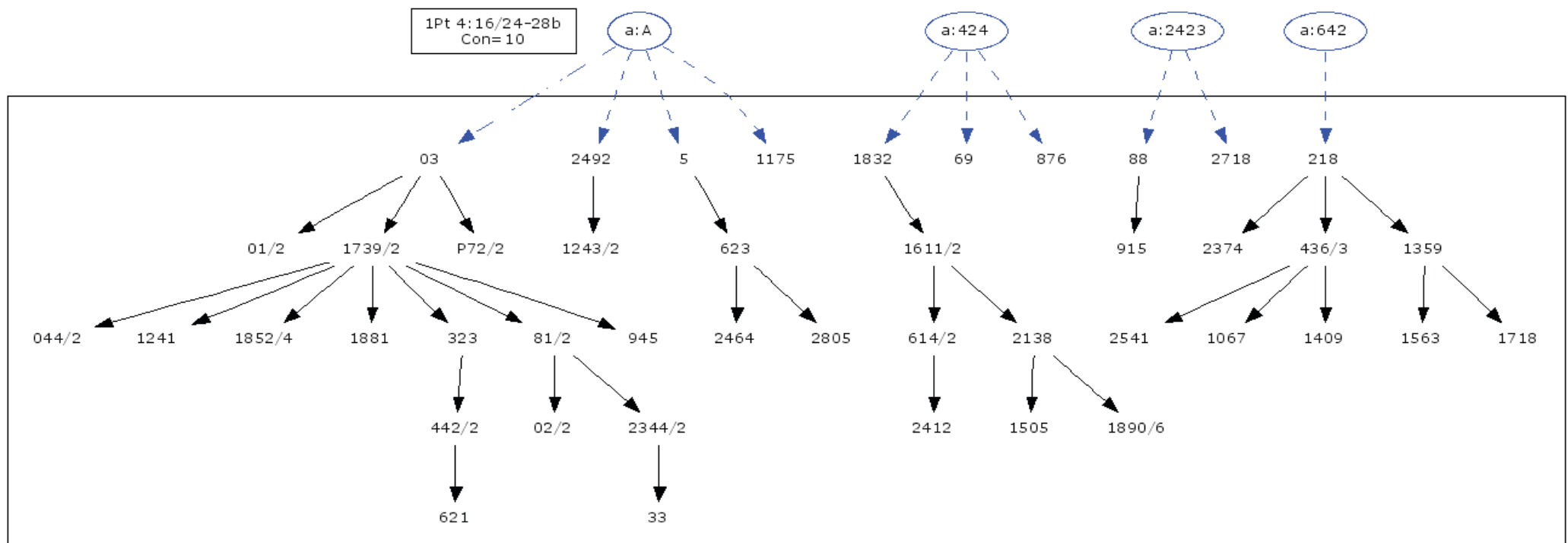
For instance
a case of imperfect coherence ...



imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

- a τω μερει τουτω
 ➞ b τω ονοματι τουτω
 c τω μερει τουτου
 d τουτω τω μερει
 e τω μερει τουτω η τω ονοματι τουτω



This is the textual flow diagram for the attestation of variant *b*.

imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

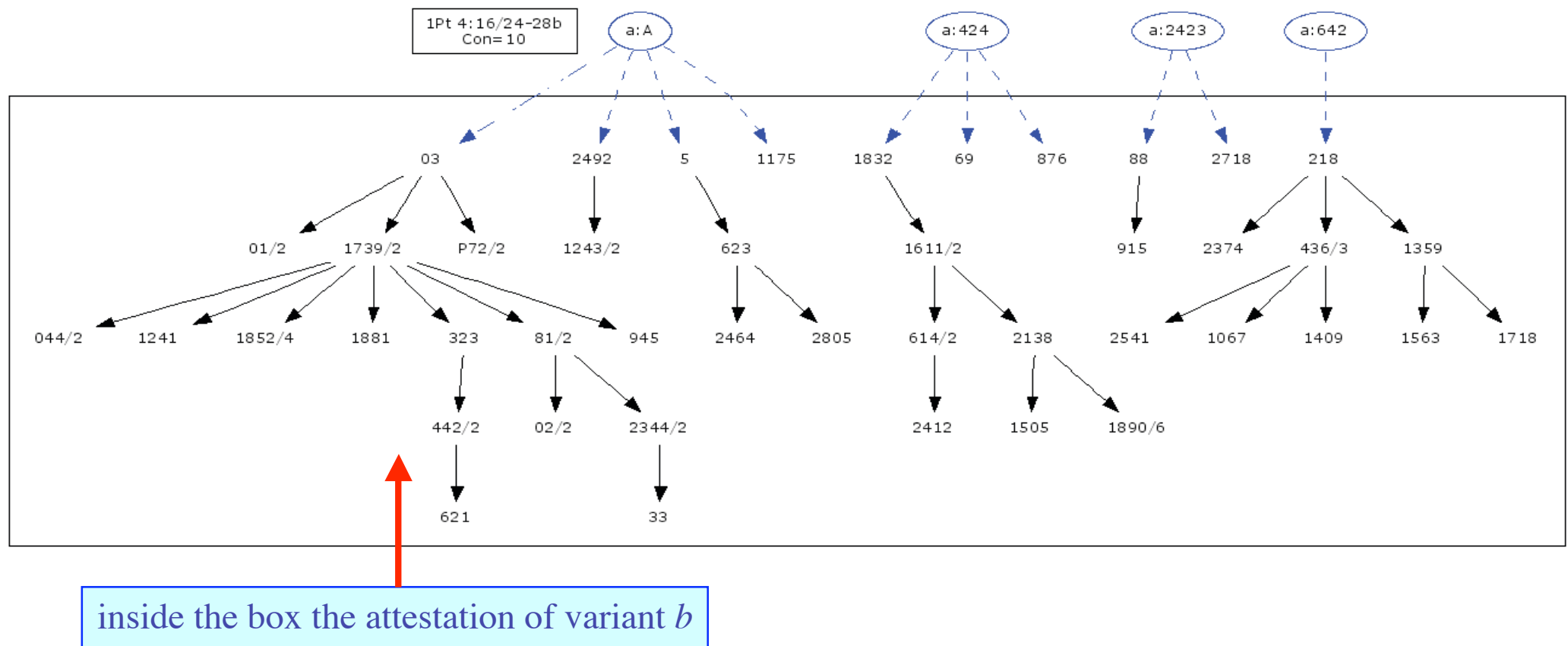
a τω μερει τουτω

c τω μερει τουτου

→ b τω ονοματι τουτω

d τουτω τω μερει

e τω μερει τουτω η τω ονοματι τουτω



imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

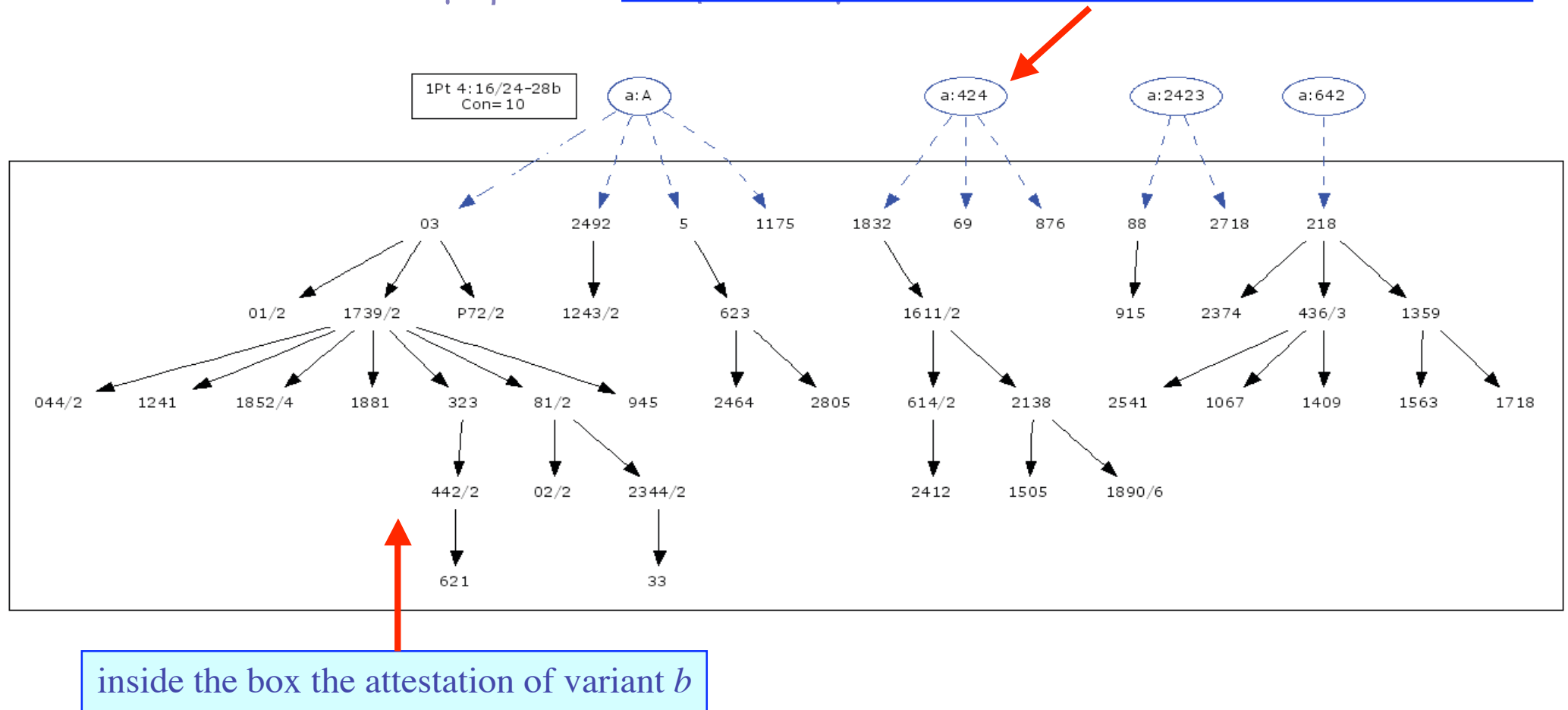
a τω μερει τουτω

c τω μερει τουτου

→ b τω ονοματι τουτω

e τω μερει του

outside the box possible sources at the same variant passage
(e.g. "a: 424" means "variant *a*, witness 424")



imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

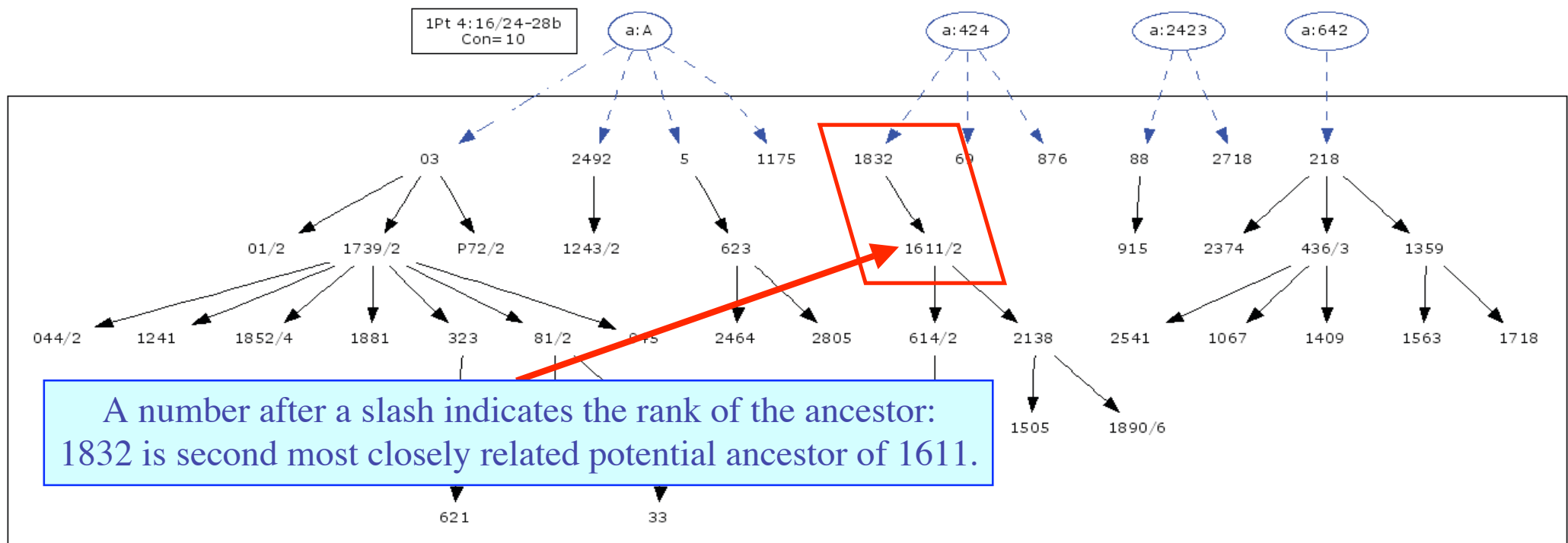
a τω μερει τουτω

c τω μερει τουτου

→ b τω ονοματι τουτω

d τουτω τω μερει

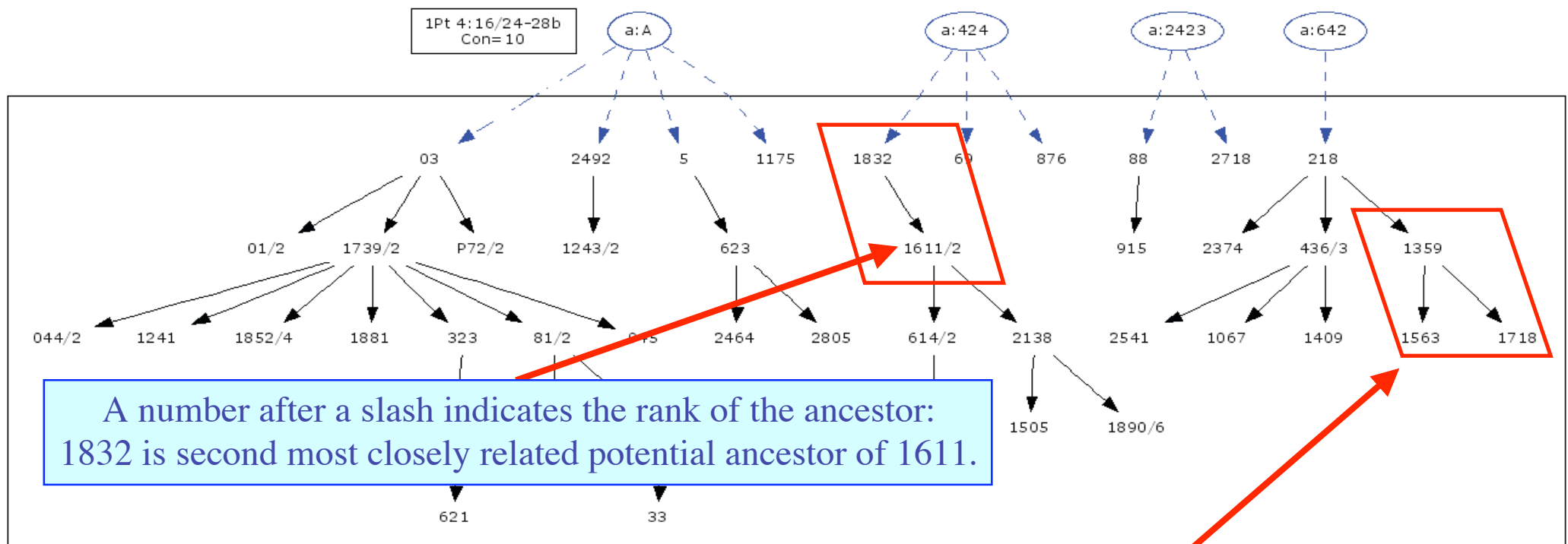
e τω μερει τουτω η τω ονοματι τουτω



imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

- a τω μερει τουτω
 → b τω ονοματι τουτω
 c τω μερει τουτου
 d τουτω τω μερει
 e τω μερει τουτω η τω ονοματι τουτω



Gregory-Aland number without addition:
The ancestor is the most closely related one.

[Contents](#) | [Index](#)

imperfect coherence

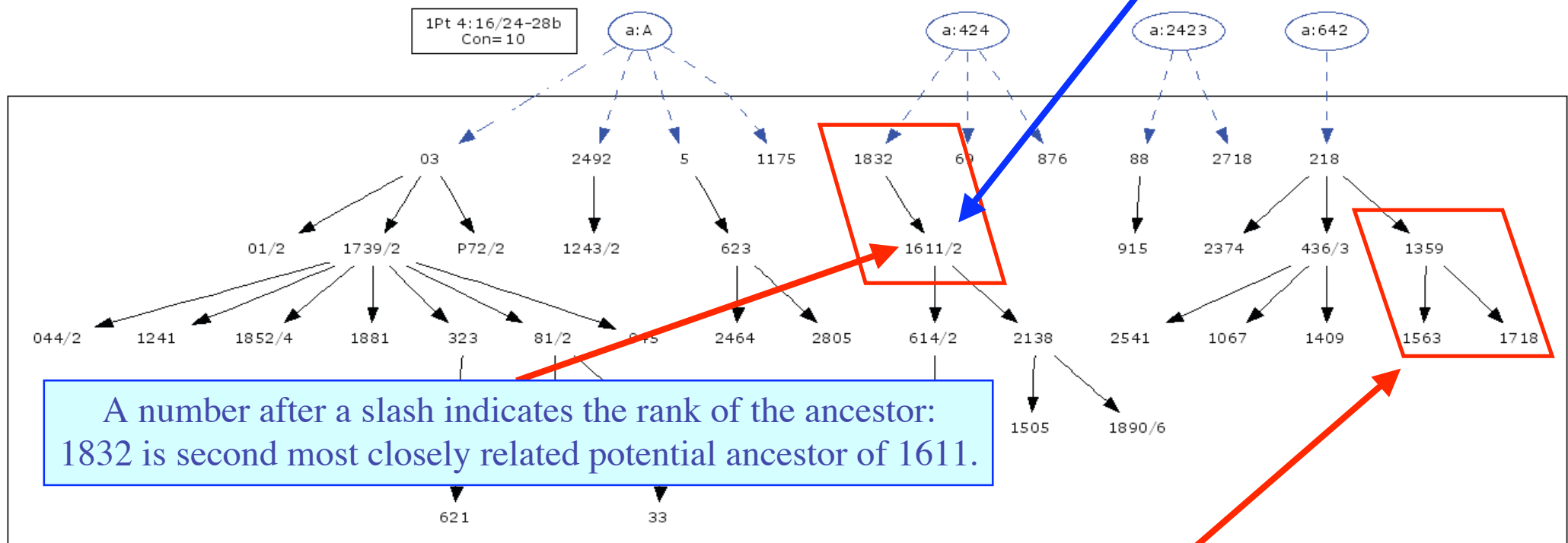
1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

a τω μερει τουτω

→ b τω ονοματι τουτω

e τω μερει τουτω η τω ονοματι τουτω

If the most closely related ancestor cannot be found in the same attestation, this usually reveals contamination, as in this case, cf. the stemmatic ancestors of 1611.

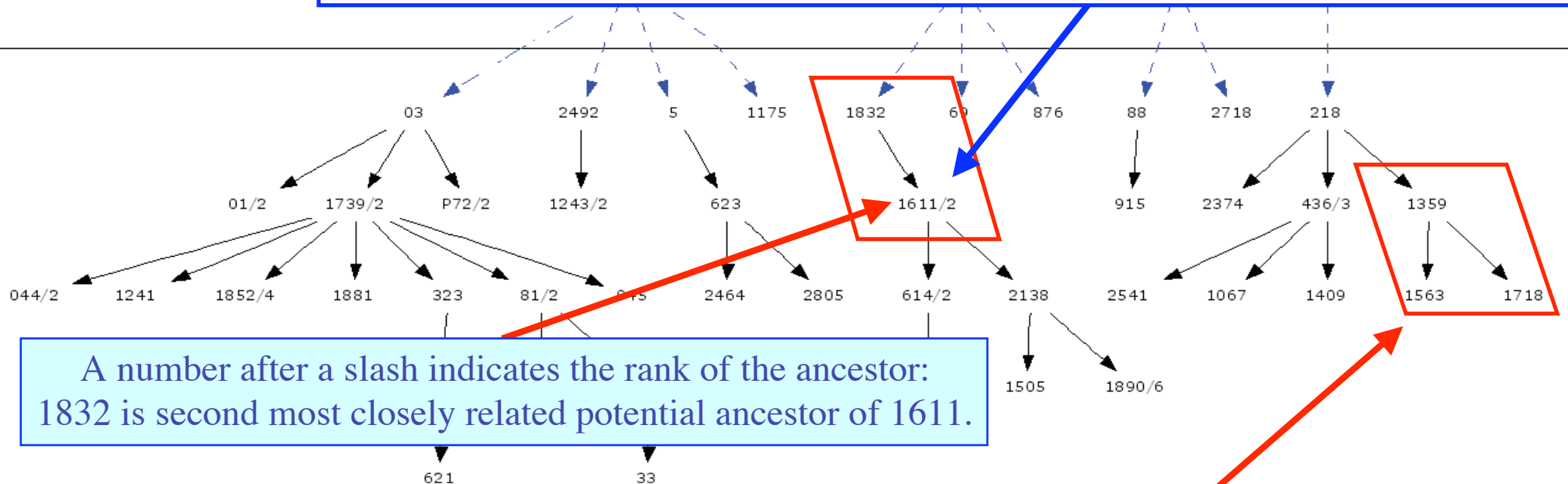
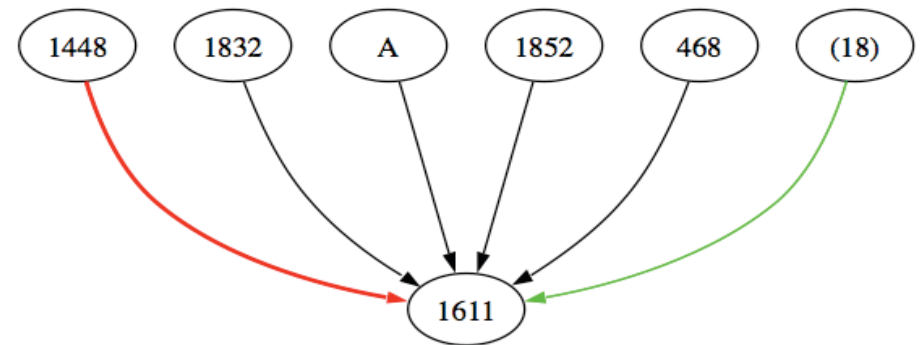


A number after a slash indicates the rank of the ancestor:
1832 is second most closely related potential ancestor of 1611.

Gregory-Aland number without addition:
The ancestor is the most closely related one.

[Contents](#) | [Index](#)

- red: edges with the highest agreement of ancestor and descendant
- red or black: necessary edges
- green: edges may be superfluous (based on low connectivity variants)



A number after a slash indicates the rank of the ancestor:
1832 is second most closely related potential ancestor of 1611.

Gregory-Aland number without addition:
The ancestor is the most closely related one.

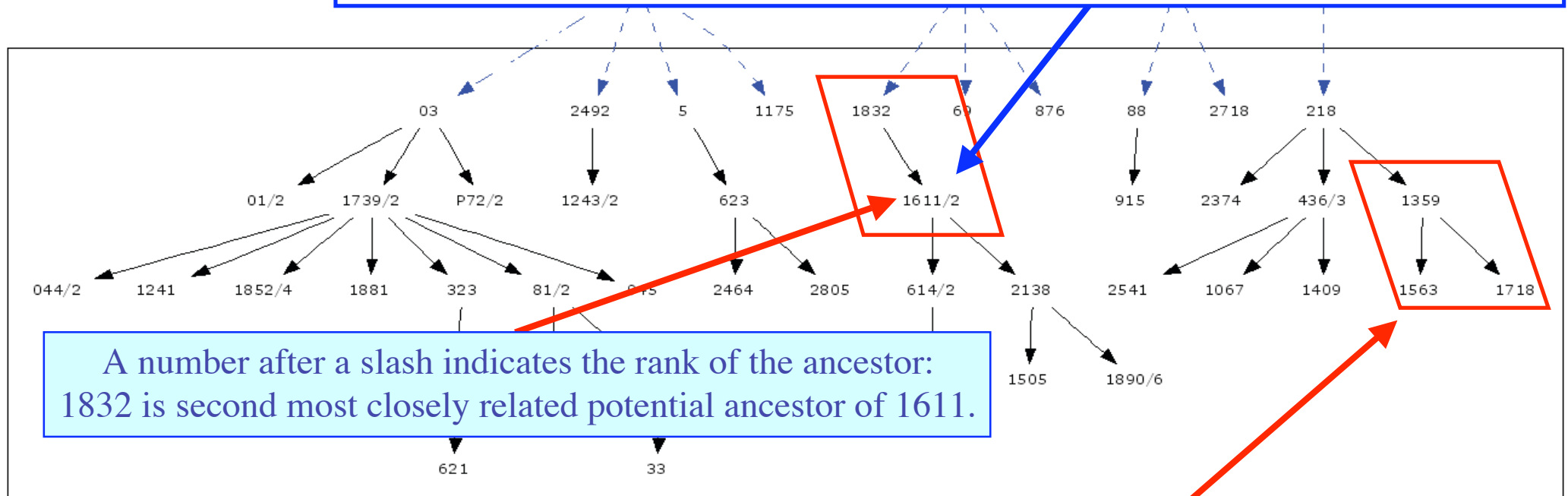
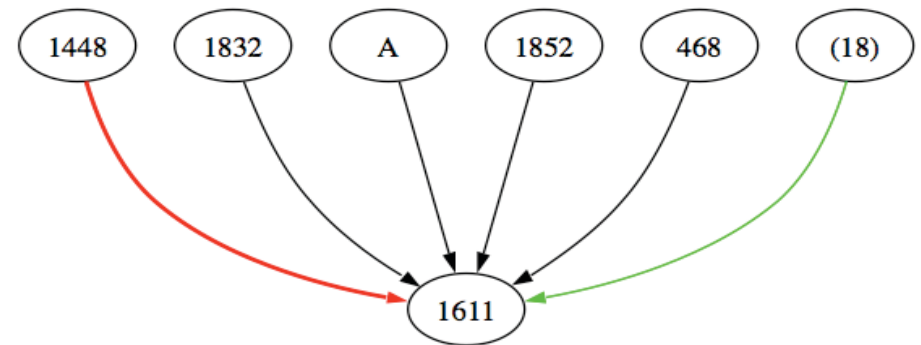
1Pt 4,16/24-28

SUBSTEMMA 1611

a τω μ
 → b τω ο

red: edges with the highest agreement of ancestor and descendant
 red or black: necessary edges
 green: edges may be superfluous (based on low connectivity variants)

As in graph theory, the lines connecting nodes (in this case witnesses) are called edges.



A number after a slash indicates the rank of the ancestor:
 1832 is second most closely related potential ancestor of 1611.

Gregory-Aland number without addition:
 The ancestor is the most closely related one.

imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

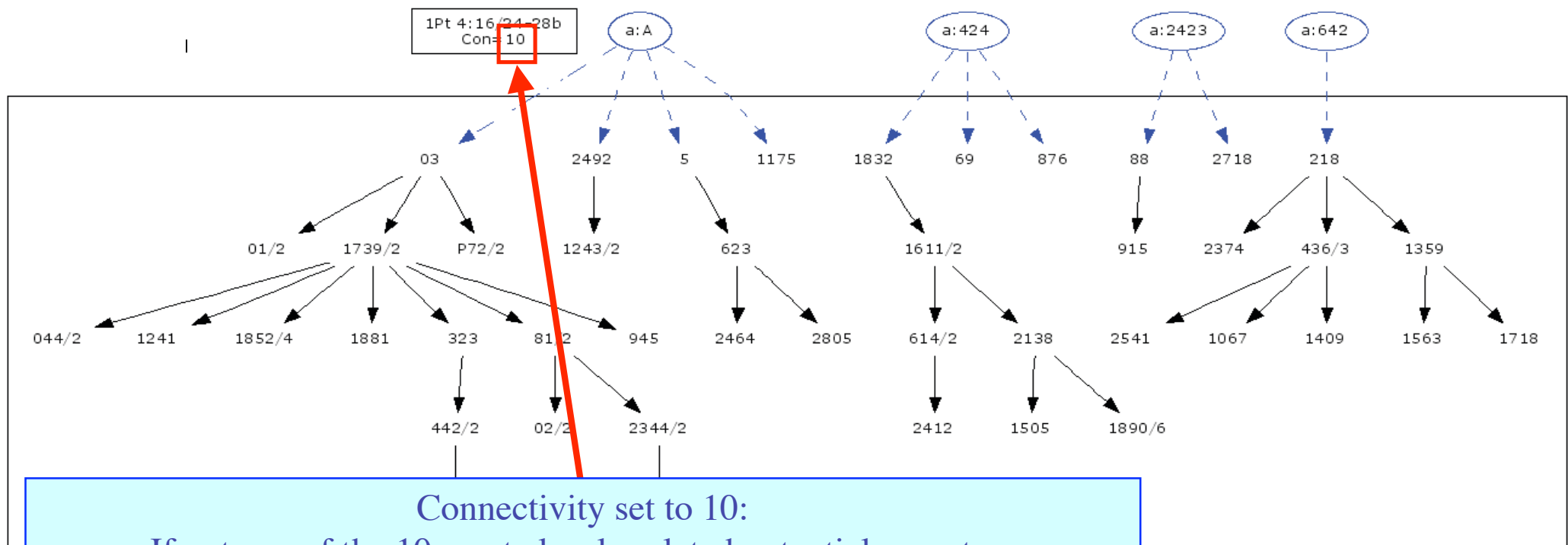
a τω μερει τουτω

c τω μερει τουτου

→ b τω ονοματι τουτω

d τουτω τω μερει

e τω μερει τουτω η τω ονοματι τουτω



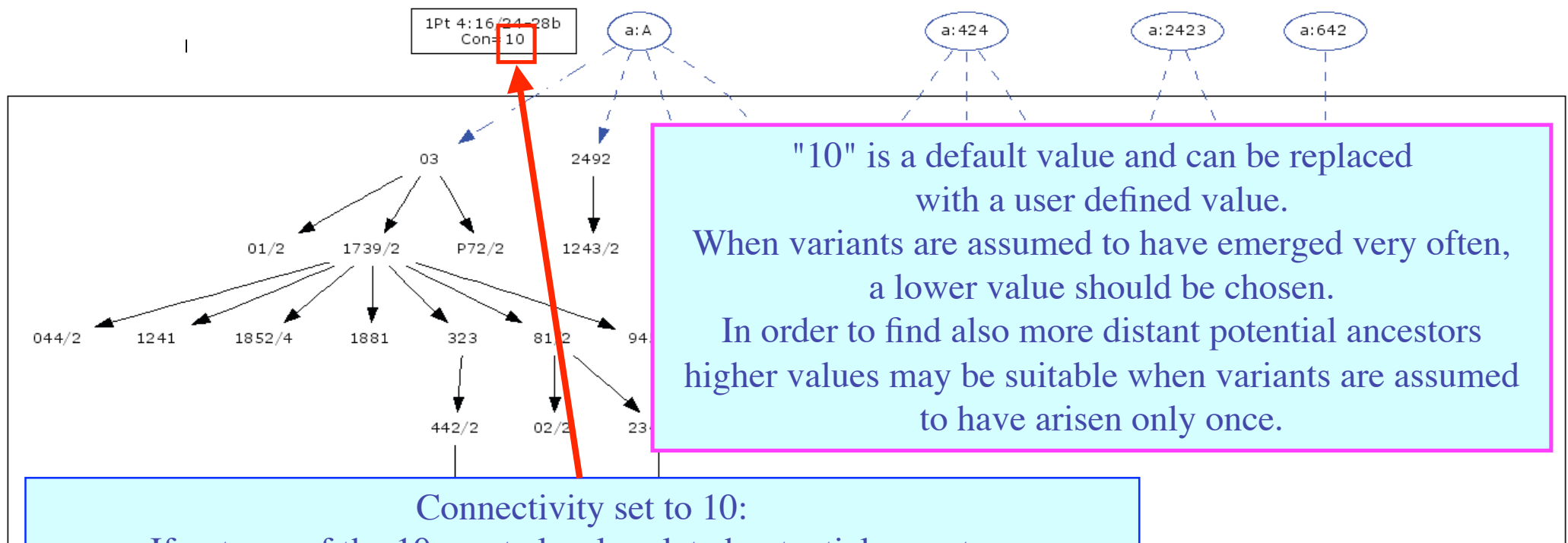
Connectivity set to 10:

If not one of the 10 most closely related potential ancestors
of a witness is found in the same attestation,
the programme searches for them in the attestations of the other variants.

imperfect coherence

1Pt 4,16/24-28 δοξαζετω δε τον θεον εν ...

a τω μερει τουτω c τω μερει τουτου
→ b τω ονοματι τουτω d τουτω τω μερει
e τω μερει τουτω η τω ονοματι τουτω



imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

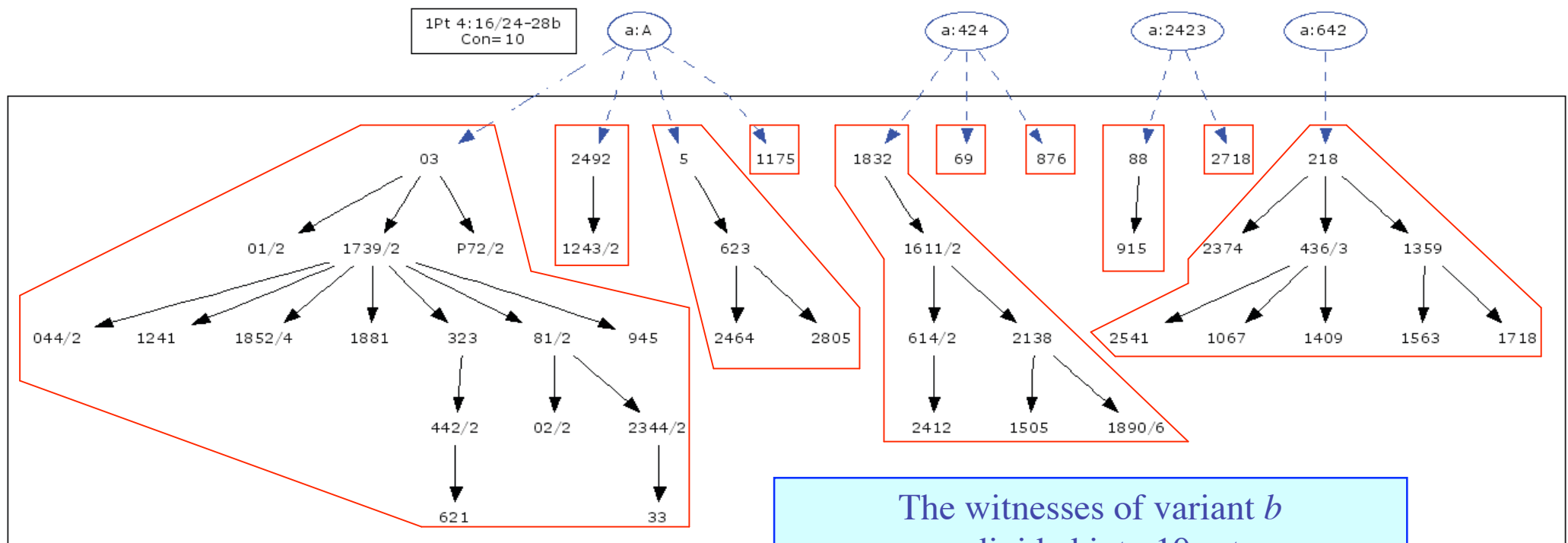
a τω μερει τουτω

c τω μερει τουτου

→ b τω ονοματι τουτω

d τουτω τω μερει

e τω μερει τουτω η τω ονοματι τουτω



The witnesses of variant *b*
are divided into 10 sets,
and there is no sufficient coherence
between members of distinct sets.

imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

a τω μερει τουτω

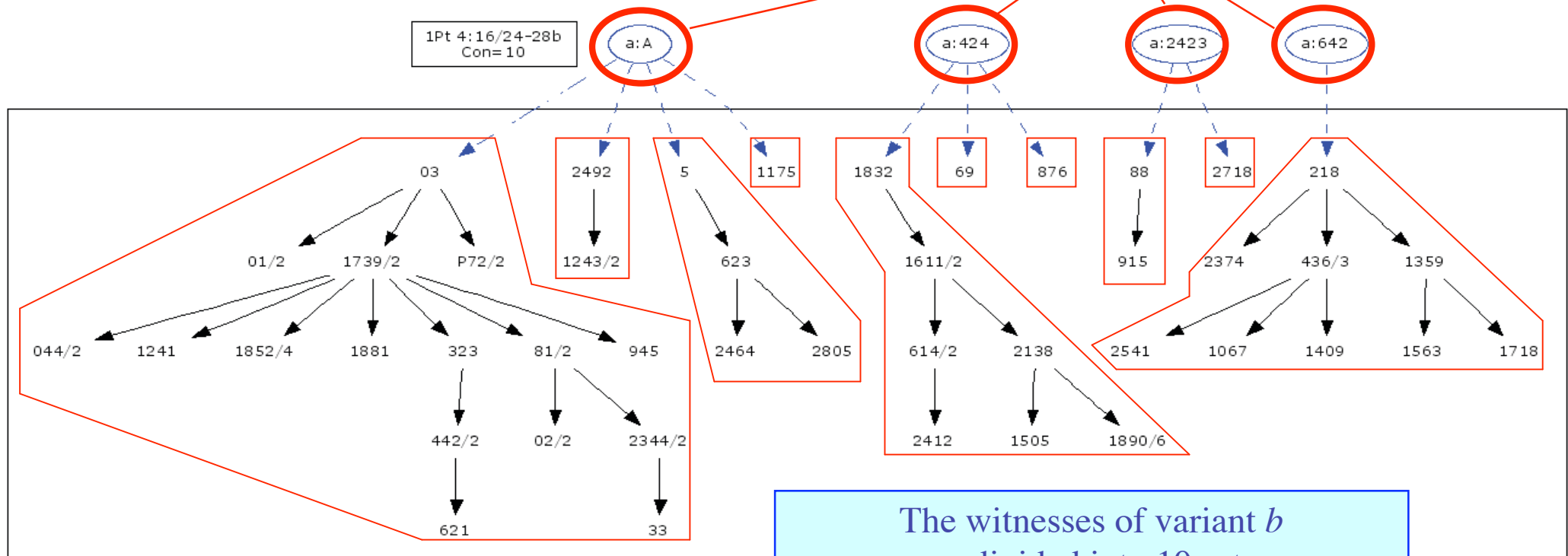
→ b τω ονοματι τουτω

c

d

e τω μερει τουτω η τω ονοματι τουτω

There are 4 most closely related potential ancestors of these sets, and they all witness to variant *a*.



The witnesses of variant *b* are divided into 10 sets, and there is no sufficient coherence between members of distinct sets.

imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

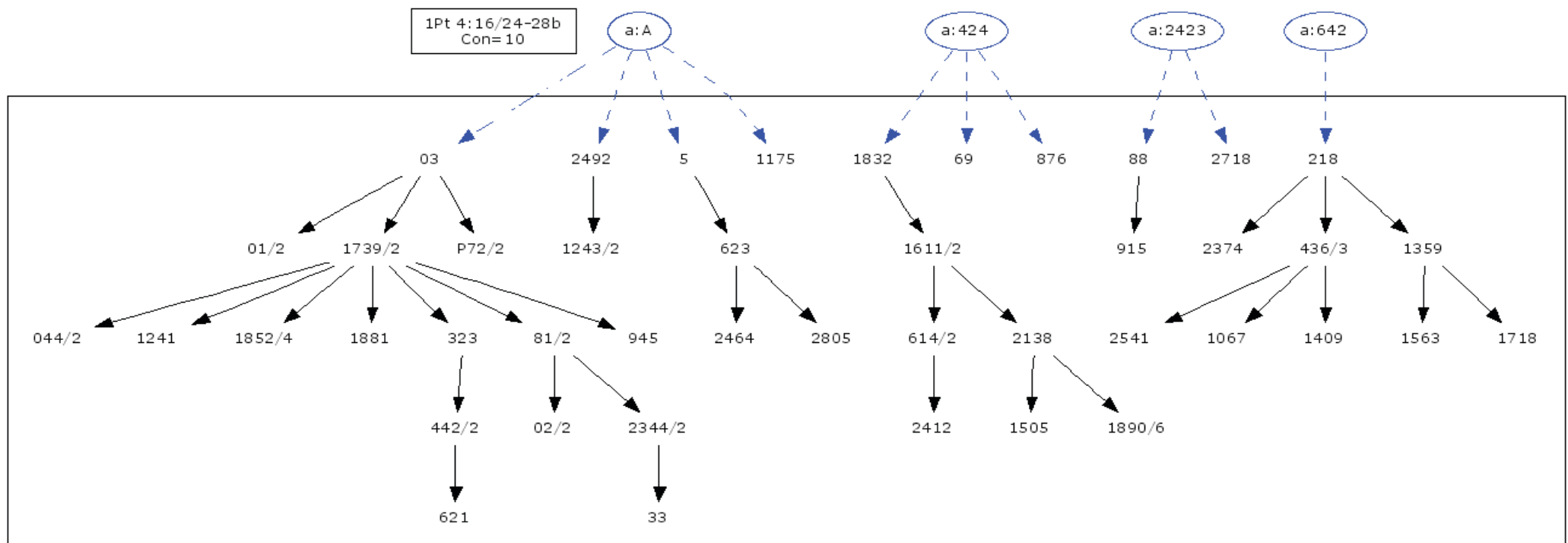
a τω μερει τουτω

c τω μερει τουτου

→ b τω ονοματι τουτω

d τουτω τω μερει

e τω μερει τουτω η τω ονοματι τουτω

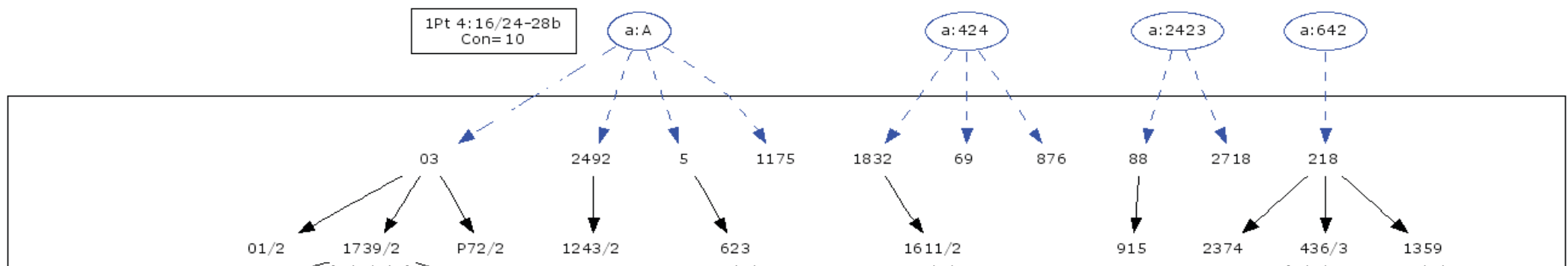


The resulting hypothesis: multiple genesis of variant *b* based on variant *a*.

imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

a τω μερει τουτω
 → b τω ονοματι τουτω
 c τω μερει τουτου
 d τουτω τω μερει
 e τω μερει τουτω η τω ονοματι τουτω



The editors of the *Editio Critica Maior* consider variant *a* to be the more difficult reading and assume that variant *b* has developed from variant *a*.

Even if variant *b* was the original, variant *b* must have been derived several times from variant *a* coincidentally. Variant *b* remains a case of multiple origins.

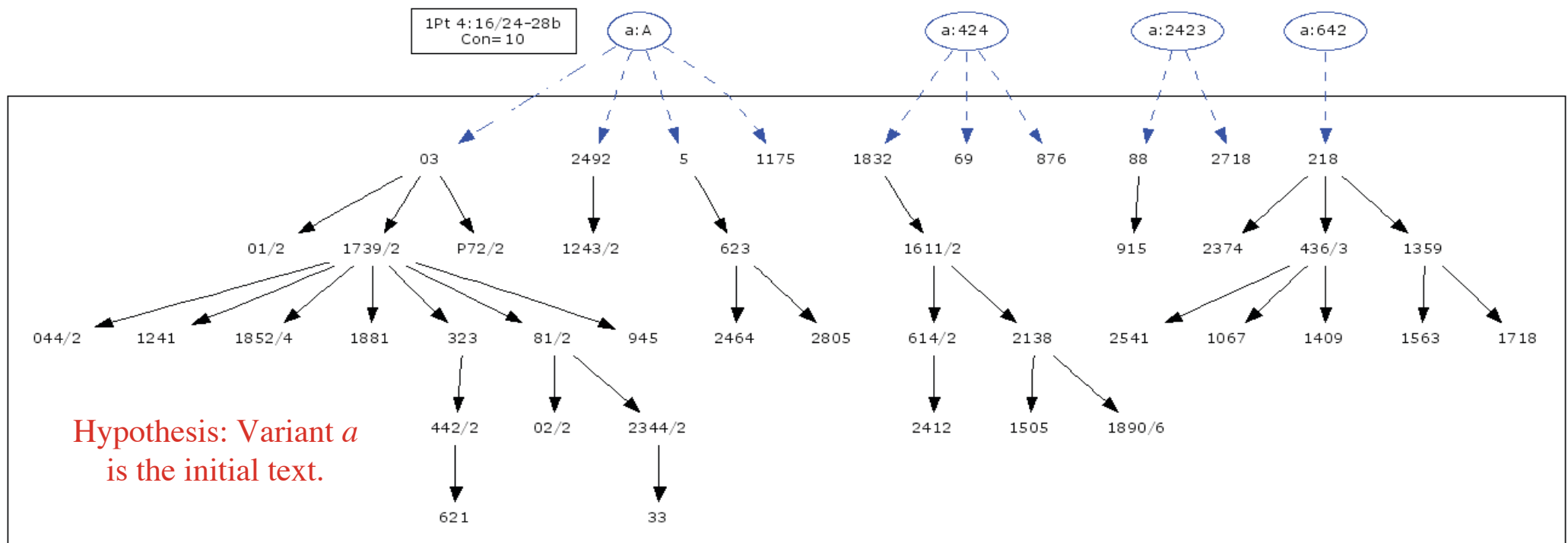
Compare these textual flow diagrams ...

The resulting hypothesis: multiple genesis of variant *b* based on variant *a*.

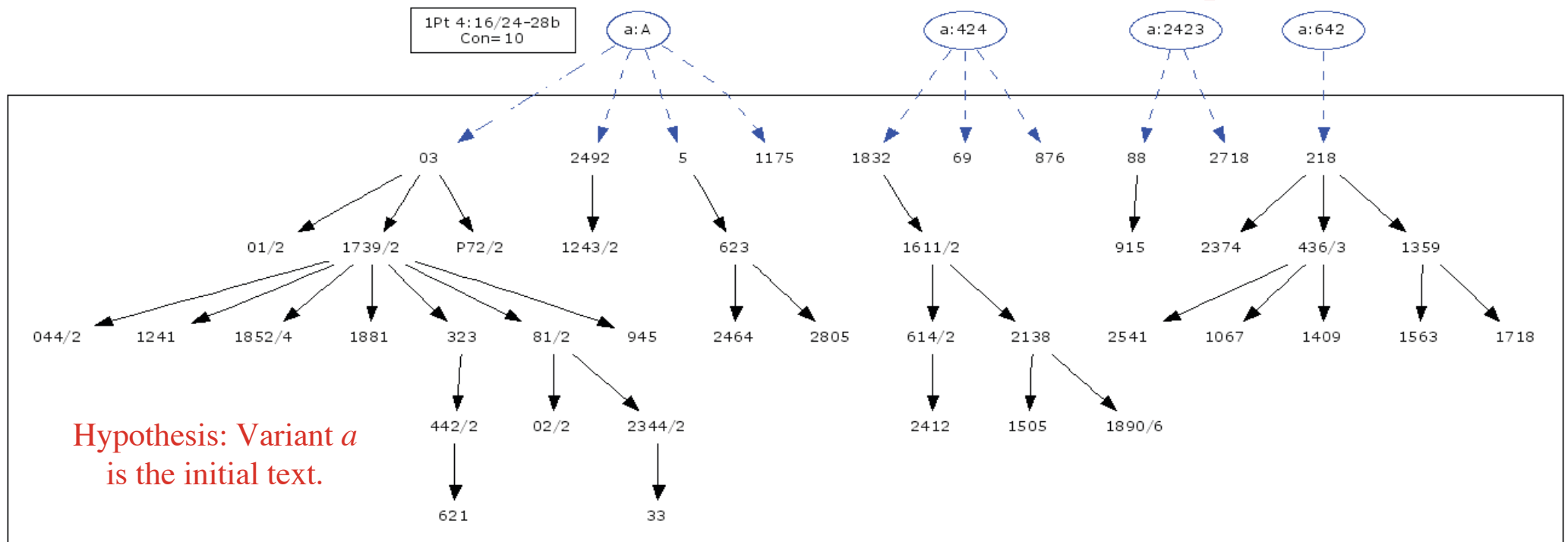
imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

a τω μερει τουτω
 ➞ b τω ονοματι τουτω
 c τω μερει τουτου
 d τουτω τω μερει
 e τω μερει τουτω η τω ονοματι τουτω

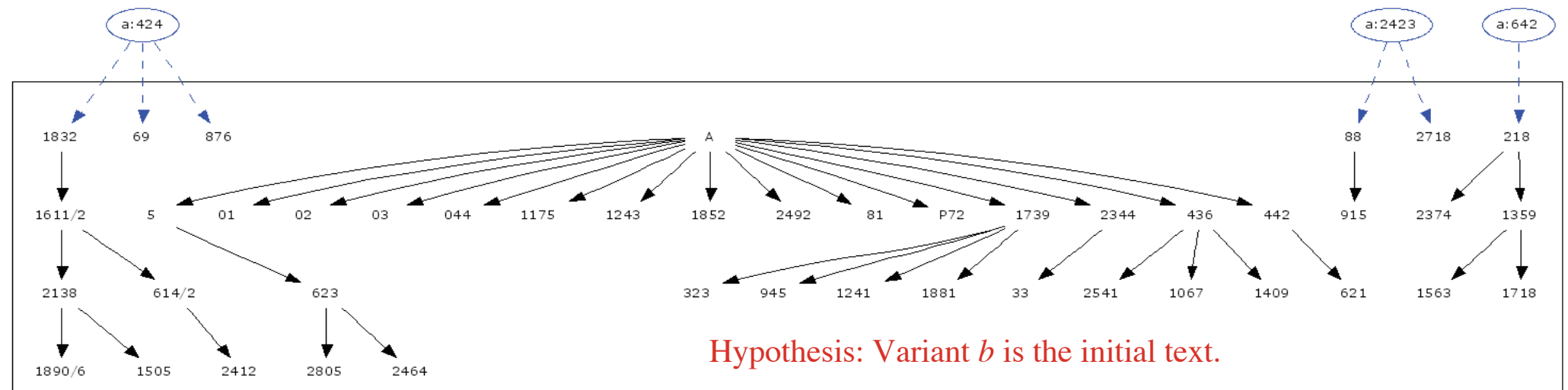
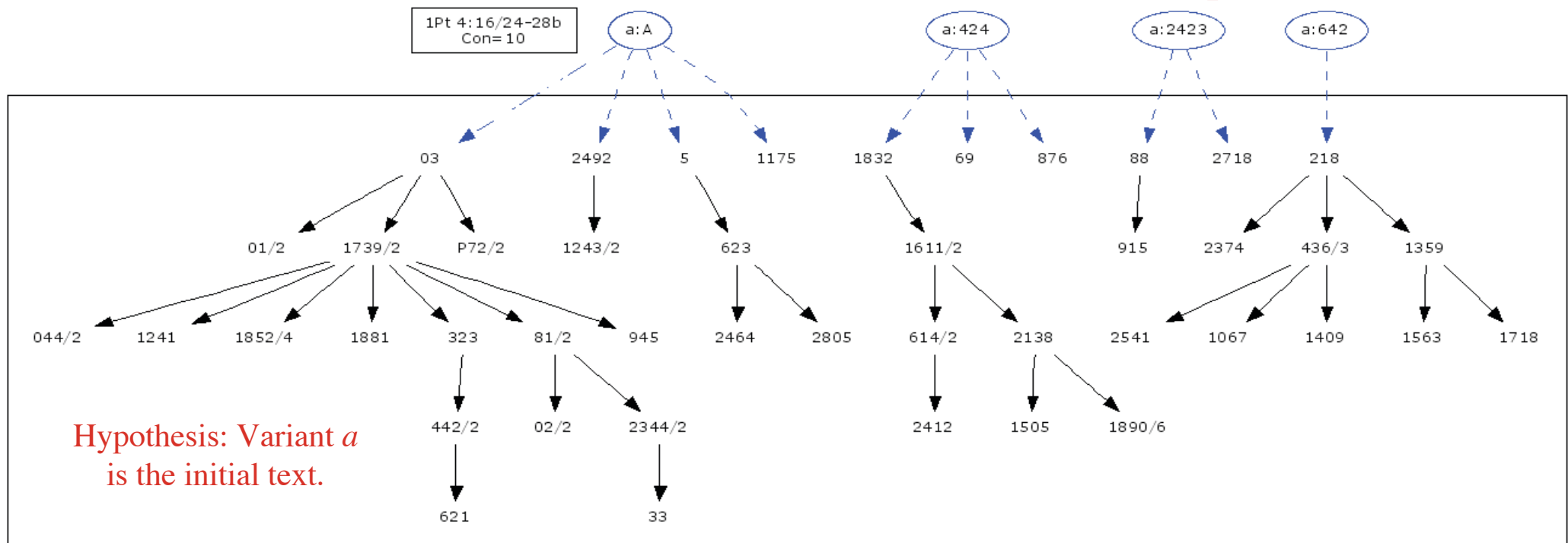


imperfect coherence



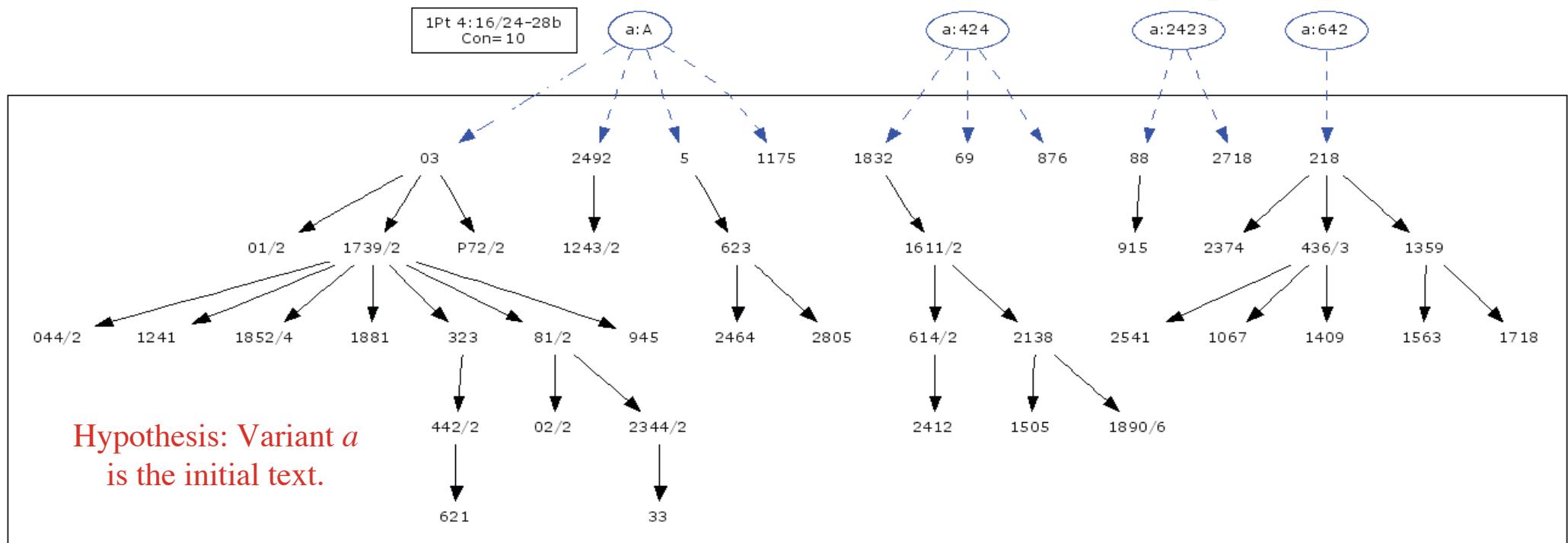
... and the textual flow diagram for variant *b* as initial text ...

imperfect coherence

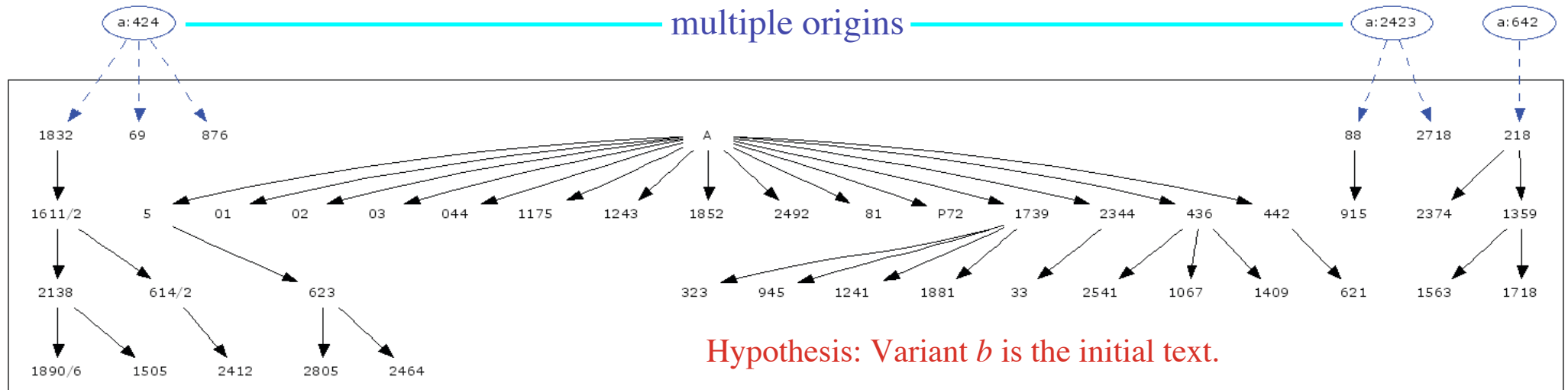


[Contents](#) | [Index](#)

imperfect coherence



multiple origins

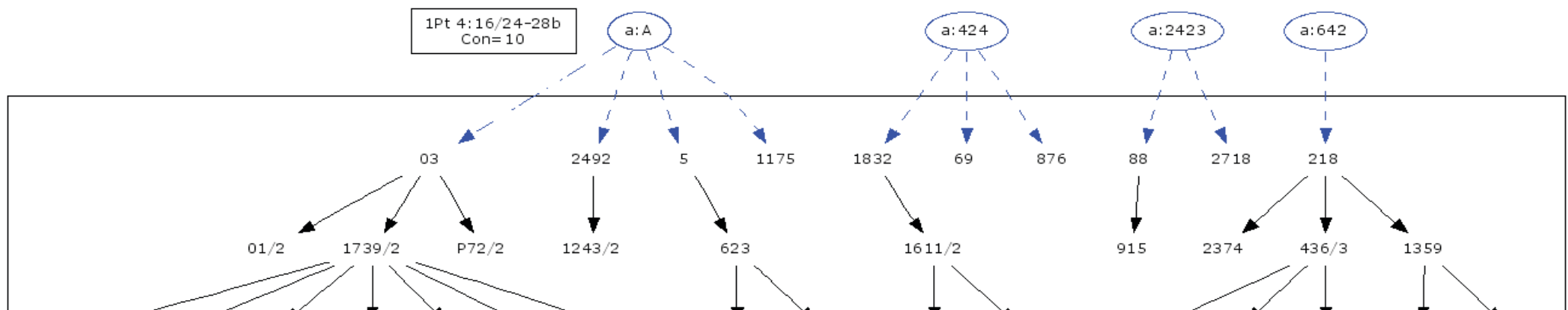


[Contents](#) | [Index](#)

imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

- a τω μερει τουτω c τω μερει τουτου
 → b τω ονοματι τουτω d τουτω τω μερει
 e τω μερει τουτω η τω ονοματι τουτω



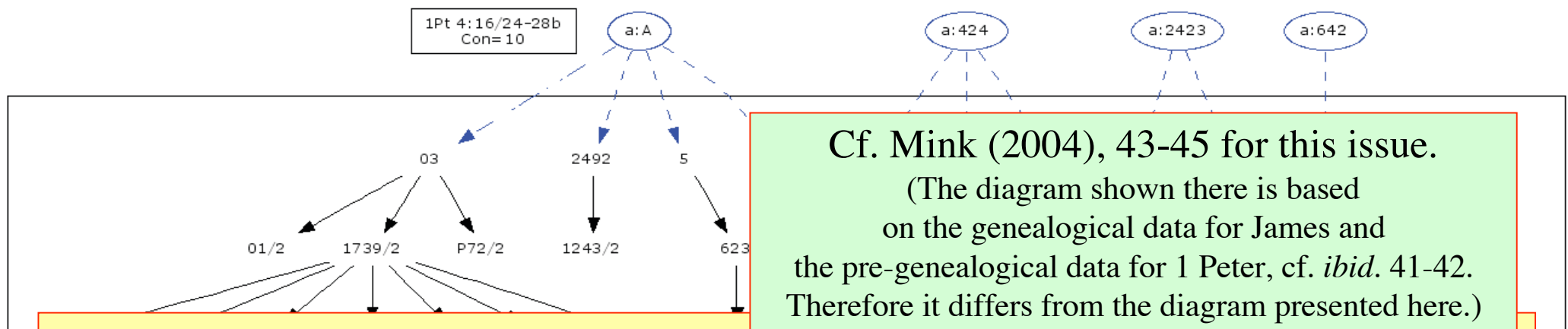
The editors of the *Editio Critica Maior* consider variant *a* to be the more difficult reading and assume that variant *b* has developed from variant *a*.
 Even if variant *b* was the original, variant *b* must have been derived several times from variant *a* coincidentally. Variant *b* remains a case of multiple origins.

The resulting hypothesis: multiple genesis of variant *b* based on variant *a*.

imperfect coherence

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

a τω μερει τουτω
 → b τω ονοματι τουτω
 c τω μερει τουτου
 d τουτω τω μερει
 e τω μερει τουτω η τω ονοματι τουτω



The editors of the *Editio Critica Maior* consider variant *a* to be the more difficult reading and assume that variant *b* has developed from variant *a*.

Even if variant *b* was the original, variant *b* must have been derived several times from variant *a* coincidentally. Variant *b* remains a case of multiple origins.

The resulting hypothesis: multiple genesis of variant *b* based on variant *a*.

perfect coherence

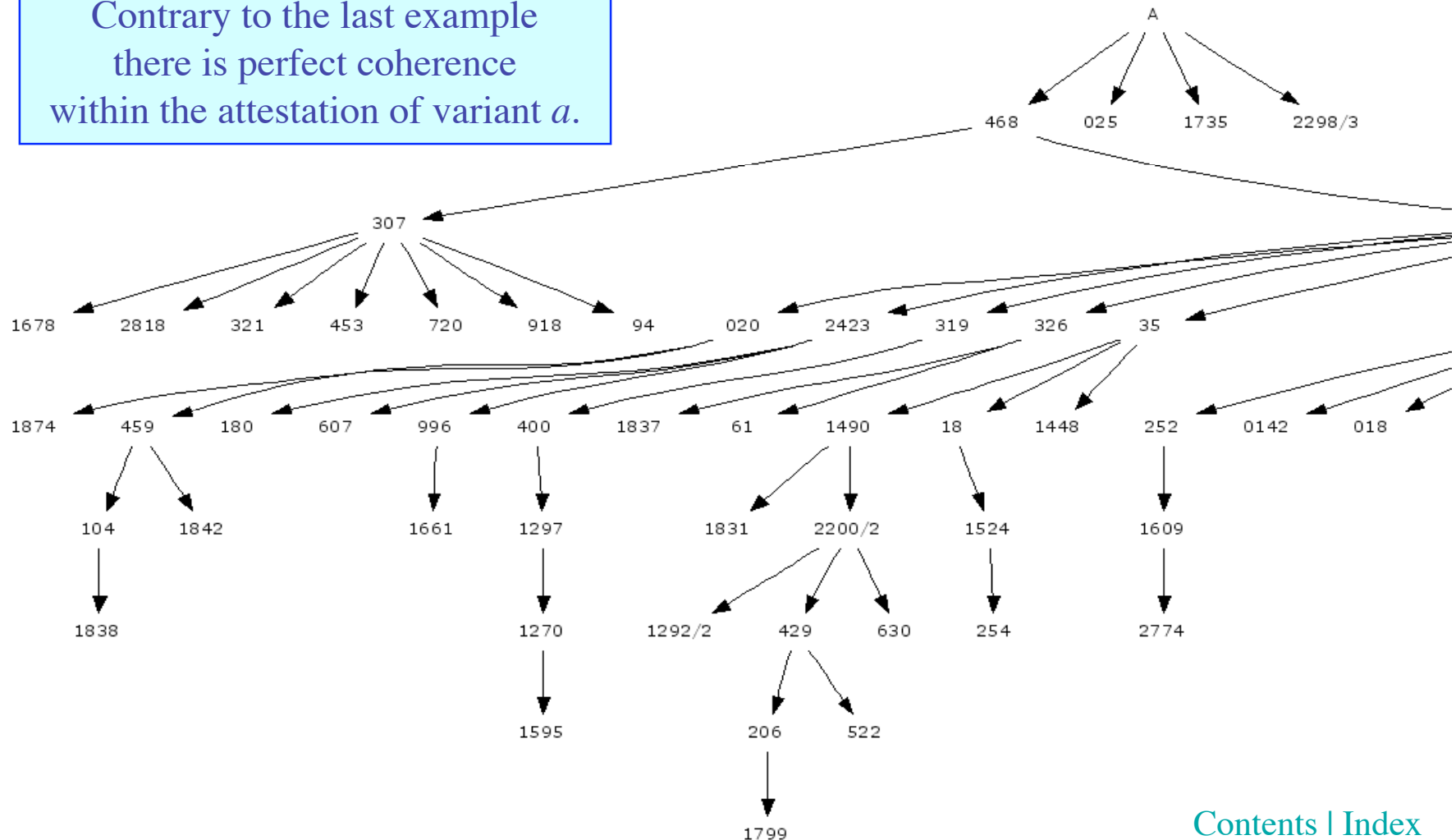
1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

→ a τω μερει τουτω
h τω ονοματι τουτω

c τω μερει τουτου
d τουτω τω μερεσι

1Pt 4:16/24-28a
Con= 10

Contrary to the last example
there is perfect coherence
within the attestation of variant *a*.



[Contents](#) | [Index](#)

perfect coherence

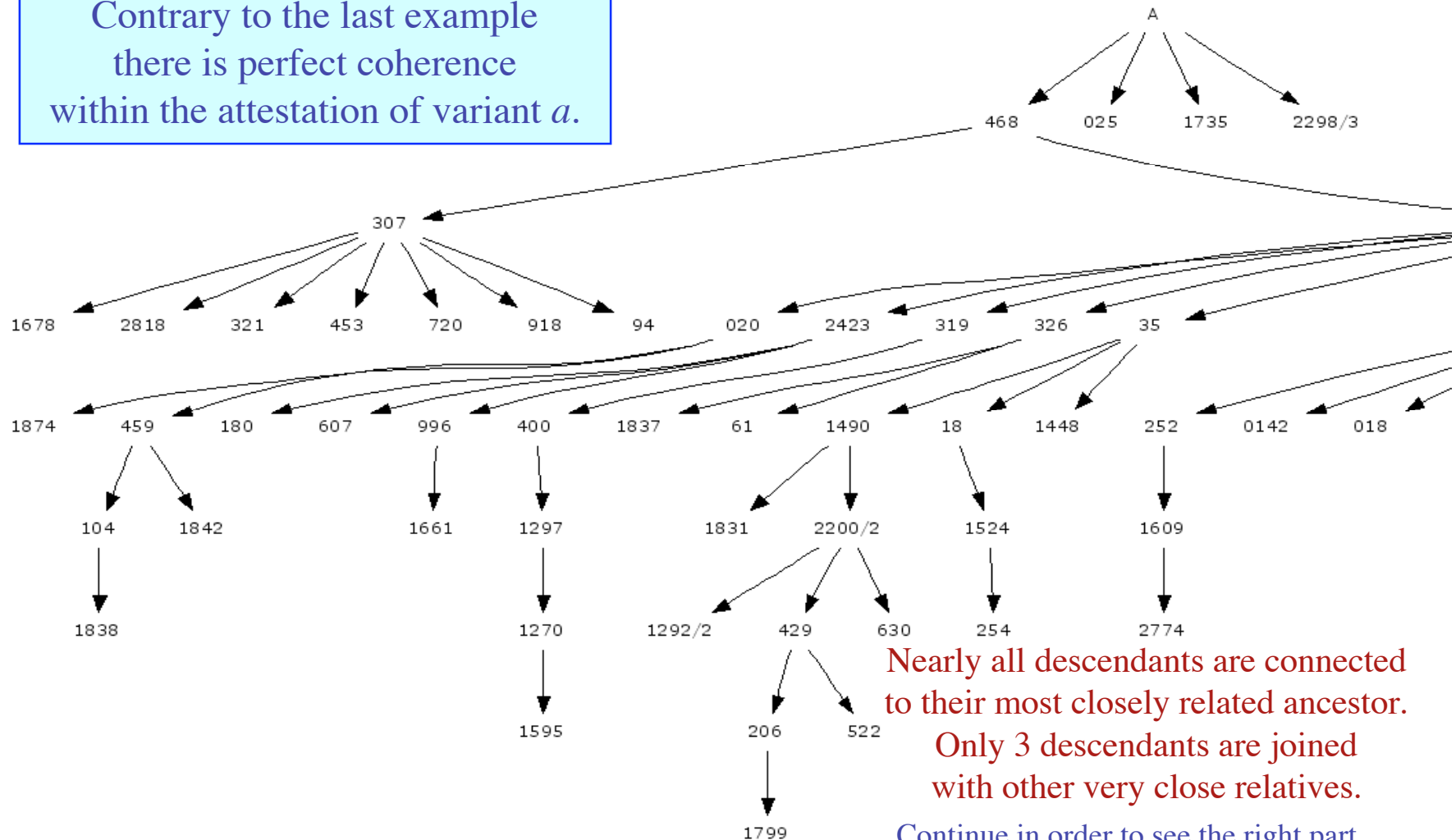
1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

→ a τω μερει τουτω
 b τω ονοματι τουτω

c τω μερει τουτου
 d τουτω τω μερει

1Pt 4:16/24-28a
 Con= 10

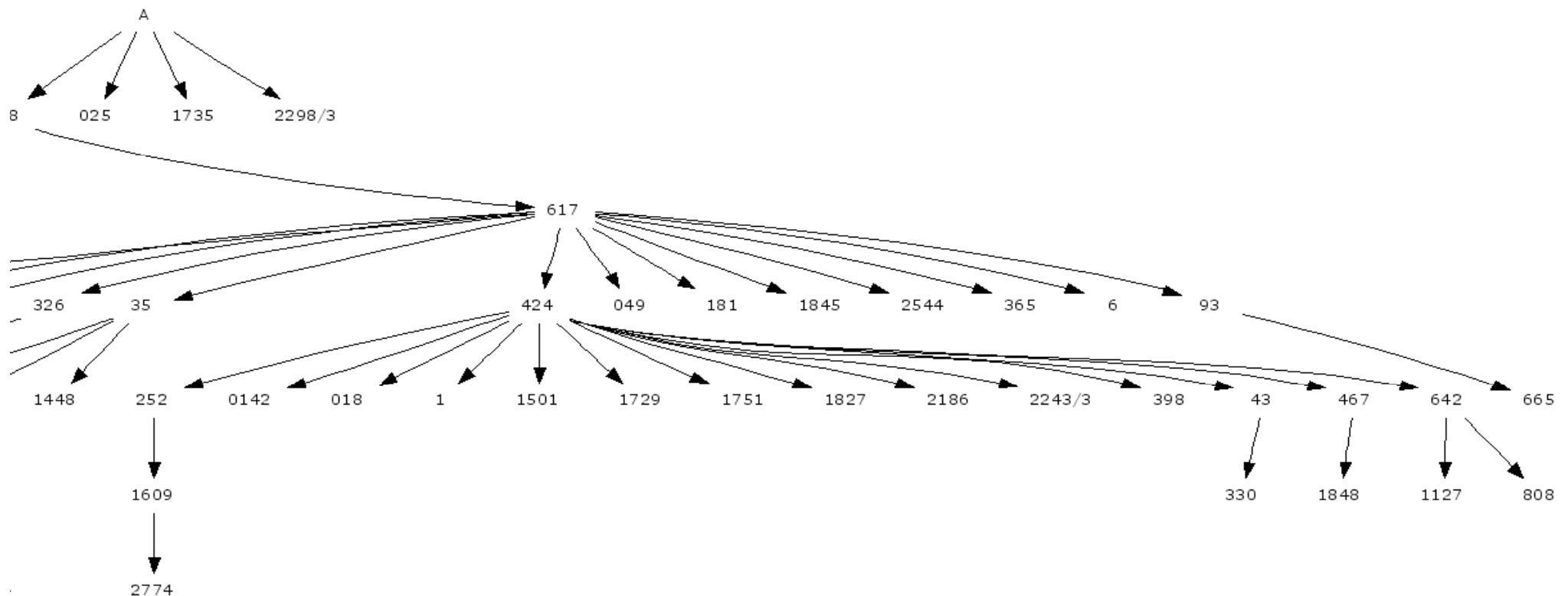
Contrary to the last example
 there is perfect coherence
 within the attestation of variant *a*.



1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

→ a τω μερει τουτω
b τω ονοματι τουτω

c τω μερει τουτου
d τουτω τω μερεσι



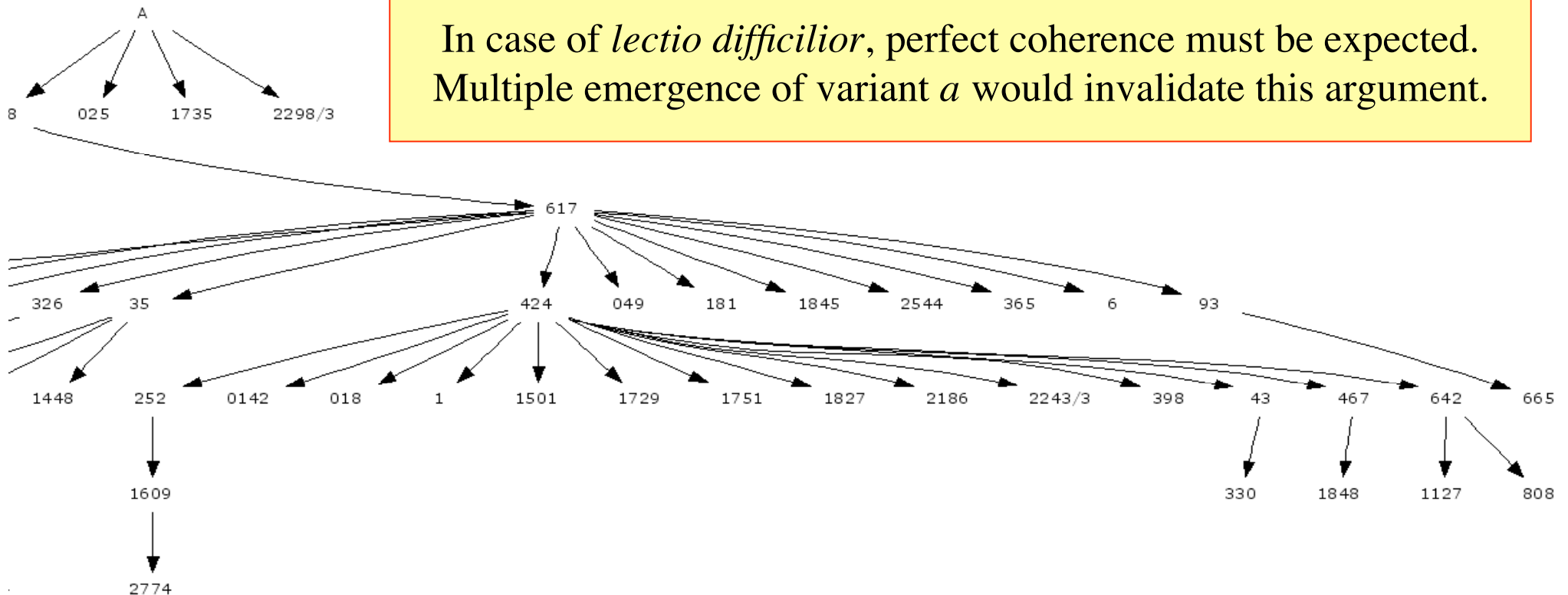
Nearly all descendants are connected to their most closely related ancestor.
Only 3 descendants are joined with other very close relatives.

[Contents](#) | [Index](#)

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

→ a τω μερει τουτω
b τω ονοματι τουτω

c τω μερει τουτου
d τουτω τω μερει



In case of *lectio difficilior*, perfect coherence must be expected. Multiple emergence of variant *a* would invalidate this argument.

Nearly all descendants are connected to their most closely related ancestor. Only 3 descendants are joined with other very close relatives.

[Contents](#) | [Index](#)

Coherence

pre-genealogical

Pre-genealogical coherence is based on the **agreement** between witnesses.

Its strength is determined by the proportion of agreements between the witnesses compared.

Pre-genealogical coherence has no genealogical direction.

genealogical

Genealogical coherence is based on **agreements** and the genealogical relationship of **diverging variants** of witnesses.

The proportion of prior variants determines the genealogical direction between the witnesses compared.

The proportion of agreements determines the strength of the genealogical coherence.

Coherence

pre-genealogical

Pre-genealogical coherence is based on the **agreement** between witnesses.

Its strength is determined by the proportion of agreements between the witnesses.

Pre-genealogical coherence has no genealogical direction.

genealogical

Genealogical coherence is based on **agreements** and **relationships** between witnesses.

Genealogical coherence takes into account the genealogical relationship between witnesses, the number of prior variants, and the genealogical direction of the agreements between witnesses compared.

The proportion of agreements determines the strength of the genealogical coherence.

Excursus:
Values determining coherence
How to evaluate the relevant data

Coherence

Coherence may be assessed as strong or weak or appropriate.
What is the criterion for rating coherence?

Let us start with genealogical coherence
and then switch to pre-genealogical coherence
in order to recognize the limitations of the latter.

Excursus:
Values determining coherence

Genealogical coherence

Data relevant for assessing genealogical coherence is provided in tables containing the potential ancestors of a given witness.

(Cf. the "Potential ancestors" module of the "Genealogical Queries" program.)

What do such tables show?

Excursus:
Values determining coherence

for instance: potential ancestors of 025
(025 = $W_{(itness)1}$)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P9	0	-	100.000	1	1	0	0	0	0
0166	0	-	100.000	8	8	0	0	0	0
093	0	>	97.368	37	38	1	0	0	0
1831S	0	>	96.970	32	33	1	0	0	0
P23	0	>	95.918	47	49	1	0	0	1
2718S	0	>	95.122	117	123	4	2	0	0
0173	0	>	95.000	19	20	1	0	0	0
0246	0	-	93.333	28	30	1	1	0	0
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
0156	0	>	90.909	60	66	3	2	1	0
0296	0	-	89.796	44	49	2	2	1	0
0209	0	>	89.167	107	120	5	3	5	0
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
P100	0	>	88.235	75	85	5	4	1	0
03	4		87.551	2342	2675	175	68	82	8
0247	0	>	86.364	19	22	2	0	1	0
P20	0	-	84.783	39	46	3	3	1	0
0251	0	-	82.353	14	17	1	1	0	1
0232	0	>	80.328	49	61	6	5	0	1
P81	0	>	79.268	65	82	8	5	4	0
0316	0	>	76.667	23	30	3	1	2	1
P78	0	-	75.000	3	4	0	0	0	1

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P9	0	-	100.000	1	1	0	0	0	0
0166	0	-	100.000	8	8	0	0	0	0
093	0	>	97.368	37	38	1	0	0	0
1831S	0	>	96.970	32	33	1	0	0	0
P23	0	>	95.918	47	49	1	0	0	1
2718S	0	>	95.122	117	123	4	2	0	0
0173	0	>	95.000	19	20	1	0	0	0
0246	0	-	93.333	28	30	1	1	0	0
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
0156	0	>	90.909	60	66	3	2	1	0
0296	0	-	89.796	44	49	2	2	1	0
0209	0	>	89.167	107	120	5	3	5	0
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
P100	0	>	88.235	75	85	5	4	1	0
03	4		87.551	2342	2675	175	68	82	8
0247	0	>	86.364	19	22	2	0	1	0
P20	0	-	84.783	39	46	3	3	1	0
0251	0	-	82.353	14	17	1	1	0	1
0232	0	>	80.328	49	61	6	5	0	1
P81	0	>	79.268	65	82	8	5	4	0
0316	0	>	76.667	23	30	3	1	2	1
P78	0	-	75.000	3	4	0	0	0	1

Explanation of the fields

$W_{(itness)2}$: potential ancestor

Excursus:
Values determining coherence

potential ancestors of 025
(025 = W_(itness)1)

Tables like this one include some witnesses (W2) which are neither potential ancestors nor potential descendants for there is no genealogical direction between the witnesses compared. It is indicated by "-" in the "D_(irection)" field.

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P9	0	-	100.000	1	1	0	0	0	0
0166	0	-	100.000	8	8	0	0	0	0
093	0	>	97.368	37	38	1	0	0	0
1831S	0	>	96.970	32	33	1	0	0	0
P23	0	>	95.918	47	49	1	0	0	1
2718S	0	>	95.122	117	123	4	2	0	0
0173	0	>	95.000	19	20	1	0	0	0
0246	0	-	93.333	28	30	1	1	0	0
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
0156	0	>	90.909	60	66	3	2	1	0
0296	0	-	89.796	44	49	2	2	1	0
0209	0	>	89.167	107	120	5	3	5	0
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
P100	0	>	88.235	75	85	5	4	1	0
03	4		87.551	2342	2675	175	68	82	8
0247	0	>	86.364	19	22	2	0	1	0
P20	0	-	84.783	39	46	3	3	1	0
0251	0	-	82.353	14	17	1	1	0	1
0232	0	>	80.328	49	61	6	5	0	1
P81	0	>	79.268	65	82	8	5	4	0
0316	0	>	76.667	23	30	3	1	2	1
P78	0	-	75.000	3	4	0	0	0	1

W_(itness)2: potential ancestor

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P9	0	-	100.000	1	1	0	0	0	0
0166	0	-	100.000	8	8	0	0	0	0
093	0	>	97.368	37	38	1	0	0	0
1831S	0	>	96.970	32	33	1	0	0	0
P23	0	>	95.918	47	49	1	0	0	1
2718S	0	>	95.122	117	123	4	2	0	0
0173	0	>	95.000	19	20	1	0	0	0
0246	0	-	93.333	28	30	1	1	0	0
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
0156	0	>	90.909	60	66	3	2	1	0
0296	0	-	89.796	44	49	2	2	1	0
0209	0	>	89.167	107	120	5	3	5	0
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
P100	0	>	88.235	75	85	5	4	1	0
03	4		87.551	2342	2675	175	68	82	8
0247	0	>	86.364	19	22	2	0	1	0
P20	0	-	84.783	39	46	3	3	1	0
0251	0	-	82.353	14	17	1	1	0	1
0232	0	>	80.328	49	61	6	5	0	1
P81	0	>	79.268	65	82	8	5	4	0
0316	0	>	76.667	23	30	3	1	2	1
P78	0	-	75.000	3	4	0	0	0	1

Explanation of the fields

$W_{(itness)2}$: potential ancestor

rank number

Excursus:
Values determining coherence

potential ancestors of 025
(025 = W_(itness)1)

The rank number is 0
if there is no genealogical direction
between the witnesses compared
or if a witness is too fragmented.
In the latter case it is indicated
by ">" in the "D_(irection)" field
if the witness (W2)
qualifies as potential ancestor
(because of the direction of
the genealogical relationship).

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P9	0	-	100.000	1	1	0	0	0	0
0166	0	-	100.000	8	8	0	0	0	0
093	0	>	97.368	37	38	1	0	0	0
1831S	0	>	96.970	32	33	1	0	0	0
P23	0	>	95.918	47	49	1	0	0	1
2718S	0	>	95.122	117	123	4	2	0	0
0173	0	>	95.000	19	20	1	0	0	0
0246	0	-	93.333	28	30	1	1	0	0
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
0156	0	>	90.909	60	66	3	2	1	0
0296	0	-	89.796	44	49	2	2	1	0
0209	0	>	89.167	107	120	5	3	5	0
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
P100	0	>	88.235	75	85	5	4	1	0
03	4		87.551	2342	2675	175	68	82	8
0247	0	>	86.364	19	22	2	0	1	0
P20	0	-	84.783	39	46	3	3	1	0
0251	0	-	82.353	14	17	1	1	0	1
0232	0	>	80.328	49	61	6	5	0	1
P81	0	>	79.268	65	82	8	5	4	0
0316	0	>	76.667	23	30	3	1	2	1
P78	0	-	75.000	3	4	0	0	0	1

W_(itness)2: potential ancestor
rank number

Excursus:
Values determining coherence

potential ancestors of 025
(025 = W_(itness)1)

The rank number is 0 if there is no genealogical direction between the witnesses compared or if a witness is too fragmented. In the latter case it is indicated by ">" in the "D_(irection)" field if the witness (W2) qualifies as potential ancestor (because of the direction of the genealogical relationship).

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P9	0	-	100.000	1	1	0	0	0	0
0166	0	-	100.000	8	8	0	0	0	0
093	0	>	97.368	37	38	1	0	0	0
1831S	0	>	96.970	32	33	1	0	0	0
P23	0	>	95.918	47	49	1	0	0	1
2718S	0	>	95.122	117	123	4	2	0	0
0173	0	>	95.000	19	20	1	0	0	0
0215	0	-	88.888	33	33	1	1	0	0
P20	0	-	84.783	39	46	3	3	1	0
0251	0	-	82.353	14	17	1	1	0	1
0232	0	>	80.328	49	61	6	5	0	1
P81	0	>	79.268	65	82	8	5	4	0
0316	0	>	76.667	23	30	3	1	2	1
P78	0	-	75.000	3	4	0	0	0	1

Smaller fragments have virtually no chance to become ancestors in an optimal substemma (i) because the more fragmented a witness is the less one can estimate which the relationship would be if the entire witness were preserved, and (ii) because the number of ancestors in an optimal substemma must be as small as possible. Therefore the chance of smaller fragments being one of these ancestors is very little.

Excursus:
Values determining coherence

W_(itness)2: potential ancestor
rank number

potential ancestors of 025
(025 = W_(itness)1)

The rank number is 0 if there is no genealogical direction between the witnesses compared or if a witness is a potential ancestor. In the latter case, the relationship is indicated by ">" in the "D" field. If the witness (W2) qualifies as potential ancestor (because of the direction of the genealogical relationship).

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P9	0	-	100.000	1	1	0	0	0	0
0166	0	-	100.000	8	8	0	0	0	0
093	0	>	97.368	37	38	1	0	0	0
1831S	0	>	96.970	32	33	1	0	0	0
P23	0	>	95.918	47	49	1	0	0	1
2718S	0	>	95.122	117	123	4	2	0	0
0173	0	>	95.000	19	20	1	0	0	0
0215	0	-	88.888	33	33	1	1	0	0
P20	0	-	84.783	39	46	3	3	1	0
0251	0	-	82.353	14	17	1	1	0	1
0232	0	>	80.328	49	61	6	5	0	1
P81	0	>	79.268	65	82	8	5	4	0
0316	0	>	76.667	23	30	3	1	2	1
P78	0	-	75.000	3	4	0	0	0	1

Smaller fragments have virtually no chance to become ancestors in an optimal substemma (i) because the more fragmented a witness is, the less likely it is that the relationship between the witnesses were preserved, and (ii) because the number of ancestors in an optimal substemma must be as small as possible. Therefore the chance of smaller fragments being one of these ancestors is very little.

Excursus:
Values determining coherence

W_(itness)2: potential ancestor
rank number

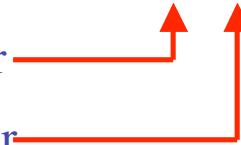
potential ancestors of 025
(025 = $W_{(itness)}1$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)}2$: potential ancestor

rank number



Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

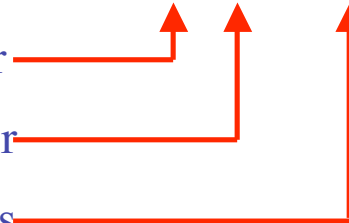
Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements



Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

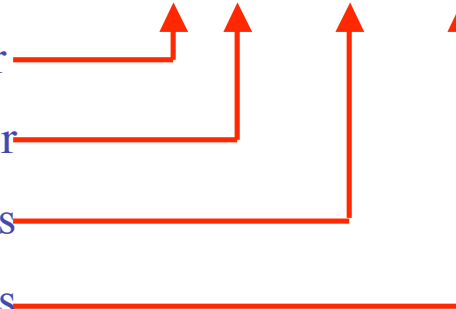
W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements



Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

The total of variant passages
in the Catholic Letters is 3046.
025 is fragmented and
contains 2681 of them.

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

A witness qualifies as potential ancestor if it supports more prior variants than the witness compared.
Thus, the direction of the predominant textual flow is determined.

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

The difference of these values is significant for the stability of the direction of the textual flow.

Small difference:

The direction may be inverted if textual decisions or local stemmata of variants change.

A witness qualifies as potential ancestor if it supports more prior variants than the witness compared.

Thus, the direction of the predominant textual flow is determined.

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

unclear passages

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

Explanation of the fields

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

unclear passages

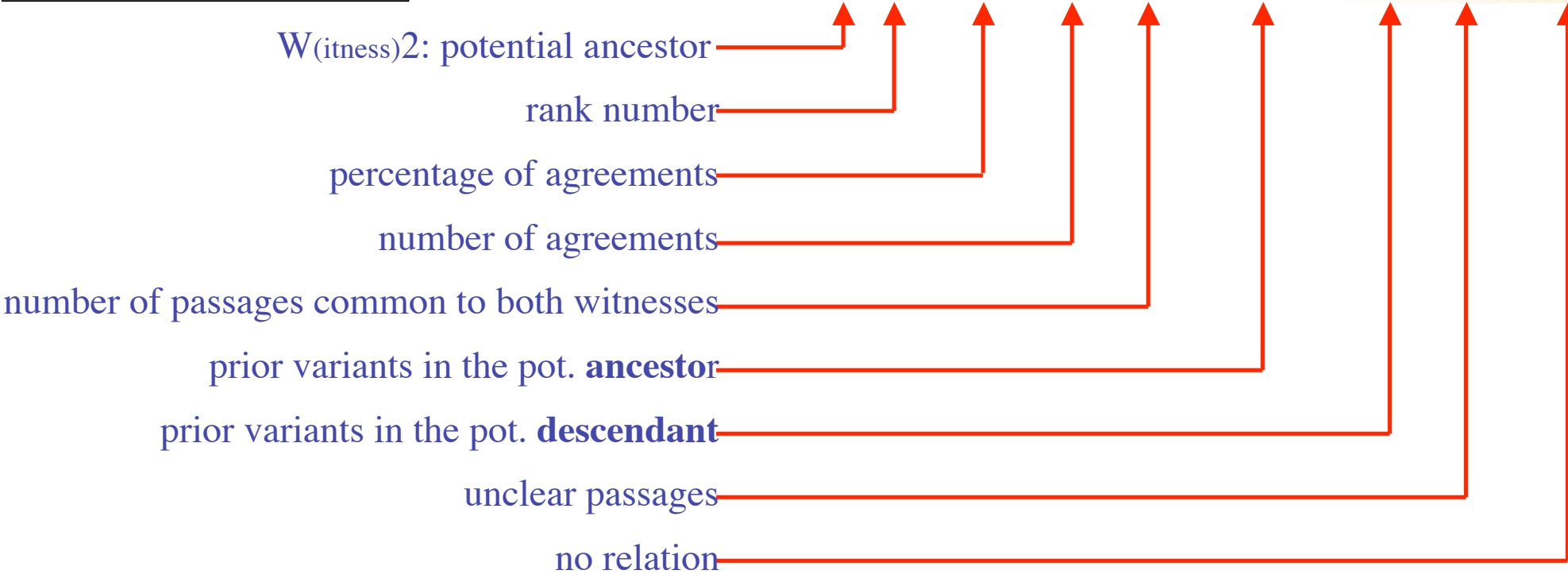
UNCL: At the present stage of work
it is unclear which is the source at these passages.
In some cases it may be impossible
to make a decision.

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8



Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

Explanation of the fields

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

unclear passages

no relation

At these passages, in a local stemma there is no relation between the variants in the witnesses compared because they are in different branches of the stemma.

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

unclear passages

no relation

The fields showing the potential ancestors
and the percentage of agreements
are particularly significant.

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

unclear passages

no relation

The potential ancestors provide information about possible sources of contamination.

From the percentage of agreements we can infer the distance to the most closely related ancestors and whether agreements may be genealogically relevant or coincidental.

The information from both fields profiles the individual character of a descendant.

The fields showing the potential ancestors and the percentage of agreements are particularly significant.

Excursus:
Values determining coherence

potential ancestors of 025
(025 = $W_{(itness)1}$)

Explanation of the fields

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

$W_{(itness)2}$: potential ancestor

rank number

percentage of agreements

number of agreements

number of passages common to both witnesses

prior variants in the pot. **ancestor**

prior variants in the pot. **descendant**

unclear passages

no relation

The potential ancestors provide information about possible sources of contamination.

From the percentage of agreements we can infer the distance to the most closely related ancestors and whether agreements may be genealogically relevant or coincidental.

The information from both fields profiles the individual character of a descendant.

Please compare the following examples and observe the differences ...

The fields showing the potential ancestors and the percentage of agreements are particularly significant.

Excursus:
Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		85.789
02	26		85.789
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	24		87.707
642	27		87.653

Please observe
the different mixtures
of potential ancestors
and the different
starting values
and decrease
of agreement
percentages.

Excursus:
Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.279
02	26		85.789
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	24		87.707
642	27		87.653

For instance
04 ...

Excursus:
Values determining coherence

potential ancestors of

04	W2	NR D	PERC1
	A	1	92.900
	1739	2	90.922
	03	3	89.301

The typical features of this table:

A is the most closely related potential ancestor
in the range above 92% agreement.

A is followed by non-Byzantine witnesses only.

Between the agreement percentage of *A*
and of the following witness there is a greater gap
(more than 2 percentage points).

No very closely related relative is extant.

The list is short.

Cf. other examples: 1739 and 03 ...

Excursus:
Values determining coherence

potential ancestors of

04	W2	NR	D	PERC1
	A	1		92.900
	1739	2		90.922
	03	3		89.301

1739	W2	NR	D	PERC1
	A	1		93.803
	03	2		89.128

03	W2	NR	D	PERC1
	A	1		96.856

In the case of 03,
the list is extremely short.
There is no potential ancestor but A.

The typical features of this table:
A is the most closely related potential ancestor
in the range above 92% agreement.
A is followed by non-Byzantine witnesses only.
Between the agreement percentage of A
and of the following witness there is a greater gap
(more than 2 percentage points).
No very closely related relative is extant.
The list is short.

Cf. other examples: 1739 and 03 ...

Excursus:
Values determining coherence

potential ancestors of

04	W2	NR	D	PERC1
	A	1		92.900
	1739	2		90.922
	03	3		89.301

1739	W2	NR	D	PERC1
	A	1		93.803
	03	2		89.128

03	W2	NR	D	PERC1
	A	1		96.856

In the case of 03,
the list is extremely short.
There is no potential ancestor but A.

The typical features of this table:
A is the most closely related potential ancestor
in the range above 92% agreement.
A is followed by non-Byzantine witnesses only.
Between the agreement percentage of A
and of the following witness there is a greater gap
(more than 2 percentage points).
No very closely related relative is extant.
The list is short.

Cf. other examples: 1739 and 03 ...

These are witnesses
with a high proportion of old text.

Excursus:
Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

[Contents](#) | [Index](#)

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.279
02	26		85.789
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	24		87.707
642	27		87.653

For instance
025 ...

Excursus:
Values determining coherence

potential ancestors of

025	W2	NR D	PERC1
	A	1	92.437
	468	0 -	91.096
	1739	2	88.810
	04	3	88.318
	03	4	87.551

The typical features of this table:
 A is the most closely related potential ancestor
 in the range above 92% agreement.
 A is followed by a witness
 with a considerable proportion of Byzantine variants.
 Between the agreement percentage of this witness
 and of the following one there is a greater gap
 (more than 2 percentage points).
 The next potential ancestors
 are non-Byzantine witnesses only
 No very closely related relative is extant.
 The list is short.

Cf. another very similar example: 468 ...

Excursus:
 Values determining coherence

potential ancestors of

025

W2	NR	D	PERC1
A	1		92.437
468	0	-	91.096
1739	2		88.810
04	3		88.318
03	4		87.551

468

W2	NR	D	PERC1
A	1		92.548
025	0	-	91.096
1739	2		87.652
03	3		87.633
04	4		87.220

The distance to the non-Byzantine witnesses 1739 and 04 is greater in this case.

The typical features of this table:
 A is the most closely related potential ancestor in the range above 92% agreement.
 A is followed by a witness with a considerable proportion of Byzantine variants.
 Between the agreement percentage of this witness and of the following one there is a greater gap (more than 2 percentage points).
 The next potential ancestors are non-Byzantine witnesses only.
 No very closely related relative is extant.
 The list is short.

Cf. another very similar example: 468 ...

Excursus:
 Values determining coherence

potential ancestors of

025

W2	NR	D	PERC1
A	1		92.437
468	0	-	91.096
1739	2		88.810
04	3		88.318
03	4		87.551

468

W2	NR	D	PERC1
A	1		92.548
025	0	-	91.096
1739	2		87.652
03	3		87.633
04	4		87.220

The distance to the non-Byzantine witnesses 1739 and 04 is greater in this case.

The typical features of this table:

A is the most closely related potential ancestor in the range above 92% agreement.

A is followed by a witness with a considerable proportion of Byzantine variants. Between the agreement percentage of this witness and of the following one there is a greater gap (more than 2 percentage points).

The next potential ancestors are non-Byzantine witnesses only. No very closely related relative is extant. The list is short.

Cf. another very similar example: 468 ...

These are witnesses with a high proportion of old text. The proportion of Byzantine variants is considerable.

Excursus:

Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

[Contents](#) | [Index](#)

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.517
02	26		86.517
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	24		87.707
642	27		87.653

For instance
323 ...

Excursus:
Values determining coherence

potential ancestors of

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0	-	89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

The typical features of this table:

There is a very closely related non-Byzantine ancestor.

The value of agreements with A
is more than 3 percentage points less.

Its agreement is comparable to the level
shown in the tables of 04, 025 or 468.

After a gap of more than 2 percentage points
there is a mix of 04 and different Byzantine witnesses
in the 89% range. The list is short.

The profile of ancestry is similar in some witnesses
like 945, 2298 ...

potential ancestors of

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0	-	89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

945

W2	NR	D	PERC1
1739	1		94.944
2298	2		92.641
A	3		92.058
323	4		91.941
04	5		89.639
025	6		88.959
35	7		88.674
468	8		88.574
424	9		88.392
642	0	-	88.322
18	10		88.319
307	11		88.214
319	12		88.188
2423	13		88.079
1448	14		87.854
453	15		87.837
020	16		87.644
617	17		87.623
03	18		87.537
93	19		86.868

2298

W2	NR	D	PERC1
1739	1		95.269
323	2		93.055
A	3		92.292
04	4		90.152
35	5		89.750
468	6		89.423
307	7		89.258
2423	8		89.123
424	9		89.075
617	10		88.962
025	11		88.914
93	12		88.798
319	13		88.617

The typical features of this table:

There is a very closely related non-Byzantine ancestor.

The value of agreements with A
is more than 3 percentage points less.

Its agreement is comparable to the level
shown in the tables of 04, 025 or 468.

After a gap of more than 2 percentage points
there is a mix of 04 and different Byzantine witnesses
in the 89% range. The list is short.

The profile of ancestry is similar in some witnesses
like 945, 2298 ...

potential ancestors of

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0	-	89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

945

W2	NR	D	PERC1
1739	1		94.944
2298	2		92.641
A	3		92.058
323	4		91.941
04	5		89.639
025	6		88.959
35	7		88.674
468	8		88.574
424	9		88.392
642	0	-	88.322
18	10		88.319
307	11		88.214
319	12		88.188
2423	13		88.079
1448	14		87.854
453	15		87.837
020	16		87.644
617	17		87.623
03	18		87.537
93	19		86.868

2298

W2	NR	D	PERC1
1739	1		95.269
323	2		93.055
A	3		92.292
04	4		90.152
35	5		89.750
468	6		89.423
307	7		89.258
2423	8		89.123
424	9		89.075
617	10		88.962
025	11		88.914
93	12		88.798
319	13		88.617

These witnesses share their variants with non-Byzantine and Byzantine witnesses. The non-Byzantine influence clearly prevails.

The typical features of this table:
There is a very closely related non-Byzantine ancestor.

The value of agreements with A
is more than 3 percentage points less.

Its agreement is comparable to the level
shown in the tables of 04, 025 or 468.

After a gap of more than 2 percentage points
there is a mix of 04 and different Byzantine witnesses
in the 89% range. The list is short.

The profile of ancestry is similar in some witnesses
like 945, 2298 ...

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.517
02	26		86.517
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	24		87.707
642	27		87.653

For instance
01 ...

Excursus:
Values determining coherence

potential ancestors of

	W2	NR	D	PERC1
	A	1		90.793
01	03	2		87.175
	81	3		85.485
	02	4		85.262
	1739	5		85.254
	623	6		85.234
	04	7		85.175
	468	8		85.143
	1845	9		84.998
	5	10		84.988
	307	11		84.955
	453	12		84.902
	2423	13		84.884
	617	14		84.822
	35	15		84.723
	424	16		84.697
	323	17		84.692
	93	18		84.689
	18	19		84.687
	642	20		84.636
	319	21		84.628
	020	22		84.505
	1735	23		84.457
	1448	24		84.416
	2298	25		84.380
	607	26		84.351
	218	27		84.316




The typical features of this table:
 This list is rather long (44 potential ancestors).
 A clearly is the most closely related ancestor.
 But the percentage of agreement with A is less
 than what we found in the tables
 for 04, 1739, 03, 025, 486, 945 or 2298.
 The percentage in the 03 line decreases considerably.
 That is also true for the 81 line.
 Then we see a dense field of relatively distant
 potential ancestors showing various kinds of text.

Excursus:
 Values determining coherence

potential ancestors of

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316



The typical features of this table:
 This list is rather long (44 potential ancestors).
 A clearly is the most closely related ancestor.
 But the percentage of agreement with A is less
 than what we found in the tables
 for 04, 1739, 03, 025, 486, 945 or 2298.
 The percentage in the 03 line decreases considerably.
 That is also true for the 81 line.
 Then we see a dense field of relatively distant
 potential ancestors showing various kinds of text.

The great distance
 to the most closely related potential ancestor
 is due to a great amount of particular variants in 01.
 Closely related potential ancestors sharing
 some of these variants may have existed and be lost.
 Thus, the preserved closest potential ancestors of 01
 are rather distant and they are in the same range
 of agreement percentages
 where coincidental agreement may be considered.

Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		85.789
02	26		85.789
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	24		87.707
642	27		87.653

For instance
35 ...

Excursus:
Values determining coherence

potential ancestors of

35	W2	NR D	PERC1
	617	1	95.995
	424	2	95.988
	468	3	95.588
	A	4	92.263
	025	5	91.160
	323	0 -	89.638
	1739	6	87.853
	03	7	87.272
	04	8	87.262
	P74	0 >	82.493

The typical features of this table:

The agreement with A is comparable to the level shown in the tables of 04, 025, 468, 323, 945 or 2298.

But there are very closely related potential ancestors in the 95% range. They are witnesses of the Byzantine text.

After the 025 line only non-Byzantine witnesses are presented.

Excursus:
Values determining coherence

potential ancestors of

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0	-	89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0	>	82.493

The typical features of this table:

The agreement with A is comparable to the level shown in the tables of 04, 025, 468, 323, 945 or 2298.

But there are very closely related potential ancestors in the 95% range. They are witnesses of the Byzantine text.

After the 025 line only non-Byzantine witnesses are presented.

468

W2	NR	D	PERC1
A	1		92.548
025	0	-	91.096
1739	2		87.652
03	3		87.633
04	4		87.220

When we compare the list for 35 with that for 468, we clearly see the difference:

Contrary to 468, 35 has potential ancestors with Byzantine text.

Excursus:
Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.279
02	26		86.279
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	24		87.707
642	27		87.653

For instance
018 ...

Excursus:
Values determining coherence

potential ancestors of

468

W2	NR	D	PERC1
A	1		92.548
025	0	-	91.096
1739	2		87.652
03	3		87.633
04	4		87.220

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0	-	89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0	>	82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.500
02	26		85.201
P74	0	>	82.789

The typical features of this table are obvious when we compare it to those for 468 and 35: There is a great number of potential ancestors which, compared with A, are more closely related to 018. They all are witnesses of the Byzantine text. Yet, the distance of 018 to A is only slightly greater than that of 468 and 35. In all cases, the non-Byzantine witnesses are found at the end of the list.

Excursus:
Values determining coherence

potential ancestors of

468

W2	NR	D	PERC1
A	1		92.548
025	0	-	91.096
1739	2		87.652
03	3		87.633
04	4		87.220

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0	-	89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0	>	82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.500
02	26		85.201
P74	0	>	82.789

The typical features of this table are obvious when we compare it to those for 468 and 35: There is a great number of potential ancestors which, compared with A, are more closely related to 018. They all are witnesses of the Byzantine text. Yet, the distance of 018 to A is only slightly greater than that of 468 and 35. In all cases, the non-Byzantine witnesses are found at the end of the list.

In 018, more Byzantine variants have accumulated than in 468 or 35.

Excursus:
Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.500
02	26		85.201
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	23		87.797
1297	25		87.781
665	26		87.720
642	27		87.653

For instance
1661 ...

Excluded
determiner

potential ancestors of

	W2	NR	D	PERC1
1661	996	1		97.205
	2423	2		90.145
	424	3		89.835
	18	4		89.366
	020	5		89.362
	468	6		89.329
	35	7		89.292
	319	8		89.188
	617	9		89.127
	252	10		89.043
	607	11		88.937
	1	12		88.757
	1609	13		88.699
	018	14		88.599
	1501	15		88.313
	400	16		88.250
	2774	17		88.223
	0142	18		88.079
	93	19		87.974
	049	20		87.893
	1270	21		87.836
	459	22		87.818
	808	23		87.797
	2186	23		87.797
	1297	25		87.781
	665	26		87.720
	642	27		87.653

The typical features of this table are:

1661 is very similar to its most closely related potential ancestor 996.

Both show a very great distance to the witness with rank number 2, more than 7 percentage points. Then a very dense bulk of Byzantine witnesses follows. The whole list comprises 119 potential ancestors.

Excursus:
Values determining coherence

potential ancestors of

	W2	NR	D	PERC1
1661	996	1		97.205
	2423	2		90.145
	424	3		89.835
	18	4		89.366
	020	5		89.362
	468	6		89.329
	35	7		89.292
	319	8		89.188
	617	9		89.127
	252	10		89.043
	607	11		88.937
	1	12		88.757
	1609	13		88.699
	018	14		88.599
	1501	15		88.313
	400	16		88.250
	2774	17		88.223
	0142	18		88.079
	93	19		87.974
	049	20		87.893
	1270	21		87.836
	459	22		87.818
	808	23		87.797
	2186	23		87.797
	1297	25		87.781
	665	26		87.720
	642	27		87.653

1661

The typical features of this table are:

1661 is very similar to its most closely related potential ancestor 996.

Both show a very great distance to the witness with rank number 2, more than 7 percentage points. Then a very dense bulk of Byzantine witnesses follows. The whole list comprises 119 potential ancestors.

996 and 1661 are a pair of witnesses sharing a lot of peculiar variants. The basis of the text is, however, clearly Byzantine.

Excursus:
Values determining coherence

Which percentage of agreement is high or low?

These values may show the range
we find in the material collated for the Catholic Letters:

maximum: 99.1 % agreement between 614 and 2412 (27 disagreements)

minimum: 77.9 % agreement between 1241 and 1838 (624 disagreements)

average agreement: 87.6 %

Excursus:
Values determining coherence

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		84.457
1448	24		84.416
2298	25		84.380
607	26		84.351
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948
04	24		86.517
1739	25		86.500
02	26		85.201
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	23		87.797
1297	25		87.781
665	26		87.720
642	27		87.653

The agreement values
fall below average
(87.6 %)
at different positions
in the tables of
potential ancestors
(cf. the red lines).

Excluded
determiner

potential ancestors of

04

W2	NR	D	PERC1
A	1		92.900
1739	2		90.922
03	3		89.301

025

W2	NR	D	PERC1
A	1		92.437
468	0 -		91.096
1739	2		88.810
04	3		88.318
03	4		87.551

323

W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0 -		89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

01

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955
453	12		84.902
2423	13		84.884
617	14		84.822
35	15		84.723
424	16		84.697
323	17		84.692
93	18		84.689
18	19		84.687
642	20		84.636
319	21		84.628
020	22		84.505
1735	23		
1448	24		
2298	25		
607	26		
218	27		84.316

35

W2	NR	D	PERC1
617	1		95.995
424	2		95.988
468	3		95.588
A	4		92.263
025	5		91.160
323	0 -		89.638
1739	6		87.853
03	7		87.272
04	8		87.262
P74	0 >		82.493

018

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
			86.948
			86.517
			86.500
			85.201
P74	0 >		82.789

1661

W2	NR	D	PERC1
996	1		97.205
2423	2		90.145
424	3		89.835
18	4		89.366
020	5		89.362
468	6		89.329
35	7		89.292
319	8		89.188
617	9		89.127
252	10		89.043
607	11		88.937
1	12		88.757
1609	13		88.699
018	14		88.599
1501	15		88.313
400	16		88.250
2774	17		88.223
0142	18		88.079
93	19		87.974
049	20		87.893
1270	21		87.836
459	22		87.818
808	23		87.797
2186	23		87.797
1297	25		87.781
665	26		87.720
642	27		87.653

The agreement values
fall below average
(87.6 %)
at different positions
in the tables of
potential ancestors
(cf. the red lines).

Let us compare
01 and 018.

Excluded
determiner

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955



Potential Descendants of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
P74	0	<	86.567
436	1		84.590
2805	2		84.419
2541	3		84.408
2464	4		84.366
442	5		84.340

[Contents](#) | [Index](#)

Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955



Potential Descendants of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
P74	0	<	86.567
436	1		84.590
2805	2		84.419
2541	3		84.408
2464	4		84.366
442	5		84.340

Additionally, the list of potential descendants is shown.
Thus, we see where in this list agreements fall below the 87% level.

Excursus:
Values determining coherence

[Contents](#) | [Index](#)

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955



There would be more closely related witnesses if more manuscripts from the 1st millennium, especially from the early centuries, were preserved.

Potential Descendants of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
P74	0	<	86.567
436	1		84.590
2805	2		84.419
2541	3		84.408
2464	4		84.366
442	5		84.340

Excursus:
Values determining coherence

[Contents](#) | [Index](#)

Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948

**Potential Descendants of 018 (W1)**

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
1	1		94.812
607	2		94.604
049	3		94.108
2186	4		93.800
0142	5		93.777
400	6		93.449
665	7		93.375
1609	8		92.986
1501	9		92.973
431	10		92.843
1297	11		92.805
5	59		88.871
2147	60		88.665
1661	61		88.599
442	62		88.478
1751	63		88.414
2541	64		88.134
915	65		87.930
623	66		87.929
61	67		87.805



Excursus:
Values determining coherence

Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948

**Potential Descendants of 018 (W1)**

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
1	1		94.812
607	2		94.604
049	3		94.108
2186	4		93.800
0142	5		93.777
400	6		93.449
665	7		93.335
5	59		88.871
2147	60		88.665
1661	61		88.599
442	62		88.478
1751	63		88.414
2541	64		88.134
915	65		87.930
623	66		87.929
61	67		87.805



There are far more close relatives, but in these tables their number is limited, because Byzantine witnesses are included only if they have been selected for the ECM.

Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955



Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948



Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793
03	2		87.175
81	3		85.485
02	4		85.262
1739	5		85.254
623	6		85.234
04	7		85.175
468	8		85.143
1845	9		84.998
5	10		84.988
307	11		84.955



Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		86.948



What is the reason
for the different positions
of the 87% range in these tables?

Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793



03	2	87.175
81	3	85.485
02	4	85.262
1739	5	85.254



Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		85.848



Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793



03	2	87.175
81	3	85.485
02	4	85.262
1739	5	85.254



Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		85.848



The genealogical environment of 018 is well documented.

Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793

1. The closer genealogical environment of 01 is completely lost.

03	2	87.175
81	3	85.485
02	4	85.262
1739	5	85.254

Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		85.848

The genealogical environment of 018 is well documented.

Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793

1. The closer genealogical environment of 01 is completely lost.

2. If a witness reads a high proportion of particular variants not shared with any other witness, the distance to all of them increases.

This applies to 01
(89 particular variants, 3 %).

03	2	87.175
81	3	85.485
02	4	85.262
1739	5	85.254

Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		85.848

The genealogical environment of 018 is well documented.

Excursus:
Values determining coherence

Potential Ancestors of 01 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
A	1		90.793

1. The closer genealogical environment of 01 is completely lost.

2. If a witness reads a high proportion of particular variants not shared with any other witness, the distance to all of them increases.

This applies to 01
(89 particular variants, 3 %).

03	2	87.175
81	3	85.485
02	4	85.262
1739	5	85.254

Potential Ancestors of 018 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1
424	1		96.735
617	2		95.357
2423	3		95.323
319	4		95.119
020	5		94.779
18	6		94.620
35	7		94.435
468	8		94.419
93	9		94.040
252	10		93.898
6	11		92.580
307	12		92.558
453	13		92.021
642	14		91.851
A	15		91.555
1448	16		91.152
025	17		90.916
2492	18		90.349
2298	19		88.402
81	20		88.218
323	21		88.057
945	22		87.290
03	23		85.848

The genealogical environment of 018 is well documented.

018:
12 particular variants, 0.4 %

Excursus:
Values determining coherence

What is the difference between the 87 % of agreement with 01 and the 87 % of agreement with 018? Is there any difference in quality?

- i. Because all closer relatives of 01 are lost, traces of the genealogical environment can be found only in more distant relatives.
- ii. In the case of 018, the agreements with 945 (87.29 %) are covered by the agreements with more closely related witnesses.
- iii. In the case of 01, we do not know these more closely related witnesses. We have no choice but to draw on 03 agreeing at 87 %.
- iv. In the case of 018, we can assess to what extent the genealogical environment is mirrored in the distant relative 945.
- v. In the case of 01 compared with 03, the assessment is restricted and non-coincidental agreement could be ascertained only if there were numerous exclusive agreements of 01 and 03 (actually there is only one in the Catholic Letters), or if we frequently find them in small attestations of variants which are unlikely to have emerged twice.

Excursus:
Values determining coherence

Consequences

If we assess the degree of coincidence of agreement with a potential ancestor, we must pay attention to:

- i. the rank number of the ancestor
- ii. the percentage of over-all agreement
- iii. the proportion of particular variants

The proportion of particular variants must be observed because it increases the distance to the closest relatives.

The individual variants which are shared with other witnesses only by coincidence play a similar role.

Excursus:
Values determining coherence

Consequences

If we assess the degree of coincidence of agreement with a potential ancestor, we must pay attention to:

- i. the rank number of the ancestor
- ii. the percentage of over-all agreement
- iii. the proportion of particular variants

The proportion of particular variants must be observed because it increases the distance to the closest relatives.

The individual variants which are shared with other witnesses only by coincidence play a similar role.

For the quality of coherence values,
cf. Mink (2004), especially 32.

Excursus:
Values determining coherence

Limitations of pre-genealogical coherence

Data relevant for assessing pre-genealogical coherence is provided in tables containing the number and percentage of agreements found in each pair of witnesses.

These values allow for statements on how close or distant relationships between witnesses are, i.e. on the strength of pre-genealogical coherence. There is no information on the genealogical direction of relationships.

Excursus:
Values determining coherence

1739	95.461
2298	93.055
945	91.941
6	90.503
442	89.974
252	89.841
35	89.638
18	89.350
04	89.323
617	89.276
93	89.276
1243	89.223
2423	89.207
642	89.189
1609	89.145
468	89.145
307	89.145
5	89.145
665	89.092
424	89.028
1845	89.014
1241	88.915
808	88.834
623	88.830
020	88.819
453	88.801
218	88.618
81	88.495
2186	88.438
319	88.399

This is the top
of the table for witness 323
showing the witnesses compared
and the corresponding
percentages of agreement.



We cannot see
whether these witnesses are
potential ancestors or descendants.

Excursus:
Values determining coherence

1739	95.461
2298	93.055
945	91.941
6	90.503
442	89.974
252	89.841
35	89.638
18	89.350
04	89.323
617	89.276
93	89.276
1243	89.223
2423	89.207
642	89.189
1609	89.145
468	89.145
307	89.145
5	89.145
665	89.092
424	89.028
1845	89.014
1241	88.915
808	88.834
623	88.830
020	88.819
453	88.801
218	88.618
81	88.495
2186	88.438
319	88.399

This is the top
of the table for witness 323
showing the witnesses compared
and the corresponding
percentages of agreement.



We cannot see
whether these witnesses are
potential ancestors or descendants.

Please compare the list
of potential ancestors.



W2	NR D	PERC1
1739	1	95.461
A	2	92.284
35	0 -	89.638
04	3	89.323
93	4	89.276
617	4	89.276
307	6	89.145
468	6	89.145
424	8	89.028
025	9	88.262
03	10	87.811

Excursus:
Values determining coherence

323	<--	1739	95.461
323	-->	2298	93.055
323	-->	945	91.941
323	-->	6	90.503
323	-->	442	89.974
323	-->	252	89.841
323		35	89.638
323	-->	18	89.350
323	<--	04	89.323
323	<--	617	89.276
323	<--	93	89.276
323	-->	1243	89.223
323	-->	2423	89.207
323	-->	642	89.189
323	-->	1609	89.145
323	<--	468	89.145
323	<--	307	89.145
323	-->	5	89.145
323	-->	665	89.092
323	<--	424	89.028
323	-->	1845	89.014
323	-->	1241	88.915
323	-->	808	88.834
323	-->	623	88.830
323	-->	020	88.819
323	-->	453	88.801
323	-->	218	88.618
323	-->	81	88.495
323	-->	2186	88.438
323	-->	319	88.399

This is the top
of the table for witness 323
showing the witnesses compared
and the corresponding
percentages of agreement.



We cannot see
whether these witnesses are
potential ancestors or descendants.

Please compare the list
of potential ancestors.



W2	NR	D	PERC1
1739	1		95.461
A	2		92.284
35	0	-	89.638
04	3		89.323
93	4		89.276
617	4		89.276
307	6		89.145
468	6		89.145
424	8		89.028
025	9		88.262
03	10		87.811

Not only information
on genealogical directions
is missing,
but all genealogically
relevant data.

Excursus:
Values determining coherence

1739	95.461
2298	93.055
945	91.941
6	90.503
442	89.974
252	89.841
35	89.638
18	89.350
04	89.323
617	89.276
93	89.276
1243	89.223
2423	89.207
642	89.189
1609	89.145
468	89.145
307	89.145
5	89.145
665	89.092
424	89.028
1845	89.014
1241	88.915
808	88.834
623	88.830
020	88.819
453	88.801
218	88.618
81	88.495
2186	88.438
319	88.399

This is the top
of the table for witness 323
showing the witnesses compared
and the corresponding
percentages of agreement.



W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
1739	1		95.461	2902	3040	70	33	26	9
A	2		92.284	2691	2916	206	0	13	6
35	0	-	89.638	2725	3040	111	111	76	17
04	3		89.323	1874	2098	89	76	46	13
93	4		89.276	2714	3040	121	119	70	16
617	4		89.276	2714	3040	124	116	73	13
307	6		89.145	2710	3040	123	120	68	19
468	6		89.145	2702	3031	123	113	77	16
424	8		89.028	2702	3035	121	116	80	16
025	9		88.262	2361	2675	121	115	62	16
03	10		87.811	2644	3011	195	75	88	9

Not only information
on genealogical directions
is missing,
but all genealogically
relevant data.



Excursus:
Values determining coherence

1739	95.461
2298	93.055
945	91.941
6	90.503
442	89.974
252	89.841
35	89.638
18	89.350

This is the top
of the table for witness 323
showing the witnesses compared
and the corresponding
percentages of agreement.

End of the excursus:

Values determining coherence
How to evaluate the relevant data

04	
617	
93	
1243	
2423	
642	
1609	
468	
307	
5	89.145
665	89.092
424	89.028
1845	89.014
1241	88.915
808	88.834
623	88.830
020	88.819
453	88.801
218	88.618
81	88.495
2186	88.438
319	88.399

W2	W1>W2	UNCL	NOREL
70	33	26	9
206	0	13	6
111	111	76	17
89	76	46	13
121	119	70	16
124	116	73	13
123	120	68	19
123	113	77	16
121	116	80	16
121	115	62	16
195	75	88	9

Not only information
on genealogical directions
is missing,
but all genealogically
relevant data.

The following examples show
the different application and use
of pre-genealogical and genealogical data.

In each case
first the analysis is based on pre-genealogical data,
after which genealogical data will be included.

The following examples show
the different application and use
of pre-genealogical and genealogical data.

In each case
first the analysis is based on pre-genealogical data,
after which genealogical data will be included.

The pre-genealogical and genealogical data used rests upon
the entire corpus of the Catholic Letters (not upon single writings).

When agreements with a given witness are checked
or potential ancestors are searched for,
smaller fragments are excluded.

Smaller fragments are those which share less than 50%
of the variant places in the given witness.

Pre-genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

a	αποθεμενοι ουν	122 witnesses including Byz
b	αποθεμενοι γουν	2147. 2652.
d	αποθεμενοι	1881. 2541.

Here we see the primary line text
as found in the *Editio Critica Maior*
and the relevant variants.

(Variant *c* only is documented
in patristic quotations.

The witness of variant *e* is a lectionary.
Lectionaries are not included.)

Pre-genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

a	αποθεμενοι ουν	122 witnesses including Byz
b	αποθεμενοι γουν	2147. 2652.
d	αποθεμενοι	1881. 2541.

Which is the source variant of variant *d*?

Did it derive from variant *a* or *b*,
omitting ουν or γουν?

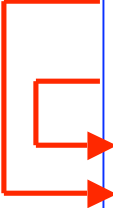
It cannot be decided on internal grounds.

Pre-genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.



Which is the source variant of variant *d*?

Did it derive from variant *a* or *b*,
omitting ουν or γουν?

It cannot be decided on internal grounds.

First of all pre-genealogical coherence
between the witnesses of variant *d*
has to be checked.

Pre-genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

agreements with 1881
(excluding smaller fragments)

1739	92.442	%
323	91.345	
2298	90.429	
945	88.953	
1241	87.267	
6	87.123	
442	86.670	
642	86.592	
04	86.558	
1243	86.478	
81	86.435	
252	86.419	
2374	86.341	
307	86.315	
35	86.315	
808	86.290	
1448	86.272	
218	86.266	
2492	86.079	
1609	86.002	
5	86.002	
453	85.977	36 lines omitted
020	85.830	
018	84.760	
1842	84.698	
2541	84.684	
02	84.671	

Pre-genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

Pre-genealogical coherence
between 1881 and 2541
is weak.
Multiple origins for variant *d*
is probable.

agreements with 1881
(excluding smaller fragments)

2541 84.684 %

1739	92.442	%
323	91.345	
2298	90.429	
945	88.953	
1241	87.267	
6	87.123	
442	86.670	
642	86.592	
04	86.558	
1243	86.478	
81	86.435	
252	86.419	
2374	86.341	
307	86.315	
35	86.315	
808	86.290	
1448	86.272	
218	86.266	
2492	86.079	
1609	86.002	
5	86.002	
453	85.977	
36 lines omitted		
020	85.830	
018	84.760	
1842	84.698	
2541	84.684	
02	84.671	

Pre-genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

agreements with 1881
(excluding smaller fragments)

Now pre-genealogical coherence
between the witnesses of variant *d*
and the witnesses of variant *b*
will be checked.

1739	92.442	%
323	91.345	
2298	90.429	
945	88.953	
1241	87.267	
6	87.123	
442	86.670	
642	86.592	
04	86.558	
1243	86.478	
81	86.435	
252	86.419	
2374	86.341	
307	86.315	
35	86.315	
808	86.290	
1448	86.272	
218	86.266	
2492	86.079	
1609	86.002	
5	86.002	
453	85.977	
36 lines omitted		
020	85.830	
018	84.760	
1842	84.698	
2541	84.684	
02	84.671	

Pre-genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

Pre-genealogical coherence between 1881 and the witnesses of variant *b* is weak.
None of the next relatives reads variant *b*.
Variant *b* probably is not the source variant of the variant in 1881.

agreements with 1881
(excluding smaller fragments)

2652 84.833 %

2147 83.783 %

1739	92.442	%
323	91.345	
2298	90.429	
945	88.953	
1241	87.267	
6	87.123	
442	86.670	
642	86.592	
04	86.558	
1243	86.478	
81	86.435	
252	86.419	
2374	86.341	
307	86.315	
35	86.315	
808	86.290	
1448	86.272	
218	86.266	
2492	86.079	
1609	86.002	
5	86.002	
453	85.977	32 lines omitted
2652	84.833	
		38 lines omitted
2147	83.783	

Pre-genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. <u>2541.</u>

agreements with 2541
(excluding smaller fragments)

The same procedure is applied
for checking pre-genealogical coherence
between 2541 and the witnesses of variant *b*.

436	97.436	%
1409	95.950	
1067	95.453	
218	90.310	
642	89.990	
808	89.635	
1359	89.627	
2374	89.512	
1735	89.353	
424	89.302	
617	89.287	
623	89.269	
5	89.254	
2423	89.250	
020	89.149	
81	89.135	
1718	89.021	
468	88.991	
35	88.991	
93	88.958	
1563	88.874	58 lines omitted
252	88.870	
2652	86.398	18 lines omitted
2147	85.092	

Pre-genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?

?

a αποθεμενοι ουν

b αποθεμενοι γουν

d αποθεμενοι

122 witnesses including Byz

2147. 2652.

1881. 2541.

Pre-genealogical coherence between 2541 and the witnesses of variant *b* is weak too. None of the closest relatives reads variant *b*.
Variant *b* probably is not the source variant of the variant in 2541.

agreements with 2541
(excluding smaller fragments)

2652 86.398 %

2147 85.092 %

436	97.436	%
1409	95.950	
1067	95.453	
218	90.310	
642	89.990	
808	89.635	
1359	89.627	
2374	89.512	
1735	89.353	
424	89.302	
617	89.287	a g r e e m e n t
623	89.269	
5	89.254	
2423	89.250	
020	89.149	
81	89.135	
1718	89.021	
468	88.991	
35	88.991	
93	88.958	
1563	88.874	
252	88.870	
58 lines omitted		
2652	86.398	
18 lines omitted		
2147	85.092	

Pre-genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

a αποθεμενοι ουν

122 witnesses including **Byz**

b αποθεμενοι γουν

2147. 2652.

d αποθεμενοι

1881. 2541.

agreements with 1881
(excluding smaller fragments)

agreements with 2541
(excluding smaller fragments)

Relatives of both, 1881 and 2541,
with higher values of agreement
read variant *a*.

%
a
g
r
e
e
m
e
n
t

1739	92.442
323	91.345
2298	90.429
945	88.953
1241	87.267
6	87.123
442	86.670
642	86.592
04	86.558
1243	86.478
81	86.435
252	86.419
2374	86.341
307	86.315
35	86.315
808	86.290
1448	86.272
218	86.266
2492	86.079
1609	86.002
5	86.002
453	85.977
468	85.952
2774	85.872
2423	85.868
020	85.830
623	85.817
2344	85.761
18	85.689
1359	85.682

436	97.436
1409	95.950
1067	95.453
218	90.310
642	89.990
808	89.635
1359	89.627
2374	89.512
1735	89.353
424	89.302
617	89.287
623	89.269
5	89.254
2423	89.250
020	89.149
81	89.135
1718	89.021
468	88.991
35	88.991
93	88.958
1563	88.874
252	88.870
18	88.867
2344	88.855
319	88.848
307	88.728
02	88.704
6	88.694
453	88.648
607	88.603

Pre-genealogical coherence

1Pt 2,1/2-4

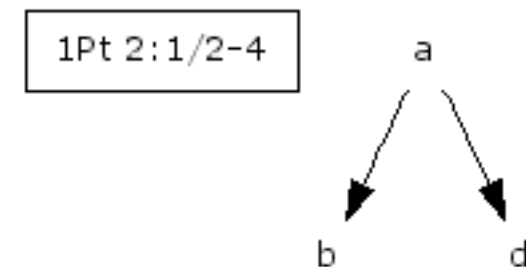
αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

**Due to pre-genealogical coherence,
the local stemma must show
variant *d* to be derived from variant *a*.**

The weak pre-genealogical coherence
between the witnesses of variant *d* and variant *b*
allows for deriving variant *b* only from variant *a*.

local stemma



Genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

In order to assess
genealogical coherence
 let us first have a look at the table
 which contains some basic information
 on the **potential ancestors** of 1881.

Genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακίαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

potential ancestors of 1881
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
1739	1		92.442	2067	2236	117	22	27	3
323	2		91.345	2037	2230	110	42	35	6
2298	3		90.429	2022	2236	121	56	29	8
A	4		90.127	1917	2127	192	0	11	7
945	5		88.953	1989	2236	123	69	37	18
6	6		87.123	1935	2221	139	80	52	15
442	7		86.670	1931	2228	132	104	42	19
642	8		86.592	1931	2230	137	85	60	17
04	9		86.558	1378	1592	107	61	38	8
1243	10		86.478	1925	2226	130	113	42	16
81	11		86.435	1918	2219	145	92	51	13
252	12		86.419	1858	2150	138	80	54	20
2374	13		86.341	1909	2211	124	100	57	21
35	14		86.315	1930	2236	150	83	59	14
207	14		86.315	1930	2236	146	85	57	18

Among the potential ancestors
(without regarding smaller fragments)
1739 most frequently agrees with 1881.
1739 reads variant *a*.
None of the potential ancestors shown
reads variant *b*.

Genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

potential ancestors of 1881
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
1739	1		92.442	2067	2236	117	22	27	3
323	2		91.345	2037	2230	110	42	35	6
2298	3		90.429	2022	2236	121	56	29	8
A	4		90.127	1917	2127	192	0	11	7
945	5		88.953	1989	2236	123	69	37	18

35	14		86.315	1930	2236	150	83	59	14
207	14		86.315	1930	2236	146	85	57	18

Among the potential ancestors
(without regarding smaller fragments)
1739 most frequently agrees with 1881.
1739 reads variant *a*.
None of the potential ancestors shown
reads variant *b*.

1739 shows 117 variants
prior to the respective variants in 1881.
1881 reads only 22 variants
prior to the respective variants in 1739.
Thus, the textual flow from 1739 to 1881 is very strong.
This direction of textual flow is not expected
to invert if some local stemmata of variants change.

Genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

potential ancestors of 1881
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
1739	1		92.442	2067	2236	117	22	27	3
323	2		91.345	2037	2230	110	42	35	6
2298	3		90.429	2022	2236	121	56	29	8
A	4		90.127	1917	2127	192	0	11	7
945	5		88.953	1989	2236	123	69	37	18

Among the potential ancestors
(without regarding smaller fragments)

1739 most frequently agrees with 1881

1739 shows 117 variants
prior to the respective variants in 1881.
1881 reads only 22 variants

Co-witness 2541 is potential ancestor of 1881 too. Yet its rank number is 57!
Thus, there is no adequate genealogical coherence.

reads variant *b*.

to invert if some local stemmata of variants change.

35	14		86.315	1930	2236	150	83	59	14
207	14		86.315	1930	2236	146	85	57	18

Genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. <u>2541.</u>

potential ancestors of 2541
(excluding smaller fragments)

Among the potential ancestors
(without regarding smaller fragments)
436 most frequently agrees with 2541.
436 reads variant *a*.

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
436	1		97.436	2964	3042	34	29	10	5
A	2		90.373	2638	2919	264	0	5	12
218	3		90.310	2740	3034	133	101	44	16
642	4		89.990	2733	3037	148	100	44	12
808	5		89.635	2724	3039	147	112	44	12
1359	6		89.627	2713	3027	130	116	51	17
2374	7		89.512	2697	3013	125	124	51	16
1735	8		89.353	2719	3043	142	122	49	11
424	9		89.302	2713	3038	161	99	48	17
617	10		89.287	2717	3043	165	95	46	20
623	11		89.269	2712	3038	151	119	40	16
5	12		89.254	2716	3043	152	117	45	13
2423	13		89.250	2715	3042	160	104	46	17
020	14		89.149	2703	3032	155	106	48	20
81	15		89.135	2691	3019	155	101	55	17

Genealogical coherence

1Pt 2,1/2-4 αποθεμενοι ουν πασαν κακιαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

potential ancestors of 2541
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
436	1		97.436	2964	3042	34	29	10	5
A	2		90.373	2638	2919	264	0	5	12
218	3		90.310	2740	3034	133	101	44	16
642	4		89.990	2733	3037	148	100	44	12
808	5		89.635	2724	3039	147	112	44	12

Among the potential ancestors
(without regarding smaller fragments)
436 most frequently agrees with 2541.
436 reads variant *a*.

436 shows 34 variants
prior to the respective variants in 2541.
2541 reads 29 variants
prior to the respective variants in 436.
Here the difference is not as distinct
as in the case of 1739 and 1881.
The direction of textual flow may invert
if some local stemmata of variants change.
In this case, A or 218 would take the place of 436.

Genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

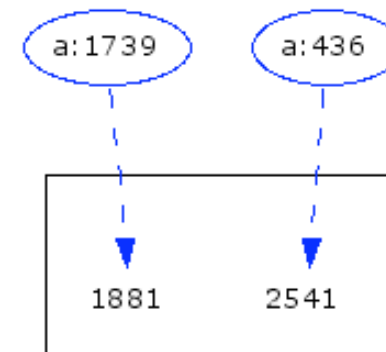
?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

potential ancestors of 1881

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
1739	1		92.442	2067	2236	117	22	27	3
323	2		91.345	2037	2230	110	42	35	6
2298	3		90.429	2022	2236	121	56	29	8
A	4		90.127	1917	2127	192	0	11	7

potential ancestors of 2541

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
436	1		97.436	2964	3042	34	29	10	5
A	2		90.373	2638	2919	264	0	5	12
218	3		90.310	2740	3034	133	101	44	16
642	4		89.990	2733	3037	148	100	44	12

1Pt 2:1/2-4d
Con= 10

The analysis of genealogical coherence
results in this textual flow diagram for variant *d*:

Genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακιαν

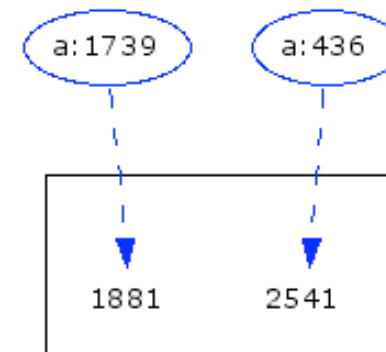
?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

potential ancestors of 1881

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
1739	1		92.442	2067	2236	117	22	27	3
323	2		91.345	2037	2230	110	42	35	6
2298	3		90.429	2022	2236	121	56	29	8
A	4		90.127	1917	2127	192	0	11	7

potential ancestors of 2541

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
436	1		97.436	2964	3042	34	29	10	5
A	2		90.373	2638	2919	264	0	5	12
218	3		90.310	2740	3034	133	101	44	16
642	4		89.990	2733	3037	148	100	44	12

1Pt 2:1/2-4d
Con= 10

The strongest genealogical coherencies suggest that variant *d* has developed twice when witnesses of variant *a* were copied.

Genealogical coherence

1Pt 2,1/2-4

αποθεμενοι ουν πασαν κακίαν

?	a	αποθεμενοι ουν	122 witnesses including Byz
?	b	αποθεμενοι γουν	2147. 2652.
	d	αποθεμενοι	1881. 2541.

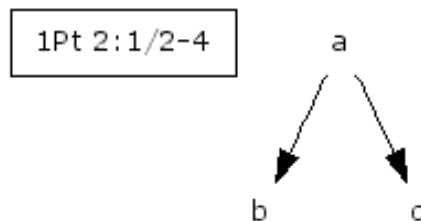
potential ancestors of 1881

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
1739	1		92.442	2067	2236	117	22	27	3
323	2		91.345	2037	2230	110	42	35	6
2298	3		90.429	2022	2236	121	56	29	8
A	4		90.127	1917	2127	192	0	11	7

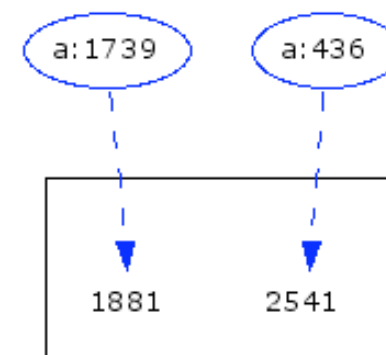
potential ancestors of 2541

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
436	1		97.436	2964	3042	34	29	10	5
A	2		90.373	2638	2919	264	0	5	12
218	3		90.310	2740	3034	133	101	44	16
642	4		89.990	2733	3037	148	100	44	12

The appropriate local stemma
of variants is:



1Pt 2:1/2-4d
Con= 10



Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

Another example ...

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

Which is the source variant of variant *d*?

Did it derive from variant *a* or *b*,
omitting τον της ελευθεριας or της ελευθεριας?

It cannot be decided on internal grounds.

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

Which is the source variant of variant *d*?

Did it derive from variant *a* or *b*,
omitting τον της ελευθεριας or της ελευθεριας?

It cannot be decided on internal grounds.

First of all pre-genealogical coherence
between the witness of variant *d*
and the witnesses of variant *a* and variant *b*
is checked.

Where are the closest relatives?

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	?	142 witnesses including Byz
b	τελειον της ελευθεριας	?	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας		398. 996. 1661.
d	τελειον		1875.

agreements with 1875
(excluding smaller fragments)

All close relatives of 1875 read variant *a*,
none of them variant *b*.
It is a reasonable assumption
that **variant *d* derives from variant *a*.**

181	94.696	%
617	92.092	
020	91.893	
424	91.869	
2423	91.568	
1	91.539	
18	91.342	
468	91.336	
35	91.294	
319	91.232	
1874	91.220	
607	91.210	
93	90.843	
252	90.701	
1845	90.576	
018	90.431	
665	90.365	
049	90.310	
6	90.122	
1501	90.111	
459	90.056	
431	89.993	a
1609	89.941	
1827	89.812	
1297	89.812	
0142	89.787	
104	89.776	
2774	89.752	
2186	89.633	g
1270	89.529	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

And which is the source variant of variant *c*?

Did it derive from variant *a* or *b*,
omitting τελειον τον or τελειον?

It too cannot be decided on internal grounds.

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

And which is the source variant of variant *c*?

Did it derive from variant *a* or *b*,
omitting τελειον τον or τελειον?

It too cannot be decided on internal grounds.

First pre-genealogical coherence
between the witnesses of variant *c*
is checked.

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

agreements with 398
(excluding smaller fragments)

424	91.749	%
2423	91.529	
319	91.512	a
607	91.454	g
617	91.400	r
35	91.400	e
18	91.347	e
020	91.303	m
1	91.276	e
468	91.077	n
018	90.846	t
252	90.570	
049	90.129	
2186	90.017	
431	89.802	
0142	89.699	
400	89.686	
1609	89.588	
93	89.588	
1501	89.501	
459	89.366	
1827	89.333	
46 lines omitted		
996	87.292	
26 lines omitted		
1661	85.681	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Pre-genealogical coherence between 398 and the other witnesses of variant *c* is weak.
Multiple origins for variant *c* is probable.

agreements with 398
(excluding smaller fragments)

424	91.749	%
2423	91.529	
319	91.512	a
607	91.454	g
617	91.400	r
35	91.400	e
18	91.347	e
020	91.303	m
1	91.276	e
468	91.077	n
018	90.846	t
252	90.570	
049	90.129	
2186	90.017	
431	89.802	
0142	89.699	
400	89.686	
1609	89.588	
93	89.588	
1501	89.501	
459	89.366	
1827	89.333	
46 lines omitted		
996	87.292	
26 lines omitted		
1661	85.681	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Pre-genealogical coherence between 398 and the other witnesses of variant *c* is weak.

Multiple origins for variant *c* is probable.

Did variant *c* emerge two times or three times?
Pre-genealogical coherence between 996 and 1661 must be checked.

424	91.749	%
2423	91.529	
319	91.512	a
607	91.454	g
617	91.400	r
35	91.400	e
18	91.347	e
020	91.303	m
1	91.276	e
468	91.077	n
018	90.846	t
252	90.570	
049	90.129	
2186	90.017	
431	89.802	
0142	89.699	
400	89.686	
1609	89.588	
	89.588	
	89.501	
	89.366	
	89.333	
		46 lines omitted
	87.292	
		26 lines omitted
1661	85.681	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996 . 1661.
d	τελειον	1875.

agreements with 996
(excluding smaller fragments)

1661	97.205	%
2423	92.055	
424	91.744	
020	91.261	
319	91.199	
18	91.173	
35	91.127	
617	91.027	
607	90.979	
468	90.967	
252	90.763	a
1	90.660	
1609	90.562	
018	89.900	
0142	89.709	
400	89.701	
2774	89.684	
2186	89.680	
93	89.631	
1501	89.610	
049	89.486	g
459	89.444	
1270	89.405	
642	89.311	
808	89.288	
1297	89.274	
181	89.071	
1595	89.063	
467	89.044	
94	88.963	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

agreements with 996
(excluding smaller fragments)

1661 is the closest relative of 996.
Pre-genealogical coherence is very strong
(97.205 % agreement).
Best hypothesis: **The variant emerged twice.**

1661	97.205	%
2423	92.055	
424	91.744	a
020	91.261	g
319	91.199	r
18	91.173	e
35	91.127	e
617	91.027	m
607	90.979	e
468	90.967	n
252	90.763	t
1	90.660	
1609	90.562	
018	89.900	
0142	89.709	
400	89.701	
2774	89.684	
2186	89.680	
93	89.631	
1501	89.610	
049	89.486	
459	89.444	
1270	89.405	
642	89.311	
808	89.288	
1297	89.274	
181	89.071	
1595	89.063	
467	89.044	
94	88.963	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

At any rate, close relatives of the witnesses of variant *c*
can be found only in the attestation of variant *a*.

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	?	142 witnesses including Byz
b	τελειον της ελευθεριας	?	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	←	398. 996. 1661.
d	τελειον		1875.

At any rate, close relatives of the witnesses of variant *c* can be found only in the attestation of variant *a*.

agreements with 398
(excluding smaller fragments)

Please compare the closest relatives of **398** ...

424	91.749	%
2423	91.529	
319	91.512	a
607	91.454	g
617	91.400	r
35	91.400	e
18	91.347	e
020	91.303	m
1	91.276	e
468	91.077	n
018	90.846	t
252	90.570	
049	90.129	
2186	90.017	
431	89.802	
0142	89.699	
400	89.686	
1609	89.588	
93	89.588	
1501	89.501	
459	89.366	
1827	89.333	
46 lines omitted		
996	87.292	
26 lines omitted		
1661	85.681	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996 . 1661.
d	τελειον	1875.

At any rate, close relatives of the witnesses of variant *c* can be found only in the attestation of variant *a*.

agreements with 996
(excluding smaller fragments)

Please compare the closest relatives of 398, **996** ...

1661	97.205	%
2423	92.055	
424	91.744	
020	91.261	
319	91.199	
18	91.173	
35	91.127	
617	91.027	
607	90.979	
468	90.967	
252	90.763	a
1	90.660	
1609	90.562	
018	89.900	
0142	89.709	
400	89.701	
2774	89.684	
2186	89.680	
93	89.631	
1501	89.610	
049	89.486	g
459	89.444	
1270	89.405	
642	89.311	
808	89.288	
1297	89.274	
181	89.071	
1595	89.063	
467	89.044	
94	88.963	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

At any rate, close relatives of the witnesses of variant *c* can be found only in the attestation of variant *a*.

agreements with 1661
(excluding smaller fragments)

Please compare the closest relatives of 398, 996 and **1661**.

996	97.205	%
2423	90.145	
424	89.835	
18	89.366	
020	89.362	
468	89.329	
35	89.292	
319	89.188	
617	89.127	
252	89.043	
607	88.937	
1	88.757	
1609	88.699	
018	88.599	
1501	88.313	
400	88.250	
2774	88.223	
0142	88.079	
93	87.974	
049	87.893	
1270	87.836	
459	87.818	
2186	87.797	%
808	87.797	
1297	87.781	
665	87.720	
642	87.653	
1595	87.574	%
307	87.512	
1874	87.492	

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

At any rate, close relatives of the witnesses of variant *c* can be found only in the attestation of variant *a*.

Therefore, it is a reasonable assumption that **variant *c* derives from variant *a*.**

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

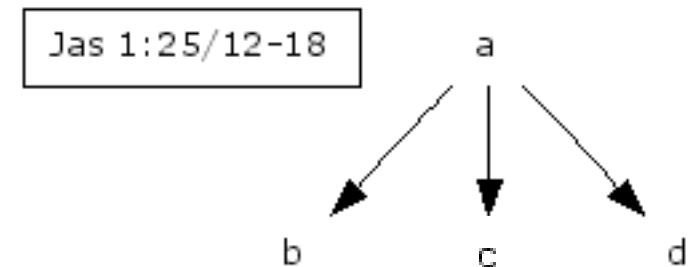
a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectonaries
are not included.

**Judging from pre-genealogical coherence,
in the local stemma of variants
both variant *c* and variant *d*
must be derived from variant *a*.**

The weak pre-genealogical coherence
between the attestations of the variants *b*, *c* and *d*
allows for deriving them all alone from variant *a*.

local stemma



Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a τελειον
b τελειον
c της ελε
d τελειον

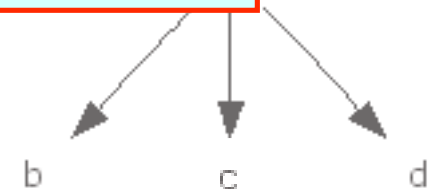
Excursus: Using data for individual writings

In this presentation coherence is based on data resulting from the comparison of witnesses in the Catholic Letters. Smaller fragments have been excluded.

What happens when we use data for an individual writing only and allow for fragments containing, in this case, most of James?

must be derived from variant *a*.

The weak pre-genealogical coherence between the attestations of the variants *b*, *c* and *d* allows for deriving them all alone from variant *a*.



ies
cluded.

Excursus: Using data for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

agreements with 398
(data for James only,
excluding smaller fragments)

197	94.211	% a g r e m e n t
617	92.510	
424	92.510	
2423	92.500	
020	92.196	
607	92.116	
1	91.984	
431	91.942	
312	91.931	
1845	91.721	
35	91.721	
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	
6	91.161	
45 lines omitted		
996	88.801	
25 lines omitted		
1661	86.939	

Pre-genealogical coherence

424	91.749
2423	91.529
319	91.512
607	91.454
617	91.400
35	91.400
18	91.347
020	91.303
1	91.276
468	91.077
018	90.846
252	90.570
049	90.129
2186	90.017
431	89.802
0142	89.699
400	89.686
1609	89.588
93	89.588
1501	89.501
459	89.366
1827	89.333

data
omissions

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

τον της ελευθεριας 142 witnesses including Byz
της ελευθεριας 197. 643T. 1241. 1837. 2374. 2774.
θεριας 398. 996. 1661.
1875.

agreements with 398
(data for James only,
excluding smaller fragments)

please compare the data
for the Catholic Letters

996	87.292
1661	85.681

46 lines
omitted

26 lines
omitted

197	94.211
617	92.510
424	92.510
2423	92.500
020	92.196
607	92.116
1	91.984
431	91.942
312	91.931
1845	91.721
35	91.721
18	91.721
456	91.590
93	91.590
181	91.557
643	91.546
453	91.459
1853	91.402
1827	91.327
307	91.327
94	91.196
6	91.161
996	88.801
1661	86.939

45 lines
omitted

25 lines
omitted

Pre-genealogical coherence

424	91.749
2423	91.529
319	91.512
607	91.454
617	91.400
35	91.400
18	91.347
020	91.303
1	91.276
468	91.077
018	90.846
252	90.570
049	90.129
2186	90.017
431	89.802
0142	89.699
400	89.686
1609	89.588
93	89.588
1501	89.501
459	89.366
1827	89.333

data
omissions

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

τον της ελευθεριας 142 witnesses including Byz

Differences result from
 (i) more witnesses being collated in James,
 (ii) fragments being included
 (some may contain not all Catholic Letters
 but comprise a great deal of James),
 (iii) changing textual character of witnesses in individual writings.

agreements with 398
 (data for James only,
 excluding smaller fragments)

please compare the data
 for the Catholic Letters

46 lines omitted	
996	87.292
26 lines omitted	
1661	85.681

197	94.211	% a g r e e m e n t
617	92.510	
424	92.510	
2423	92.500	
020	92.196	
607	92.116	
1	91.984	
431	91.942	
312	91.931	
1845	91.721	
35	91.721	
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	
6	91.161	
45 lines omitted		
996	88.801	
25 lines omitted		
1661	86.939	

Pre-genealogical coherence

424	91.749
2423	91.529
319	91.512
607	91.454
617	91.400
35	91.400
18	91.347
020	91.303
1	91.276
468	91.077
018	90.846
252	90.570
049	90.129
2186	90.017
431	89.802
0142	89.699
400	89.686
1609	89.588
93	89.588
1501	89.501
459	89.366
1827	89.333

data
itings

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

τον της ελευθεριας 142 witnesses including Byz

Differences result from
 (i) more witnesses being collated in James,
 (ii) fragments being included
 (some may contain not all Catholic Letters
 but comprise a great deal of James),
 (iii) changing textual character of witnesses in individual writings.

agreements with 398

Please use the "Comparison of Witnesses" module
 in the "Genealogical Queries" program
 in order to find changing textual character.

please compare the data
 for the Catholic Letters

46 lines omitted	
996	87.292
26 lines omitted	
1661	85.681

197	94.211	%
617	92.510	a
424	92.510	g
2423	92.500	r
020	92.196	e
607	92.116	e
1	91.984	m
431	91.942	e
312	91.931	n
1845	91.721	t
35	91.721	
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	
6	91.161	
45 lines omitted		
996	88.801	
25 lines omitted		
1661	86.939	

Excursus: Using data
for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Pre-genealogical coherence between 398
and the other witnesses of variant *c*
remains weak.
Multiple origins for variant *c*
is probable.

agreements with 398
(data for James only,
excluding smaller fragments)

197	94.211	%
617	92.510	
424	92.510	
2423	92.500	
020	92.196	
607	92.116	
1	91.984	
431	91.942	
312	91.931	
1845	91.721	
35	91.721	a
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	g
6	91.161	
996	88.801	
1661	86.939	

45 lines
omitted

25 lines
omitted

Excursus: Using data for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

agreements with 996
(data for James only,
excluding smaller fragments)

1661 remains the closest relative of 996.
Pre-genealogical coherence is very strong.
Best hypothesis: **The variant emerged twice.**

1661	97.098	%
2423	94.459	
617	93.939	
18	93.808	
319	93.697	
1251	93.676	
424	93.676	
607	93.544	
020	93.369	
665	93.149	
312	93.103	
456	93.017	
35	93.017	
2080	92.885	
93	92.885	
468	92.876	
1595	92.744	
6	92.725	
1853	92.706	
676	92.622	
400	92.598	
1845	92.490	a
1270	92.480	
459	92.450	
1893	92.358	
326	92.358	
1	92.358	g
1297	92.348	
1837	92.216	
1598	92.216	

Excursus: Using data
for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

All close relatives of 996
and, accordingly, those of 1661
read variant *a*.
So far, the result is the same
as one based on data
for the entire Catholic Letters.

agreements with 996
(data for James only,
excluding smaller fragments)

1661	97.098	%
2423	94.459	
617	93.939	
18	93.808	
319	93.697	
1251	93.676	
424	93.676	
607	93.544	
020	93.369	
665	93.149	
312	93.103	a
456	93.017	
35	93.017	
2080	92.885	
93	92.885	
468	92.876	
1595	92.744	
6	92.725	
1853	92.706	
676	92.622	
400	92.598	g
1845	92.490	
1270	92.480	
459	92.450	
1893	92.358	
326	92.358	
1	92.358	
1297	92.348	
1837	92.216	
1598	92.216	
		r
		e
		m
		e
		n
		t

Excursus: Using data
for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

- a τελειον τον της ελευθεριας 142 witnesses including **Byz**
 b τελειον της ελευθεριας 197. 643T. 1241. 1837. 2374. 2774.
 c της ελευθεριας 398. 996. 1661.
 d τελειον 1875.

All close relatives of 996
and, accordingly, those of 1661
read variant *a*.
So far, the result is the same
as one based on data
for the entire Catholic Letters.

agreements with 996
(data for James only,
excluding smaller fragments)

Is the same true for 398?

1661	97.098	%
2423	94.459	
617	93.939	
18	93.808	
319	93.697	
1251	93.676	
424	93.676	
607	93.544	
020	93.369	
665	93.149	
312	93.103	
456	93.017	
35	93.017	
2080	92.885	
93	92.885	
468	92.876	%
1595	92.744	
6	92.725	
1853	92.706	
676	92.622	
400	92.598	
1845	92.490	
1270	92.480	
459	92.450	
1893	92.358	
326	92.358	
1	92.358	
1297	92.348	
1837	92.216	
1598	92.216	

Pre-genealogical coherence

424	91.749
2423	91.529
319	91.512
607	91.454
617	91.400
35	91.400
18	91.347
020	91.303
1	91.276
468	91.077
018	90.846
252	90.570
049	90.129
2186	90.017
431	89.802
0142	89.699
400	89.686
1609	89.588
93	89.588
1501	89.501
459	89.366
1827	89.333
46 lines omitted	
996	87.292
26 lines omitted	
1661	85.681

data
ratings

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

τον της ελευθεριας

της ελευθεριας

θεριας

?

?

142 witnesses including Byz

197. 643T. 1241. 1837. 2374. 2774.

398. 996. 1661.

1875.

agreements with 398
(data for James only,
excluding smaller fragments)

data for James

data for the Catholic Letters

197	94.211	%
617	92.510	a
424	92.510	g
2423	92.500	r
020	92.196	e
607	92.116	e
1	91.984	m
431	91.942	e
312	91.931	n
1845	91.721	t
35	91.721	
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	
6	91.161	
45 lines omitted		
996	88.801	
25 lines omitted		
1661	86.939	

Pre-genealogical coherence

424	91.749
2423	91.529
319	91.512
607	91.454
617	91.400
35	91.400
18	91.347
020	91.303
1	91.276
468	91.077
018	90.846
252	90.570
049	90.129
2186	90.017
431	89.802
0142	89.699
400	
160	
93	
150	
459	
1827	89.333
996	87.292
1661	85.681

data
ratings

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

τον της ελευθεριας ? 142 witnesses including Byz
της ελευθεριας ? 197. 643T. 1241. 1837. 2374. 2774.
θεριας 398. 996. 1661.
1875.

In James only,
197 is the closest relative of 398.

agreements with 398
(data for James only,
excluding smaller fragments)

data for James

data for the Catholic Letters

197	94.211	%
617	92.510	a
424	92.510	g
2423	92.500	r
020	92.196	e
607	92.116	e
1	91.984	m
431	91.942	e
312	91.931	n
1845	91.721	t
35	91.721	
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	
6	91.161	
996	88.801	
1661	86.939	

45 lines
omitted25 lines
omitted

Excursus: Using data
for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a τελειον τον της ελευθεριας 142 witnesses including **Byz**
 b τελειον της ελευθεριας 197. 643T. 1241. 1837. 2374. 2774.
 c της ελευθεριας 398. 996. 1661.
 d τελειον 1875.

In James only,
197 is the closest relative of 398.

197 witnesses to variant *b*.

agreements with 398
(data for James only,
excluding smaller fragments)

197	94.211	% a green element
617	92.510	
424	92.510	
2423	92.500	
020	92.196	
607	92.116	
1	91.984	
431	91.942	
312	91.931	
1845	91.721	
35	91.721	
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	
6	91.161	
45 lines omitted		
996	88.801	
25 lines omitted		
1661	86.939	

Excursus: Using data for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	?	142 witnesses including Byz
b	τελειον της ελευθεριας	?	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας		398. 996. 1661.
d	τελειον		1875.

In James only,
197 is the closest relative of 398.

197 witnesses to variant *b*.

Thus, one could consider dual emergence of variant *c*
from two different variants.

agreements with 398
(data for James only,
excluding smaller fragments)

197	94.211	% a g r e m e n t
617	92.510	
424	92.510	
2423	92.500	
020	92.196	
607	92.116	
1	91.984	
431	91.942	
312	91.931	
1845	91.721	
35	91.721	
18	91.721	
456	91.590	
93	91.590	
181	91.557	
643	91.546	
453	91.459	
1853	91.402	
1827	91.327	
307	91.327	
94	91.196	
6	91.161	
45 lines omitted		
996	88.801	
25 lines omitted		
1661	86.939	

Excursus: Using data
for individual writings

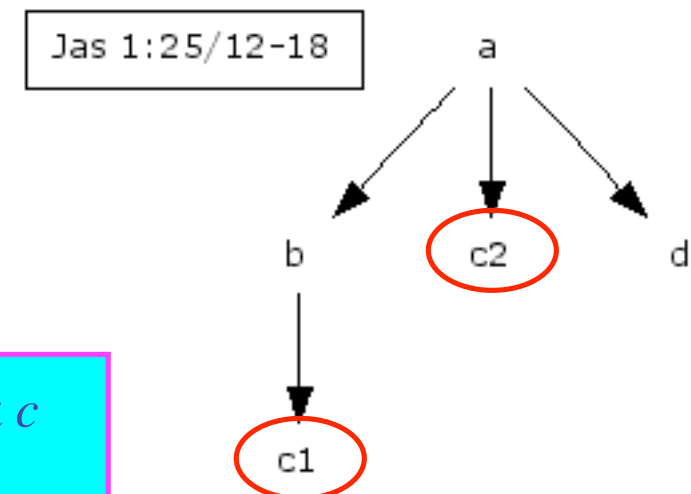
Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

local stemma



Thus, one could consider dual emergence of variant *c*
from two different variants.

Excursus: Using data
for individual writings

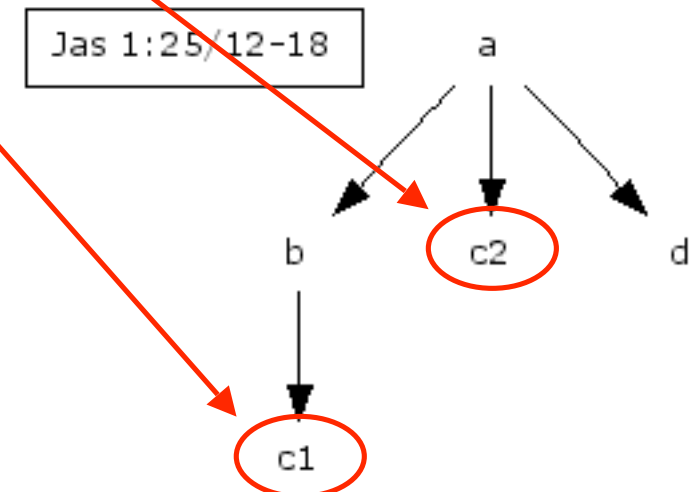
Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

local stemma



In this case, there would be two variants,
c1 and *c2*,
and the attestation would be split accordingly.

Excursus: Using data for individual writings

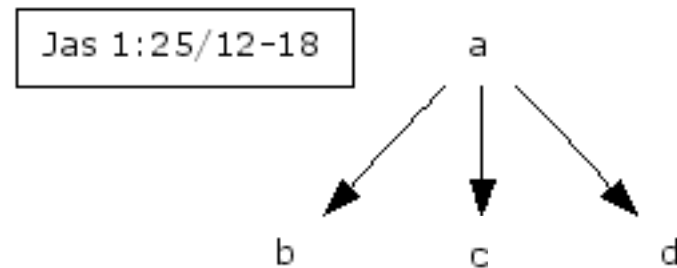
Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

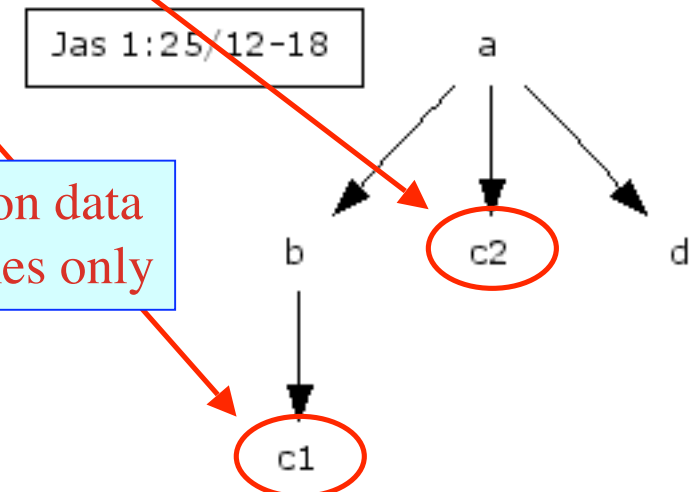
Lectionaries are not included.

local stemma



based on data for the entire Catholic Letters

local stemma



based on data for James only

Excursus: Using data for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

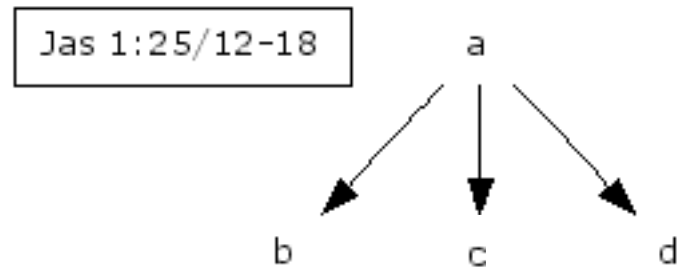
a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries are not included.

local stemma

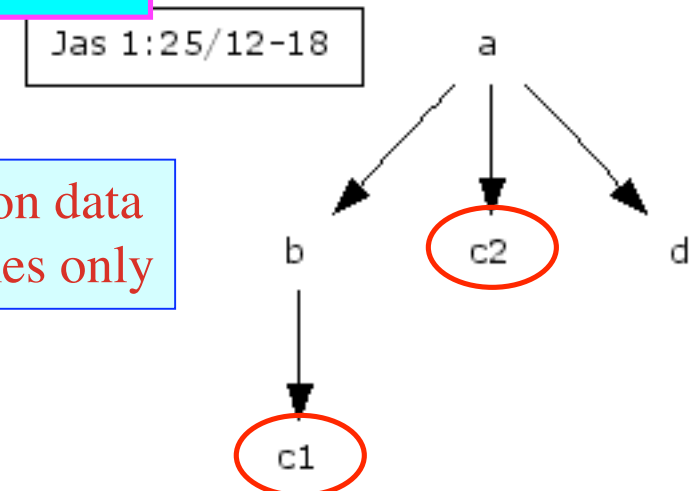
Which local stemma should be preferred?

local stemma



based on data for the entire Catholic Letters

based on data for James only



Pre-genealogical coherence

424	91.749
2423	91.529
319	91.512
607	91.454
617	91.400
35	91.400
18	91.347
020	91.303
1	91.276
468	91.077
018	90.846
252	90.570
049	90.129
2186	90.017
431	89.802
0142	89.600
400	
1609	
93	
150	
459	89.366
1827	89.333
46 lines omitted	
996	87.292
26 lines omitted	
1661	85.681

data
ratings

James 1,25/12-18

εις νομον τελειον τον της ελευθεριας

τον της ελευθεριας

της ελευθεριας

θεριας

142 witnesses including Byz

197. 6431. 1241. 1837. 2374. 2774.

398. 996. 1661.

1875.

Depending on which data is used,
424 (variant *a*) or 197 (variant *b*)
is the next relative of 398.

agreements with 398
(data for James only,
excluding smaller fragments)

data for James

data for the Catholic Letters

197	94.211
617	92.510
424	92.510
2423	92.500
020	92.196
607	92.116
1	91.984
431	91.942
312	91.931
1845	91.721
35	91.721
18	91.721
456	91.590
93	91.590
181	91.557
643	91.546
453	91.459
1853	91.402
1827	91.327
307	91.327
94	91.196
6	91.161
45 lines omitted	
996	88.801
25 lines omitted	
1661	86.939

%
a
g
r
e
e
m
e
n
t

Excursus: Using data
for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

Depending on which data is used,
424 (variant *a*) or 197 (variant *b*)
is the next relative of 398.

In **398** and **424** nearly the entire text of the Catholic Letters has been preserved.
At 3030 of 3046 variant passages in the Catholic Letters their variants can be checked.
197 is fragmentary. There are only 570 variant passages (all in James)
where **197** and **398** can be compared.
In James alone 398 and 424 have text at 761 variant passages.

Excursus: Using data
for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομο

a	τελειον τον της ελευθεριας	142
b	τελειον της ελευθεριας	197
c	της ελευθεριας	398
d	τελειον	187

It is not possible to extrapolate values for the entire Catholic Letters from badly fragmented witnesses even if James is preserved to this extent. Thus, 197 and 424 cannot be treated equally.

A witness like 197 should only be included in coherence analysis if there are variants which strongly argue for closer coherence between – in this case – 197 and 398.

Depending on which data is used, 424 (variant *a*) or 197 (variant *b*) is the next relative of 398.

In **398** and **424** nearly the entire text of the Catholic Letters has been preserved. At 3030 of 3046 variant passages in the Catholic Letters their variants can be checked. **197** is fragmentary. There are only 570 variant passages (all in James) where **197** and **398** can be compared. In James alone 398 and 424 have text at 761 variant passages.

Excursus: Using data for individual writings

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

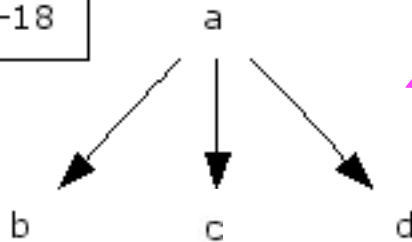
Lectionaries are not included.

local stemma

This local stemma should be preferred.

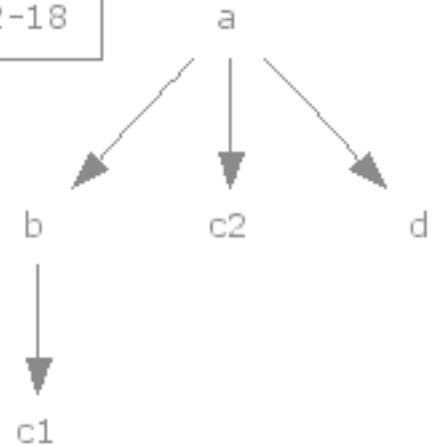
local stemma

Jas 1:25/12-18



based on data for the entire Catholic Letters

Jas 1:25/12-18

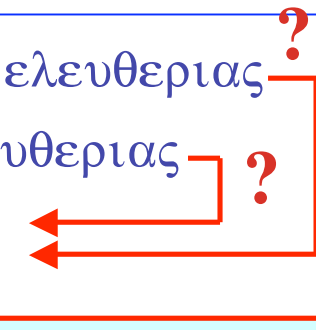


based on data for James only

Pre-genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875



Lectionaries
are not included.

End of the Excursus: Using data for individual writings

All of the following analyses will again be based
on data resulting from all of the Catholic Letters.

After the analysis of pre-genealogical coherence at Jas 1,25/12-18,
the genealogical view will now be presented.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

Which is the source variant of variant *d*?

Did it derive from variant *a* or *b*,
omitting τον της ελευθεριας or της ελευθεριας?

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a τελειον τον της ελευθεριας

b τελειον της ελευθεριας

c της ελευθεριας

d τελειον

?

?

142 witnesses including **Byz**
197. 643T. 1241. 1837. 2374. 2774.
398. 996. 1661.
1875.

Lectionaries
are not included.

potential ancestors of 1875
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
181	1		94.696	2714	2866	88	47	12	5
617	2		92.092	2655	2883	152	53	16	7
020	3		91.893	2641	2874	141	62	20	10
424	4		91.869	2644	2878	150	54	21	9
2423	5		91.568	2639	2882	152	62	20	9
1	6		91.539	2629	2872	135	75	21	12
18	7		91.342	2627	2876	147	64	26	12
468	8		91.336	2625	2874	155	54	30	10
35	9		91.294	2632	2883	149	62	27	13
319	10		91.232	2570	2817	147	68	19	13
607	11		91.210	2615	2867	146	76	20	10
93	12		90.843	2619	2883	155	72	24	13
252	13		90.701	2536	2796	145	87	19	9
1845	14		90.576	2595	2865	145	78	32	15
018	15		90.421	2500	2874	154	82	27	11

Among the potential ancestors
(excluding smaller fragments)
181 most frequently agrees with 1875.
181 reads variant *a*.
None of the potential ancestors shown
reads variant *b*.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 1875
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
181	1		94.696	2714	2866	88	47	12	5
617	2		92.092	2655	2883	152	53	16	7
020	3		91.893	2641	2874	141	62	20	10
424	4		91.869	2644	2878	150	54	21	9
2423	5		91.568	2639	2882	152	62	20	9
1	6		91.530	2620	2872	135	75	21	12

Among the potential ancestors
(excluding smaller fragments)
181 most frequently agrees with 1875.
181 reads variant *a*.
None of the potential ancestors shown
reads variant *b*.

181 shows 88 variants
prior to the respective variants in 1875.
1875 reads only 47 variants
prior to the respective variants in 1875.
Thus, the textual flow from 181 to 1875 is very strong.
This direction of textual flow is not expected
to invert if some local stemmata of variants change.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 1875
(excluding)

The resulting textual flow diagram
for variant *d* is:

Jas 1:25/12-18d
Con= 10

a: 181

1875

Among the pot
(excluding sm
181 most frequentl
181 reads
None of the potent
reads v

ws 88 variants
ective variants in 1875.
s only 47 variants
ective variants in 1875.
om 181 to 1875 is very strong.
xtual flow is not expected
stemmata of variants change.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

And which is the source variant of variant *c*?

Did it derive from variant *a* or *b*,
omitting τελειον τον or τελειον?

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 398
(excluding smaller fragments)

There is a dense group
of closely related potential ancestors,
the first of which is 424.
424 reads variant *a*.
None of the potential ancestors shown
reads variants *b*.
Co-witnesses 996 and 1661 are not
potential ancestors of 398.

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
424	1		91.749	2780	3030	131	64	43	12
2423	2		91.529	2777	3034	133	74	39	11
319	3		91.512	2717	2969	130	78	33	11
607	4		91.454	2761	3019	126	88	35	9
35	5		91.400	2774	3035	134	75	43	9
617	5		91.400	2774	3035	140	70	37	14
18	7		91.347	2766	3028	131	78	43	10
020	8		91.303	2761	3024	134	83	39	7
1	9		91.276	2762	3026	125	93	37	9
468	10		91.077	2756	3026	148	74	42	6
018	11		90.846	2749	3026	133	93	40	11
252	12		90.570	2670	2948	132	97	35	14
A	13		90.447	2632	2910	256	0	6	16
049	14		90.129	2721	3019	126	121	36	15

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 398
(excluding smaller fragments)

There is a dense group
of closely related potential ancestors,
the first of which is 424.
424 reads variant *a*.
None of the potential ancestors shown
reads variants *b*.
Co-witnesses 996 and 1661 are not
potential ancestors of 398.

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
424	1		91.749	2780	3030	131	64	43	12
2423	2		91.529	2777	3034	133	74	39	11
319	3		91.512	2717	2969	130	78	33	11
607	4		91.454	2761	3019	126	88	35	9
35	5		91.400	2774	3035	134	75	43	9
617	6		91.400	2774	3035	134	75	43	9

424 shows 131 variants
prior to the respective variants in 398.
398 reads only 64 variants
prior to the respective variants in 424.
Thus, the textual flow from 424 to 398 is very strong.
This direction of textual flow is not expected
to invert if some local stemmata of variants change.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 1661
(excluding smaller fragments)

996 is by far the most closely related
potential ancestor of 1661.
Co-witness 398 is potential ancestor
with rank number 72.
Thus, there is no adequate
genealogical coherence.

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
996	1		97.205	2921	3005	62	10	7	5
2423	2		90.145	2735	3034	223	40	31	5
424	3		89.835	2722	3030	231	45	26	6
18	4		89.366	2706	3028	226	52	36	8
020	5		89.362	2705	3027	224	53	33	12
468	6		89.329	2704	3027	232	47	37	7
35	7		89.292	2710	3035	229	49	39	8
319	8		89.188	2648	2969	226	55	33	7
617	9		89.127	2705	3035	233	47	34	16
252	10		89.043	2625	2948	214	62	37	10
607	11		88.937	2685	3019	226	65	37	6
1	12		88.757	2684	3024	223	72	36	9
1609	13		88.699	2692	3035	223	76	35	9
018	14		88.599	2681	3026	230	73	34	8
1501	15		88.313	2675	3020	218	80	38	0

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 1661
(excluding smaller fragments)

996 is by far the most closely related potential ancestor of 1661.
Co-witness 398 is potential ancestor with rank number 72.
Thus, there is no adequate genealogical coherence.

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
996	1		97.205	2921	3005	62	10	7	5
2423	2		90.145	2735	3034	223	40	31	5
424	3		89.835	2722	3030	231	45	26	6
18	4		89.366	2706	3028	226	52	36	8
020	5		89.362	2705	3027	224	53	33	12
468	6		89.330	2704	3027	222	47	27	7

996 shows 62 variants prior to the respective variants in 1661.
1661 reads only 10 variants prior to the respective variants in 996.
Thus, the textual flow from 996 to 1661 is very strong.
This direction of textual flow is not expected to invert if some local stemmata of variants change.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398 996 . 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 996
(excluding smaller fragments)

2423 is the most closely related potential ancestor of 996 and reads variant *a*.
None of the potential ancestors shown reads variant *b*.
The rank number 71 of potential ancestor 398 does not allow for adequate genealogical coherence.

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
2423	1		92.055	2769	3008	167	40	29	3
424	2		91.744	2756	3004	178	44	24	2
020	3		91.261	2736	2998	172	51	33	6
319	4		91.199	2684	2943	172	53	31	3
18	5		91.173	2737	3002	170	52	36	7
35	6		91.127	2742	3009	174	50	37	6
617	7		91.027	2739	3009	181	47	32	10
607	8		90.979	2723	2993	168	63	35	4
468	9		90.967	2729	3000	179	48	38	6
252	10		90.763	2653	2923	164	64	35	7
1	11		90.660	2718	2998	171	70	34	5
1609	12		90.562	2725	3009	167	74	35	8
018	13		89.900	2697	3000	184	79	36	4
0142	14		89.709	2685	2993	168	108	28	4
400	15		89.701	2552	2845	161	93	33	6

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398 996 . 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 996
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
2423	1		92.055	2769	3008	167	40	29	3
424	2		91.744	2756	3004	178	44	24	2
020	3		91.261	2736	2998	172	51	33	6
319	4		91.199	2684	2943	172	53	31	3
18	5		91.173	2737	3002	170	52	36	7
				2742	3009	174	50	37	6
				2739	3009	181	47	32	10
				2723	2993	168	63	35	4
				2729	3000	179	48	38	6
252	10		90.763	2653	2923	164	64	35	7
1	11		90.660	2718	2998	171	70	34	5
1609	12		90.562	2725	3009	167	74	35	8
018	13		89.900	2697	3000	184	79	36	4
0142	14		89.709	2685	2993	168	108	28	4
400	15		89.701	2552	2845	161	93	33	6

2423 is the most closely related
potential ancestor of 996 and 1661.
None of the potential ancestors
reads variant *b*.
The rank number 71 of potential ancestor 398
does not allow
for adequate genealogical coherence.

Multiple origins for variant *c*
must be assumed.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 996
(excluding smaller fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
2423	1		92.055	2769	3008	167	40	29	3
424	2		91.744	2756	3004	178	44	24	2
020	3		91.261	2736	2998	172	51	33	6
319	4		91.199	2684	2943	172	53	31	3
18	5		91.173	2737	3002	170	52	36	7
35	6		91.127	2742	3000	174	50	27	6

2423 is the most closely related potential ancestor of 996 and reads variant *a*.
None of the potential ancestors shown reads variant *b*.
The rank number 71 of potential ancestor 398 does not allow for adequate genealogical coherence.

2423 shows 167 variants prior to the respective variants in 996.
996 reads only 40 variants prior to the respective variants in 2423.
Thus, the textual flow from 2423 to 996 is very strong.
This direction of textual flow is not expected to invert if some local stemmata of variants change.

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 398

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
424	1		91.749	2780	3030	131	64	43	12
2423	2		91.529	2777	3034	133	74	39	11
319	3		91.512	2717	2969	130	78	33	11
607	4		91.454	2761	3019	126	88	35	9

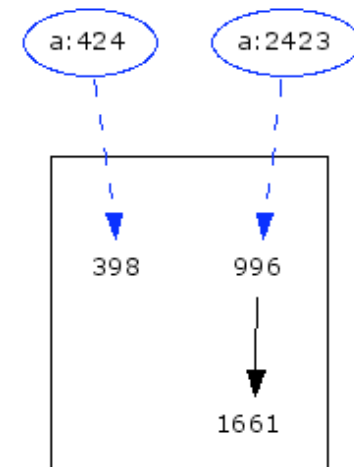
potential ancestors of 996

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
2423	1		92.055	2769	3008	167	40	29	3
424	2		91.744	2756	3004	178	44	24	2
020	3		91.261	2736	2998	172	51	33	6
319	4		91.199	2684	2943	172	53	31	3

potential ancestors of 1661

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
996	1		97.205	2921	3005	62	10	7	5
2423	2		90.145	2735	3034	223	40	31	5
424	3		89.835	2722	3030	231	45	26	6
18	4		89.366	2706	3028	226	52	36	8

Jas 1:25/12-18c
Con= 10



The analysis of genealogical coherence
results in this textual flow diagram for variant c:

Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

potential ancestors of 398

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
424	1		91.749	2780	3030	131	64	43	12
2423	2		91.529	2777	3034	133	74	39	11
319	3		91.512	2717	2969	130	78	33	11
607	4		91.454	2761	3019	126	88	35	9

potential ancestors of 996

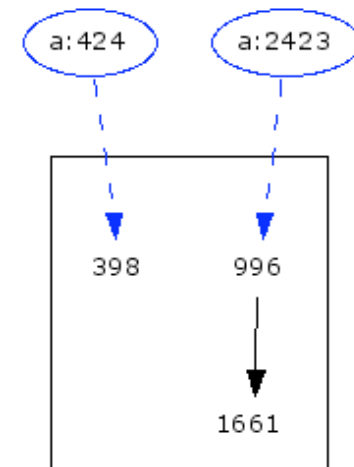
W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
2423	1		92.055	2769	3008	167	40	29	3
424	2		91.744	2756	3004	178	44	24	2
020	3		91.261	2736	2998	172	51	33	6
319	4		91.199	2684	2943	172	53	31	3

potential ancestors of 1661

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
996	1		97.205	2921	3005	62	10	7	5
2423	2		90.145	2735	3034	223	40	31	5
424	3								
18	4								

Jas 1:25/12-18c
Con= 10

The strongest genealogical coherencies suggest
that variant *c* has developed twice
when witnesses of variant *a* were copied.



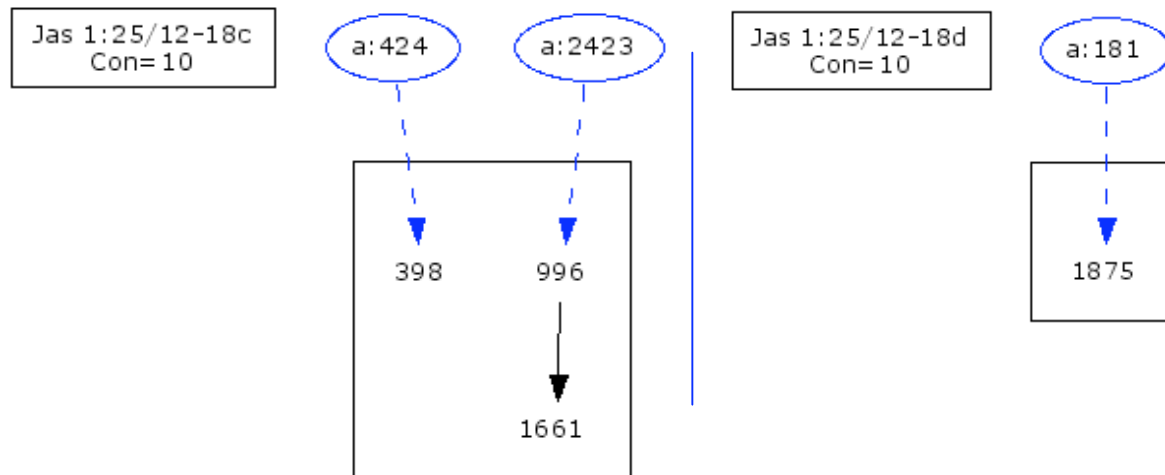
Genealogical coherence

Jas 1,25/12-18 εις νομον τελειον τον της ελευθεριας

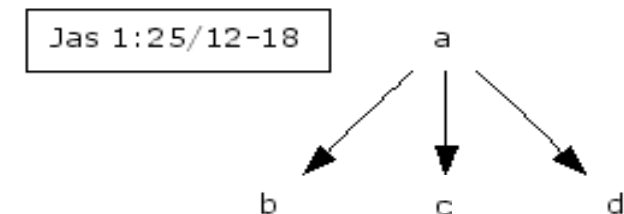
a	τελειον τον της ελευθεριας	142 witnesses including Byz
b	τελειον της ελευθεριας	197. 643T. 1241. 1837. 2374. 2774.
c	της ελευθεριας	398. 996. 1661.
d	τελειον	1875.

Lectionaries
are not included.

textual flow diagrams for variants *c* and *d*



The appropriate
local stemma of variants is:



The following example shows
how to deal with insufficient coherence
when the variant probably rests upon
different source variants.

The analysis of pre-genealogical coherence will be omitted this time,
and instead textual flow diagrams based on genealogical data
will be used immediately.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Lectionaries are not included.

The lack of an explicit subject in variant *a* is very hard.

It is the most difficult reading.

Thus, adding a subject suggests itself.

What are the source variants of variants *b*, *c*, *d* and *e*?

Did they emerge independently?

Are witnesses reading the same variant genealogically connected?

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Lectionaries are not included.

In order to find the source of variant *b*

- (i) the most closely related potential ancestor of each witness of this variant is searched within the attestation, and
- (ii) if not one of the upper ten closely related potential ancestors is found, they are searched outside the attestation of variant *b* ...

Genealogical coherence

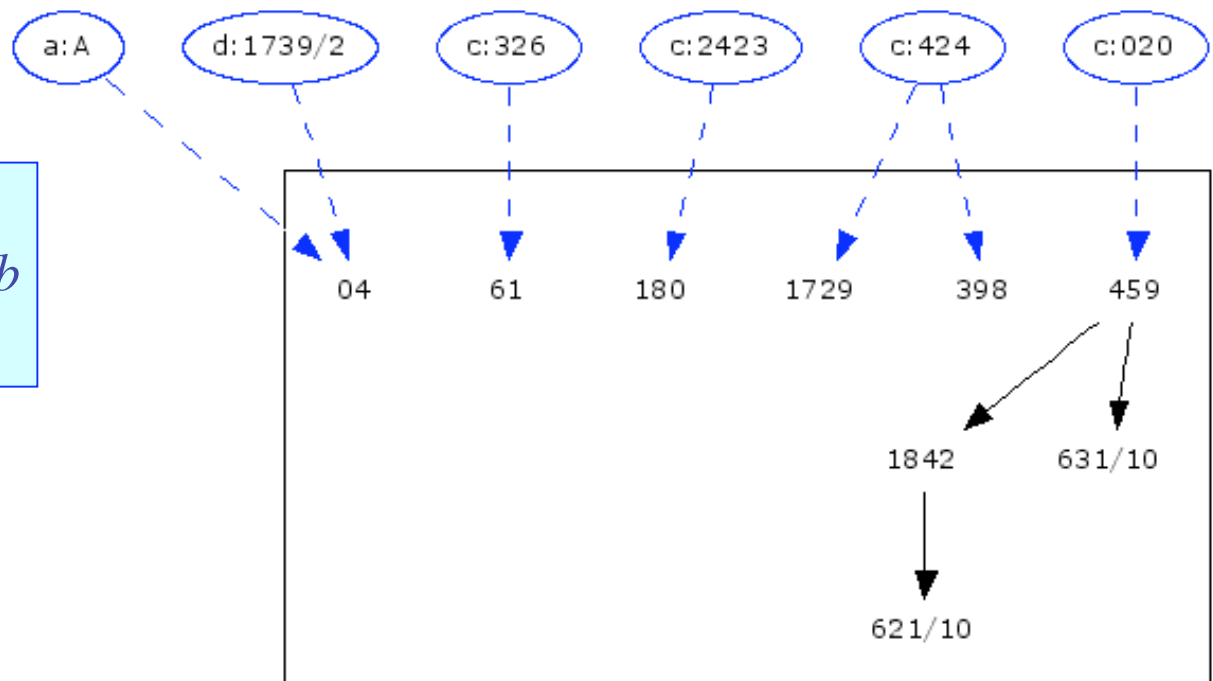
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805

Jas 1:12/31b
Con= 10

Genealogical coherence
between the witnesses of variant *b*
is extremely weak.

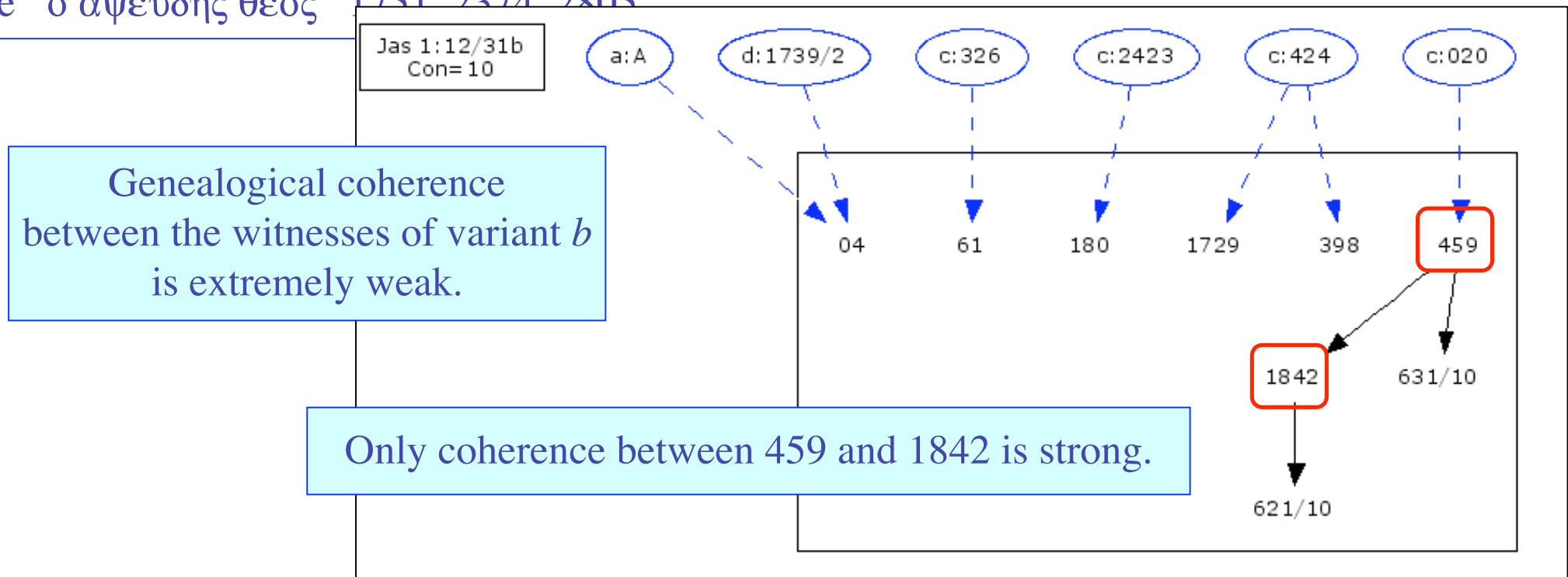


Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805

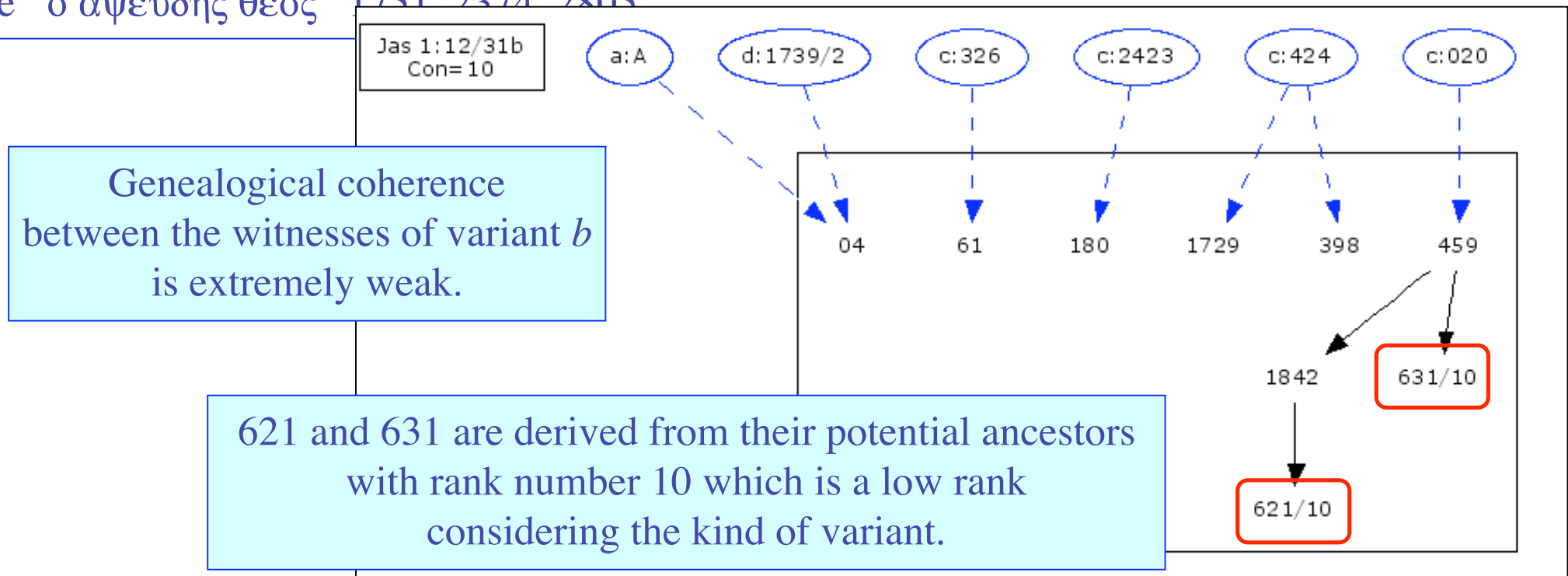


Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805



Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805

Jas 1:12/31b
Con= 10

a:A

d:1739/2

c:326

c:2423

c:424

c:020

Genealogical coherence
between the witnesses of variant *b*
is extremely weak.

Therefore, it might be advisable to search
for potential ancestors outside the attestation
if they are not found up to rank number 5.

621 and 631 are derived from their potential ancestors
with rank number 10 which is a low rank
considering the kind of variant.

1842

631/10

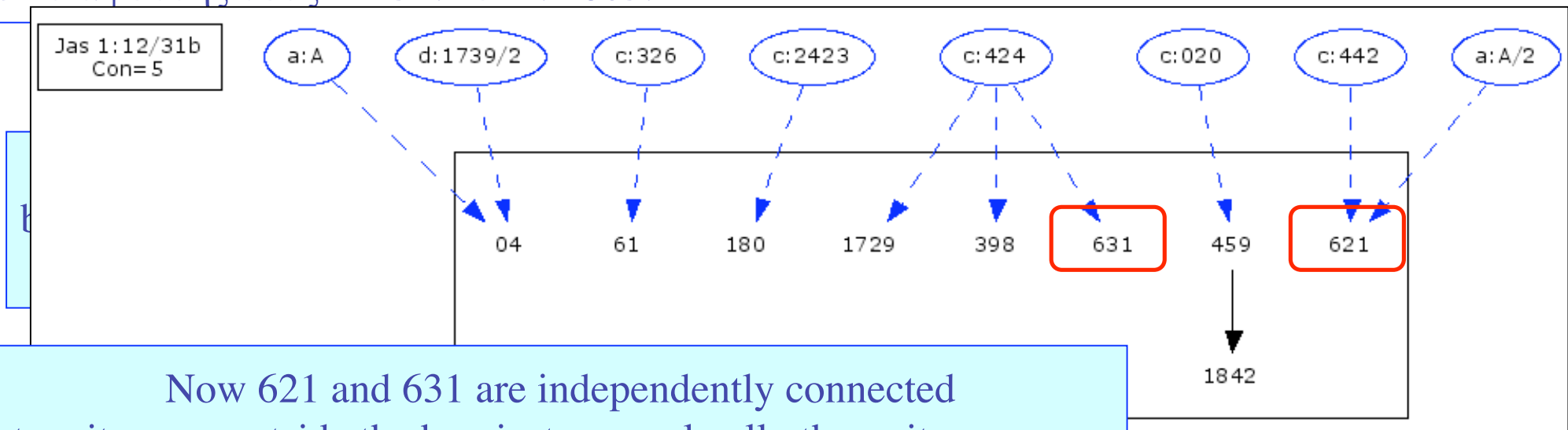
621/10

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.



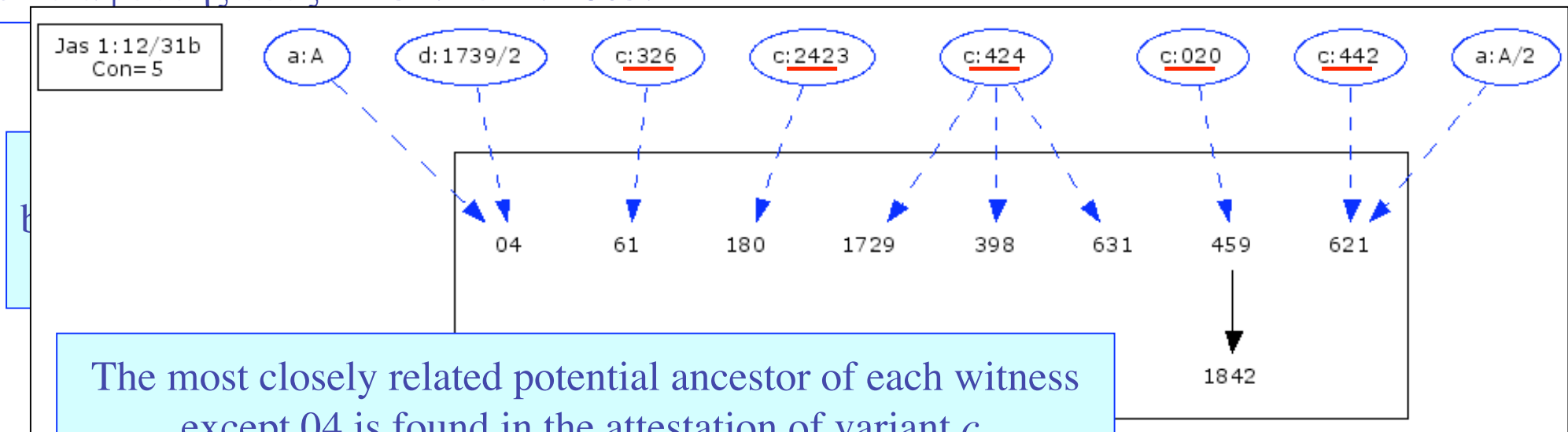
Now 621 and 631 are independently connected to witnesses outside the box just as nearly all other witnesses are.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.



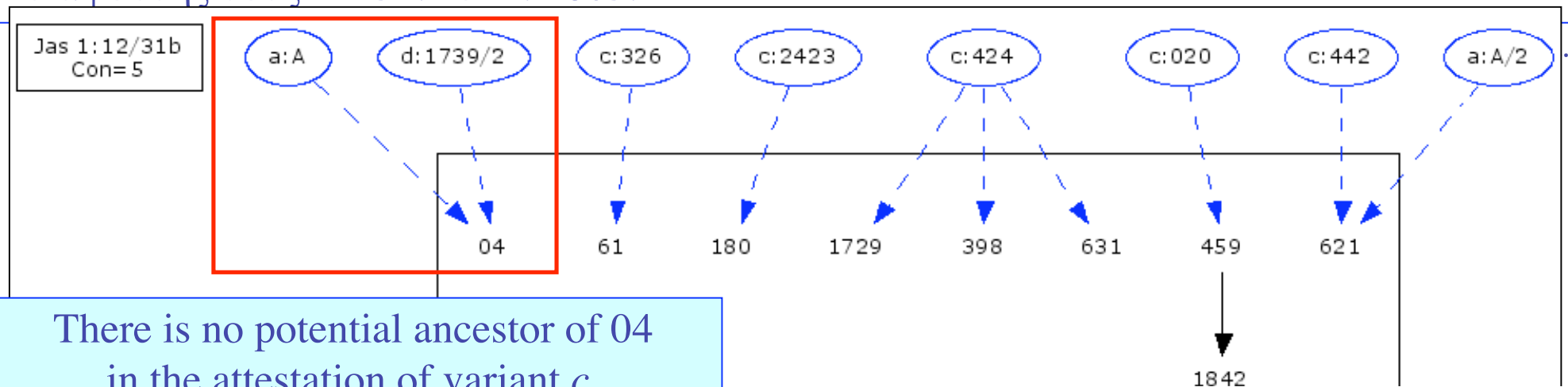
The most closely related potential ancestor of each witness except 04 is found in the attestation of variant *c*.
The best hypothesis is that for these witnesses variant *c* is the source.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
 c ο κυριος 117 witnesses including 025 and **Byz**
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
 e ο αψευδης θεος 1751. 2374. 2805.



There is no potential ancestor of 04 in the attestation of variant *c*.
 The most closely related one is *A*, the hypothetical witness of the initial text. Yet, it is not impossible to consider 1739 (variant *d*).

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.900	1871	2014	132	0	9	2
1739	2		90.922	1913	2104	78	70	35	8
03	3		89.301	1878	2103	116	48	55	6

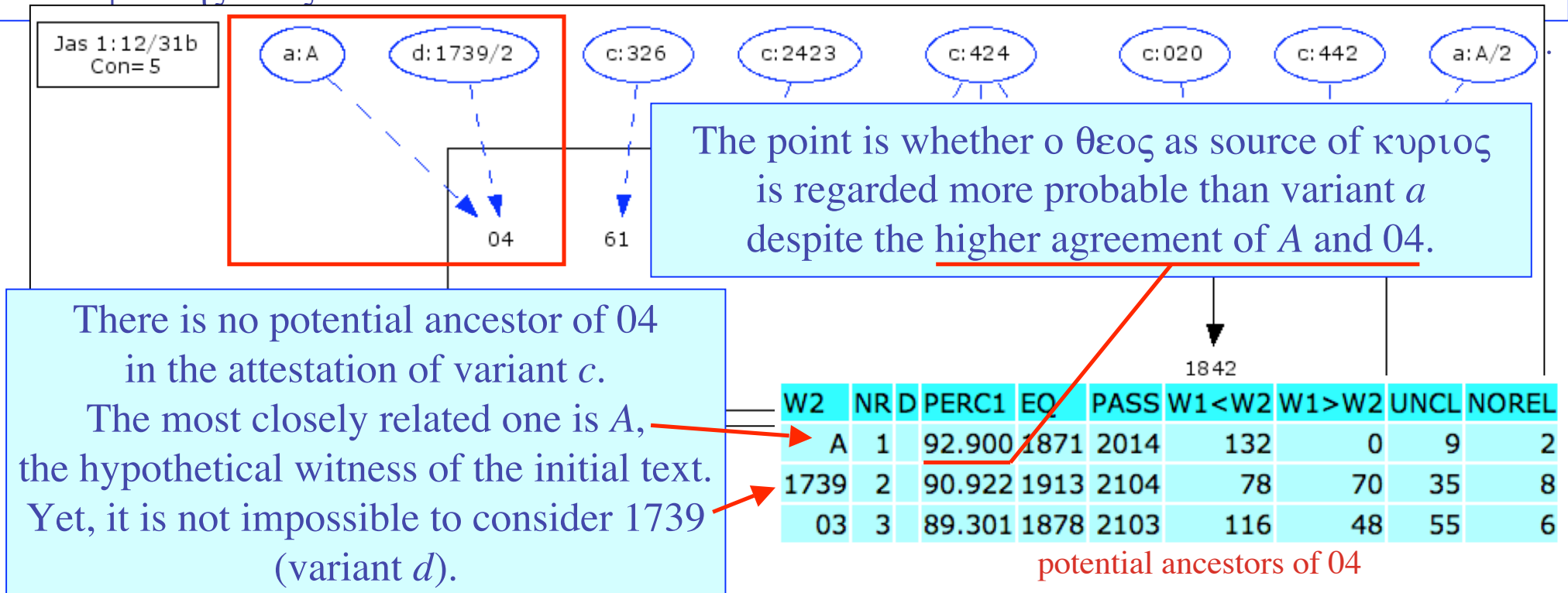
potential ancestors of 04

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
 c ο κυριος 117 witnesses including 025 and **Byz**
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
 e ο αψευδης θεος 1751. 2374. 2805.



Genealogical coherence

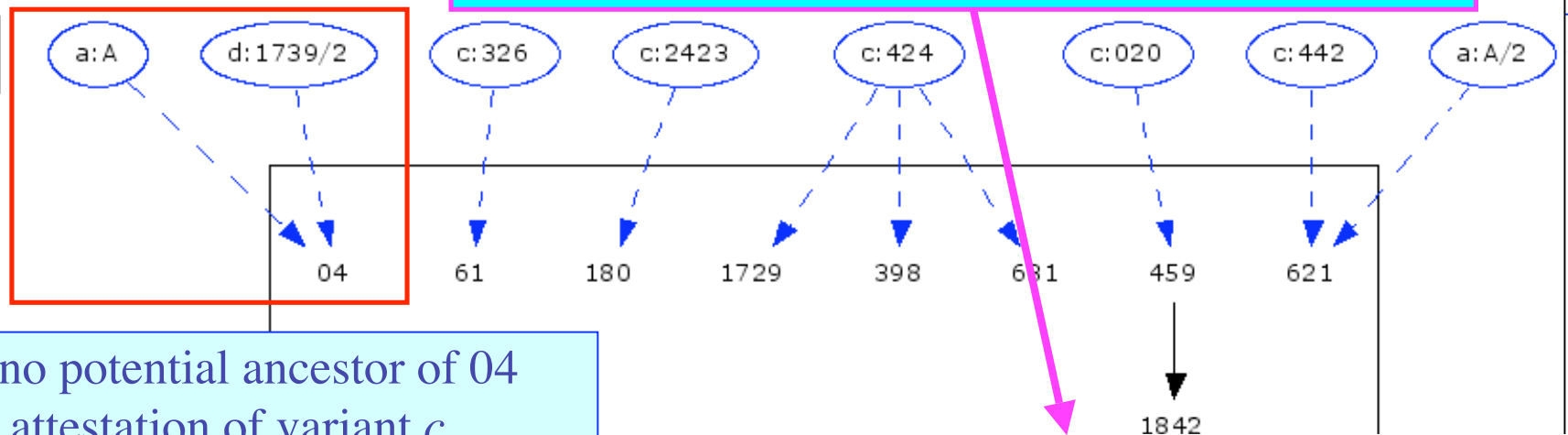
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 04	81. 206T. 286. 1661. 2244
b	κυριος	04. 61. 180T. 398.	
c	ο κυριος	117 witnesses incl	
d	ο θεος	322. 323. 945. 117	2492.
e	ο αψευδης θεος	1751. 2374. 280	

Attention: Be aware of 04 being fragmentary.
It contains roughly two thirds
of all variant passages in the Catholic Letters
(maximum possible: 3046).
This may affect reliability of statements.

Jas 1:12/31b
Con=5



There is no potential ancestor of 04
in the attestation of variant *c*.
The most closely related one is *A*,
the hypothetical witness of the initial text.
Yet, it is not impossible to consider 1739
(variant *d*).

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.900	1871	2014	132	0	9	2
1739	2		90.922	1913	2104	78	70	35	8
03	3		89.301	1878	2103	116	48	55	6

potential ancestors of 04

Genealogical coherence

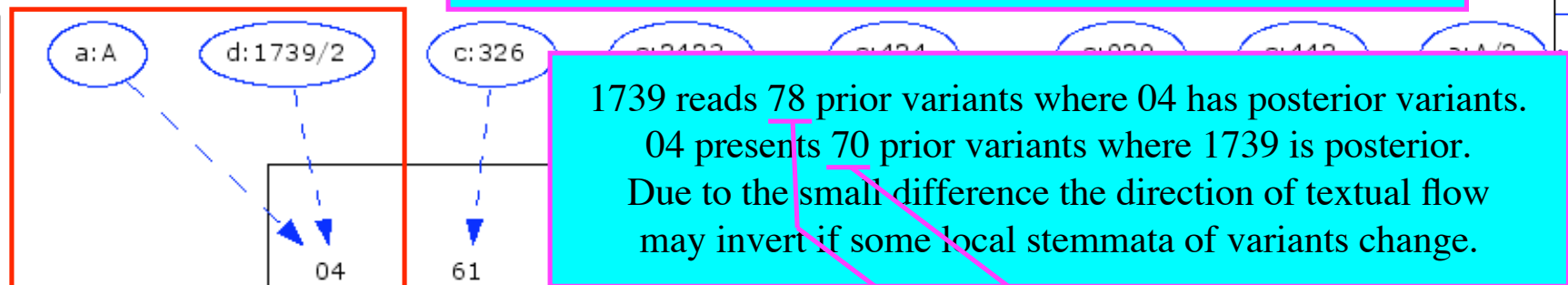
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 04	181. 206T. 286. 1661. 2244
b	κυριος	04. 61. 180T. 398.	
c	ο κυριος	117 witnesses incl	
d	ο θεος	322. 323. 945. 117	2492.
e	ο αψευδης θεος	1751. 2374. 280	

Attention: Be aware of 04 being fragmentary.
It contains roughly two thirds
of all variant passages in the Catholic Letters
(maximum possible: 3046).
This may affect reliability of statements.

Jas 1:12/31b
Con=5



1739 reads 78 prior variants where 04 has posterior variants.
04 presents 70 prior variants where 1739 is posterior.
Due to the small difference the direction of textual flow
may invert if some local stemmata of variants change.

There is no potential ancestor of 04
in the attestation of variant *c*.
The most closely related one is *A*,
the hypothetical witness of the initial text.
Yet, it is not impossible to consider 1739
(variant *d*).

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.900	1871	2014	132	0	9	2
1739	2		90.922	1913	2104	78	70	35	8
03	3		89.301	1878	2103	116	48	55	6

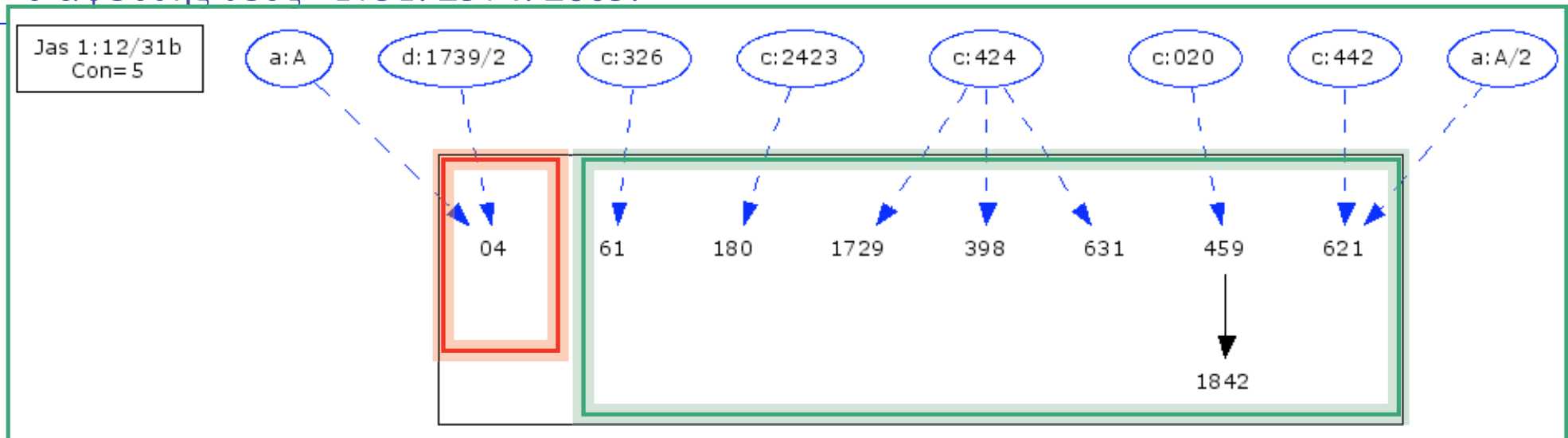
potential ancestors of 04

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
 c ο κυριος 117 witnesses including 025 and **Byz**
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
 e ο αψευδης θεος 1751. 2374. 2805.



Differentiation between 04 and the other witnesses
is possible when the attestation is split.

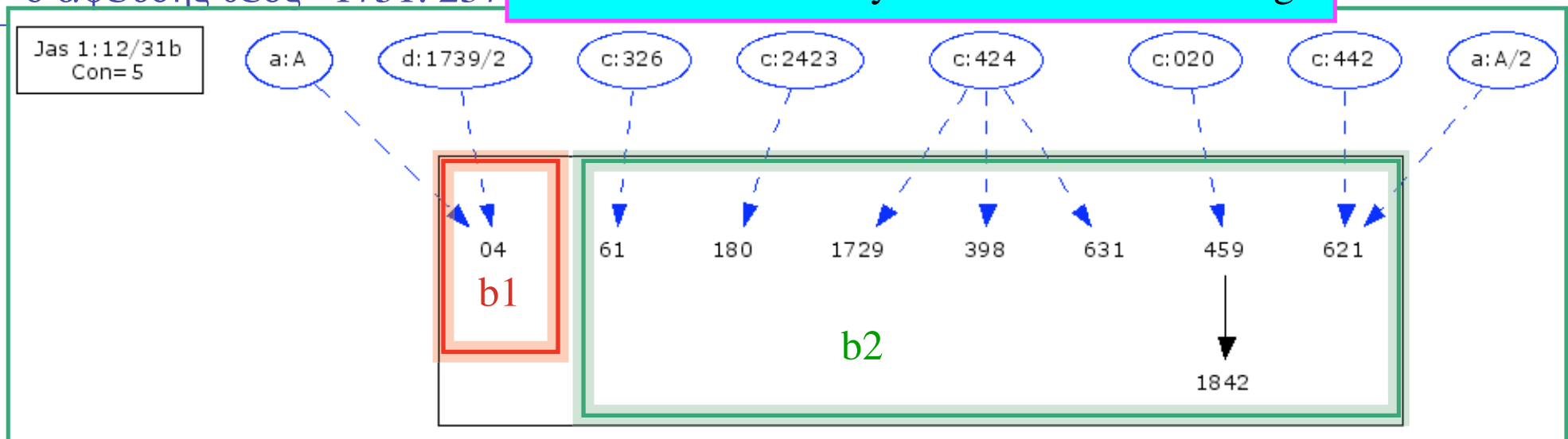
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 8. 2464. 2492.
e	ο αψευδης θεος	1751. 2374.

As a result we get two variants, *b1* and *b2*, which coincidentally have the same wording.



Differentiation between 04 and the other witnesses is possible when the attestation is split.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842

c ο κυριος 117 witnesses including 025 and **Byz**

d ο θεος 322. 323. 945 8. 2464. 2492.

e ο αψευδης θεος 1751. 2374

As a result we get two variants, *b1* and *b2*, which coincidentally have the same wording.

Jas 1:12/31b
Con=5

a:A

d:1739/2

c:326

c:2423

c:424

c:020

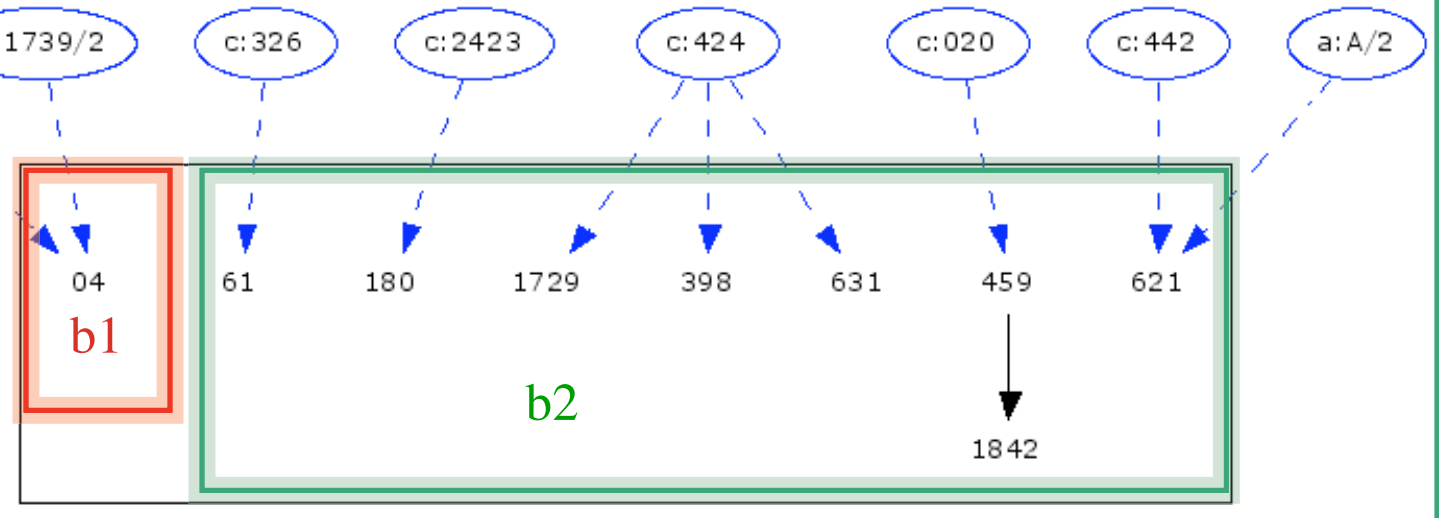
c:442

a:A/2

In a local stemma this procedure results in these connections:

?
↓
b1

c
↓
b2



Differentiation between 04 and the other witnesses is possible when the attestation is split.

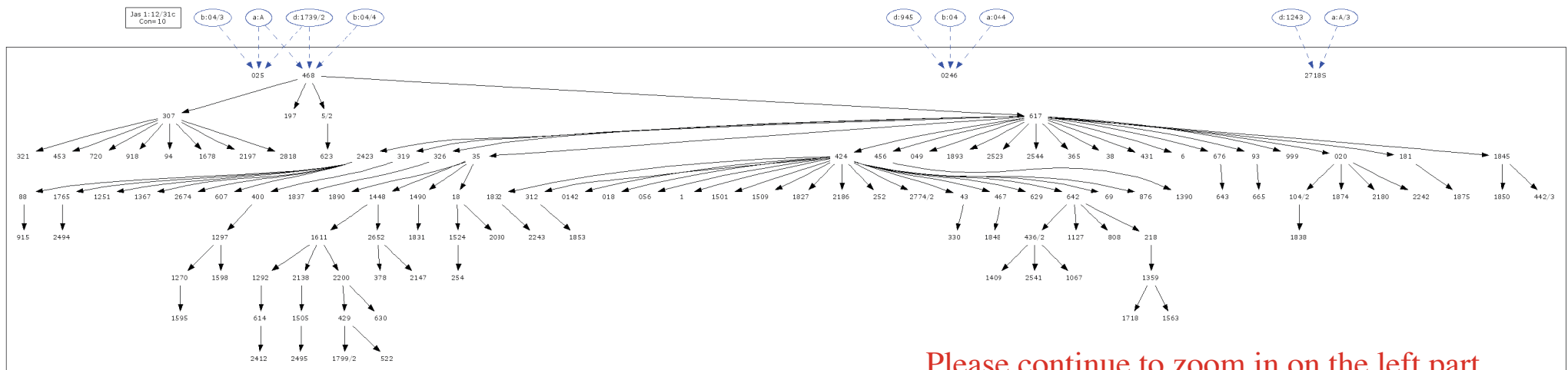
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	<u>ο κυριος</u>	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Lectionaries are not included.



Please continue to zoom in on the left part ...

This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om.

P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος

04. 61. 180T. 398. 459. 621. 631. 1729. 1842

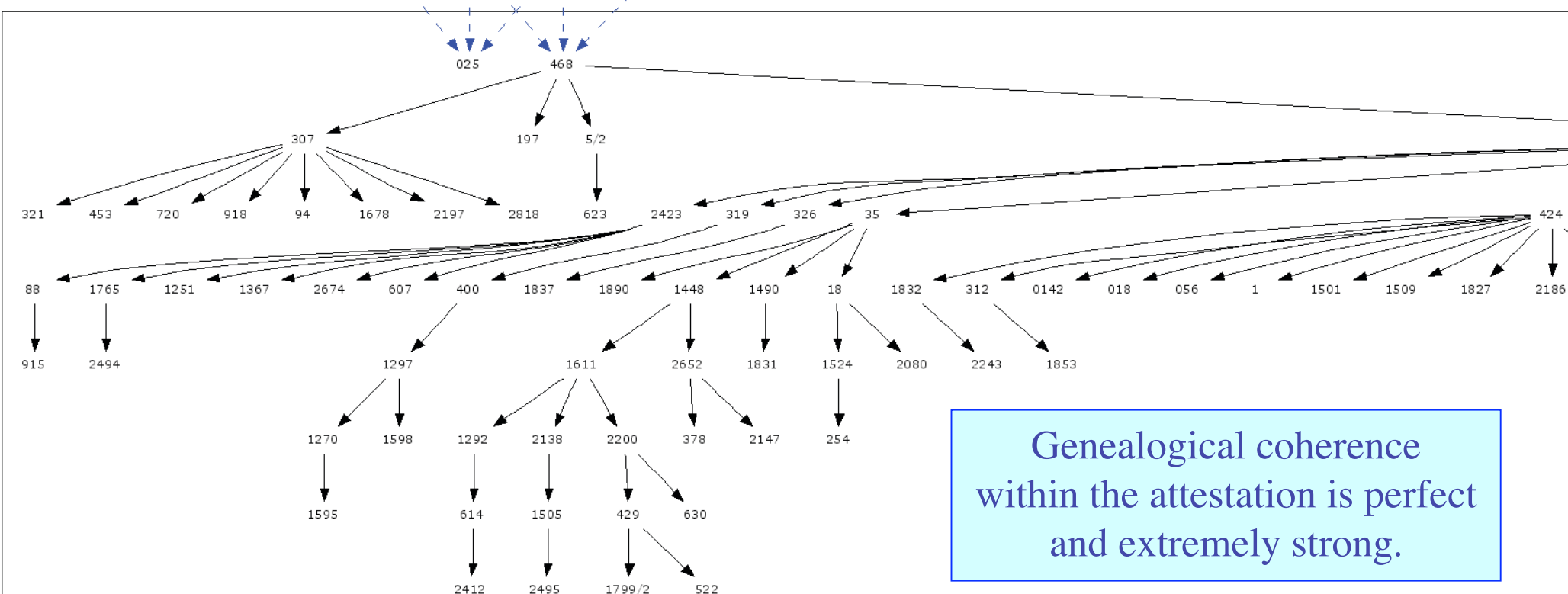
Jas 1:12/31c
Con=10

b:04/3

a:A

d:1739/2

b:04/4



This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om.

P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος

04. 61. 180T. 398. 459. 621. 631. 1729. 1842

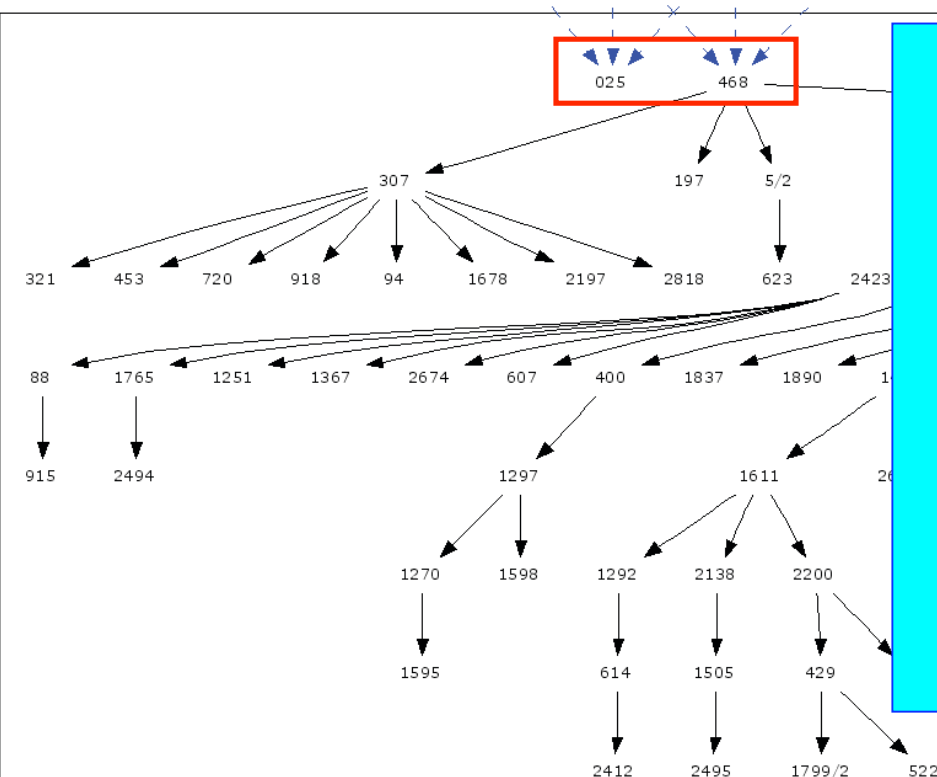
Jas 1:12/31c
Con=10

b:04/3

a:A

d:1739/2

b:04/4



025 and 468 are not connected because there is no direction of textual flow between them

...

and extremely strong.

This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842

Jas 1:12/31c
Con=10

b:04/3

a:A

d:1739/2

b:04/4

025 468

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	6	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

025 and 468 are not connected because there is no direction of textual flow between them (cf. the equal number of prior and posterior variants when both witnesses are compared).

...

and extremely strong.

This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842

Jas 1:12/31c
Con=10

b:04/3

a:A

d:1739/2

b:04/4

025 468

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

025 and 468 are not connected because there is no direction of textual flow between them (cf. the equal number of prior and posterior variants when both witnesses are compared).

Yet, the mutual relation is closer than the relation to any potential ancestor (except for A).

Thus, this undirected genealogical coherence is adequate though not shown in the textual flow diagram.

and extremely strong.

This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842

Jas 1:12/31c
Con=10

b:04/3

a:A

d:1739/2

b:04/4

025 468

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0		91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0		91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3								
04	4								
P74	0								

For undirected genealogical coherencies,
cf. Mink (2004), 63-67.

025 and 468 are not connected because there is
no direction of textual flow between them
(cf. the equal number of prior and posterior variants
when both witnesses are compared).

Yet, the mutual relation is closer
than the relation to any potential ancestor
(except for A).

Thus, this undirected genealogical coherence
is adequate though not shown
in the textual flow diagram.

and extremely strong.

This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om.

b κυριος

P7

04

Jas 1:12/31c
Con=10

Undirected genealogical coherencies
become directed ones
if only one local stemma of variants changes.

Please continue to see
the right part of the diagram...

025 and 468 are not connected because there is
no direction of textual flow between them
(cf. the equal number of prior and posterior variants
when both witnesses are compared).

Yet, the mutual relation is closer
than the relation to any potential ancestor
(except for A).

Thus, this undirected genealogical coherence
is adequate though not shown
in the textual flow diagram.

and extremely strong.

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

2412 2495 1799/2 522

This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

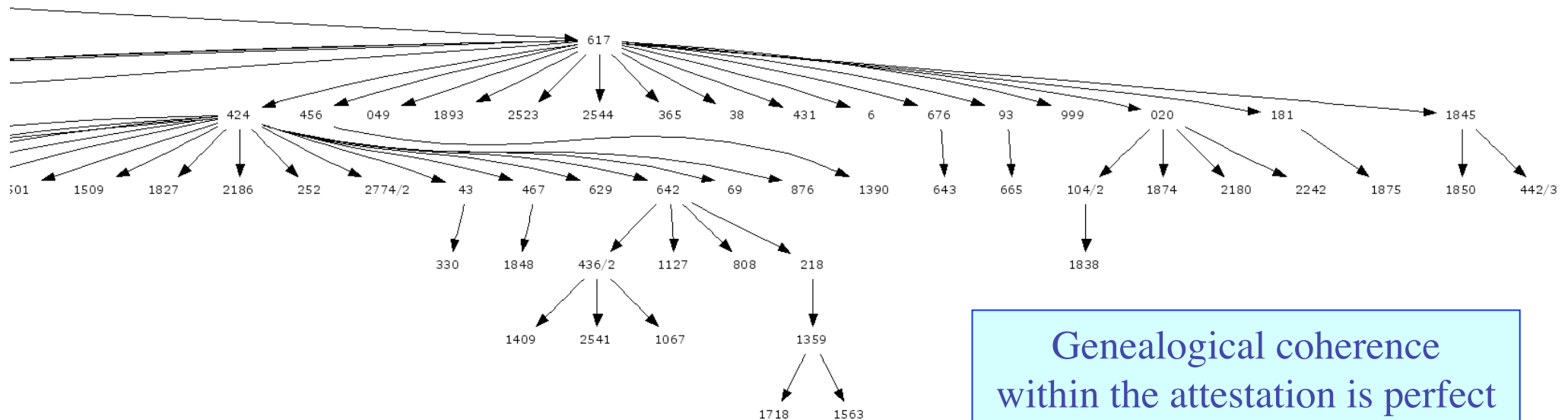
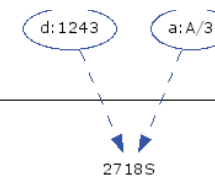
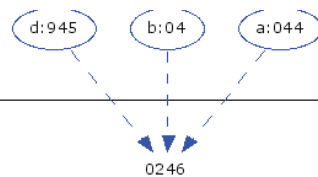
τον στεφανον ον επηγγειλατο ...

a om.

P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος

04. 61. 180T. 398. 459. 621. 631. 1729. 1842



Genealogical coherence within the attestation is perfect and extremely strong.

This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om.

P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος

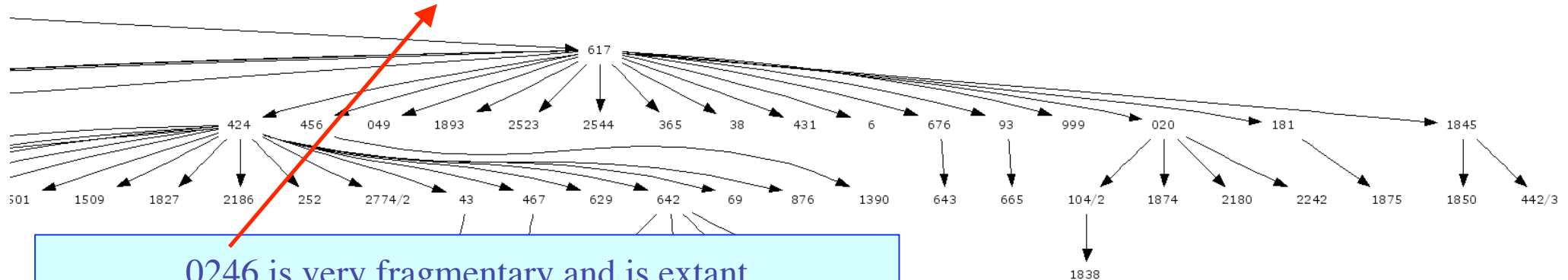
04. 61. 180T. 398. 459. 621. 631. 1729. 1842

d:945 b:04 a:044

0246

d:1243 a:A/3

2718S



0246 is very fragmentary and is extant at 30 variant passages only.

Thus, there is not enough genealogical information. 0246 completely agrees with some witnesses of variant c. That is the reason why there is no genealogical direction towards witnesses of variant c. Compare the agreements in this table ...

Genealogical coherence within the attestation is perfect and extremely strong.

the attestation of variant c.

Genealogical coherence

Jas 1,12/31

τον στεφανον

a om.

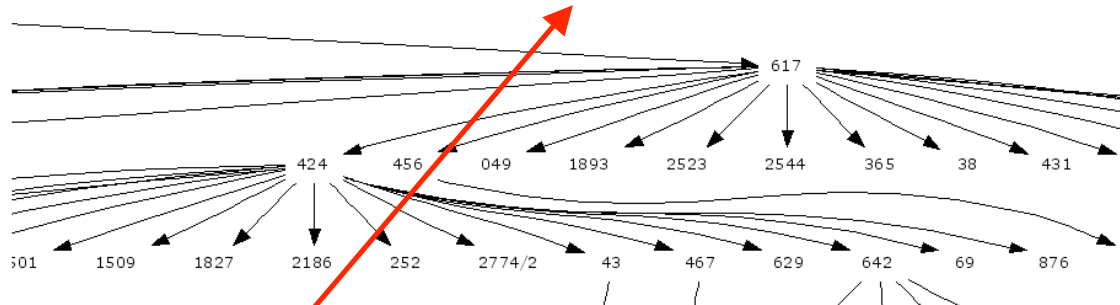
P74. 01. 02. 03. 044. 81. 206T. 9

b κυριος

04. 61. 180T. 398. 459. 621. 631

d:945 b:04 a:044

0246



0246 is very fragmentary and is extant at 30 variant passages only.

Thus, there is not enough genealogical information.

0246 completely agrees with some witnesses of variant c. That is the reason why there is no genealogical direction towards witnesses of variant c.

Compare the agreements in this table ...

potential ancestors of 0246

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
P23	0	-	100.000	3	3	0	0	0	0
18	0	-	100.000	30	30	0	0	0	0
35	0	-	100.000	30	30	0	0	0	0
104	0	-	100.000	30	30	0	0	0	0
181	0	-	100.000	30	30	0	0	0	0
197	0	-	100.000	30	30	0	0	0	0
218	0	-	100.000	30	30	0	0	0	0
312	0	-	100.000	30	30	0	0	0	0
424	0	-	100.000	30	30	0	0	0	0
468	0	-	100.000	30	30	0	0	0	0
614	0	-	100.000	30	30	0	0	0	0
617	0	-	100.000	30	30	0	0	0	0
643	0	-	100.000	30	30	0	0	0	0
676	0	-	100.000	30	30	0	0	0	0
915	0	-	100.000	30	30	0	0	0	0
1127	0	-	100.000	30	30	0	0	0	0
1251	0	-	100.000	30	30	0	0	0	0
1359	0	-	100.000	30	30	0	0	0	0
1448	0	-	100.000	30	30	0	0	0	0
1563	0	-	100.000	30	30	0	0	0	0

"W1<W2"="W1>W2":
no genealogical direction

and extremely strong.

the attestation of variant c.

Genealogical coherence

Jas 1,12/31

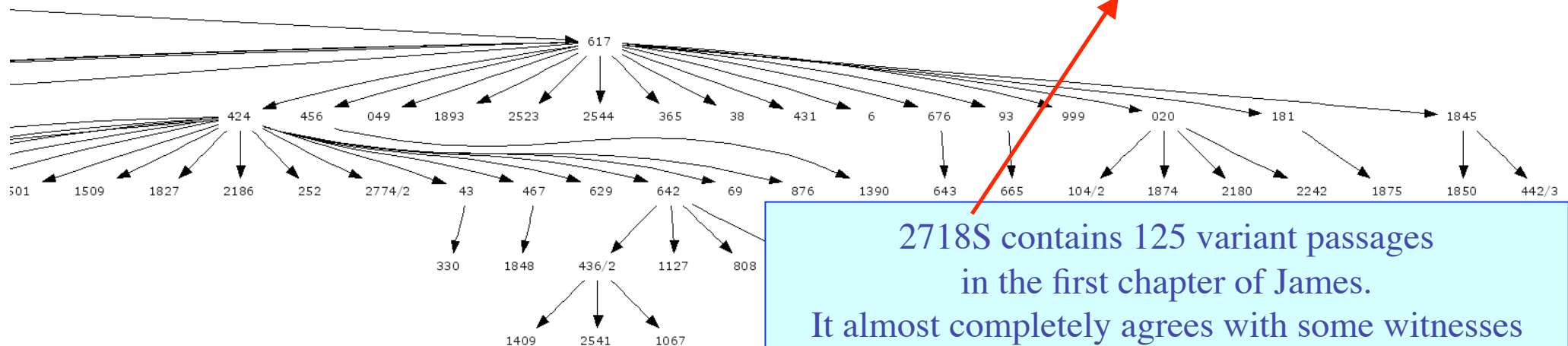
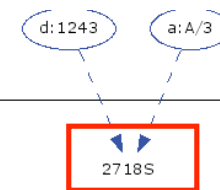
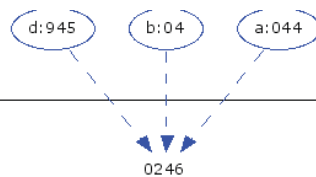
τον στεφανον ον επηγγειλατο ...

a om.

P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος

04. 61. 180T. 398. 459. 621. 631. 1729. 1842



2718S contains 125 variant passages
in the first chapter of James.

It almost completely agrees with some witnesses
of variant *c*, and there is no genealogical direction
towards these witnesses.

Compare the agreements in this table ...

This is the textual flow diagram for the attestation of variant *c*.

potential ancestors of 2718S

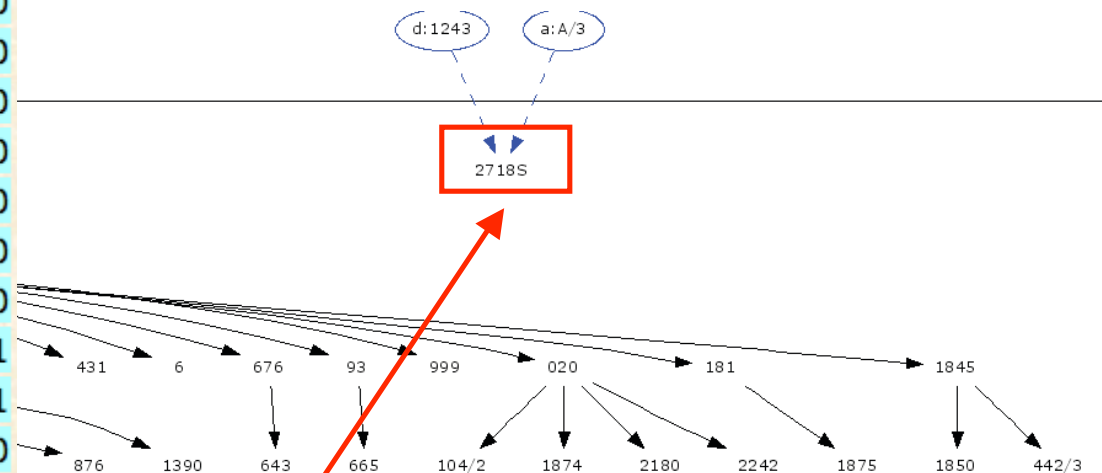
Genealogical coherence

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
0166	0	-	100.000	8	8	0	0	0	0
0246	0	-	100.000	29	29	0	0	0	0
1840	0	-	100.000	16	16	0	0	0	0
020	0	-	98.400	123	125	1	1	0	0
18	0	-	98.400	123	125	1	1	0	0
35	0	-	98.400	123	125	1	1	0	0
197	0	-	98.400	123	125	1	1	0	0
617	0	-	98.400	123	125	1	1	0	0
676	0	-	98.400	123	125	1	1	0	0
2242	0	-	98.400	123	125	1	1	0	0
2186	0	-	98.361	120	122	1	1	0	0
322	0	-	97.600	122	125	1	1	0	1
323	0	-	97.600	122	125	1	1	0	1
1390	0	-	97.600	122	125	1	1	1	0
1243	1		96.800	121	125	2	1	0	1
2492	1		96.800	121	125	2	1	0	1
A	3		96.774	120	124	4	0	0	0
1175	0	-	96.000	120	125	2	2	0	1
P23	0	>	95.918	47	49	1	0	0	1
P74	0	-	95.385	62	65	1	1	0	1
1739	4		95.200	119	125	3	2	0	1
81	5		94.400	118	125	3	2	1	1
945	0	-	94.400	118	125	3	3	0	1
03	6		93.443	114	122	4	3	1	0
01	0	-	92.623	113	122	4	4	1	0

στεφανον ον επηγγειλατο ...

206T. 996. 1661. 2344.

21. 631. 1729. 1842



2718S contains 125 variant passages

in the first chapter of James.

It almost completely agrees with some witnesses of variant *c*, and there is no genealogical direction towards these witnesses.

Compare the agreements in this table ...

ram for the attestation of variant *c*.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a om.

P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.

b κυριος

04. 61. 180T. 398. 459. 621. 631. 1729. 1842

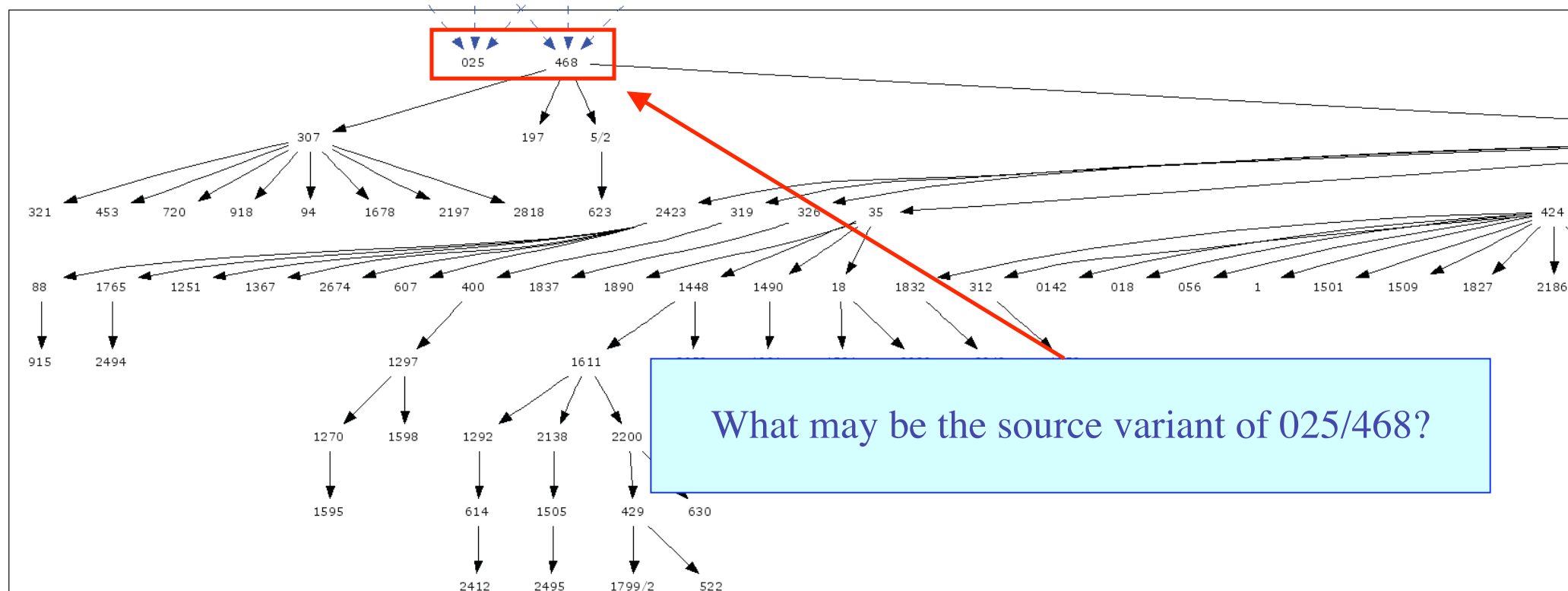
Jas 1:12/31c
Con=10

b:04/3

a:A

d:1739/2

b:04/4



This is the textual flow diagram for the attestation of variant c.

Genealogical coherence

Jas 1,12/31 τον στεφανον ον επηγγειλατο ...

- a

om.

P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
- b

κυριος

04. 61. 180T. 398. 459. 621. 631. 1729. 1842
- c

ο κυριος

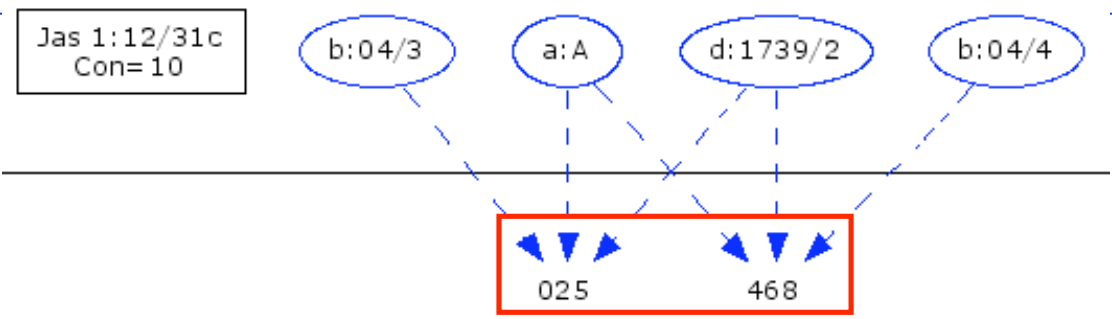
117 witnesses including 025 and **Byz**
- d

ο θεος

322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
- e

ο αψευδης θεος

1751. 2374. 2805.



Lectionaries are not included.

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

Again the potential ancestors of 025 and 468 ...

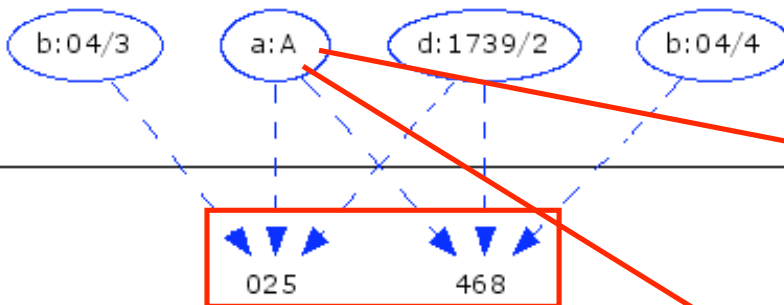
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c ο κυριος 117 witnesses including 025 and Byz
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
 e ο αψευδης θεος 1751. 2374. 2805.

Jas 1:12/31c
Con= 10



Lectionaries are not included.

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0		91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0		91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

In both tables,
 the reconstructed initial text, A, clearly is
 the most closely related potential ancestor.
 There is a considerable, nearly constant distance
 to 03, 04 and 1739.
 Differences rest upon the greater proportion
 of Byzantine variants in 468.

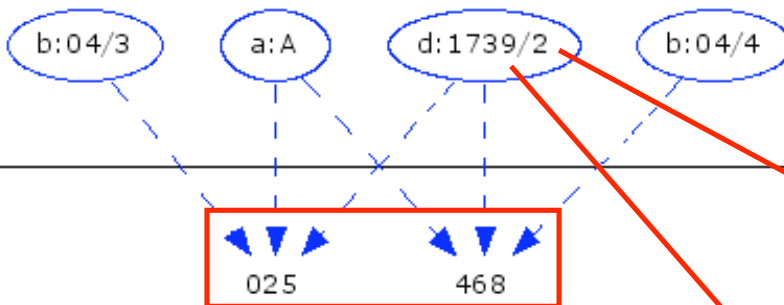
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c ο κυριος 117 witnesses including 025 and Byz
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
 e ο αψευδης θεος 1751. 2374. 2805.

Jas 1:12/31c
Con= 10



Lectionaries are not included.

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

Despite the greater distance, variants in 025/468 that do not agree with the initial text are most frequently found in 1739. 1739 can be anticipated to be one of the ancestors in an optimal substemma.

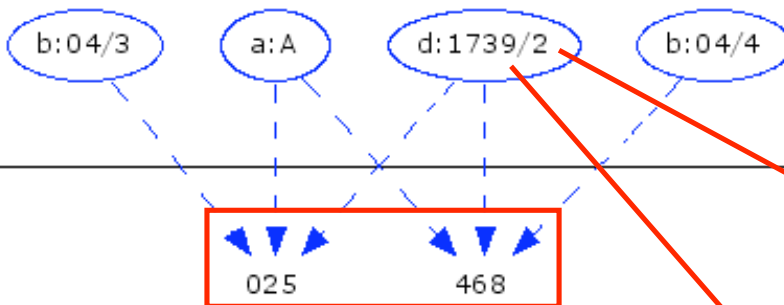
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c ο κυριος 117 witnesses including 025 and Byz
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609. 1739.
 e ο αψευδης θεος 1751. 2374. 2805.

Jas 1:12/31c
Con= 10



Priority of 1739 in comparison
with 025 and 468
can be derived from these values
("W1<W2" higher than "W1>W2").

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

Despite the greater distance, variants in 025/468
that do not agree with the initial text
are most frequently found in 1739.
1739 can be anticipated to be
one of the ancestors in an optimal substemma.

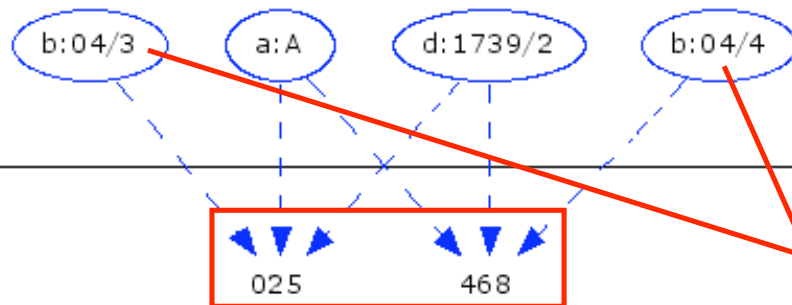
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c ο κυριος 117 witnesses including 025 and **Byz**
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
 e ο αψευδης θεος 1751. 2374. 2805.

Jas 1:12/31c
Con= 10



potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

In some cases 025/468 agrees with 04
and no other potential ancestor.

04 may be one of the ancestors in an optimal substemma.

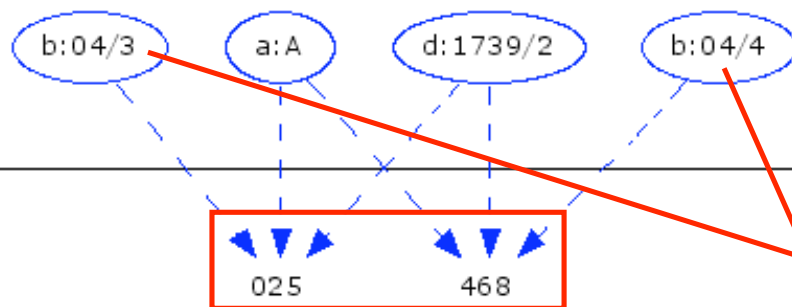
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

- a om. P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
 b κυριος 04. 61. 180T. 398. 459. 621. 631. 1729. 1842
 c ο κυριος 117 witnesses including 025 and **Byz**
 d ο θεος 322. 323. 945. 1175. 1241. 1243. 1609
 e ο αψευδης θεος 1751. 2374. 2805.

Jas 1:12/31c
Con= 10



Yet, priority of 04 in comparison with 025 and especially 468 is weak ("W1<W2" slightly higher than "W1>W2").

potential ancestors of 025

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.437	2371	2565	181	0	6	7
468	0	-	91.096	2435	2673	92	92	48	6
1739	2		88.810	2381	2681	126	93	63	18
04	3		88.318	1701	1926	88	78	45	14
03	4		87.551	2342	2675	175	68	82	8

potential ancestors of 468

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

In some cases 025/468 agrees with 04 and no other potential ancestor.
 04 may be one of the ancestors in an optimal substemma.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	<u>ο κυριος</u>	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805

not included.

The question of the source of variant *c* cannot definitely be answered on the basis of genealogical coherencies.

The superior general agreement of 025/468 with the initial text argues in favour of variant *a* as source.

Nevertheless, variant *d* and *b* are possible.

The solution depends on what we consider the most plausible scenario:

(i) In the view of the copyist there was a strong demand for a subject.

Thus, there is no need of a Vorlage already containing this subject (source: variant *a*).

(ii) A scribe may easily copy κς instead of θς (source: variant *d*).

(iii) A copyist only omitted the article (source: variant *b*).

Genealogical coherence

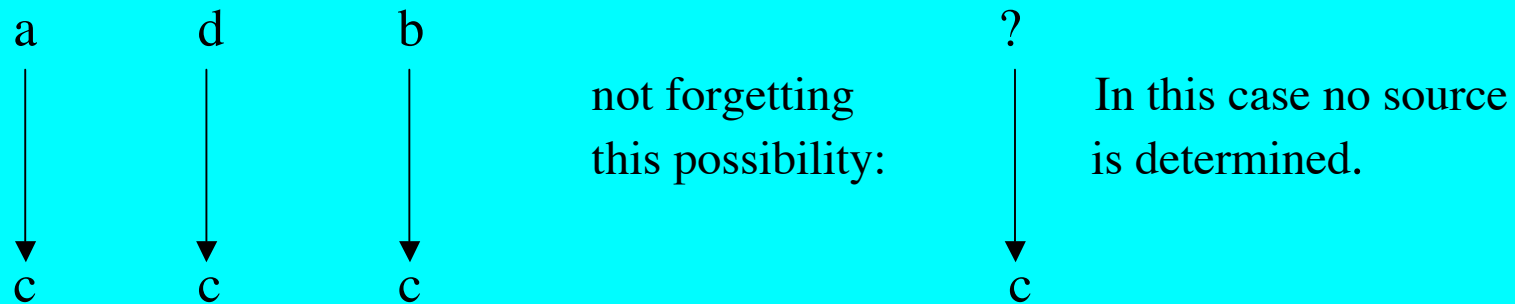
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	<u>ο κυριος</u>	<u>117 witnesses including 025 and Byz</u>
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Lectionaries are not included.

This results in various options to position variant *c* in a local stemma:



Genealogical coherence

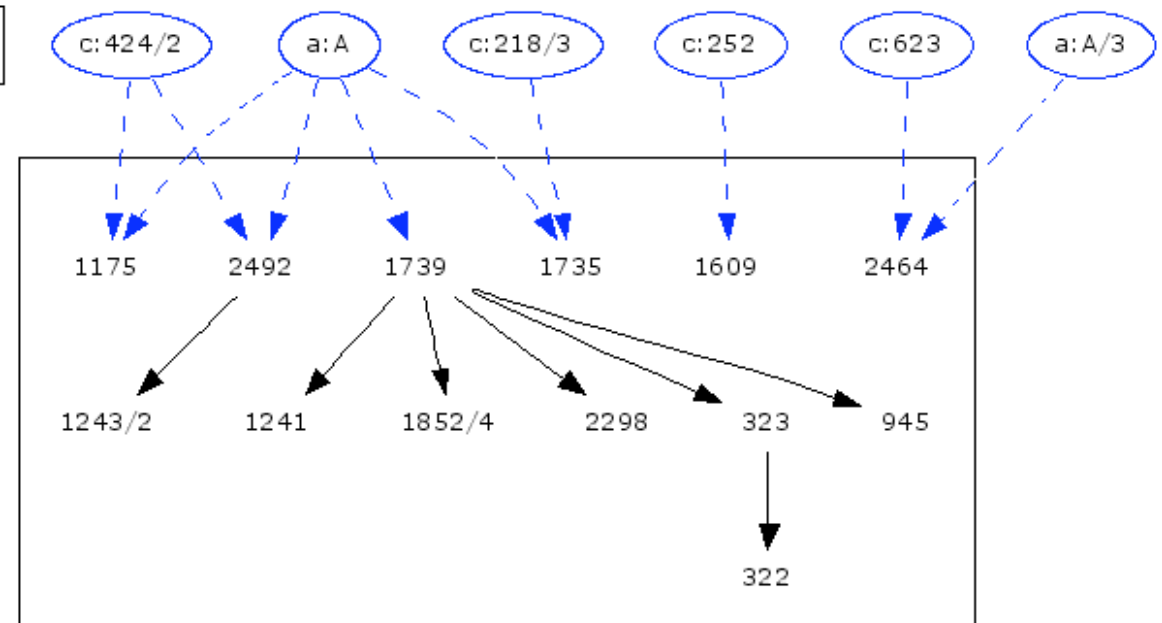
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	<u>322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.</u>
e	ο αψευδης θεος	1751. 2374. 2805.

Jas 1:12/31d
Con= 5

This is the textual flow diagram
for the attestation of variant *d*.



Genealogical coherence

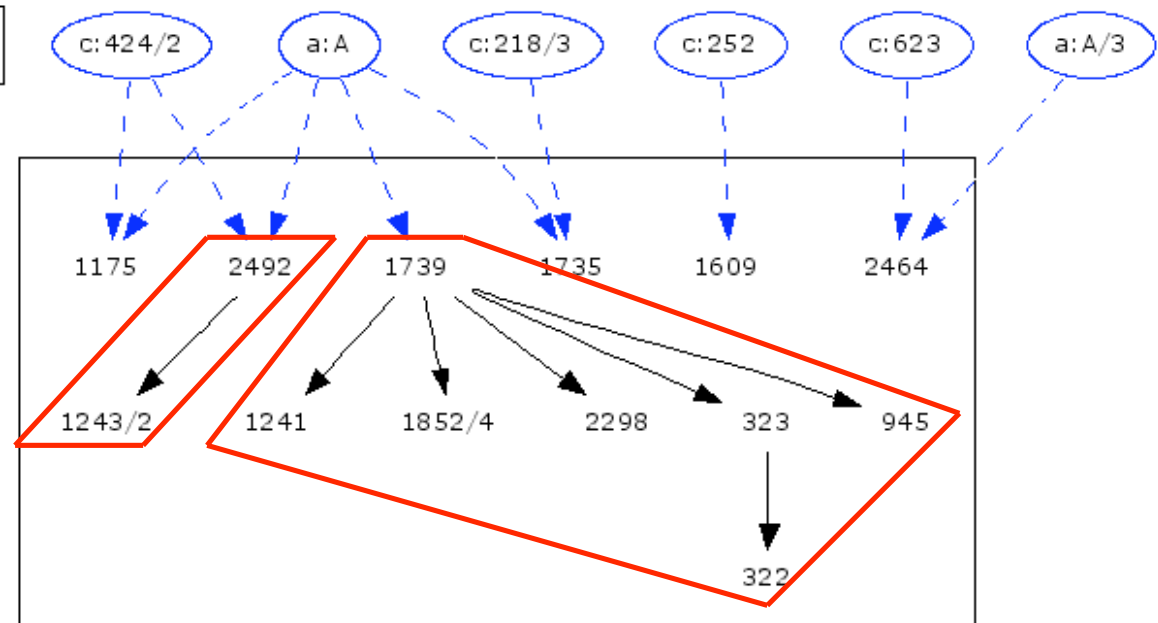
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Jas 1:12/31d
Con= 5

There are only 2 coherent fields
within this attestation.
Multiple origin must be assumed.



Genealogical coherence

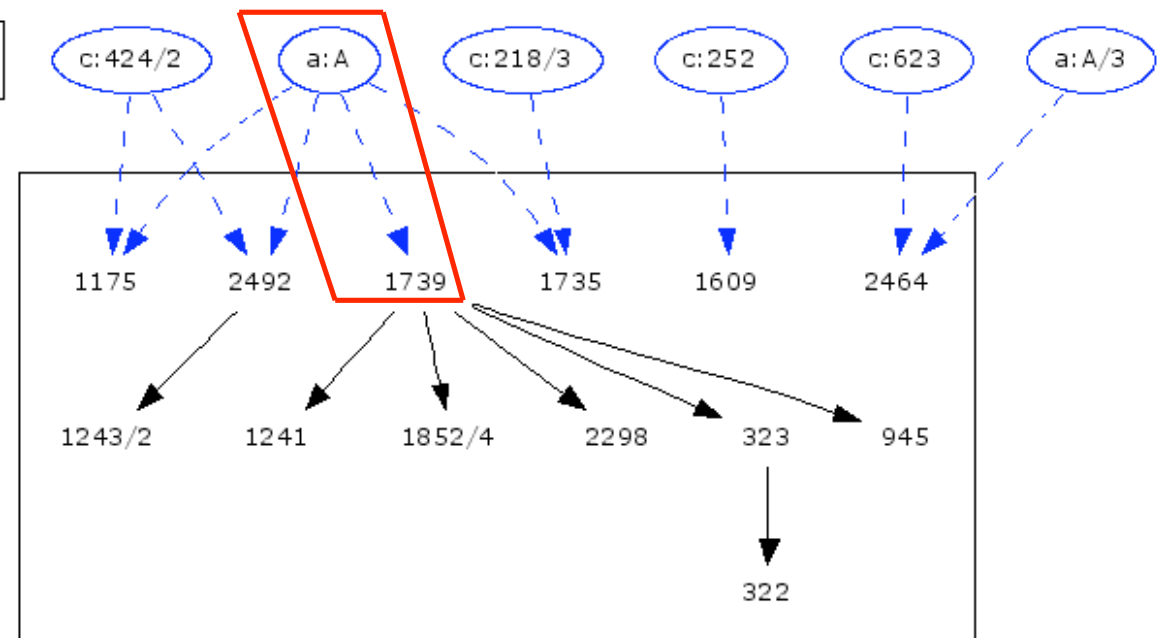
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Jas 1:12/31d
Con= 5

The potential ancestors of 1739
are A and 03.
They support variant *a*.



Genealogical coherence

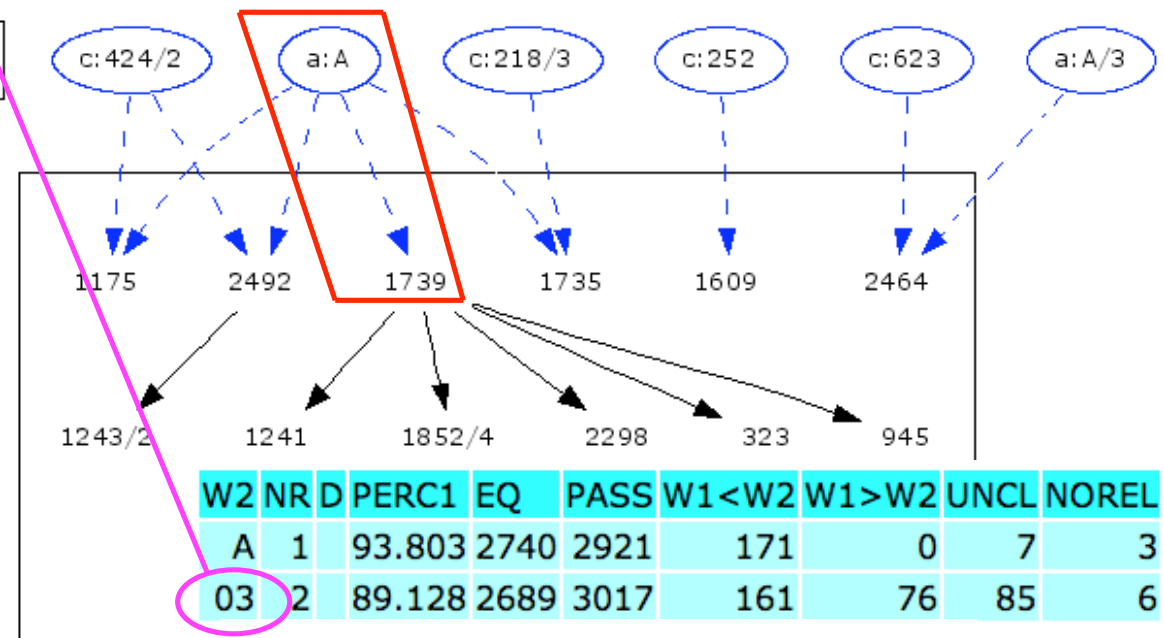
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805

The potential ancestors of 1739
are A and 03.
They support variant *a*.

Jas 1:12/31d
Con= 5



potential ancestors of 1739
(A is witness of the initial text by default.)

Genealogical coherence

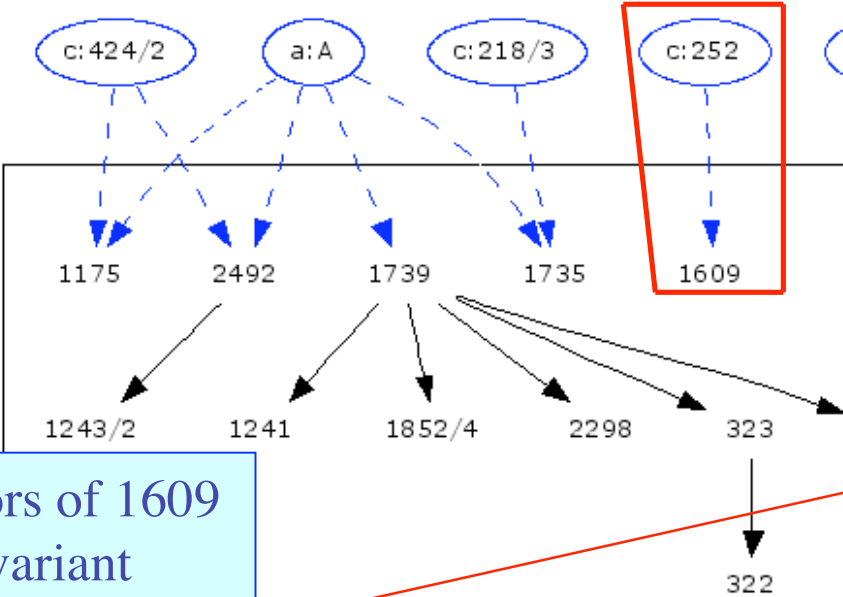
Jas 1,12/31 τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298.
e	ο αψευδης θεος	1751. 2374. 2805.

W2	NR	D	PERC1
252	1		95.269
424	2		94.706
2423	3		94.548
35	4		94.353
18	5		94.143
319	6		93.960
617	7		93.861
468	8		93.843
020	9		93.740
607	10		93.564
018	11		92.986
1	12		92.982
2186	13		92.136
93	14		91.858
642	15		91.809
6	16		91.347
307	17		91.333
1845	18		91.314
665	19		91.304
A	20		91.133
453	21		91.124
808	22		91.059
1448	23		90.948
2818	24		90.631
2492	25		90.411

Jas 1:12/31d
Con= 5

The potential ancestors of 1739
are A and 03.
They support variant *a*.



All most closely related potential ancestors of 1609
read variant *c*. A witness of another variant
is not found above rank number 20.

Genealogical coherence

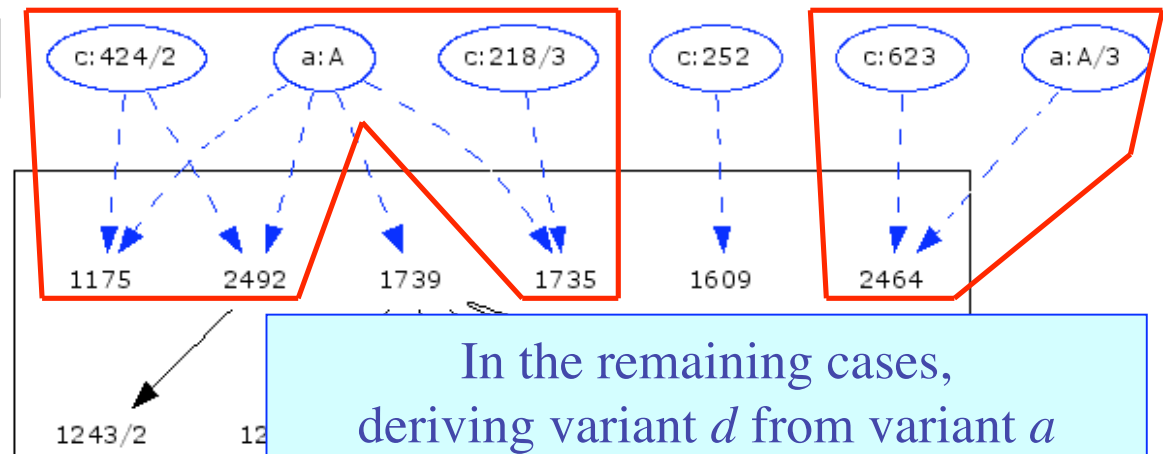
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Jas 1:12/31d
Con= 5

The potential ancestors of 1739
are A and 03.
They support variant *a*.



All most closely related potential ancestors of 1609
read variant *c*. A witness of another variant
is not found above rank number 20.

In the remaining cases,
deriving variant *d* from variant *a*
or variant *c* is possible because the
most closely or very closely related
potential ancestors are in the attestations
of both variants, *a* and *c*.

Genealogical coherence

Jas 1,12/31

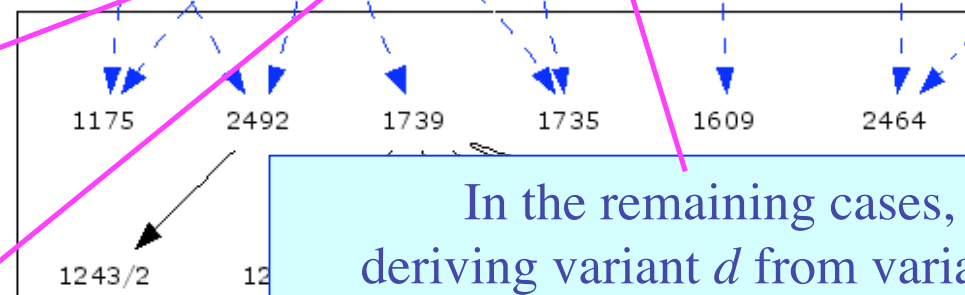
τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Jas 1:12/31d
Con= 5

In order to represent different sources of variant *d* in the local stemma the attestation must be split.

The potential ancestors of 1739 are A and 03. They support variant *a*.



All most closely related potential ancestors of 1609 read variant *c*. A witness of another variant is not found above rank number 20.

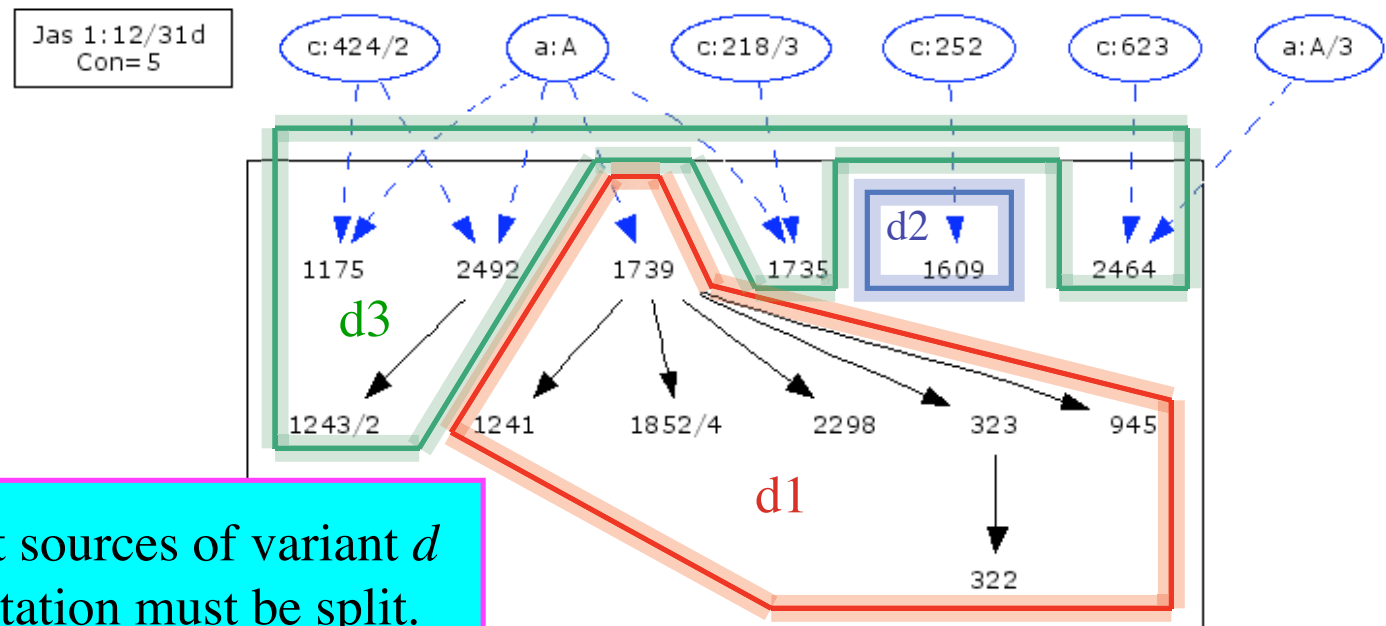
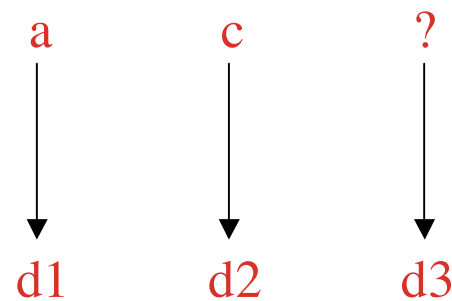
In the remaining cases, deriving variant *d* from variant *a* or variant *c* is possible because the most closely or very closely related potential ancestors are in the attestations of both variants, *a* and *c*.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609. 1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.



In order to represent different sources of variant *d* in the local stemma the attestation must be split.

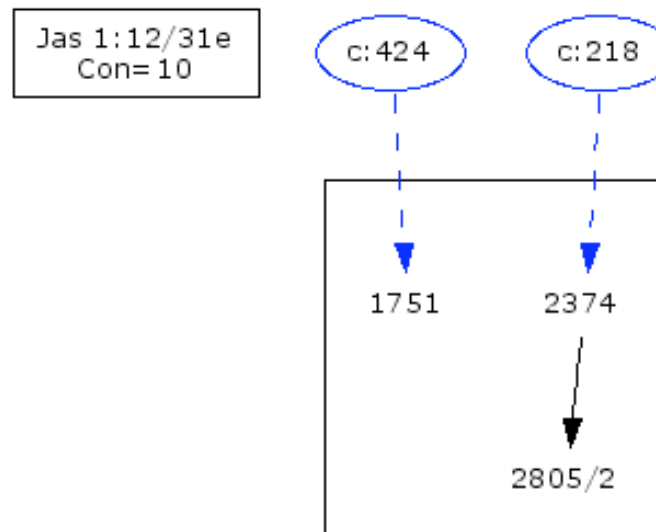
Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	<u>1751. 2374. 2805.</u>

Lectionaries are not included.



This is the textual flow diagram for the attestation of variant *e*.

Genealogical coherence

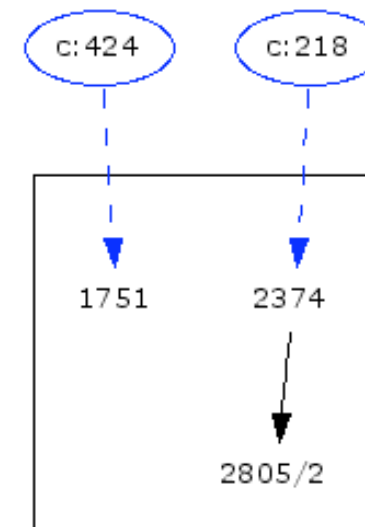
Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Lectionaries are not included.

Jas 1:12/31e
Con=10



There is only weak genealogical coherence between 1751 and 2374 or 2805. 2374 is among the potential ancestors of 1751, yet its rank number is 38 (87.4 % agreement). Multiple origins for this variant resting upon Tit 1,2 can easily be imagined.

This is the textual flow diagram for the attestation of variant *e*.

Genealogical coherence

Jas 1,12/31

τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 124
e	ο αψευδης θεος	1751. 2374. 2805.

The most closely related potential ancestors of 1751 and 2374 as well read variant *c*.

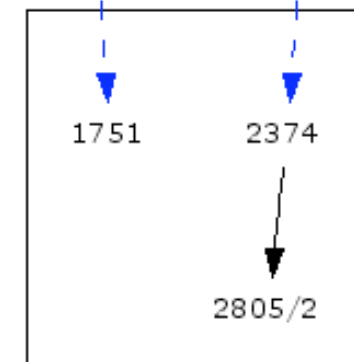
Lectioanaries are not included.

Jas 1:12/31e
Con=10

c:424

c:218

There is only weak genealogical coherence between 1751 and 2374 or 2805.
2374 is among the potential ancestors of 1751, yet its rank number is 38 (87.4 % agreement).
Multiple origins for this variant resting upon Tit 1,2 can easily be imagined.



This is the textual flow diagram for the attestation of variant *e*.

Genealogical coherence

Jas 1,12/31

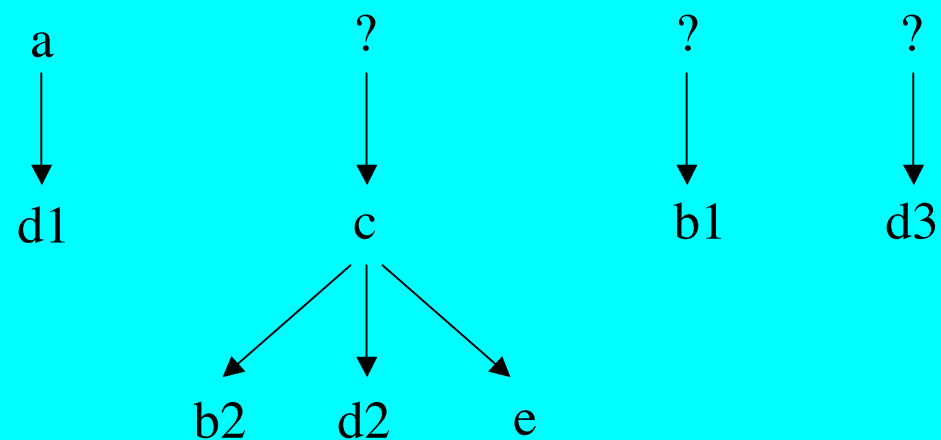
τον στεφανον ον επηγγειλατο ...

a	om.	P74. 01. 02. 03. 044. 81. 206T. 996. 1661. 2344.
b	κυριος	04. 61. 180T. 398. 459. 621. 631. 1729. 1842
c	ο κυριος	117 witnesses including 025 and Byz
d	ο θεος	322. 323. 945. 1175. 1241. 1243. 1609.1735. 1739. 1852. 2298. 2464. 2492.
e	ο αψευδης θεος	1751. 2374. 2805.

Lectionaries are not included.

This local stemma presents the most cautious assumptions:

The local stemma depends
on the decisions made
on the sources of the variants
b1, *c* and *d3*.



Finally, a more complex case
which requires examining more
than one variant passage ...

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	[	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
		b	εστω	139 witnesses including Byz
?	[	c	εσται	1838.
		d	και εστω	02(*Vf). 33. 81.

Is variant *b* to be derived from variant *a* or variant *d*?

Or is variant *b* itself the source of all the other variants?

The problem cannot be solved without regarding the context
immediately preceding the passage in question.

It is a place of variation too ...

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	[	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
		b	εστω	139 witnesses including Byz
?	]	c	εσται	1838.
		d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

(There are 6 more variants *e, f, g, h, i, j* which must be derived from variant *d* or are lectionary variants. They are not relevant in this context.)

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

?	[	a εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
		b εστω	139 witnesses including Byz
?	]	c εσται	1838.
		d και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c ιστε αγαπητοι μου αδελφοι	33V.
d ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

The witnesses present different combinations of variants at these two passages. The most important ones are ...

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

The witnesses present different combinations of variants at these two passages. The most important ones are ...

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
?	c	εσται	1838.
	d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

The witnesses present different combinations of variants at these two passages. The most important ones are ...

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	[	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
		b	εστω	139 witnesses including Byz
?	]	c	εσται	1838.
		d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

The witnesses present different combinations of variants at these two passages. The most important ones are ...

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

The witnesses present different combinations of variants at these two passages. The most important ones are ...

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

The combination of variants *d* and *b* results in a very smooth reading:
ωστε αδελφοι μου αγαπητοι εστω πας ανθρωπος ταχυς εις το ακουσαι

The context

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.

c ιστε

d ωστω

The combination of variants *a* and *a* may be felt harder because of δε which seems to be unrelated to the context :

ιστε αδελφοι μου αγαπητοι εστω δε πας ανθρωπος ταχυς εις το ακουσαι

The combination of variants *d* and *b* results in a very smooth reading:

ωστω αδελφοι μου αγαπητοι εστω πας ανθρωπος ταχυς εις το ακουσαι

Pre-genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	[	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
		b	εστω	139 witnesses including Byz
?	[	c	εσται	1838.
		d	και εστω	02(*Vf). 33. 81.

Is variant *b* to be derived from variant *a* or variant *d*?

First let us focus on the small attestation of variant *d*.

Pre-genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?



a εστω δε 01. 03. 04. 025*. 945. 1739 1852. 2344. 2464. 254
 b εστω 139 witnesses including **Byz**
 c εσται 1838.
 d και εστω 02(*Vf). 33. 81.

?

There is a strong pre-genealogical coherence within the attestation of variant *d*.

That the next relatives of 02 range at 90-89% agreement, is due to the amount of peculiarities in 02 shared by no other witness.

agreements with 02
(excluding smaller fragments)

1735	90.375	%
33	89.789	
P74	89.521	a
81	89.372	g
2344	89.354	r
436	88.911	e
2541	88.704	e
623	88.701	m
1409	88.360	e
5	88.284	n
03	88.231	t
1739	88.151	
218	87.754	
1067	87.354	
642	87.263	
2464	87.145	
808	87.139	
323	87.030	
93	87.023	
2374	86.973	
2298	86.915	
1359	86.858	
945	86.857	
04	86.828	
048	86.704	
2805	86.678	
1563	86.403	
665	86.401	
307	86.226	
468	86.218	
1845	86.210	
1718	86.172	

Pre-genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 254
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

1735	90.375	%
33	89.789	
P74	89.521	a
81	89.372	g
2344	89.354	r
436	88.911	e
2541	88.704	e
623	88.701	m
1409	88.360	e
5	88.284	n
03	88.231	t
1739	88.151	
218	87.754	
1067	87.354	
642	87.263	
2464	87.145	
808	87.139	
323	87.030	
93	87.023	
2374	86.973	
2298	86.915	
1359	86.858	
945	86.857	
04	86.828	
048	86.704	
2805	86.678	
1563	86.403	
665	86.401	
307	86.226	
468	86.218	
1845	86.210	
1718	86.172	

Yet, the closest relative is 1735,
one of the 139 witnesses
reading variant *b*.

Is 02 (or 33 or 81)

potential ancestor of 1735?

Or could *d* even be derived from *b*?

What is the (genealogical) role
of 1735 within the attestation of *b*?

agreements with 02
(excluding smaller fragments)

Pre-genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
?	c	εσται	1838.
	d	και εστω	02(*Vf). 33. 81.

Yet, the closest relative is 1735,
one of the 139 witnesses
reading variant *b*.

Is 02 (or 33 or 81)
potential ancestor of 1735?
Or could *d* even be derived from *b*?
What is the (genealogical) role
of 1735 within the attestation of *b*?

These questions cannot be answered
without using genealogical data.
First, the most closely related
potential ancestors of 1735 are shown.

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

potential ancestors of 1735

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		91.202	2664	2921	239	0	6	12
02	2		90.375	2723	3013	136	108	35	11
218	3		89.562	2720	3037	128	116	44	29
5	4		89.527	2727	3046	137	125	37	20
81	5		89.477	2704	3022	145	110	44	19
623	6		89.444	2720	3041	139	126	38	18
642	7		89.375	2717	3040	141	117	45	20
93	8		88.739	2703	3046	148	111	48	36
808	9		88.725	2699	3042	146	131	43	23
020	10		88.567	2688	3035	146	120	52	29
665	11		88.455	2421	2737	122	120	42	32
424	12		88.326	2686	3041	154	121	56	24
468	13		88.278	2681	3037	162	116	57	21
307	14		88.247	2688	3046	156	119	57	26

Yet, the closest relative is 1735,
one of the 139 witnesses
reading variant *b*.
Is 02 (or 33 or 81)
potential ancestor of 1735?
Or could *d* even be derived from *b*?
What is the (genealogical) role
of 1735 within the attestation of *b*?

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

potential ancestors of 1735

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		91.202	2664	2921	239	0	6	12
02	2		90.375	2723	3013	136	108	35	11
218	3		89.562	2720	3037	128	116	44	29
5	4		89.527	2727	3046	137	125	37	20
81	5		89.477	2704	3022	145	110	44	19
623	6		89.444	2720	3041	139	126	38	18
642	7		89.375	2717	3040	141	117	45	20
93	8		88.739	2703	3046	148	111	48	36
8	9		88.725	2699	3042	146	131	43	23
0	10		88.567	2688	3035	146	120	52	29
5	11		88.455	2421	2737	122	120	42	32
4	12		88.326	2686	3041	154	121	56	24
8	13		88.278	2681	3037	162	116	57	21
307	14		88.247	2688	3046	156	119	57	26

Yet, the closest relative is 1735,
one of the 139 witnesses
reading variant *b*.

Is 02 (or 33 or 81)

potential ancestor of 1735?

02 and 81 are potential ancestors of 1735.
Their rank number and agreement is appropriate.

Priority values are sufficient
("W1<W2" higher than "W1>W2").

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

- ? [a εστω δε 01. 03. 04. 025*
 b εστω 139 witnesses in
 c εσται 1838.
 ? [d και εστω 02(*Vf). 33. 81.]

Nevertheless, there is no textual flow from 02 or 81 to 1735 at this variant passage. Please remember the assumptions considered more probable than their contrary ...

potential ancestors of 1735

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		91.202	2664	2921	239	0	6	12
02	2		90.375	2723	3013	136	108	35	11
218	3		89.562	2720	3037	128	116	44	29
5	4		89.527	2727	3046	137	125	37	20
81	5		89.477	2704	3022	145	110	44	19
623	6		89.444	2720	3041	139	126	38	18
642	7		89.375	2717	3040	141	117	45	20
93	8		88.739	2703	3046	148	111	48	36
8	9		88.725	2699	3042	146	131	43	23
0	10		88.567	2688	3035	146	120	52	29
5	11		88.455	2421	2737	122	120	42	32
4	12		88.326	2686	3041	154	121	56	24
8	13		88.278	2681	3037	162	116	57	21
307	14		88.247	2688	3046	156	119	57	26

Yet, the closest relative is 1735, one of the 139 witnesses reading variant *b*.

Is 02 (or 33 or 81)

potential ancestor of 1735?

02 and 81 are potential ancestors of 1735. Their rank number and agreement is appropriate.

Priority values are sufficient ("W1<W2" higher than "W1>W2").

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

?



a εστω δε 01. 03. 04. 025*

b εστω 139 witnesses in

c εσται 1838.

?



d και εστω 02(*Vf). 33. 81.

Nevertheless, there is no textual flow from 02 or 81 to 1735 at this variant passage.
Please remember the assumptions considered more probable than their contrary ...

potential ancestors of 1735

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants, they come from another source (are not 'invented').

The scribe uses few rather than many sources.

The sources feature closely related texts rather than less related ones.

Yet, the closest reading is one of the 139 witnesses. Is 02 (or 33) a potential ancestor of 1735? Or could *d* even be the Vorlage? What is the (genealogical) role of 1735 within the attestation of *b*?

W2	W1	W1<W2	W1>W2	UNCL	NOREL				
<p>Vorlage with fidelity.</p> <p>ging variants,</p> <p>source (are not 'invented').</p> <p>than many sources.</p> <p>y related texts</p> <p>S.</p>						239	0	6	12
						136	108	35	11
						128	116	44	29
						137	125	37	20
						145	110	44	19
						139	126	38	18
						141	117	45	20
						148	111	48	36
						146	131	43	23
020	10	88.567	2688	3035	146	120	52	29	
665	11	88.455	2421	2737	122	120	42	32	
424	12	88.326	2686	3041	154	121	56	24	
468	13	88.278	2681	3037	162	116	57	21	
307	14	88.247	2688	3046	156	119	57	26	

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*
	b	εστω	139 witnesses in
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

Nevertheless, there is no textual flow from 02 or 81 to 1735 at this variant passage.
Please remember the assumptions considered more probable than their contrary ...

potential ancestors of 1735

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		91.202	2664	2921	239	0	6	12
						136	108	35	11
						128	116	44	29
						137	125	37	20
81	5		89.477	2704	3022	145	110	44	19
623	6		89.444	2720	3041	139	126	38	18
642	7		89.375	2717	3040	141	117	45	20
93	8		88.739	2703	3046	148	111	48	36
808	9		88.725	2699	3042	146	131	43	23
020	10		88.567	2688	3035	146	120	52	29
665	11		88.455	2421	2737	122	120	42	32
424	12		88.326	2686	3041	154	121	56	24
468	13		88.278	2681	3037	162	116	57	21
307	14		88.247	2688	3046	156	119	57	26

Yet, the closest reading is
one of the 13
reading variant *b*.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').

Is 02 (or 33 or 81)
potential ancestor of 1735?
Or could *d* even be derived from *b*?
What is the (genealogical) role
of 1735 within the attestation of *b*?

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

potential ancestors of 1735

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		91.202	2664	2921	239	0	6	12
02	2		90.375	2723	3013	136	108	35	11
218	3		89.562	2720	3037	128	116	44	29
5	4		89.527	2727	3046	137	125	37	20
81	5		89.477	2704	3022	145	110	44	19
623	6		89.444	2720	3041	139	126	38	18
642	7		89.375	2717	3040	141	117	45	20
93	8		88.739	2703	3046	148	111	48	36
808	9		88.725	2699	3042	146	131	43	23
828	10		88.567	2688	3035	146	128	50	29
838	11		88.567	2688	3035	146	128	50	32
848	12		88.567	2688	3035	146	128	50	24
858	13		88.278	2681	3037	162	110	57	21
307	14		88.247	2688	3046	156	119	57	26

There are other closely related potential ancestors than 02 and 81 starting with 218. They read variant *b*. In this case, 218 will be the source of textual flow to 1735.

What is the (genealogical) role of 1735 within the attestation of *b*?

If a scribe introduces diverging variants, they come from another source (are not 'invented').

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

potential ancestors of 1735

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		91.202	2664	2921	239	0	6	12
02	2		90.375	2723	3013	136	108	35	11
218	3		89.562	2720	3037	128	116	44	29
5	4		89.527	2727	3046	137	125	37	20
81	5		88.477	2704	3033	145	140	44	19
424	12		88.520	2680	3041	154	121	50	18
468	13		88.278	2681	3037	162	116	57	20
307	14		88.247	2688	3046	156	119	57	36
									23
									29
									32
									24
									21
									26



There are other closely related potential ancestors than 02 and 81 starting with 218.
They read variant *b*. In this case, 218 will be the source of textual flow to 1735.

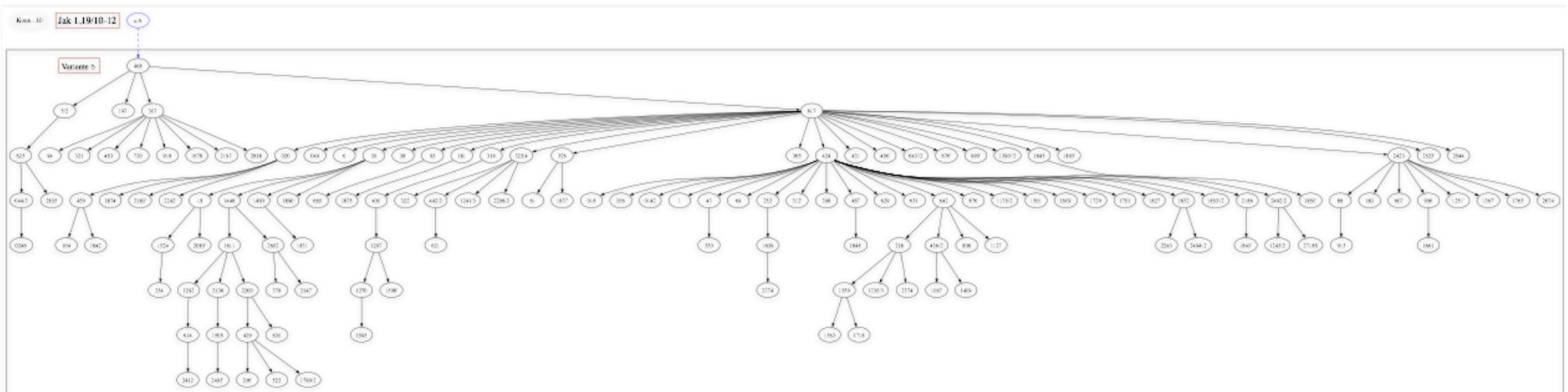
What is the (genealogical) role of 1735 within the attestation of *b*?

In order to find out what the place of a witness is within the textual flow at a variant passage, the most closely related potential ancestors must be searched for each witness.

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?		a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
		b	εστω	139 witnesses including Byz
?		c	εσται	1838.
		d	και εστω	02(*Vf). 33. 81.

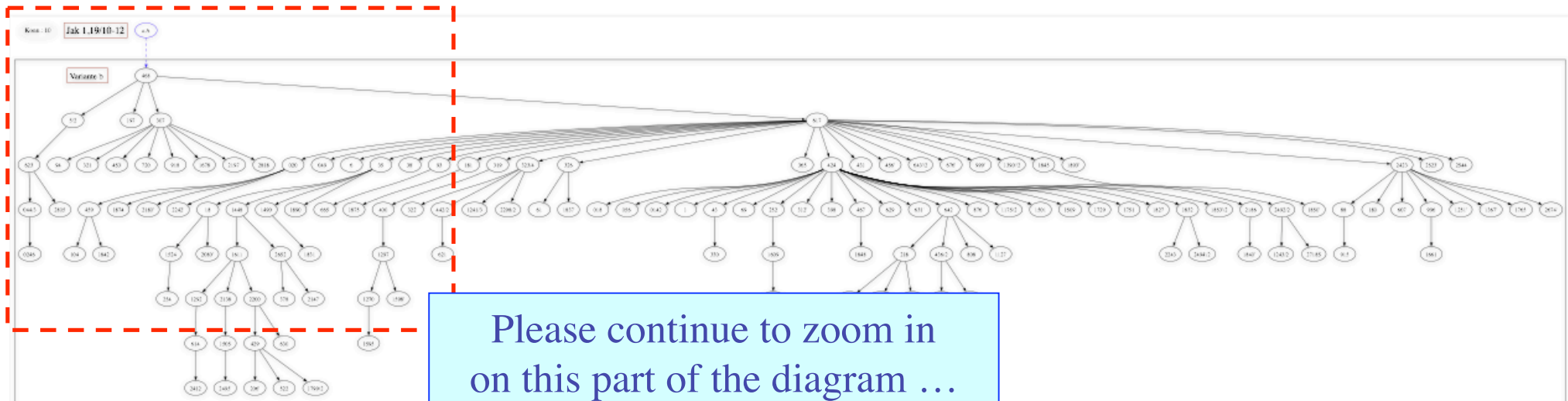


This is the result, the textual flow diagram for the witnesses of variant b .
Coherence is perfect.

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b εστω	139 witnesses including Byz
	c εσται	1838.
?	d και εστω	02(*Vf). 33. 81.



This is the result, the textual flow diagram for the witnesses of variant *b*.
Coherence is perfect.

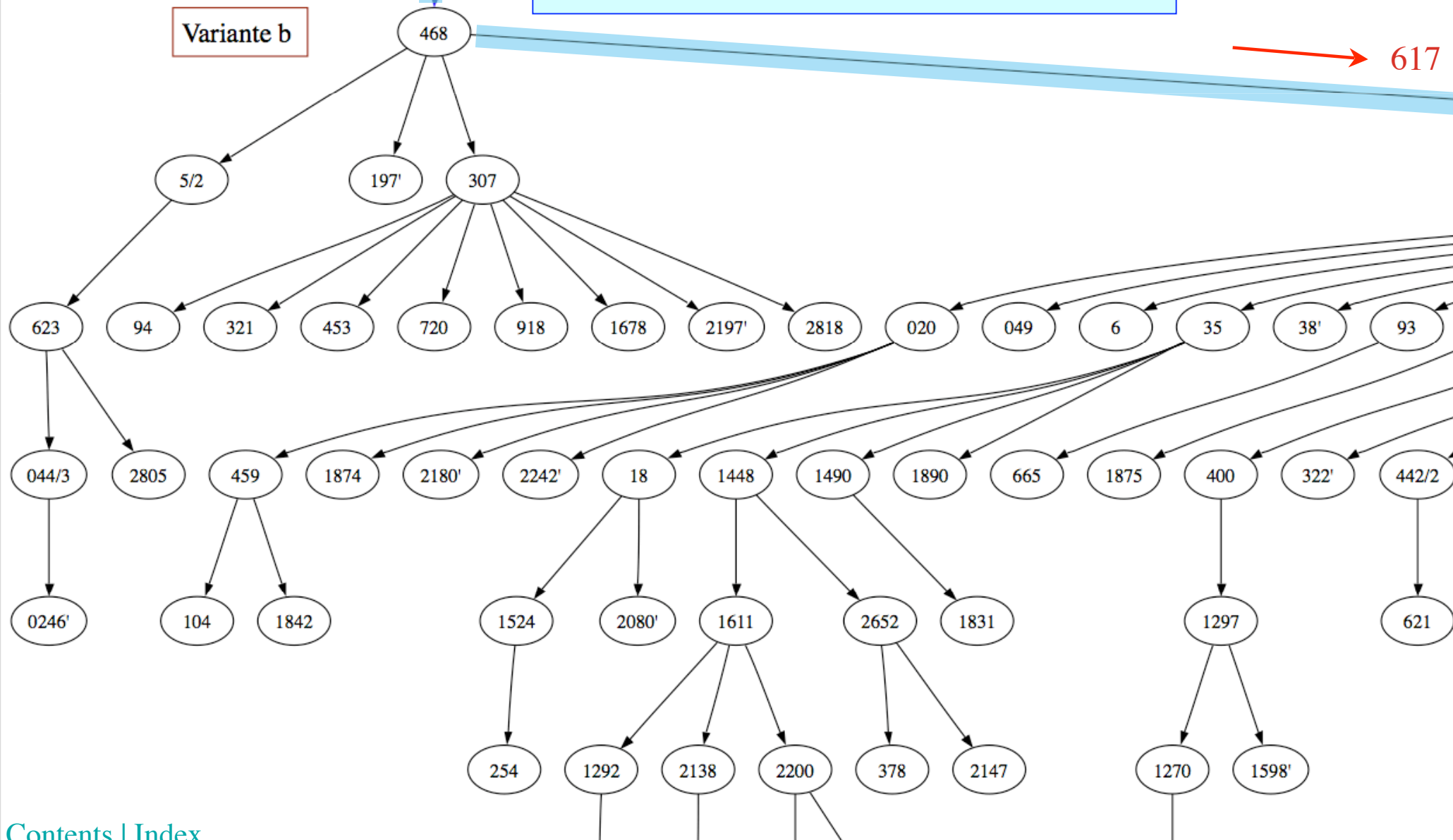
Konn.: 10

Jak 1,19/10-12

a:A

... and follow the way to 1735 via 617.

Variante b



Konn.: 10

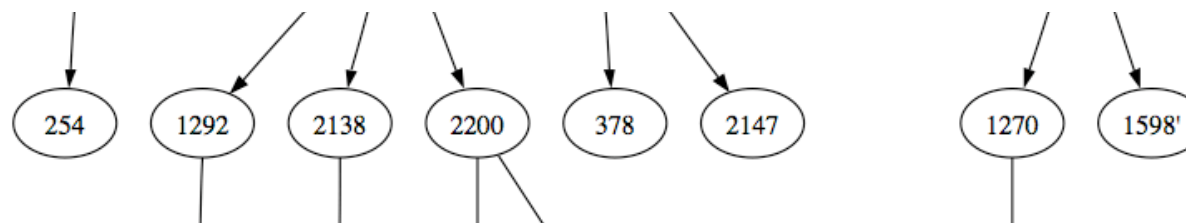
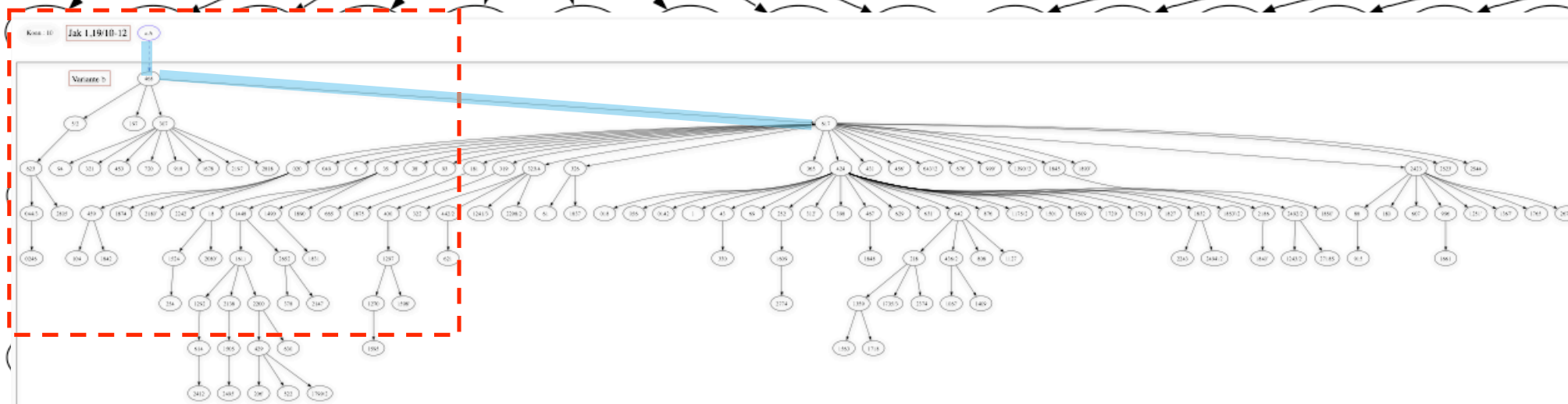
Jak 1,19/10-12

a:A

... and follow the way to 1735 via 617.

Variante b

617



Konn.: 10

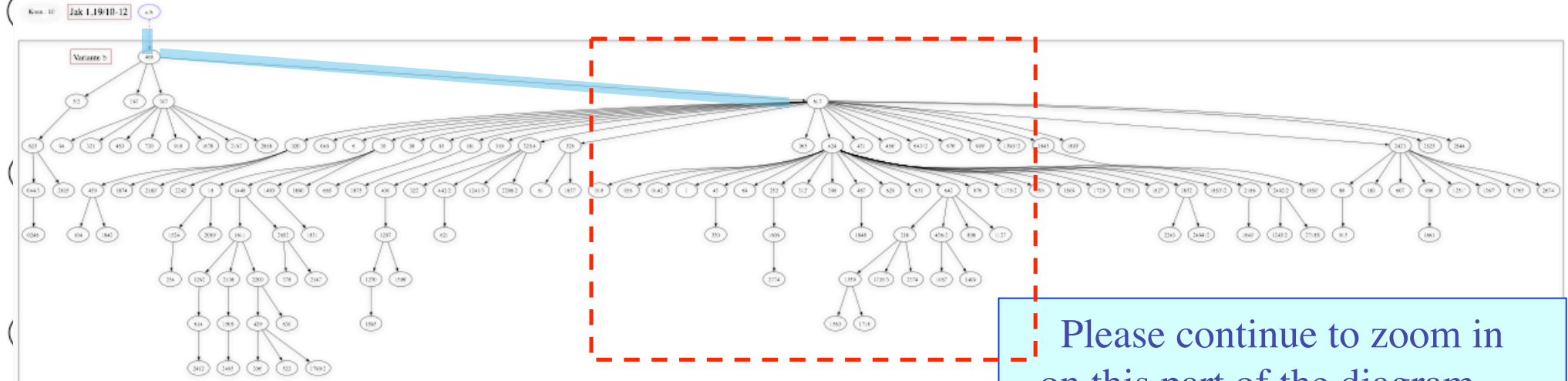
Jak 1,19/10-12

a:A

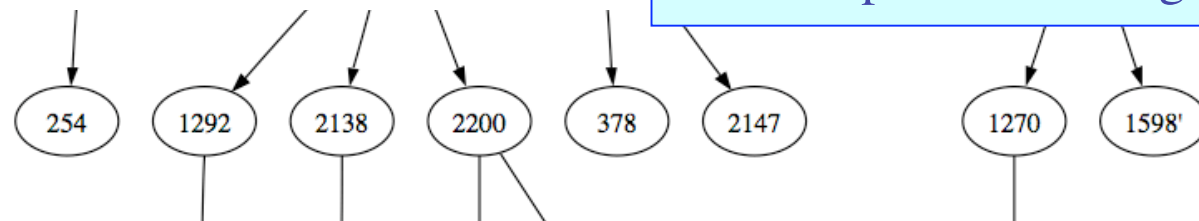
... and follow the way to 1735 via 617.

Variante b

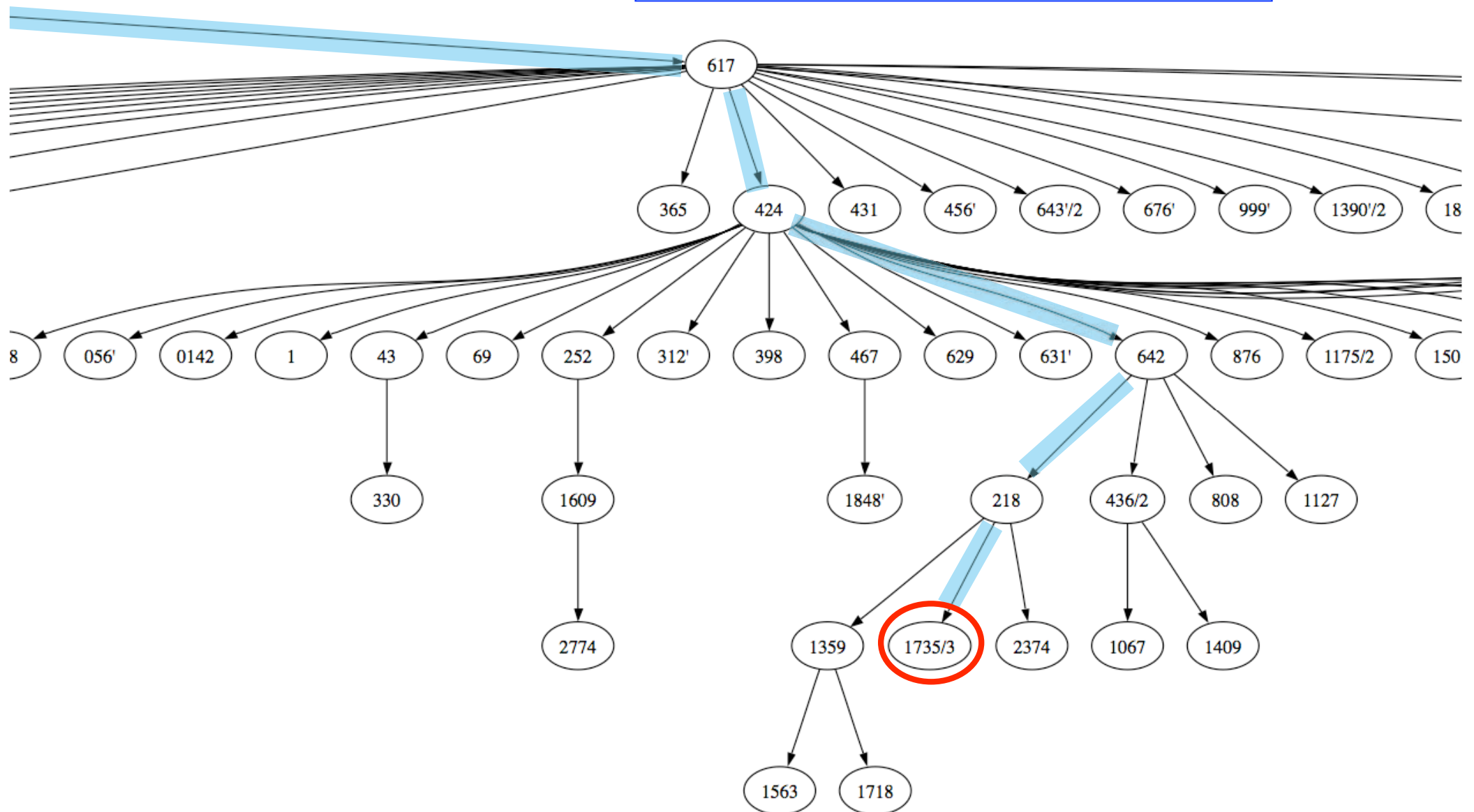
617



Please continue to zoom in on this part of the diagram ...



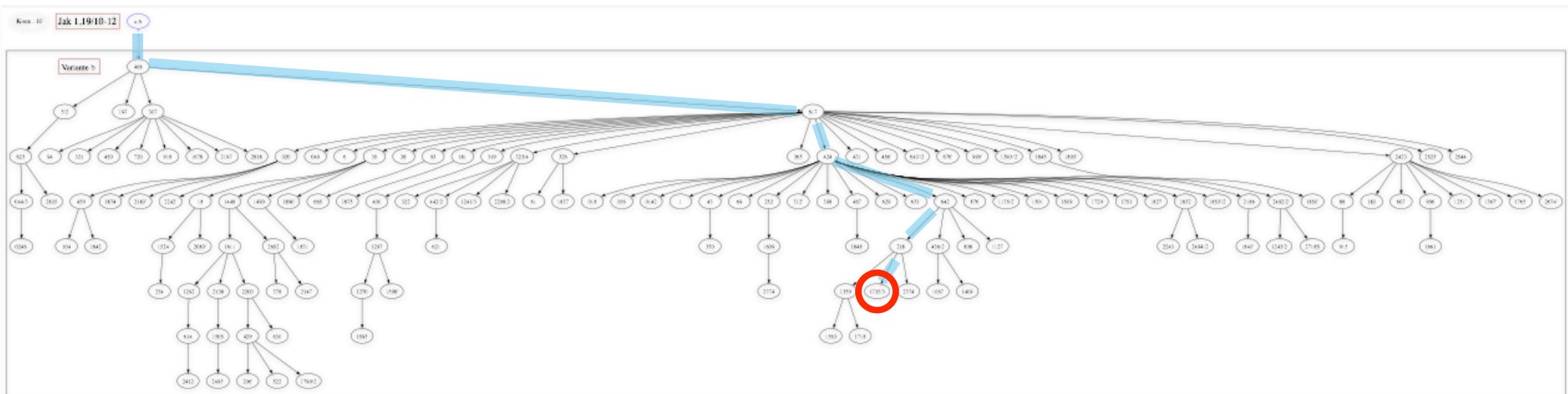
... and follow the way to 1735.



Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
?	d	και εστω	02(*Vf). 33. 81.

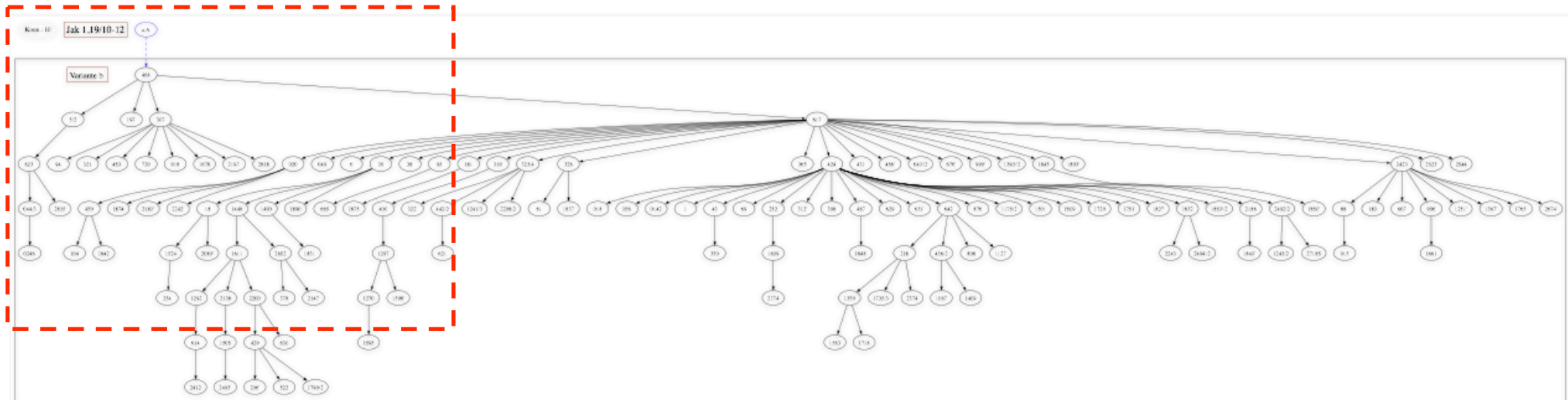


1735 does not play an important part in transmitting variant *b*.
There is no witness in this attestation of which 1735 is the most closely related ancestor.

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b εστω	139 witnesses including Byz
	c εσται	1838.
?	d και εστω	02(*Vf). 33. 81.



Now let us take a closer look at the source of this textual flow diagram ...

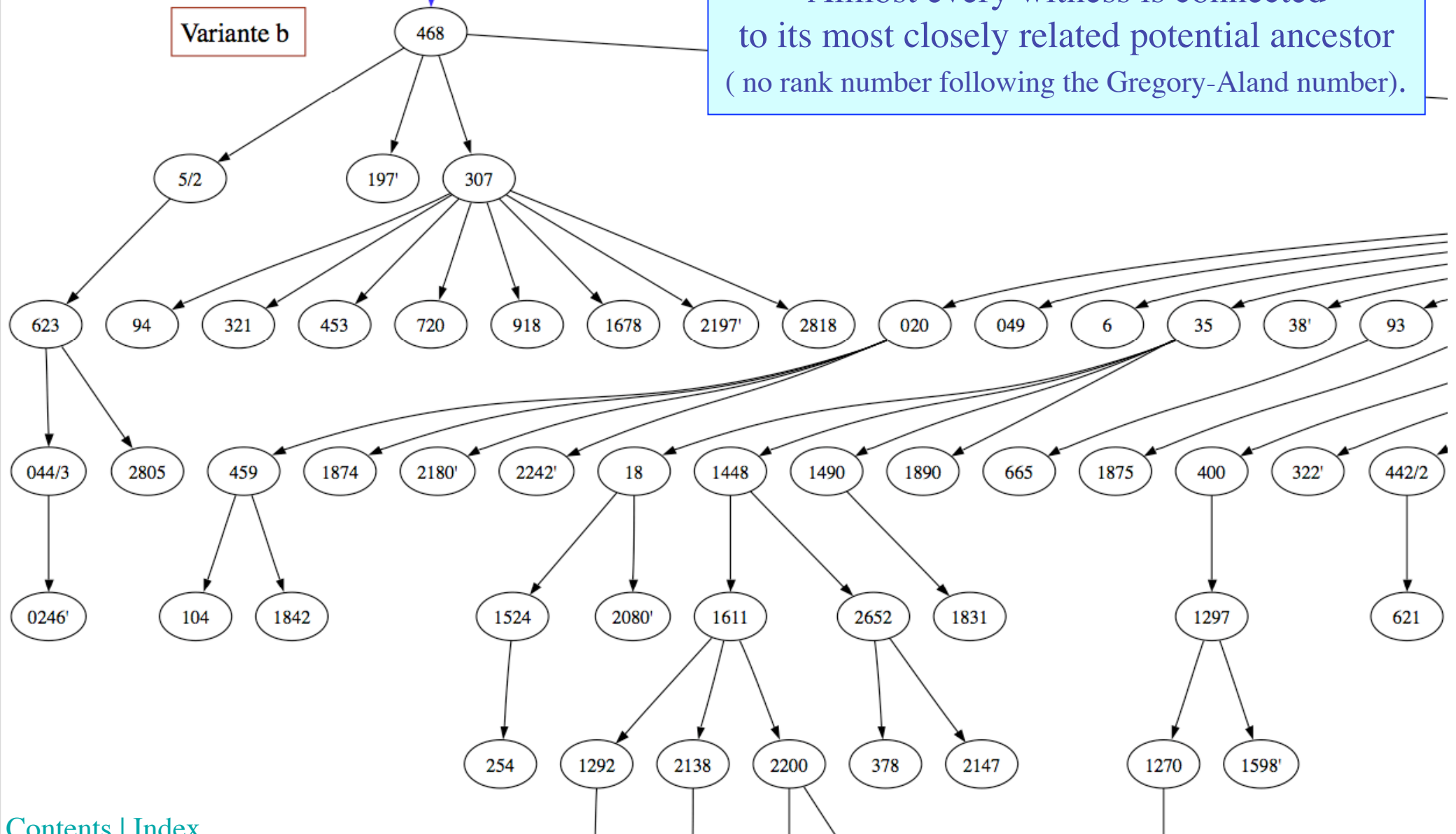
Konn.: 10

Jak 1,19/10-12

a:A

In the whole attestation
genealogical coherence is very strong.
Almost every witness is connected
to its most closely related potential ancestor
(no rank number following the Gregory-Aland number).

Variante b



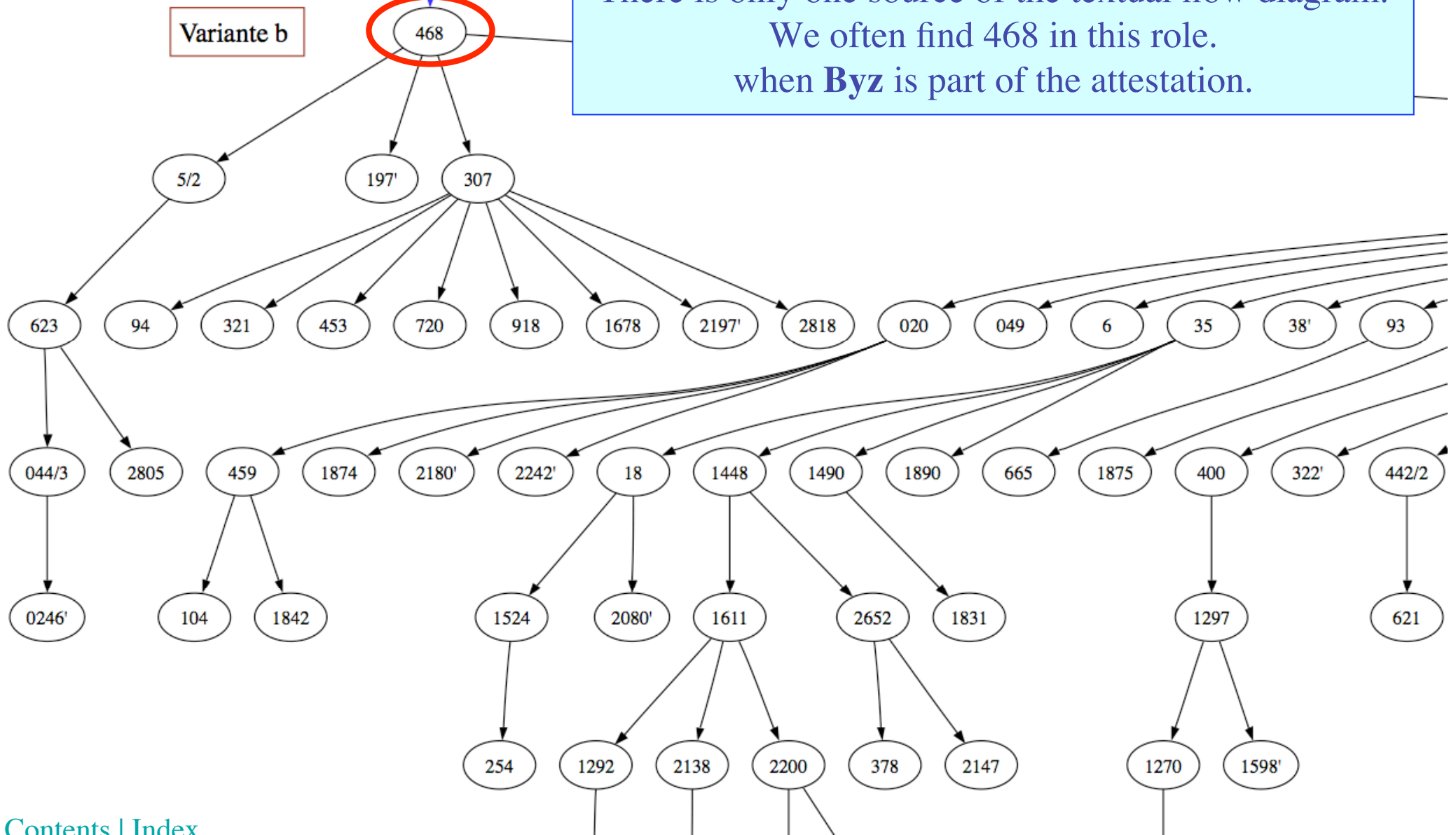
Konn.: 10

Jak 1,19/10-12

a:A

Genealogical coherence is perfect.
There is only one source of the textual flow diagram.
We often find 468 in this role.
when **Byz** is part of the attestation.

Variante b



Konn.: 10

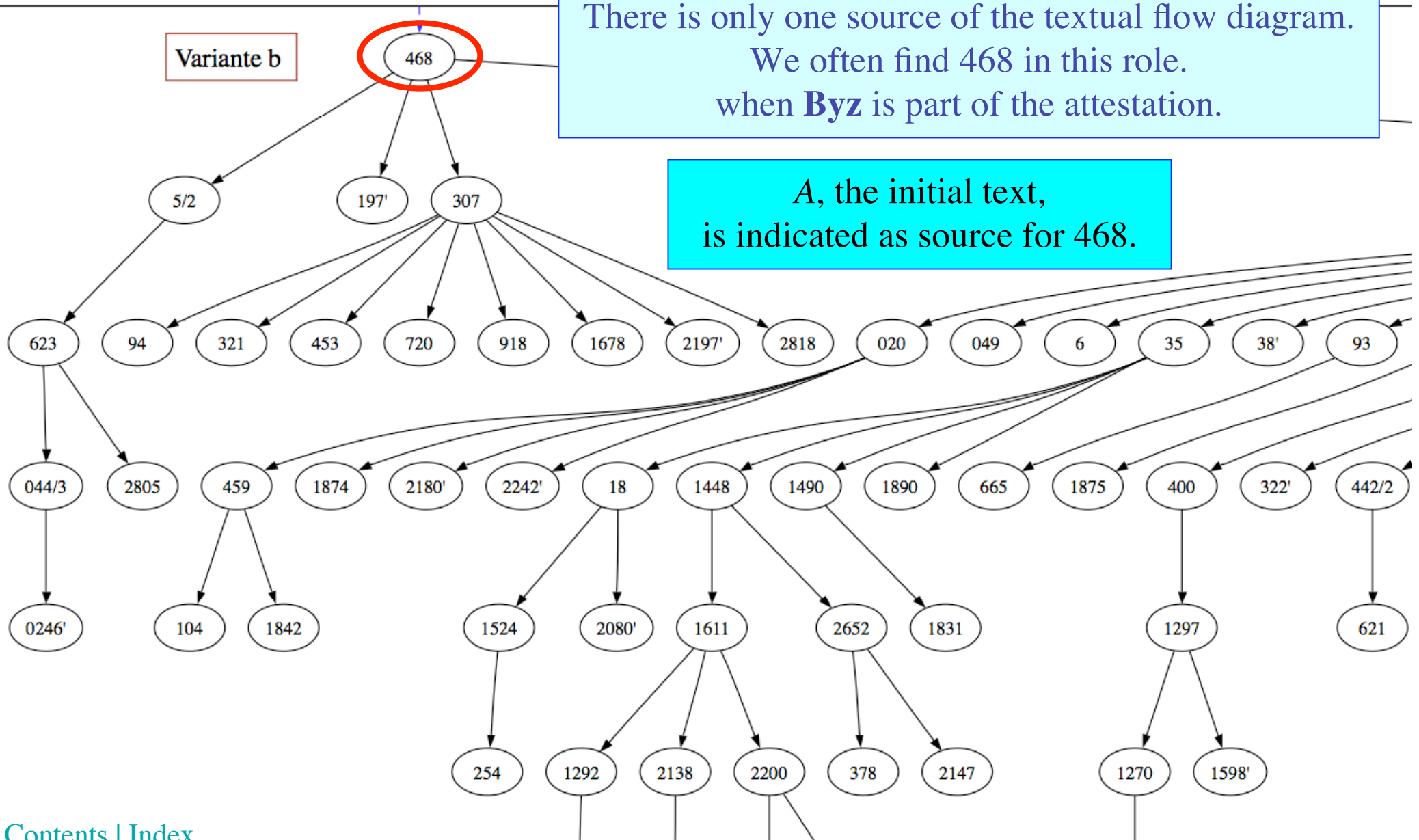
Jak 1,19/10-12

a:A

Variante b

Genealogical coherence is perfect.
There is only one source of the textual flow diagram.
We often find 468 in this role.
when **Byz** is part of the attestation.

A, the initial text,
is indicated as source for 468.



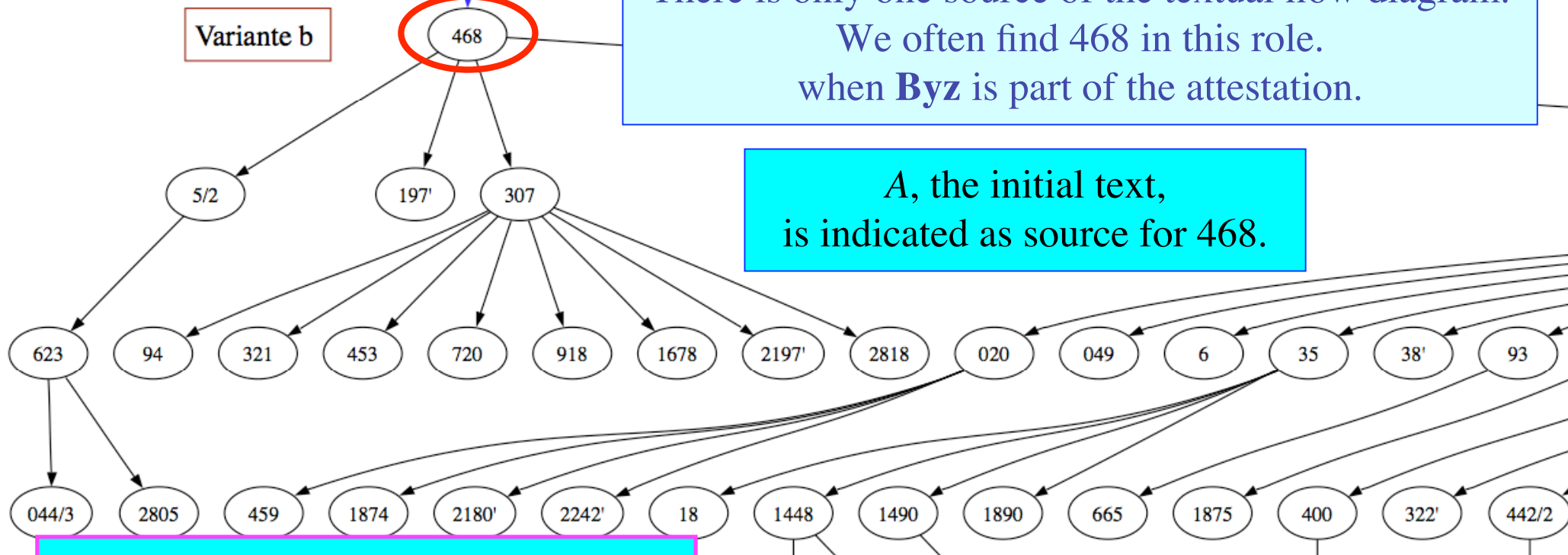
Konn.: 10

Jak 1,19/10-12

a:A

Genealogical coherence is perfect.
There is only one source of the textual flow diagram.
We often find 468 in this role.
when **Byz** is part of the attestation.

A, the initial text,
is indicated as source for 468.



A is the most closely related
potential ancestor of 468
outside the attestation of variant *b*.

All potential ancestors and 025
read variant *a*. There is no other choice
but **variant *a* as source for variant *b***.
(P74 has *lacuna*.)

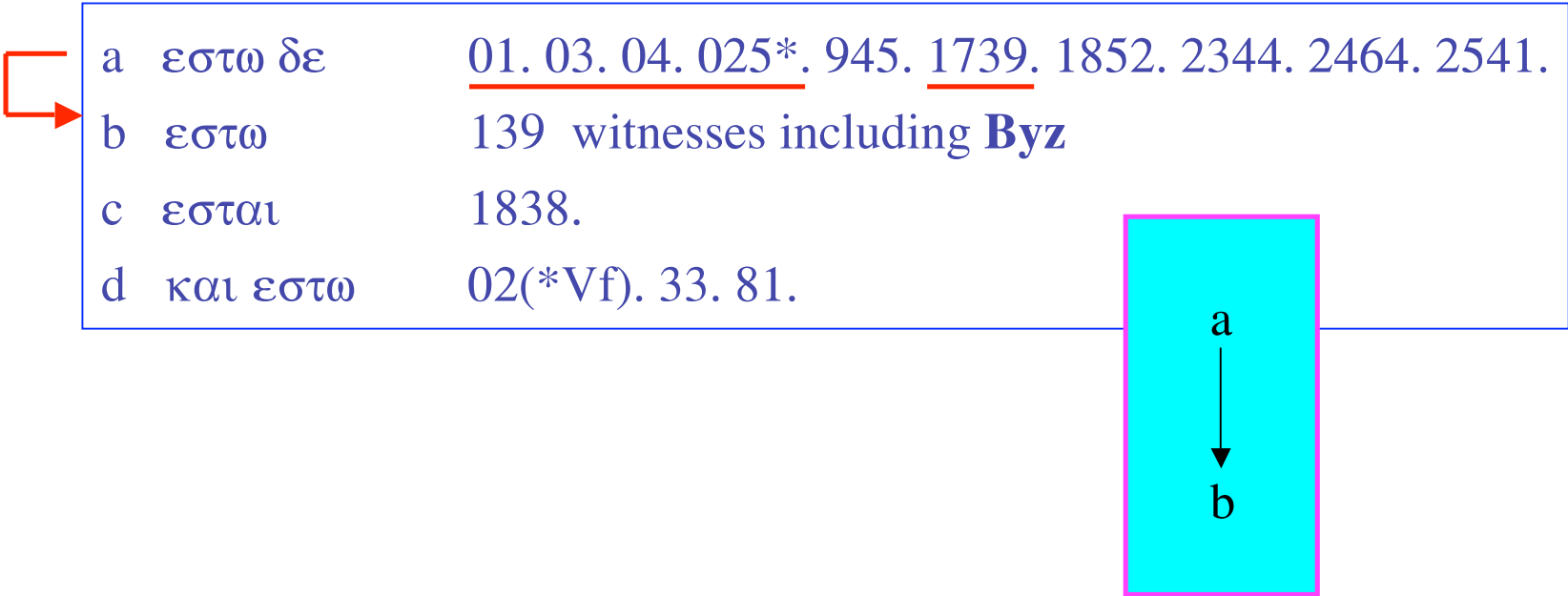
W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

potential ancestors of 468

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

a	εστω δε	<u>01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.</u>
b	εστω	139 witnesses including Byz
c	εσται	1838.
d	και εστω	02(*Vf). 33. 81.



A is the most closely related potential ancestor of 468 outside the attestation of variant *b*.

All potential ancestors and 025 read variant *a*. There is no other choice but **variant *a* as source for variant *b*.**
(P74 has *lacuna*.)

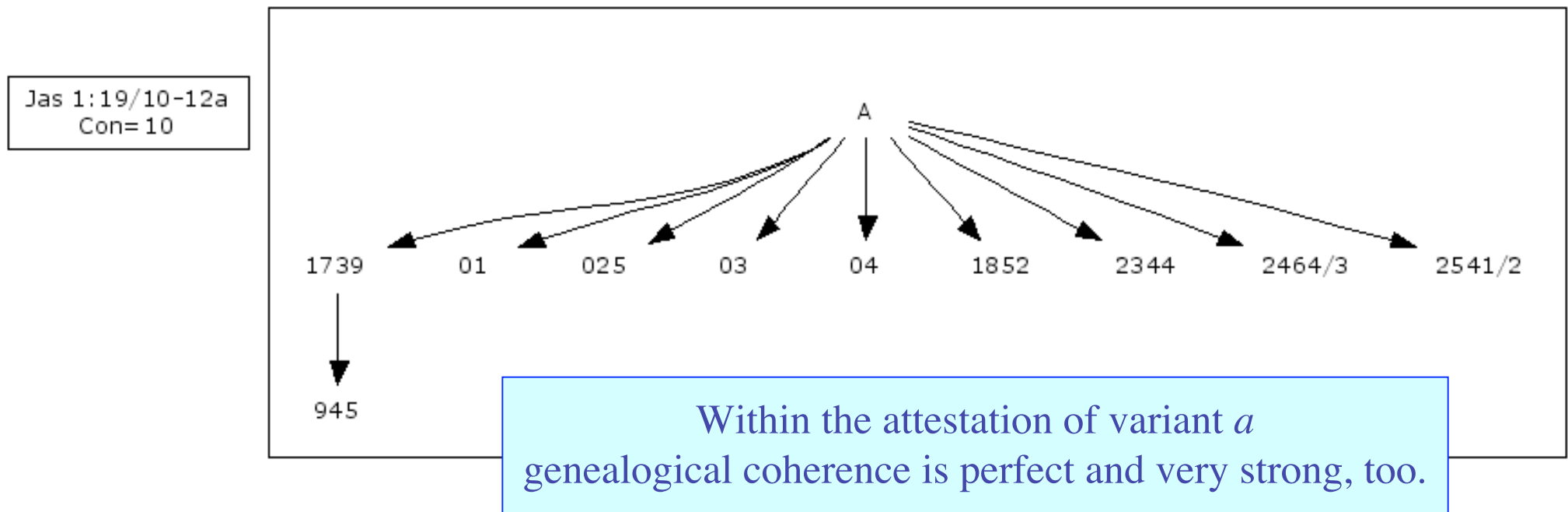
W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.548	2695	2912	201	0	9	7
025	0	-	91.096	2435	2673	92	92	48	6
1739	2		87.652	2662	3037	150	120	86	19
03	3		87.633	2636	3008	190	77	92	13
04	4		87.220	1829	2097	96	95	63	14
P74	0	>	83.333	280	336	24	23	7	2

potential ancestors of 468

Genealogical coherence

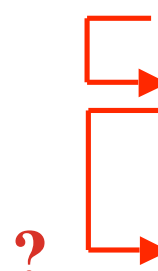
Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

a	εστω δε	<u>01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.</u>
b	εστω	139 witnesses including Byz
c	εσται	1838.
d	και εστω	02(*Vf). 33. 81.



Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?		a εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
		b εστω	139 witnesses including Byz
		c εσται	1838.
		<u>d και εστω</u>	<u>02(*Vf). 33. 81.</u>

The analysis of genealogical coherence suggested that variant *d* is not the source of variant *b*.
Could, on the contrary, variant *d* be derived from variant *b*?

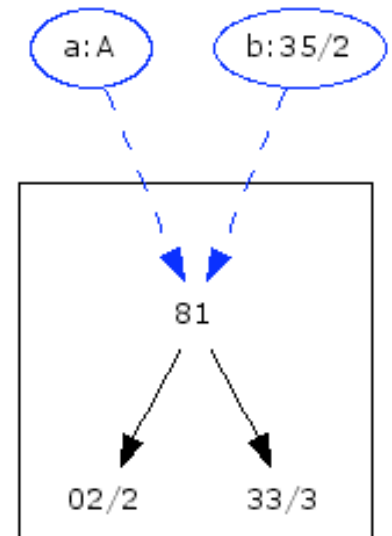
Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
	d	<u>και εστω</u>	<u>02(*Vf). 33. 81.</u>

The analysis of genealogical coherence suggested that variant *d* is not the source of variant *b*.
Could, on the contrary, variant *d* be derived from variant *b*?

Jas 1:19/10-12d
Con=10



It is possible to derive variant *d* from variant *a* or variant *b*.
The textual flow diagram mirrors the position of 81 in the general textual flow.
Please look at the potential ancestors of 81 ...

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχους εις το ακουσαι

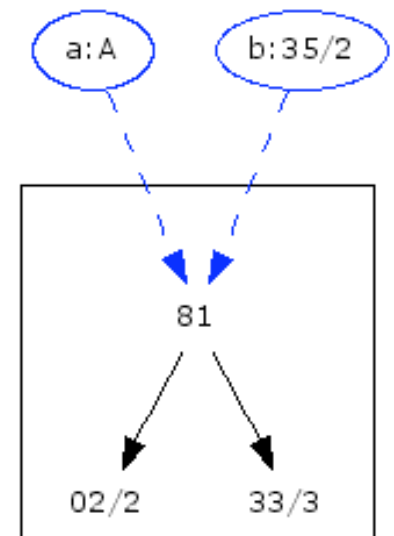
a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
b	εστω	139 witnesses including Byz
c	εσται	1838.
d	και εστω	<u>02(*Vf). 33. 81.</u>

? potential ancestors of 81

Jas 1:19/10-12d
Con=10

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
A	1		92.302	2674	2897	210	0	5	
35	2		89.179	2695	3022	124	121	60	
93	2		89.179	2695	3022	132	124	45	
1739	2		89.179	2695	3022	152	100	63	
307	5		89.146	2694	3022	129	122	51	
424	6		89.062	2687	3017	133	127	48	
617	7		88.749	2682	3022	138	128	55	
468	8		88.716	2673	3013	137	119	60	
2423	9		88.712	2680	3021	134	133	51	23
020	10		88.495	2669	3016	135	133	52	27
323	10		88.495	2669	3016	136	130	66	15
2298	12		88.377	2669	3020	143	133	54	21
04	13		88.294	1848	2093	101	88	45	11
03	14		88.080	2638	2995	196	73	75	13
945	15		88.054	2661	3022	142	130	56	24

There is a close mix of Byzantine and non-Byzantine witnesses. Before making a decision on the source of variant *d* the context, i.e. the preceding variant, should be considered ...



It is possible to derive variant *d* from variant *a* or variant *b*. The textual flow diagram mirrors the position of 81 in the general textual flow. Please look at the potential ancestors of 81 ...

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses including Byz
	c	εσται	1838.
	d	και εστω	02(*Vf). 33. 81.

The preceding text is one of the following variants at Jas 1,19/2-8:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

(There are 6 more variants *e, f, g, h, i, j* which must be derived from variant *d* or are lectionary variants. They are not relevant in this context.)

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses inclu
	c	εσται	1838.
	d	και εστω	02(*Vf). 33. 81.

The closer context in the witnesses of variant *d*, especially in 81, suggests that witnesses reading **ωστε** at the beginning of the verse are not the source of variant *d*. However, there may be witnesses reading **ιστε** and variant *b* **εστω** ...

The preceding text is one of the following variants at Jas 1,19/20:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

(There are 6 more variants *e, f, g, h, i, j* which must be derived from variant *d* or are lectionary variants. They are not relevant in this context.)

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

?	a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
	b	εστω	139 witnesses inclu
	c	εσται	1838.
	d	και εστω	02(*Vf). 33. 81.

The closer context in the witnesses of variant *d*, especially in 81, suggests that witnesses reading **ωστε** at the beginning of the verse are not the source of variant *d*. However, there may be witnesses reading **ιστε** and variant *b* **εστω** ...

The preceding text is one of the following variants at Jas 1,19/20:

a	ιστε αδελφοι μου αγαπητοι	01(*f). 03. 04. 81. 88. 915. 918. 945. 1067. 1175. 1243. 1739. 1837C. 2344. 2492*. 2541.
b	ιστε δε αδελφοι μου αγαπητοι	P74V. 02. 629*V. 2464.
c	ιστε αγαπητοι μου αδελφοι	33V.
d	ωστε αδελφοι μου αγαπητοι	124 witnesses including Byz

(There are 6 more variants *e, f, g, h, i, j* which must be excluded for genealogical reasons or are lectionary variants. They are not relevant for the present discussion.)

This applies to these witnesses. But none of them is potential ancestor of 81 ...

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

?

	W2	NR	D	PERC1
a εστω δε				
b εστ	A	1		92.302
c εστ	35	2		89.179
d και	93	2		89.179
	1739	2		89.179
	307	5		89.146
	424	6		89.062
	617	7		88.749
	468	8		88.716
	2423	9		88.712
	020	10		88.495
	323	10		88.495
	2298	12		88.377
	04	13		88.294
	03	14		88.080
	945	15		88.054
	025	16		87.758

witnesses inclu

The closer context in the witnesses of variant *d*, especially in 81, suggests that witnesses reading **ωστε** at the beginning of the verse are not the source of variant *d*. However, there may be witnesses reading **ιστε** and variant *b* **εστω** ...

The

is one of the following variants at Jas 1,19/20:

a ιστε αδελφο	01(*f).	03.	04.	81.	88.	915.	918.	945.	1067.	1175.	1243.
b ιστε δε αδελ	1739.	1837C.	2344.	2492*.	2541.						
c ιστε αγαπητ	τοι	P74V.	02.	629*V.	2464.						
d ωστε αδελφα	33V.										

124 witnesses including **Byz**

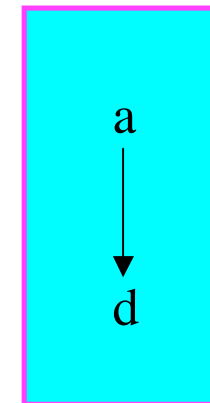
This applies to these witnesses. But none of them is potential ancestor of 81 ...

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
b	εστω	139 witnesses including Byz
c	εσται	1838.
d	και εστω	02(*Vf). 33. 81.

The best assumption is that variant *a* is the source of variant *d*.



Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

- a εστω δε 01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
- b εστω 139 witnesses including **Byz**
- c εσται 1838.
- d και εστω 02(*Vf). 33. 81.

Due to many peculiarities
1838 has no very close relatives.
There is a considerable gap between 1838 and 104,
the most closely related potential ancestor.
104 and the following potential ancestors
have been subsumed under **Byz**
(variant *b*).

potential ancestors of 1838

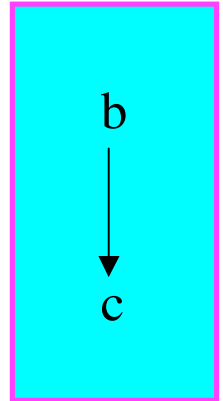
W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
104	1		91.670	2564	2797	174	28	25	6
459	2		90.427	2626	2904	194	43	31	10
1842	3		88.541	2573	2906	215	73	33	12
020	4		87.763	2546	2901	248	47	47	13
35	5		87.255	2540	2911	258	50	54	9
252	6		87.133	2465	2829	242	65	46	10
424	7		87.061	2530	2906	243	65	46	12
468	8		87.048	2527	2903	243	65	46	9
18	9		86.983	2526	2904	243	65	46	11
2423	10		86.873	2528	2910	265	57	50	10
1	11		86.738	2518	2903	254	69	49	13
607	12		86.710	2512	2897	258	69	48	10
617	13		86.706	2524	2911	274	56	45	12
467	14		86.700	2464	2842	226	94	42	16
319	15		86.688	2468	2847	261	61	42	15

more than 8%
disagreements
of 1838 and 104

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυσ εις το ακουσαι

a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
b	εστω	139 witnesses including Byz
c	<u>εσται</u>	<u>1838.</u>
d	και εστω	02(*Vf). 33. 81.



Due to many peculiarities
1838 has no very close relatives.
There is a considerable gap between 1838 and 104,
the most closely related potential ancestor.
104 and the following potential ancestors
have been subsumed under **Byz**
(variant *b*).

Jas 1:19/10-12c
Con=10

b:104

Variant *c* must be derived
from variant *b*.

1838

potential ancestors of 1838

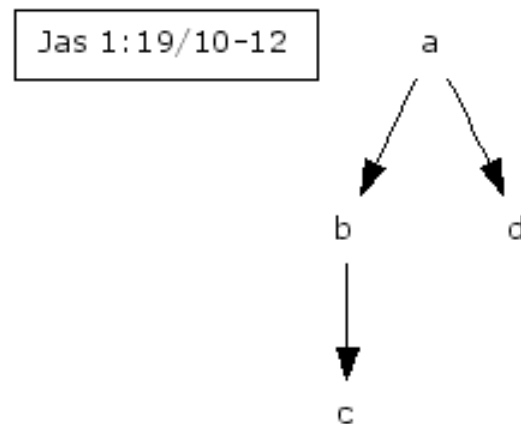
W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
104	1		91.670	2564	2797	174	28	25	6
459	2		90.427	2626	2904	194	43	31	10
1842	3		88.541	2573	2906	215	73	33	12
020	4		87.763	2546	2901	248	47	47	13
35	5		87.255	2540	2911	258	50	54	9
252	6		87.133	2465	2829	243	65	46	10
424	7		87.061	2530	2906	264	48	52	12
468	8		87.048	2527	2903	267	51	49	9
18	9		86.983	2526	2904	256	56	55	11
2423	10		86.873	2528	2910	265	57	50	10
1	11		86.738	2518	2903	254	69	49	13
607	12		86.710	2512	2897	258	69	48	10
617	13		86.706	2524	2911	274	56	45	12
467	14		86.700	2464	2842	226	94	42	16
319	15		86.688	2468	2847	261	61	42	15

Genealogical coherence

Jas 1,19/10-12 εστω δε πας ανθρωπος ταχυς εις το ακουσαι

a	εστω δε	01. 03. 04. 025*. 945. 1739. 1852. 2344. 2464. 2541.
b	εστω	139 witnesses including Byz
c	εσται	1838.
d	και εστω	02(*Vf). 33. 81.

The appropriate
local stemma of variants is:



The Coherence-Based Genealogical Method CBGM

1. The objective

2. Some basics

3. Key terms and procedures

4. Interpreting coherence

➡ 5. How to find stemmatic coherencies

[Contents](#) | [Index](#)

Pre-genealogical coherence is based on agreements only.

It indicates how close the relation between witnesses is.

It does not reveal anything about the genealogical direction between them.

Genealogical coherence is based on agreements and disagreements from which the predominant textual flow from potential ancestors to potential descendants has been deduced.

Genealogical coherence shows which witness may be the ancestor of another witness in a global stemma.

Stemmatic coherence is found between ancestors and descendants in the global stemma, which presents the simplest hypothesis for which ancestors are necessary to explain the full text of each descendant at every point of variation.

Pre-genealogical coherence is based on agreements only.

It indicates how close the relation between witnesses is.

It does not reveal anything about the genealogical direction between them.

Genealogical coherence is based on agreements and disagreements from which the predominant textual flow from potential ancestors to potential descendants has been deduced.

Genealogical coherence shows which witness may be the ancestor of another witness in a global stemma.

Stemmatic coherence is found between ancestors and descendants in the global stemma, which presents the simplest hypothesis for which ancestors are necessary to explain the full text of each descendant at every point of variation.

Please remember the assumptions considered more probable than their contrary (following the rule of parsimony) ...

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').

The scribe uses few rather than many sources.

The sources feature closely related texts
rather than less related ones.

assumptions more probable
than their contrary

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants,
they come from another source (are not 'invented').

The scribe uses few rather than many sources.

The sources feature closely related texts
rather than less related ones.

assumptions more probable
than their contrary

... and remember the special requirements
the CBGM must meet ...

A scribe wants to copy the Vorlage with fidelity.

If a scribe introduces diverging variants, they come from another source (are not 'invented').

The scribe uses few rather than many sources.

The sources feature closely related texts rather than less related ones.

assumptions more probable
than their contrary

special requirements
the CBGM must meet

An adequate method has to be able to deal with contamination and coincidental rise of variants.

The resulting hypotheses cannot be falsified at any passage of text.

→ The resulting hypotheses must be as simple as possible, i.e. the number of ancestors of each descendant must be as small as possible.

[Contents](#) [Index](#)

For example descendant *F*

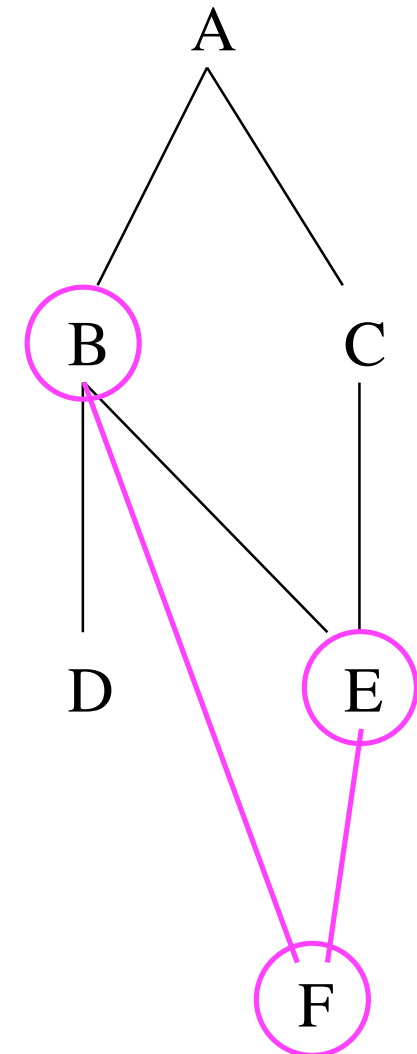
If the stemma represents a tradition known in every detail,
at least one of these statements is true
for each variant passage:

F agrees with *B*.

F agrees with *E*.

F changed the text of *B*.

F changed the text of *E*.



For example descendant *F*

If the stemma represents a tradition known in every detail,
at least one of these statements is true
for each variant passage:

F agrees with *B*.

F agrees with *E*.

F changed the text of *B*.

F changed the text of *E*.

The CBGM demands that at each variant passage
the text of a descendant must be completely explained
by text of the immediate stemmatic ancestors:

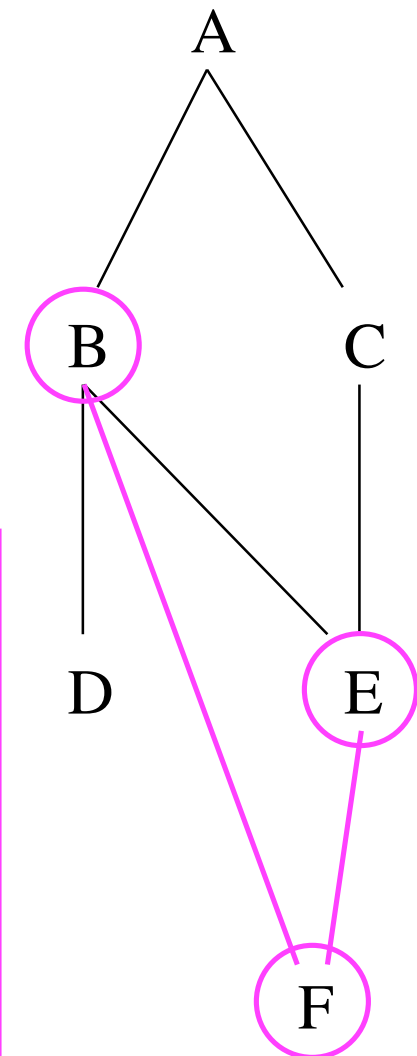
as agreeing with at least one of them

or if not agreeing

as changing the text of at least one of them

(i.e. creating new variants

which rest upon variants in at least one of them)



For example descendant *F*

If the stemma represents a tradition known in every detail,
at least one of these statements is true
for each variant passage:

F agrees with *B*.

F agrees with *E*.

F changed the text of *B*.

F changed the text of *E*.

For prior variants found only in non-ancestors
and the concept of intermediary nodes,
cf. Mink (2004), 59-63.

The CBGM demands that at each variant passage
the text of a descendant must be completely explained
by text of the immediate stemmatic ancestors:

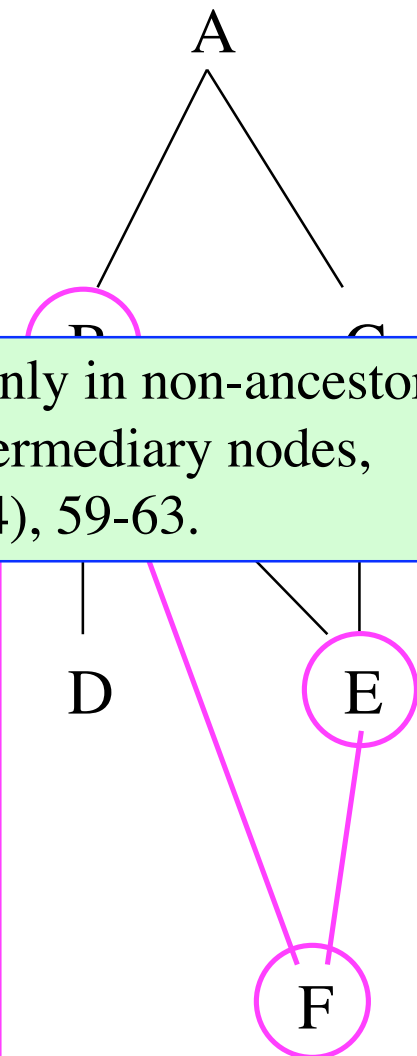
as agreeing with at least one of them

or if not agreeing

as changing the text of at least one of them

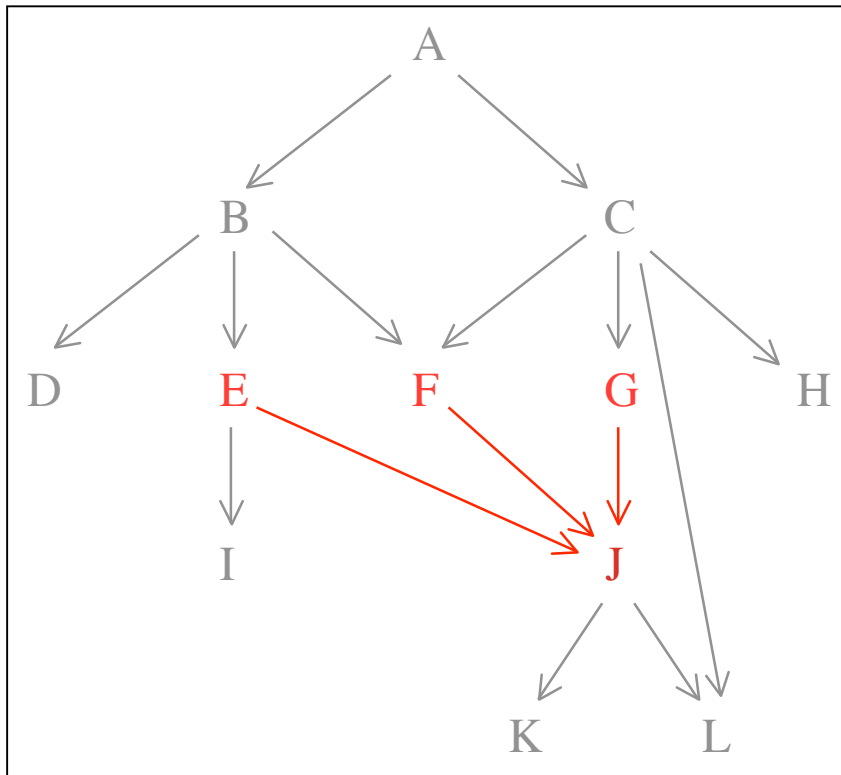
(i.e. creating new variants

which rest upon variants in at least one of them)



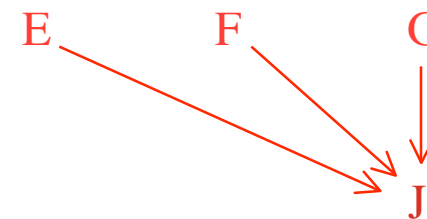
Stemma and substemmata

stemma of witnesses



Stemmata are the combination of **optimal** substemmata.

Substemmata are optimal if the number of ancestors necessary to explain all variants in a descendant is as small as possible.



substemma

Optimal sublemma

Which problems are to be solved?

➡ Which witnesses are potential ancestors of the descendant?

Optimal substemma

Which problems are to be solved?

Which witnesses are potential ancestors of the descendant?

➡ The task is to explain all the variants in the descendant.
To what extent can each combination of potential ancestors accomplish this task?

Optimal substemma

Which problems are to be solved?

Which witnesses are potential ancestors of the descendant?

The task is to explain all the variants in the descendant.

To what extent can each combination of potential ancestors accomplish this task?

➡ Which combinations have the highest capacity to explain the variants in the descendant?

Optimal substemma

Which problems are to be solved?

Which witnesses are potential ancestors of the descendant?

The task is to explain all the variants in the descendant.

To what extent can each combination of potential ancestors accomplish this task?

Which combinations have the highest capacity to explain the variants in the descendant?

 Which of them is the smallest combination?

Optimal substemma

Which problems are to be solved?

Which witnesses are potential ancestors of the descendant?

The task is to explain all the variants in the descendant.

To what extent can each combination of potential ancestors accomplish this task?

Which combinations have the highest capacity to explain the variants in the descendant?

Which of them is the smallest combination?



Are comparatively distant relatives part of the combination and do they contribute merely coincidental agreements so that even smaller combinations may be sufficient?

Witness 35

has been chosen for demonstrating the procedures needed to find the optimal substemma containing the smallest combination of ancestors necessary for explaining the entire text of 35.

Witness 35 has been preserved in a 11th century manuscript.

In the *ECM* of the Catholic Letters, 35 consistently is one of the witnesses used to determine solid Byzantine attestations which in the apparatus have been subsumed under the **Byz** symbol.

Potential Ancestors of 35 (W1)

Data Source: Cath. Letters (excl. fragments)

for instance
descendant 35

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
617	1		95.995	2924	3046	56	46	15	5
424	2		95.988	2919	3041	51	45	23	3
468	3		95.588	2903	3037	57	49	27	1
A	4		92.263	2695	2921	212	0	6	8
025	5		91.160	2444	2681	99	84	46	8
323	0	-	89.638	2725	3040	111	111	76	17
1739	6		87.853	2676	3046	158	115	77	20
03	7		87.272	2633	3017	201	78	90	15
04	8		87.262	1836	2104	103	93	60	12
P74	0	>	82.493	278	337	27	22	6	4



There are 8 potential ancestors of 35.

for instance
descendant 35

Potential Ancestors of 35 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
617	1		95.995	2924	3046	56	46	15	5
424	2		95.988	2919	3041	51	45	23	3
468	3		95.588	2903	3037	57	49	27	
A	4		92.263	2695	2921	212	0	6	
025	5		91.160	2444	2681	99	84	46	
323	0	-	89.638	2725	3040	111	111	76	
1739	6		87.853	2676	3046	158	115	77	
03	7		87.272	2633	3017	201	78	90	
04	8		87.262	1836	2104	103	93	60	
P74	0	>	82.493	278	337	27	22	6	

The criterion for potential ancestry is that the "W1<W2" value is greater than the "W1>W2" value.

"W1<W2": cases in which the variant in the descendant (W1) is **posterior** to the variant in the potential ancestor (W2).

"W1>W2": cases in which the variant in the descendant (W1) is **prior** to the variant in the potential ancestor (W2).

There are 8 potential ancestors of 35.

Potential Ancestors of 35 (W1)

Data Source: Cath. Letters (excl. fragments)

for instance
descendant 35

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
617	1		95.995	2924	3046	56	46	15	5
424	2		95.988	2919	3041	51	45	23	3
468	3		95.588	2903	3037	57	49		
A	4		92.263	2695	2921	212	0		
025	5		91.160	2444	2681	99	84		
323	0	-	89.638	2725	3040	111	111		
1739	6		87.853	2676	3046	158	115		
03	7		87.272	2633	3017	201	78		
04	8		87.262	1836	2104	103	93		
P74	0	>	82.493	278	337	27	22		

The first three potential ancestors are very similar to each other.

The percentage of their mutual agreements is in the 95-96% range as their list of potential ancestors reveals. Due to their similarity, the numbers of posterior variants in 35 are only slightly higher than that of the prior ones.

Compared with the first three potential ancestors, 1739, 03 and 04 are clearly more distant.

There are 8 potential ancestors of 35.

Potential Ancestors of 35 (W1)

Data Source: Cath. Letters (excl. fragments)

for instance
descendant 35

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
617	1		95.995	2924	3046	56	46	15	5
424	2		95.988	2919	3041	51	45	23	3
468	3		95.588	2903	3037	57	49	27	1
A	4		92.263	2695	2921	212	0	6	8
025	5		91.160	2444	2681	99	84	46	8
323	0	-	89.638	2725	3040	111	111	76	17
1739	6		87.853	2676	3046	158	115	77	20
03	7		87.272	2633	3017	201	78	90	15
04	8		87.262	1836	2104	103	93	60	12
P74	0	>	82.493	278	337	27	22	6	4



There are 8 potential ancestors of 35.

255 combinations of these 8 potential ancestors are possible.

For a given number (n) of potential ancestors the number of possible combinations is $2^n - 1$.
That means that each additional potential ancestor approximately doubles the number of combinations.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	30	6	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	30	6	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance
descendant 35

This is the top of a database providing information
on these 255 combinations of potential ancestors of 35.
The fields contain ...

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance
descendant 35

255 combinations

[Contents](#) | [Index](#)

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance
descendant 35

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance
descendant 35

number of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	29	7	0		
617.468.A.025.1739.	5	3010	29	7	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

The database is sorted by this number.

for instance
descendant 35

number of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance
descendant 35

number of variants not
explained by agreement
but by posteriority

number of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28				
617.468.A.025.1739.03.04.	7	3012	28				
617.424.468.025.1739.	5	3011	29				
424.468.025.1739.03.04.	6	3011	29				
617.424.468.025.1739.03.	6	3011	29				
617.424.468.A.025.1739.	6	3011	29				
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance
descendant 35

In these cases, the descendant reads variants which are derived from a prior variant from at least one of the ancestors in this combination.

number of variants not explained by agreement but by posteriority

number of variants explained by agreement with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance
descendant 35

cases of unknown
source variant

number of variants not
explained by agreement
but by posteriority

number of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

for instance
descendant 35

number of variants not
explained by agreement
but by posteriority

number of variants
explained by agreement
with one of the ancestors

- number of ancestors

255 combinations

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance

descendant 35

cases not explained
by this combinationcases of unknown
source variantnumber of variants not
explained by agreement
but by posterioritynumber of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.	6	3013	27	6	0		
617.424.468.025.1739.04.	6	3013	27	6	0		
617.424.468.025.1739.03.	6	3013	27	6	0		
617.468.025.1739.04.	6	3013	27	6	0	<<	
617.468.025.1739.03.	6	3013	27	6	0		
617.468.A.025.1739.04.	6	3013	27	6	0		
617.424.468.1739.03.04.	6	3013	27	6	0		
424.468.025.1739.04.	6	3013	27	6	0		
617.424.468.1739.03.04.	6	3013	27	6	0		
424.468.A.025.1739.03.	6	3013	27	6	0		
617.424.468.A.1739.03.04.	6	3013	27	6	0		
424.468.025.1739.03.	6	3013	27	6	0		
617.424.025.1739.04.	6	3013	27	6	0		
424.468.A.025.1739.03.	6	3013	27	6	0		
617.424.025.1739.03.04.	6	3013	27	6	0		
617.424.A.025.1739.04.	6	3013	27	6	0		
617.424.468.A.1739.04.	6	3013	27	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

In these cases, none of the ancestors in the combination agrees with the descendant or reads a variant which can be the source of the variant in the descendant as established in the local stemmata. That means that the combination does not meet the criteria for optimal substemmata.

for instance
descendant 35

cases not explained
by this combination

cases of unknown
source variant

number of variants not
explained by agreement
but by posteriority

number of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.	6	3013	27	6	0		
617.424.468.025.1739.04.	6	3013	27	6	0		
617.424.468.025.1739.03.	6	3013	27	6	0		
617.468.025.1739.04.	6	3013	27	6	0	<<	
617.468.025.1739.03.	6	3013	27	6	0		
617.468.025.1739.04.	6	3013	27	6	0		
617.424.468.1739.03.04.	6	3013	27	6	0		
617.424.468.1739.04.	6	3013	27	6	0		
424.468.025.1739.04.	6	3013	27	6	0		
617.424.468.1739.03.04.	6	3013	27	6	0		
617.424.468.1739.04.	6	3013	27	6	0		
424.468.025.1739.03.	6	3013	27	6	0		
617.424.025.1739.04.	6	3013	27	6	0		
424.468.A.025.1739.03.	6	3013	27	6	0		
617.424.A.025.1739.04.	6	3013	27	6	0		
617.424.468.A.1739.04.	6	3013	27	6	0		
617.424.A.025.1739.03.04.	6	3013	27	6	0		
617.424.468.A.1739.03.04.	6	3013	27	6	0		
424.468.025.1739.04.	5	3010					
617.468.025.1739.03.	5	3010					
617.468.A.025.1739.	5	3010					
424.468.A.025.1739.04.	6	3010					
617.468.A.025.1739.03.	6	3010					
617.424.468.1739.03.04.	6	3010					
617.424.468.A.1739.03.04.	7	3010					
424.468.025.1739.03.	5	3009					
617.424.025.1739.04.	5	3009					
424.468.A.025.1739.03.	6	3009					
617.424.025.1739.03.04.	6	3009					
617.424.A.025.1739.04.	6	3009					
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

In these cases, none of the ancestors in the combination agrees with the descendant or reads a variant which can be the source of the variant in the descendant as established in the local stemmata.

That means that the combination does not meet the criteria for optimal substemmata.

for instance
descendant 35

cases not explained
by this combination

cases of unknown
source variant

It occurs only rarely that the source variant cannot be found in any combination. But as many potential ancestors especially of witnesses with older texts are lost, it may happen that the source of a variant in the descendant has survived only in a witness, which is not among the potential ancestors of that descendant.

For prior variants found only in non-ancestors, the procedure required in this case and the concept of intermediary nodes, cf. Mink (2004), 59-63.

255 combinations

[Contents](#) | [Index](#)

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
617.424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0		
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.04.	6	3009	30	7	0		
617.424.A.025.1739.03.04.	7	3009	31	6	0		
424.468.025.1739.	4	3008	31	7	0		
424.468.A.025.1739.	5	3008	31	7	0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

"<<" indicates the combination explaining the most variants in the descendant compared with combinations which are equal in number of ancestors.

for instance
descendant 35

cases not explained by this combination

cases of unknown source variant

number of variants not explained by agreement but by posteriority

number of variants explained by agreement with one of the ancestors

number of ancestors

255 combinations

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.03.							
424.468.A.025.1739.03.							
617.424.025.1739.03.							
617.424.A.025.1739.03.							
617.424.468.A.1739.03.							
617.424.A.025.1739.03.							
424.468.025.1739.03.							
424.468.A.025.1739.03.							
617.424.468.1739.03.							
617.424.468.1739.03.							
617.424.468.A.1739.03.							

for instance

descendant 35

cases not explained
by this combinationcases of unknown
source variantnumber of variants not
explained by agreement
but by posterioritynumber of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

The stemmatic ancestors are sought among those potential ancestors which are the most closely related ones. Combinations consisting of such ancestors explain the variants in the descendant by a particularly large number of agreements.

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.03.							
424.468.A.025.1739.03.							
617.424.025.1739.03.							
617.424.A.025.1739.03.							
617.424.468.A.1739.03.							
617.424.A.025.1739.03.							
424.468.025.1739.03.							
424.468.A.025.1739.03.							
617.424.468.1739.03.							
617.424.468.1739.03.							
617.424.468.A.1739.03.							

Therefore, a larger number of variants explained by agreement seems to be preferable.

Yet, the larger number may result from more coincidental agreements or, more importantly, a larger combination which may contain less closely related ancestors that cause such agreements.

The stemmatic ancestors are sought among those potential ancestors which are the most closely related ones. Combinations consisting of such ancestors explain the variants in the descendant by a particularly large number of agreements.

for instance
descendant 35

cases not explained
by this combination

cases of unknown
source variant

number of variants not
explained by agreement
but by posteriority

number of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.	5	3011	29	6	0		
424.468.025.1739.03.04.	6	3011	29	6	0		
617.424.468.025.1739.03.	6	3011	29	6	0		
617.424.468.A.025.1739.	6	3011	29	6	0		
424.468.A.025.1739.03.04.	7	3011	29	6	0		
617.424.468.A.025.1739.03.	7	3011	29	6	0		
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.025.1739.04.	5	3010	29	7	0		
617.468.025.1739.03.	5	3010	30	6	0		
617.468.A.025.1739.	5	3010	30	6	0		
424.468.A.025.1739.04.	6	3010	29	7	0		
617.468.A.025.1739.03.	6	3010	30	6	0		
617.424.468.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
424.468.025.1739.03.	5	3009	31	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
424.468.A.025.1739.03.	6	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.					0		
617.424.A.025.1739.					0		
424.468.025.1739.					0		
424.468.A.025.1739.					0		
617.424.468.1739.04.	5	3008	30	7	1		
617.424.468.1739.03.	5	3008	32	6	0		
617.424.468.A.1739.03.	6	3008	32	6	0		

for instance

descendant 35

cases not explained
by this combinationcases of unknown
source variantnumber of variants not
explained by agreement
but by posterioritynumber of variants
explained by agreement
with one of the ancestors

number of ancestors

255 combinations

The objective is to find a combination
which is as small as possible.

[Contents](#) | [Index](#)

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.424.468.025.1739.03.04.	7	3013	27	6	0		
617.424.468.A.025.1739.04.	7	3013	27	6	0		
617.424.468.A.025.1739.03.04.	8	3013	27	6	0		
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.03.04.	6	3012	28	6	0		
617.468.A.025.1739.04.	6	3012	28	6	0		
617.468.A.025.1739.03.04.	7	3012	28	6	0		
617.424.468.025.1739.04.	6	3010	29	7	0		
617.424.468.025.1739.03.04.	5	3010	30	6	0		
617.424.468.A.025.1739.04.	5	3010	30	6	0		
617.424.468.A.025.1739.03.04.	6	3010	29	7	0		
617.424.468.A.1739.03.04.	6	3010	30	6	0		
617.424.468.A.1739.03.04.	7	3010	30	6	0		
617.424.025.1739.04.	5	3009	31	6	0		
617.424.025.1739.03.04.	5	3009	31	6	0		
617.424.025.1739.03.04.	6	3009	31	6	0		
617.424.A.025.1739.04.	6	3009	31	6	0		
617.424.468.A.1739.03.04.	5	3008	30	7	1		
617.424.468.1739.03.04.	5	3008	32	6	0		
617.424.468.A.1739.03.04.	6	3008	32	6	0		

Therefore, a smaller number of ancestors must be preferred if the number of explained variants in the descendant is equal.

The objective is to find a combination which is as small as possible.

for instance
descendant 35

cases not explained by this combination

cases of unknown source variant

number of variants not explained by agreement but by posteriority

number of variants explained by agreement with one of the ancestors

number of ancestors

255 combinations

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

This is an extract from the database shown last.
 It presents combinations
which exhibit the largest numbers of agreements
if compared with other combinations
containing the same number of ancestors.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

As the number of ancestors and agreements decreases, the number of unexplained variants, unknown source variants and variants posterior to those found in the combination of ancestors increases.

This is an extract from the database shown last. It presents combinations which exhibit the largest numbers of agreements if compared with other combinations containing the same number of ancestors.

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	



The sum of these cases is 3046,
corresponding to the total of 3046 variant passages
which witness 35 contains.
It is the maximum possible in the Catholic Letters.

for instance
descendant 35

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

This is the greatest value available in this field, and these are the lowest ones available in the corresponding fields.

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

At first glance this combination
seems to be the best one.

...

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

At first glance this combination
seems to be the best one.

It explains the variants in 35
by agreement at 3013 passages.

...

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

At first glance this combination
seems to be the best one.

It explains the variants in 35
by agreement at 3013 passages.

27 variants are explained as
being immediately posterior to the variant
in at least one of the ancestors
in this combination.

...

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	8	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

At first glance this combination
seems to be the best one.

It explains the variants in 35
by agreement at 3013 passages.

27 variants are explained as
being immediately posterior to the variant
in at least one of the ancestors
in this combination.

In 6 instances the ancestor of 35 cannot be found
because the source variants of the variants in 35
are questionable and have not been
established in the local stemmata of variants.

...

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

At first glance this combination
seems to be the best one.

It explains the variants in 35
by agreement at 3013 passages.

27 variants are explained as
being immediately posterior to the variant
in at least one of the ancestors
in this combination.

In 6 instances the ancestor of 35 cannot be found
because the source variants of the variants in 35
are questionable and have not been
established in the local stemmata of variants.

0 instances remain unexplained.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

This combination contains 6 ancestors,
and no variant in witness 35 remains unexplained
as far as a source variant has been assigned
in the local stemmata of variants.

Can the same result be achieved
on the basis of a smaller combination?

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

This combination contains 6 ancestors,
and no variant in witness 35 remains unexplained
as far as a source variant has been assigned
in the local stemmata of variants.

Can the same result be achieved
on the basis of a smaller combination?

This combination consists of 4 ancestors,
and in this case too no variant in witness 35
remains unexplained.

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	33	8	1	<<	
424.1739.	2	2995	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

There is a different number of variants in witness 35
explained by agreement
and, accordingly, a different number of variants
explained as deriving from a variant
from at least one of the ancestors.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	33	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

Are the 3 additional agreements of the 1st combination coincidental?

There is a different number of variants in witness 35
explained by agreement
and, accordingly, a different number of variants
explained as deriving from a variant
from at least one of the ancestors.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

Are the 3 additional agreements of the 1st combination coincidental?

(attestations reduced to 35 and the witnesses of the 1st combination)

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424. 468. 617. 1739.

→ b αγαπαν και ημερας ιδειν αγαθας 04. 35.

2Pt 3,10/18 a εν η οι ουρανοι 04. 025. 468. 617. 1739.

→ b εν η ουρανοι 35. 424.

Jd 19/9 a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

→ b οι αποδιοριζοντες εαυτους 04. 35*.

These three variant passages show additional agreement with 04 or 424,
the two potential ancestors that are not in the smaller combination.

The list of potential ancestors of 35 presents ...

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

Are the

1Pt 3,10/1

2Pt 3,10/1

Jd 19/9

Potential Ancestors of 35 (W1)

Data Source: Cath. Letters (excl. fragments)

W2	NR	D	PERC1	EQ	PASS	W1<W2	W1>W2	UNCL	NOREL
617	1		95.995	2924	3046	56	46	15	5
424	2		95.988	2919	3041	51	45	23	3
468	3		95.588	2903	3037	57	49	27	1
A	4		92.263	2695	2921	212	0	6	8
025	5		91.160	2444	2681	99	84	46	8
323	0	-	89.638	2725	3040	111	111	76	17
1739	6		87.853	2676	3046	158	115	77	20
03	7		87.272	2633	3017	201	78	90	15
04	8		87.262	1836	2104	103	93	60	12
P74	0	>	82.493	278	337	27	22	6	4

17. 1739.

The list of potential ancestors of 35 presents 424 as a witness very similar to 35, and 04 as a comparatively distant relative.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Are the 3 additional agreements of the 1st combination coincide

(attestations reduced to 35 and the witnesses of the 1st combination)

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424.

b αγαπαν και ημερας ιδειν αγαθας 04. 35.

2Pt 3,10/18 a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

Jd 19/9 a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

b οι αποδιοριζοντες εαυτους 04. 35*.

We must ask whether these variants are **connective**. Please bear in mind that 04 and 424 are not required for explaining the other 3043 variants in witness 35.

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
			91.160	2444
			89.638	2725
			87.853	2676
			87.272	2633
			87.262	1836
			82.493	278

Excursus:

Connective variants

If a variant contributes to genealogical coherencies,
it is a connective variant.

A variant can yield genealogical coherencies only
if it does not coincidentally conform with variants in other witnesses.

Jd 19/9

a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

b οι αποδιοριζοντες εαυτους 04. 35*.

We must ask whether these variants are **connective**.
Please bear in mind that 04 and 424 are not required
for explaining the other 3043 variants in witness 35.

Excursus: Connective variants

(Non-)coincidental emergence of variants

indications for non-coincidental emergence:

high agreement of the witnesses concerned
unusual kinds of variant

indications for coincidental emergence:

lower agreement of the witnesses concerned
variants which easily emerge

Excursus: Connective variants

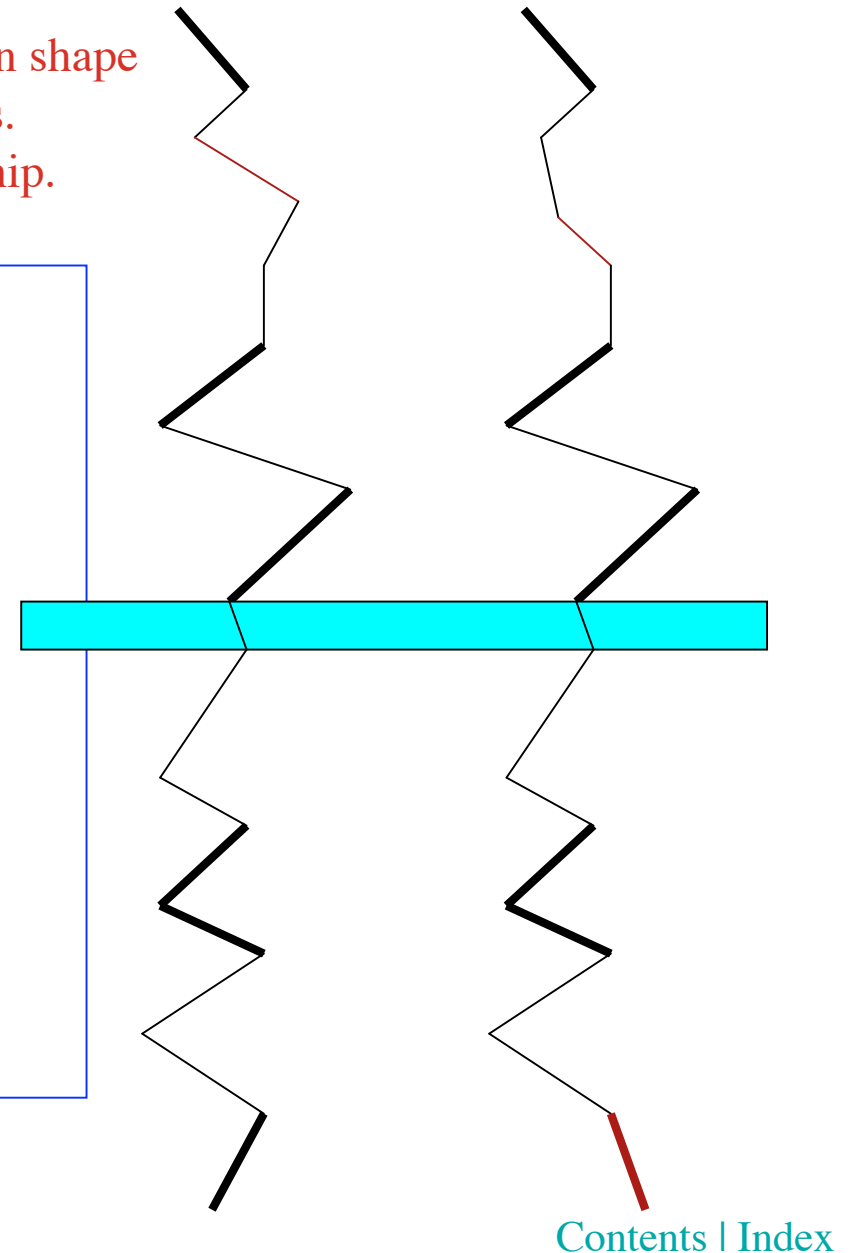
These two lines are very similar in shape
and show only few variants.
This suggests close relationship.

indication for non-coincidental emergence:

high agreement of the witnesses concerned

non-coincidental agreement

The variant is **connective**,
regardless of whether it is major or minor,
because the witnesses are closely related.



Excursus: Connective variants

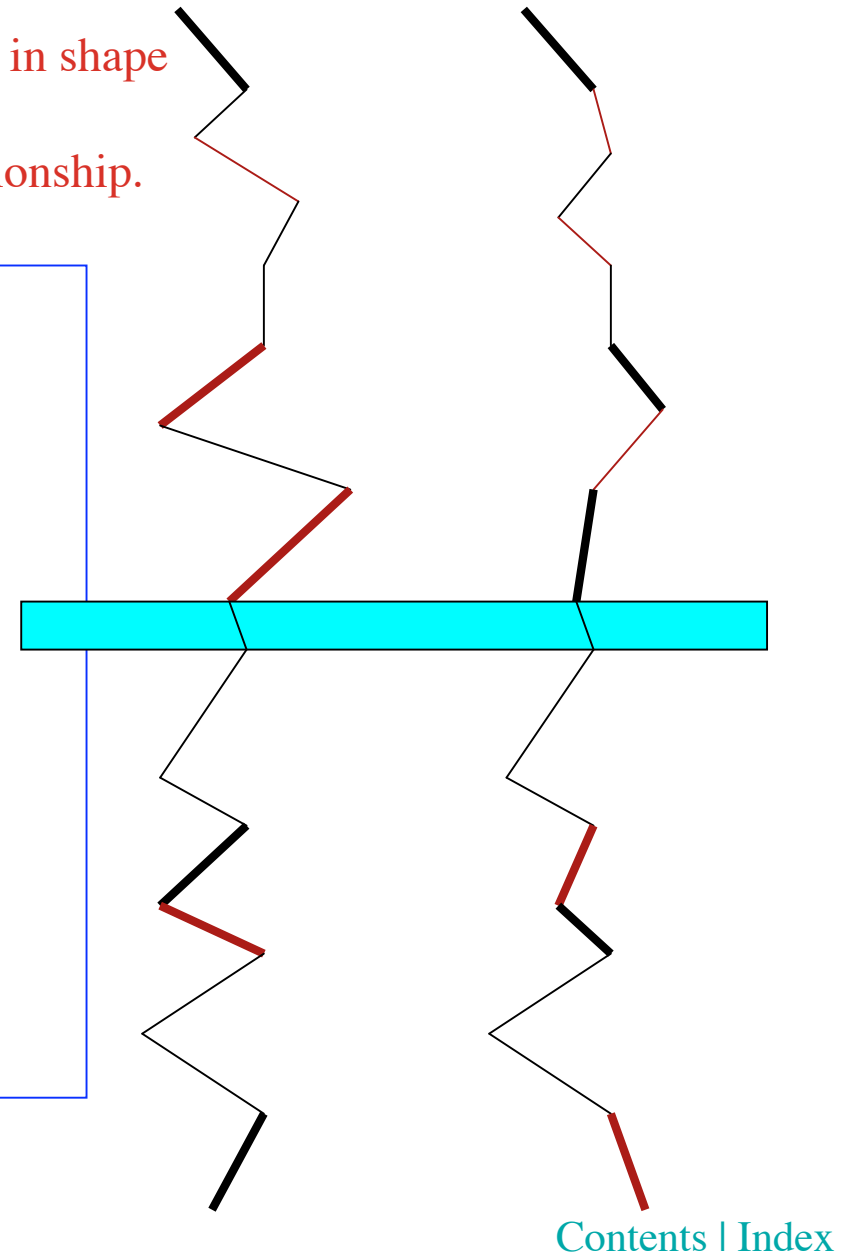
These two lines are rather different in shape
and show less agreements.
This suggests a more distant relationship.

indication for coincidental emergence:

lower agreement of the witnesses concerned

coincidental agreement

The variant is **not connective**,
because the witnesses are not closely related
and the variant emerges easily.



Excursus: Connective variants

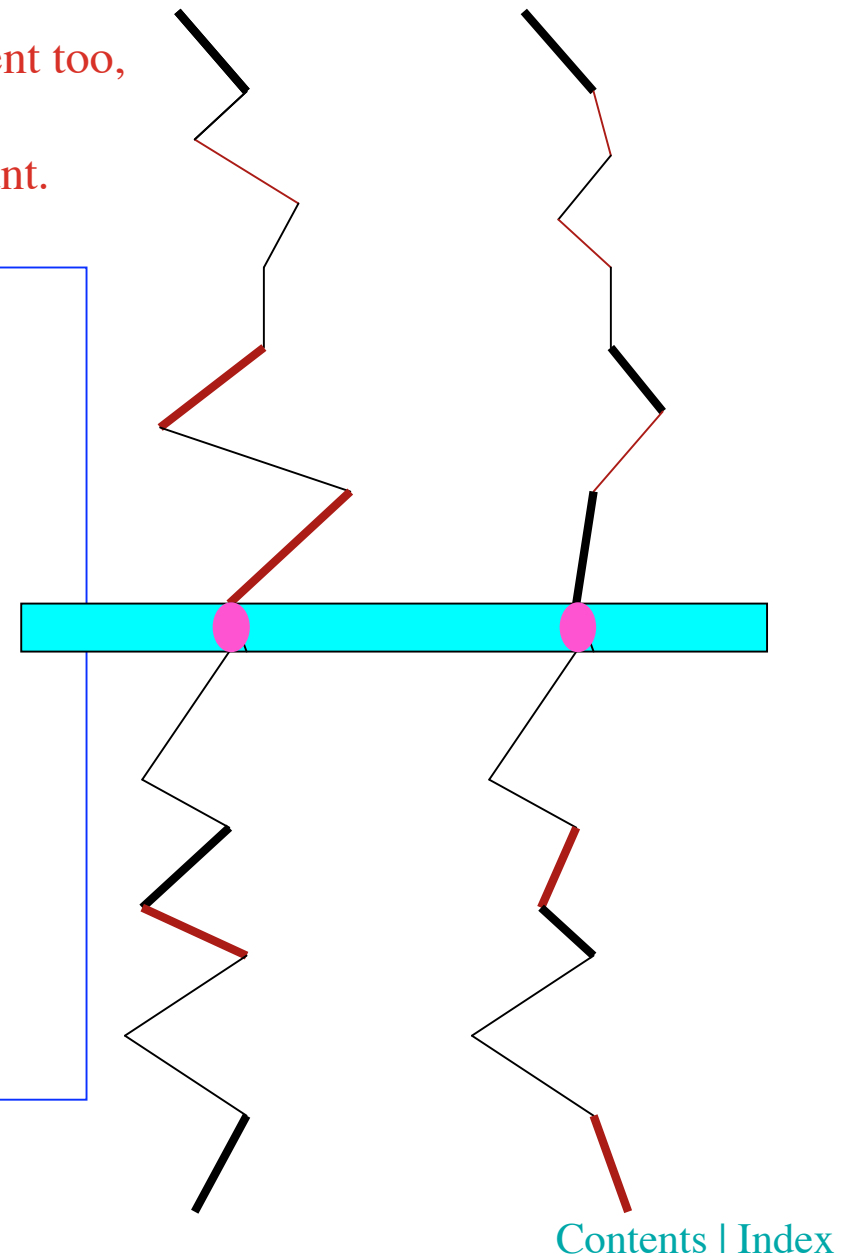
These two lines are rather different too,
but there is an agreement
in an extremely unusual variant.

indication for non-coincidental emergence:

unusual kind of variant

agreement probably non-coincidental

The variant is **connective**,
because multiple emergence
of this type of variant is improbable,
even if the witnesses are not closely related.



Excursus: Connective variants

Evaluation of connectivity is based

- (i) on assessing how closely witnesses are related,
- (ii) on assessing the character of a variant
(whether it is unlikely to have emerged
more than once independently).

The results of both procedures may not point into the same direction,
and it is a matter of philological reasoning to balance them.

Excursus: Connective variants

Connectivity of variants should be evaluated

→ when local stemmata of variants are established

Strong pre-genealogical coherence of witnesses points to connective variants
even if variants would otherwise be regarded as unimportant.

Excursus: Connective variants

Connectivity of variants should be evaluated

when local stemmata of variants are established

→ when textual flow diagrams are compiled

Each witness has potential ancestors. They have a rank number indicating the position in the list of potential ancestors of this witness.

Textual flow diagrams present genealogical coherencies found within and between attestations.

It depends on the connectivity of the variant concerned whether genealogical coherence is adequate.

In case of very significant variants, genealogical coherence between descendants and potential ancestors with higher rank numbers (indicating lower agreement) may be assumed.

In case of easily emerging variants only low rank numbers are accepted in order to exclude coincidental agreements.

Excursus: Connective variants

Connectivity of variants should be evaluated

when local stemmata of variants are established

when textual flow diagrams are compiled

→ when optimal substemmata are searched for.

The ancestors in an optimal substemma must explain all variants in the descendant.

At the same time the combination of ancestors should be as small as possible.

Each ancestor within a given combination makes at least one unique contribution to explaining variants in the descendant.

Removing this ancestor from the combination would result in variants in the descendant remaining unexplained by agreement or unexplained at all.

Often the particular contribution of an ancestor is to explain only few variants in the descendant by agreement, which would otherwise be explained as having emerged from a different variant in another ancestor in the same combination.

In this case, the connectivity of the variants concerned must be examined again.

Is connectivity so compelling that the respective ancestor cannot be removed from the combination in order to get a smaller number of ancestors?

Excursus: Connective variants

Connectivity of variants should be evaluated

when local stemmata of variants are established

End of excursus:
Connective variants

The ancestor
At the
Each ancestor

descendant.
ible.
bution

Removing this ancestor from the combination would result in variants in the descendant remaining unexplained by agreement or unexplained at all.

Often the particular contribution of an ancestor is to explain only few variants in the descendant by agreement, which would otherwise be explained as having emerged from a different variant in another ancestor in the same combination.

In this case, the connectivity of the variants concerned must be examined again.
Is connectivity so compelling that the respective ancestor cannot be removed from the combination in order to get a smaller number of ancestors?

[Contents](#) | [Index](#)

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Are the 3 additional agreements of the 1st combination coincide

(attestations reduced to the witnesses of the 1st combination)

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424.

b αγαπαν και ημερας ιδειν αγαθας 04. 35.

2Pt 3,10/18 a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

Jd 19/9 a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

b οι αποδιοριζοντες εαυτους 04. 35*.

First let us focus on the two contributions of 04.

The general agreement of 35 and 04 is poor compared with the top agreement values in the 91-96% range.

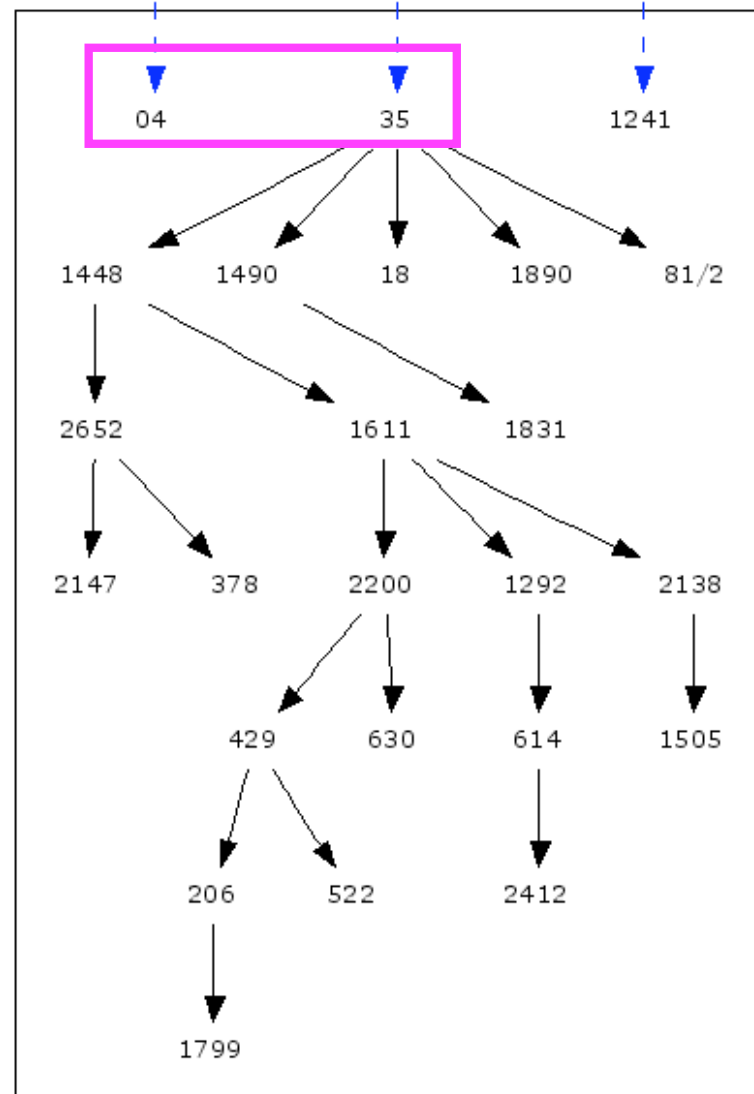
Vorf	Vorfanz	Stellen	Post	Frag
617.424.468.025.1739.04.	6	▶ 3013	27	6
617.468.025.1739.04.	5	3012	28	6
617.468.025.1739.	4	▶ 3010	30	6
424.468.1739.	3	3002	35	8
424.1739.	2	2985	40	13
617.	1	2924	56	16

1Pt 3:10/10-18b
Con= 5

a:A

a:617

a:1739



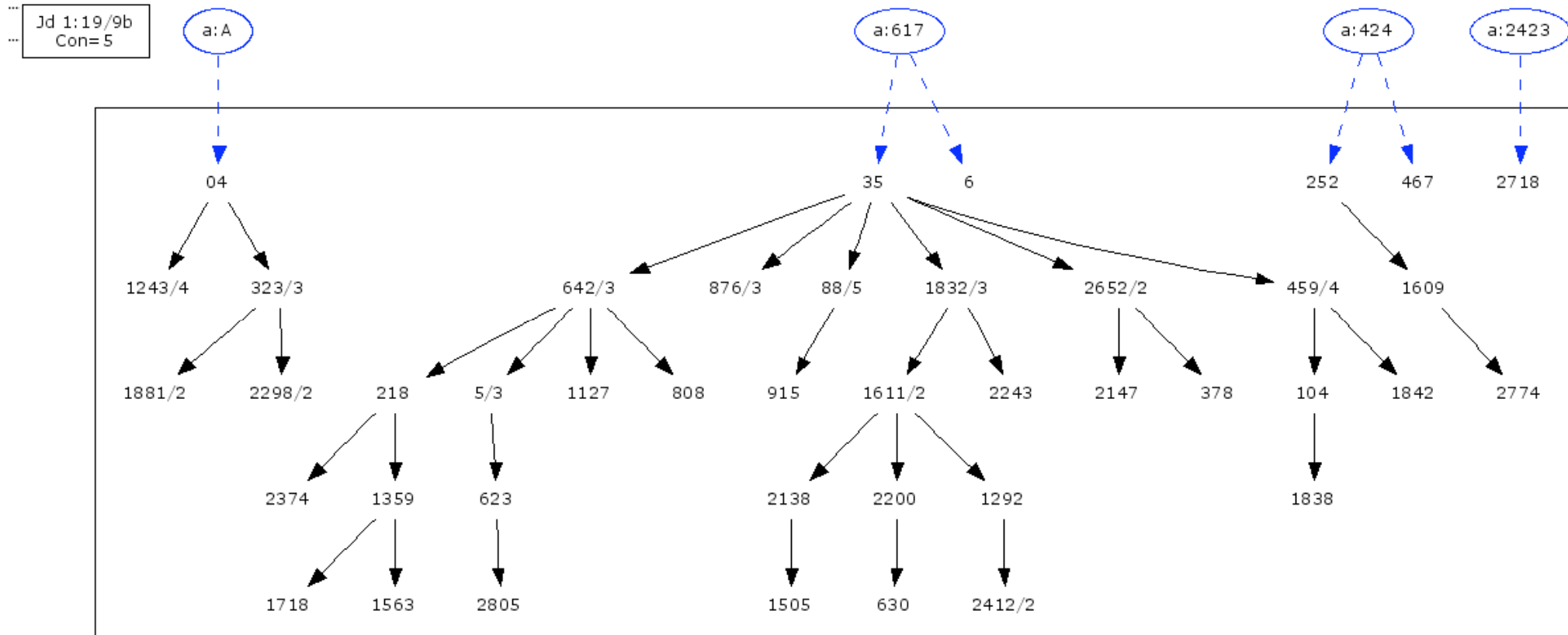
Variant *b* presents
a transposition of words emphasizing αγαθας.
The character of the variant does not cogently
suggest high connectivity.
When potential ancestors
with adequately low rank numbers (not higher than 5)
are included, the textual flow diagram exhibits
multiple emergence of this variant.

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424. 468. 617. 1739.
 b αγαπαν και ημερας ιδειν αγαθας 04. 35.

[Contents](#) | [Index](#)

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	3005	40	12	0	<<	

for instance
descendant 35



Jd 19/9

a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

b οι αποδιοριζοντες εαυτους 04. 35*.

The same applies to this textual flow diagram for variant *b* where presumably copyists missed an object.

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Are the 3 additional agreements of the 1st combination coincide

(attestations reduced to 35 and the witnesses of the 1st combination)

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424.

b αγαπαν και ημερας ιδειν αγαθας 04. 35.

2Pt 3,10/18 a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

Jd 19/9 a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

b οι αποδιοριζοντες εαυτους 04. 35*.

Conclusion:

04 is not necessarily needed as ancestor in an optimal substemma.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Are the 3 additional agreements of the 1st combination coincide

(attestations reduced to 35 and the witnesses of the 1st combination)

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424.

b αγαπαν και ημερας ιδειν αγαθας 04. 35.

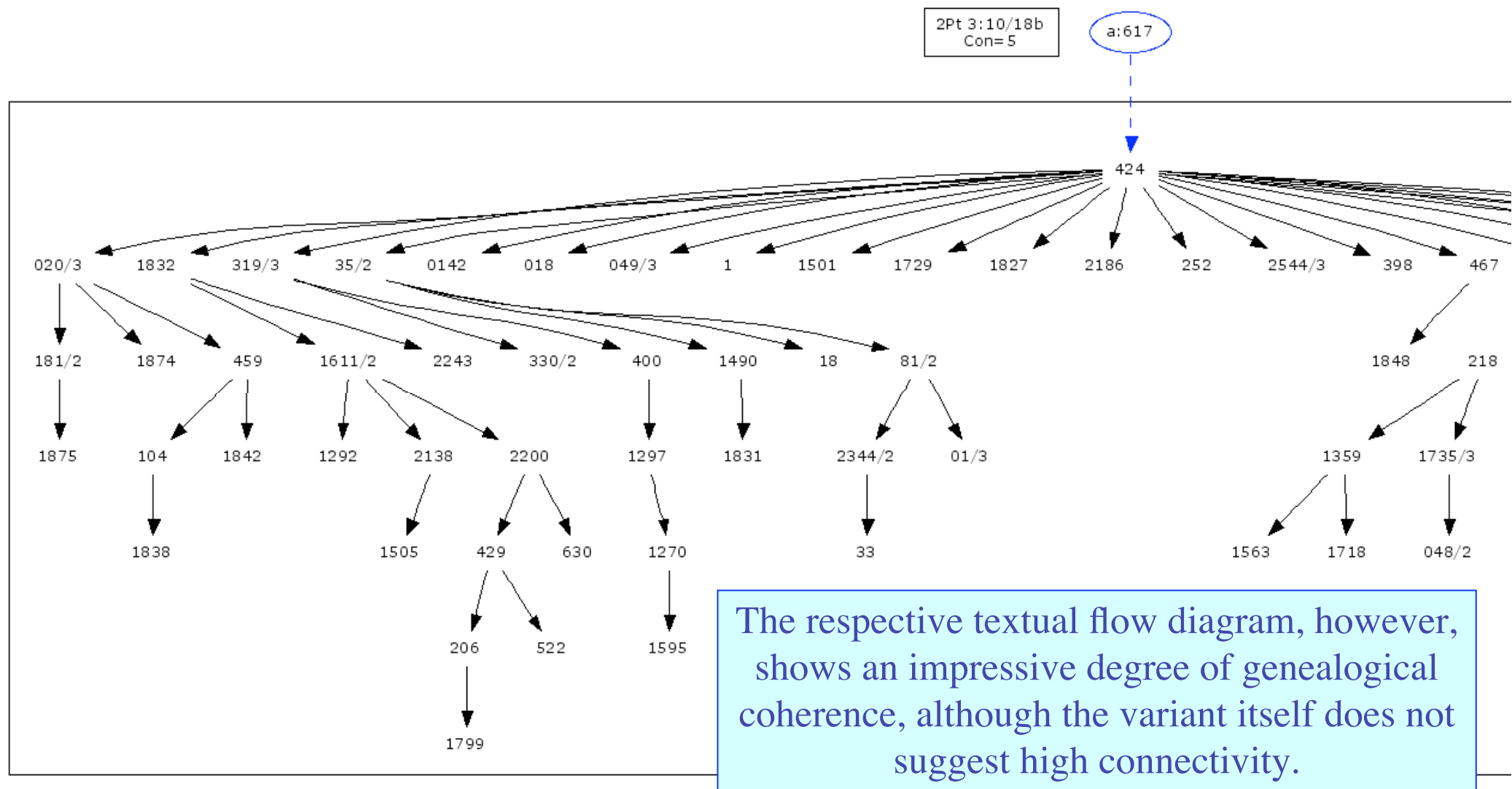
2Pt 3,10/18 a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

Jd 19/9 a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

b οι αποδιοριζοντες εαυτους 04. 35*.

In contrast to 04, the general agreement of 424 and 35 is very high.
But as η and οι were pronounced alike, the omission of one of these words
cannot be regarded as a sign of connectivity.



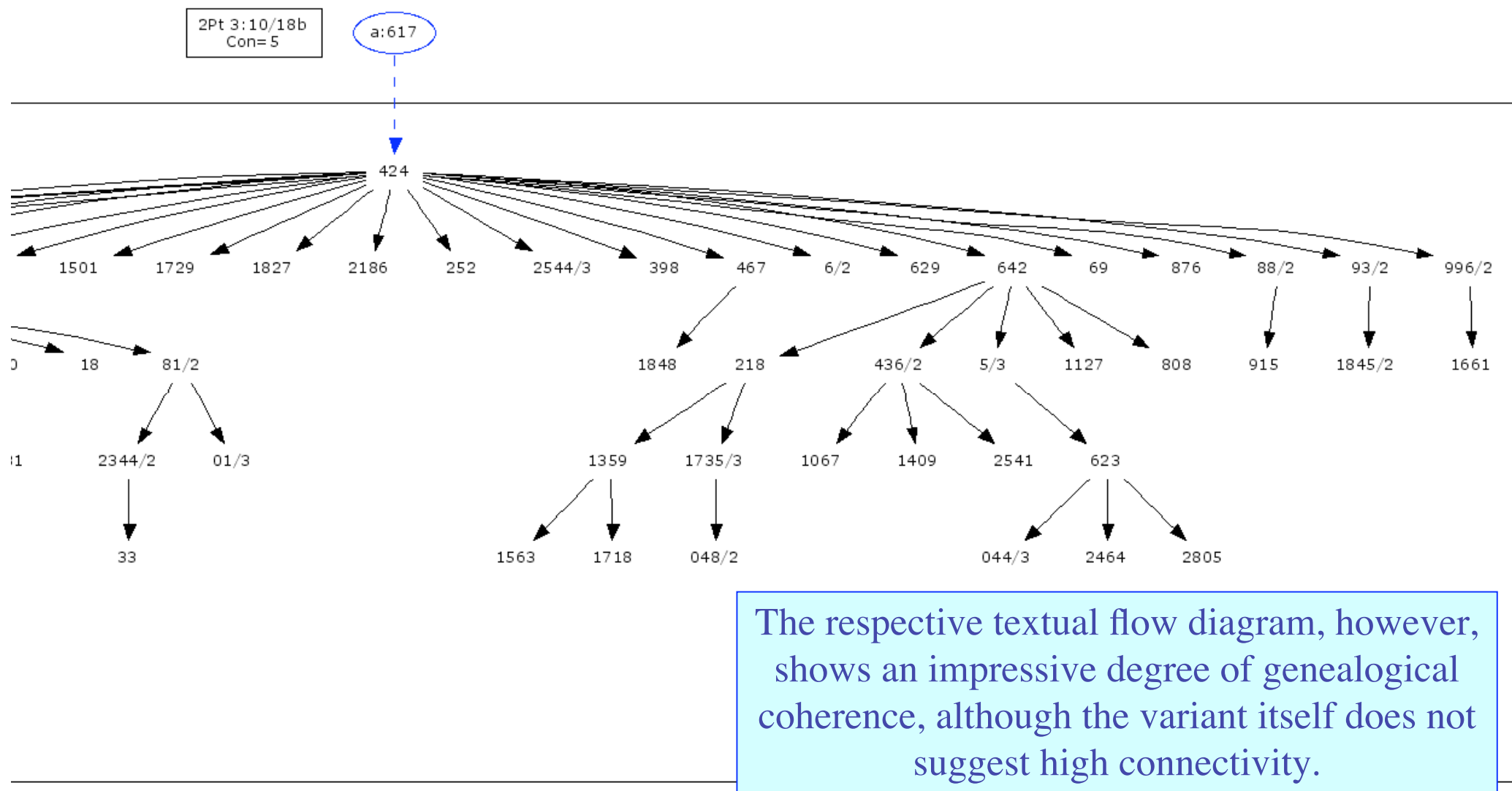
Please continue to see the right part ...

2Pt 3,10/18

a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

[Contents](#) | [Index](#)



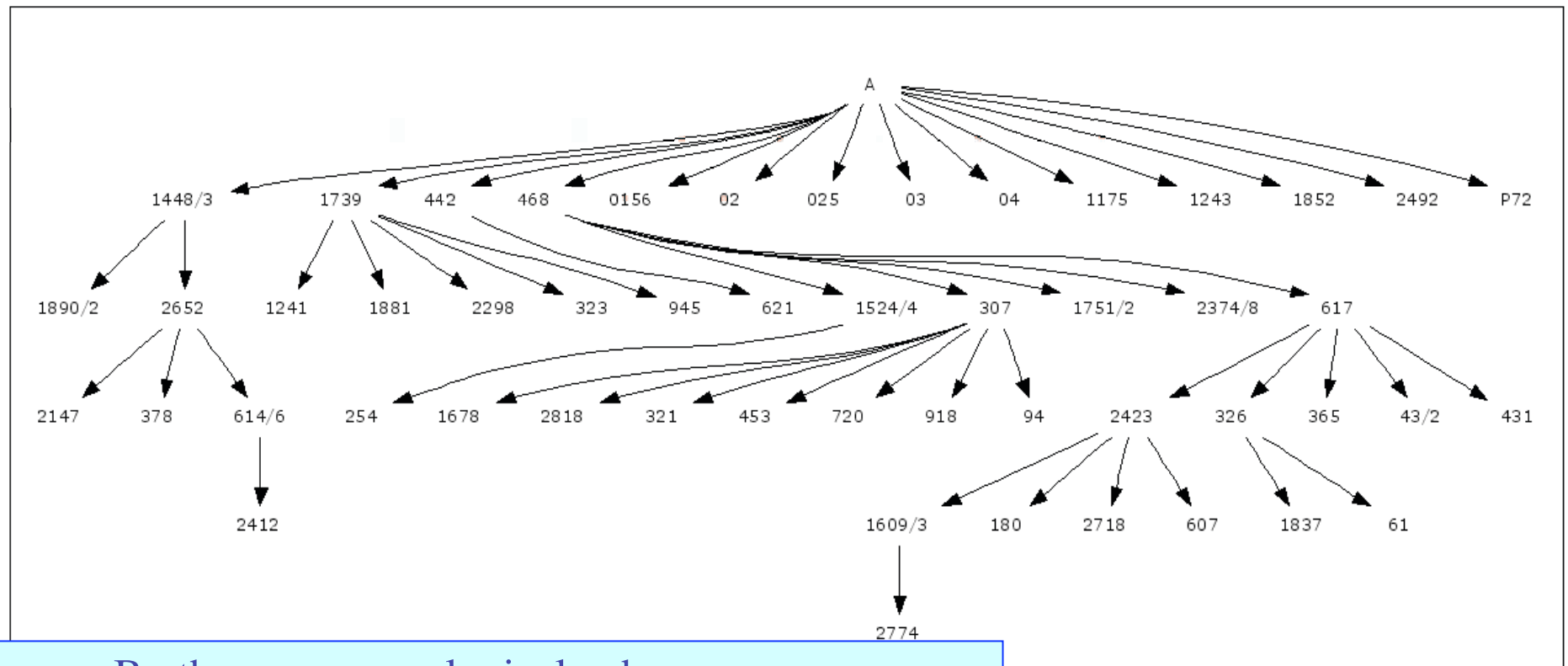
2Pt 3,10/18

a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

[Contents](#) | [Index](#)

2Pt 3:10/18a
Con= 10



By the way, genealogical coherence
within the attestation of variant *a*
is extremely strong too.

This example shows that very insignificant variants
do not necessarily exclude perfect genealogical coherence.
Such cases are numerous.

2Pt 3,10/18

a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Are the 3 additional agreements of the 1st combination coincide

(attestations reduced to 35 and the witnesses of the 1st combination)

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424.

b αγαπαν και ημερας ιδειν αγαθας 04. 35.

2Pt 3,10/18 a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

Jd 19/9

617, 424, 468 and 025 are very similar witnesses so that the agreements of 35 with 424 are also contained in 617, 468 and 025.

This passage is the only exception.

If we regard variant *b* as connective, only this passage would demand stemmatic coherence of 35 and 424.

However, a variant like this one can too easily emerge by accident.

[Contents](#) | [Index](#)

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	▶ 3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Are the 3 additional agreements of the 1st combination coincide

(attestations reduced to 35 and the witnesses of the 1st combination)

1Pt 3,10/10-18 a αγαπαν και ιδειν ημερας αγαθας 025. 424.

b αγαπαν και ημερας ιδειν αγαθας 04. 35.

2Pt 3,10/18 a εν η οι ουρανοι 04. 025. 468. 617. 1739.

b εν η ουρανοι 35. 424.

Jd 19/9 a οι αποδιοριζοντες 025. 424. 468. 617. 1739.

b οι αποδιοριζοντες εαυτους 04. 35*.

Conclusion:

424 is not necessarily required as ancestor in an optimal substemma.

Whether or not 424 is needed depends on philological assessment.

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶ 3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	55	16	50	<<	

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Why should 1739 not be excluded from this combination?
Like 04 it agrees with 35 at less than 88%.

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	▶3010▶	▶30▶	▶6▶	▶0▶	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	35	16	50	<<	

617.468.025.	3	▶2995▶	▶35▶	▶10▶	▶6▶		
--------------	---	--------	------	------	-----	--	--

W2	NR	D	PERC1	EQ
617	1		95.995	2924
424	2		95.988	2919
468	3		95.588	2903
A	4		92.263	2695
025	5		91.160	2444
323	0	-	89.638	2725
1739	6		87.853	2676
03	7		87.272	2633
04	8		87.262	1836
P74	0	>	82.493	278

Why should 1739 not be excluded from this combination?
Like 04 it agrees with 35 at less than 88%.

This is the combination without 1739.
Instead of 3010 only 2995 variants in witness 35
could be explained by agreement.
4 more are questionable
and 6 places remain unexplained.
The capacity of explaining the variants in 35
decreases considerably.

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

The combination of 617, 468, 025 and 1739
seems to be a good hypothesis
for the ancestors in an optimal substemma.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

The combination of 617, 468, 025 and 1739 seems to be a good hypothesis for the ancestors in an optimal substemma.

However, we must not forget that there are 6 instances in which the ancestor of 35 cannot be found because the source variants are questionable and have not been incorporated into the local stemmata of variants.

Since an optimal substemma must be able to explain all variants in the descendant, it must at least be possible that the variants in 35 at these 6 passages derive from at least one ancestor.

Vorf	Vorfanz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

These are the 6 variants:

Jas 3,2/26-38 b ανηρ δυναμενος χαλιναγωγησαι και ολον το σωμα

1Pt 4,3/6-10 h υμιν ο παρεληλυθως χρονος

1Pt 5,10/38-44 b καταρτισαι στηριξαι σθενωσαι θεμελιωσαι

2Pt 2,12/10-14 c ζωα γεγεννημενα φυσικα

2Pt 3,18/2 c αυξανητε

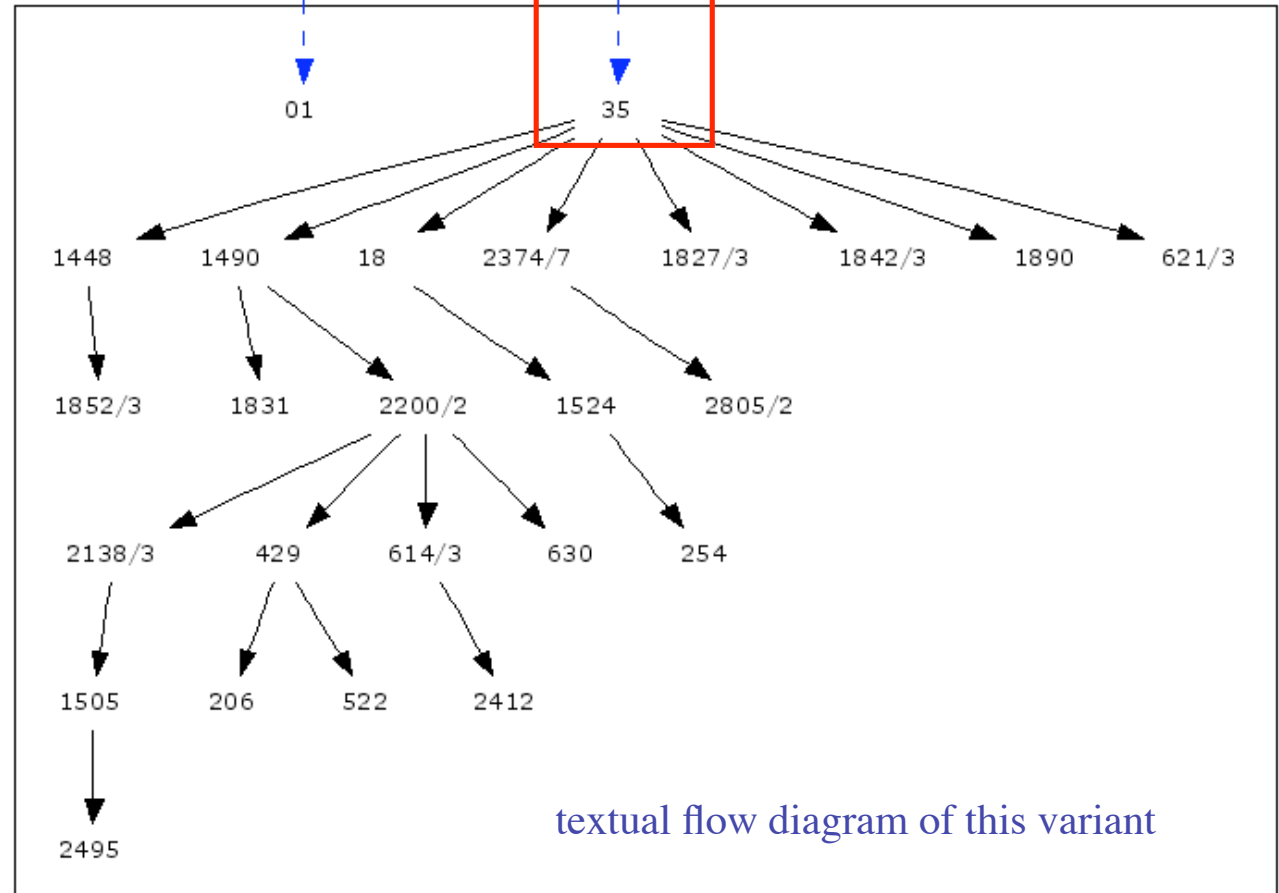
3Jn 12/28-30 c και οιδαμεν

Vorf	Voranz	St
617.424.468.025.1739.04.	6	
617.468.025.1739.04.	5	
617.468.025.1739.	4	
424.468.1739.	3	
424.1739.	2	
617.	1	

Jas 3:2/26-38b
Con= 10

a:A

a:617



Jas 3,2/26-38 b ανηρ δυναμενος χαλιναγωγησαι και ολον το σωμα 35

This variant could be derived from variant *a*:
ανηρ δυνατος χαλιναγωγησαι και ολον το σωμα 025. 468. 617. 1739.

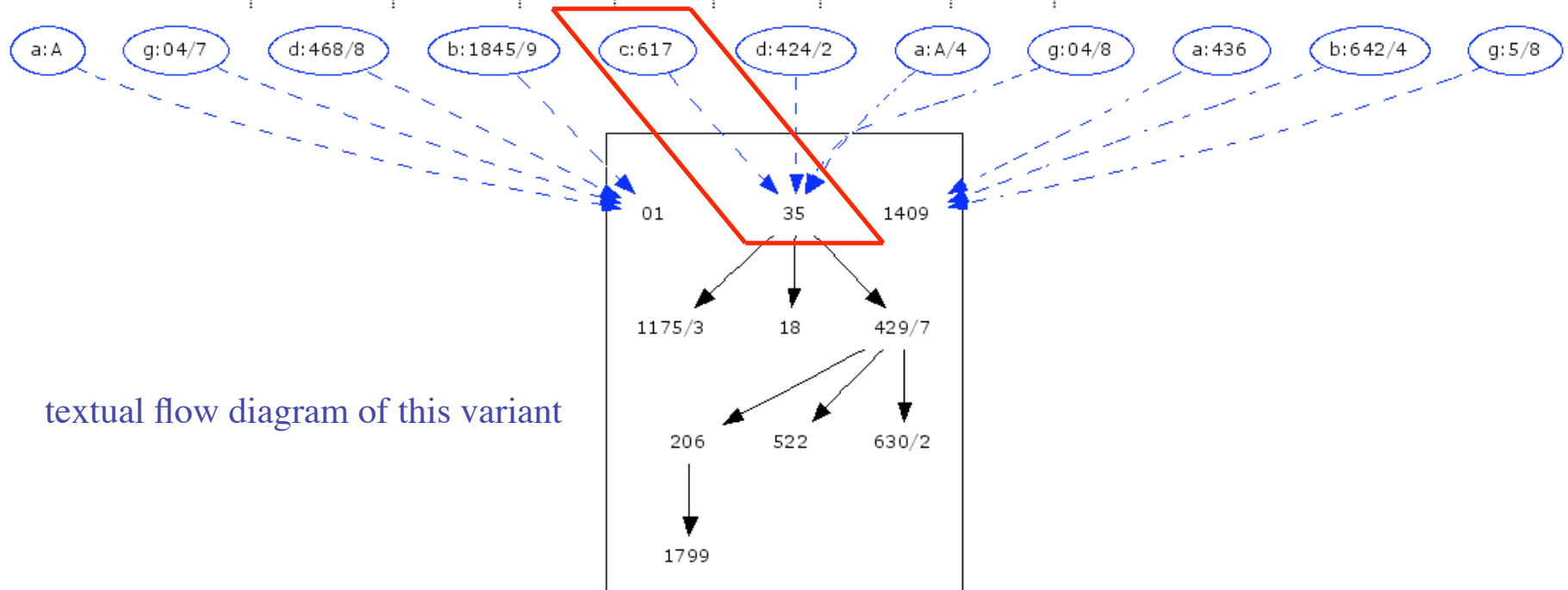
Attestations include descendant and ancestors only.

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

1Pt 4:3/6-10h
Con= 10



textual flow diagram of this variant

1Pt 4,3/6-10

h υμιν ο παρεληλυθως χρονος 35

This variant could be derived from variant c:
ημιν ο παρεληλυθως χρονος 025. 617.

Attestations include descendant and ancestors only.

[Contents](#) | [Index](#)

Vorf	Voranz	Stellen	F
617.424.468.025.1739.04.	6	3013	
617.468.025.1739.04.	5	3012	
617.468.025.1739.	4	3010	
424.468.1739.	3	3002	
424.1739.	2	2985	
617.	1	2924	

1Pt 5:10/38-44b
Con= 10

r:617

h:424/2

l:468/3

a:A/4

g:03/7

35

1448

1890

1611

1292

2138

2200

614

1505

429

630

2412

206

522

textual flow diagram of this variant

1Pt 5,10/38-44

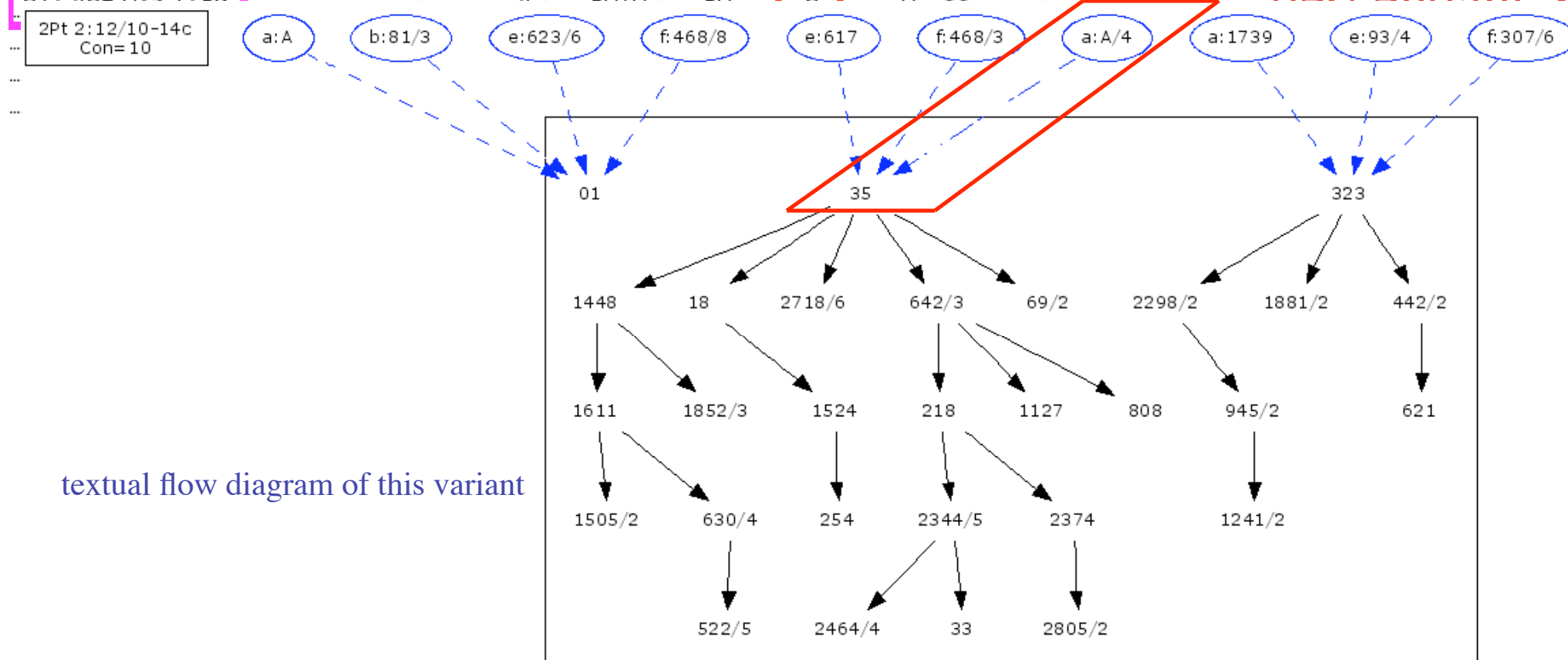
b καταρτισαι στηριξαι σθενωσαι θεμελιωσαι 35*

This variant could be a mixture of variants *a* and *l*:
καταρτισει στηριξει σθενωσει θεμελιωσει 1739T.
and καταρτισαι υμας στηριξαι σθενωσαι θεμελιωσαι 468.
Probably the variant is just an erroneous copy of the latter one.

nts | Index

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.04.	4	3010	30	6	0	<<	

for instance
descendant 35



2Pt 2,12/10-14 c ζωα γεγεννημενα φυσικα 35

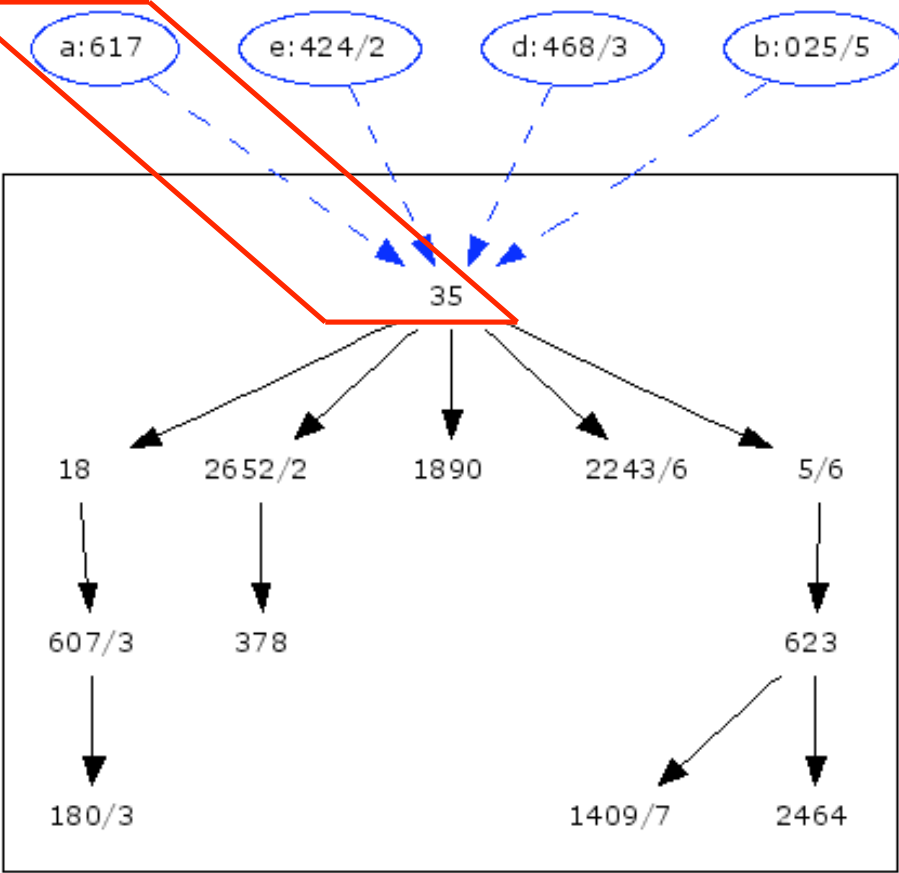
This variant could be derived from variant *a*:
ζωα γεγεννημενα φυσικα 025. 1739.

Attestations include descendant and ancestors only.

[Contents](#) | [Index](#)

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	3				
424.1739.	2	2985	4				
617.	1	2924	5				

2Pt 3:18/2c
Con=10



for instance
descendant 35

textual flow diagram of this variant

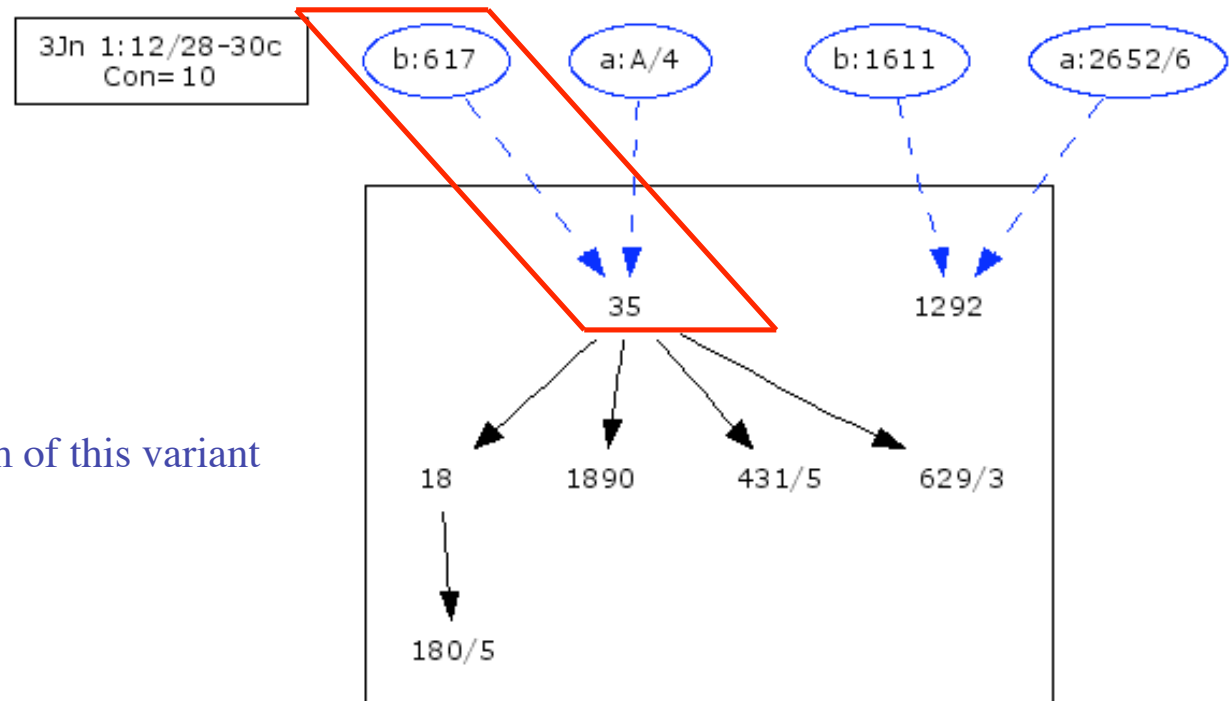
2Pt 3,18/2 c αυξανητε 35

This variant could be derived from variant *a*:
αυξανετε 617. 1739.

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

textual flow diagram of this variant



3Jn 12/28-30 c και οίδαμεν 35

This variant could be derived from variant *b*:
και οίδατε 025.468.617.

Attestations include descendant and ancestors only.

[Contents](#) | [Index](#)

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

Again the 6 variants supported by witness 35:

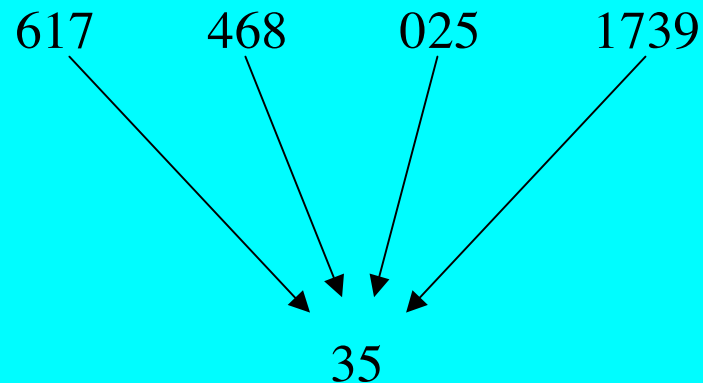
- Jas 3,2/26-38 b ἀνηρ δυναμενος χαλιναγωγησαι και ολον το σωμα
- 1Pt 4,3/6-10 h υμιν ο παρεληλυθως χρονος
- 1Pt 5,10/38-44 b καταρτισαι στηριξαι σθενωσαι θεμελιωσαι
- 2Pt 2,12/10-14 c ζωα γεγεννημενα φυσικα
- 2Pt 3,18/2 c αυξανητε
- 3Jn 12/28-30 c και οιδαμεν

In each of these cases a possible source variant read by at least one of the witnesses 617, 468, 025 and 1739 can be found.

Vorf	Voranz	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.	3	3002	35	8	1	<<	
424.1739.	2	2985	40	13	8	<<	
617.	1	2924	56	16	50	<<	

for instance
descendant 35

Therefore, this hypothesis on an optimal substemma is adequate:



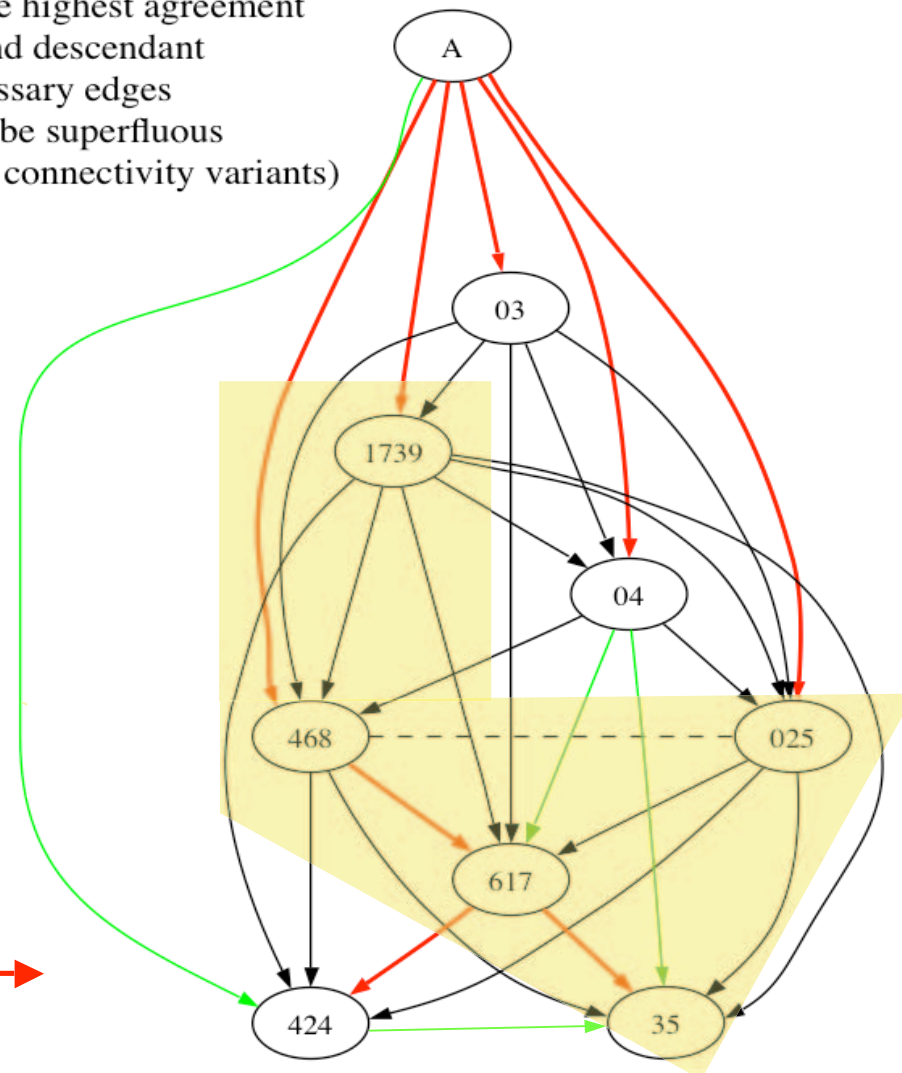
This substemma cannot be falsified at any variant passage.

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.							
424.1739.							
617.							

for instance
descendant 35

TOP OF THE GLOBAL STEMMA (excerpt)

red: edges with the highest agreement of ancestor and descendant
red or black: necessary edges
green: edges may be superfluous (based on low connectivity variants)



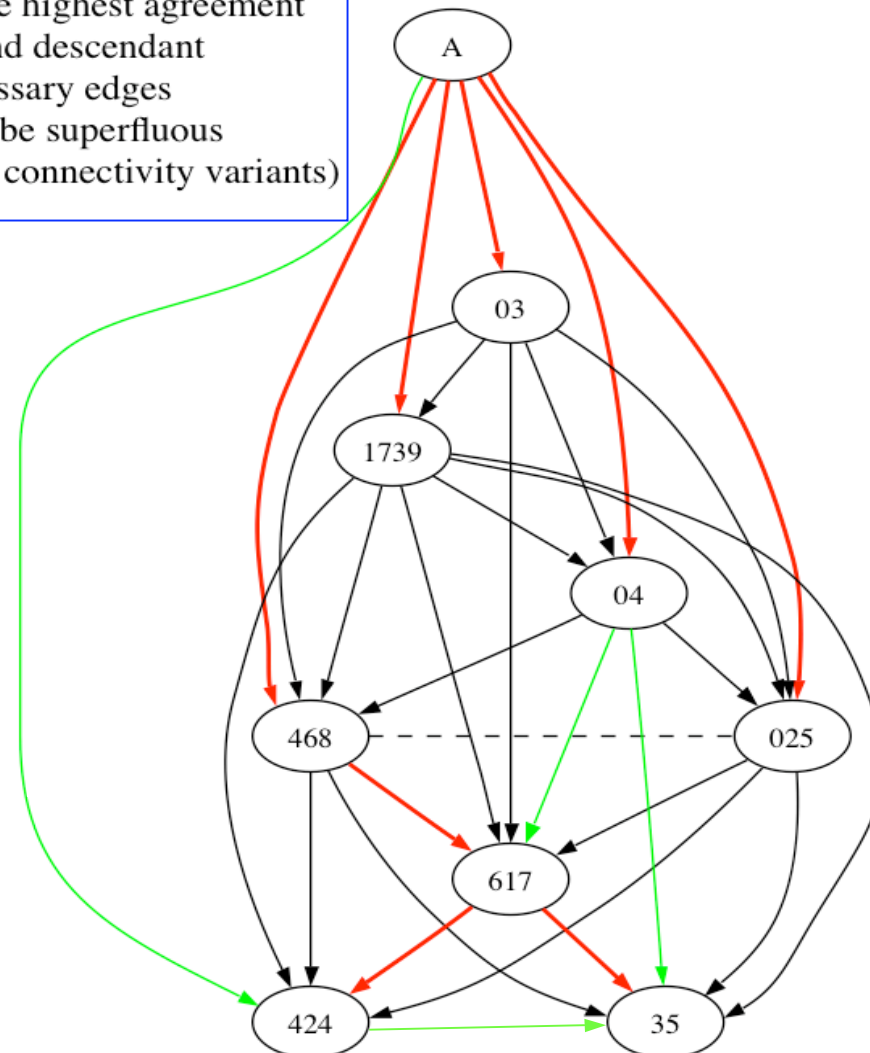
Descendant and ancestors
are in a coherent field.

[Contents](#) | [Index](#)

for instance
descendant 35

TOP OF THE GLOBAL STEMMA (excerpt)

red: edges with the highest agreement
 of ancestor and descendant
 red or black: necessary edges
 green: edges may be superfluous
 (based on low connectivity variants)



This diagram has not yet been fully optimised.
 Therefore connections are shown
 which may be superfluous (the green edges).

In this diagram, an edge is regarded as necessary
 if removing it would considerably diminish
 the number of variants in the descendant
 which are explained by agreement
 with a potential ancestor,
 and/or would considerably increase
 the number of variants in the descendant
 which are explained neither by agreement
 nor by posteriority.

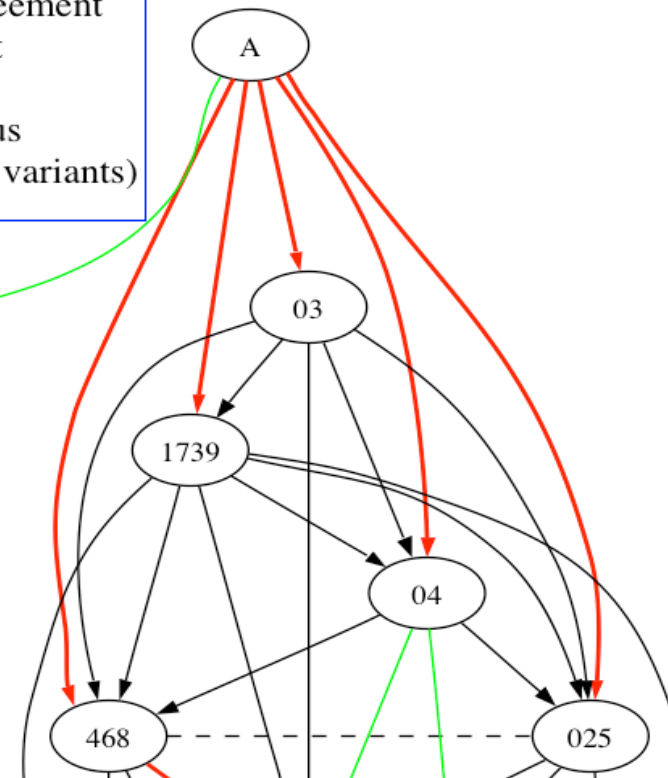
[Contents](#) | [Index](#)

for instance
descendant 35

TOP OF THE GLOBAL STEMMA (excerpt)

red: edges with the highest agreement of ancestor and descendant
red or black: necessary edges
green: edges may be superfluous (based on low connectivity variants)

This diagram has not yet been fully optimised.
Therefore connections are shown which may be superfluous (the green edges).
In this diagram, an edge is regarded as necessary if removing it would considerably diminish the number of variants in the descendant which are explained by agreement with a potential ancestor, and/or would considerably increase the number of variants in the descendant which are explained neither by agreement nor by posteriority.



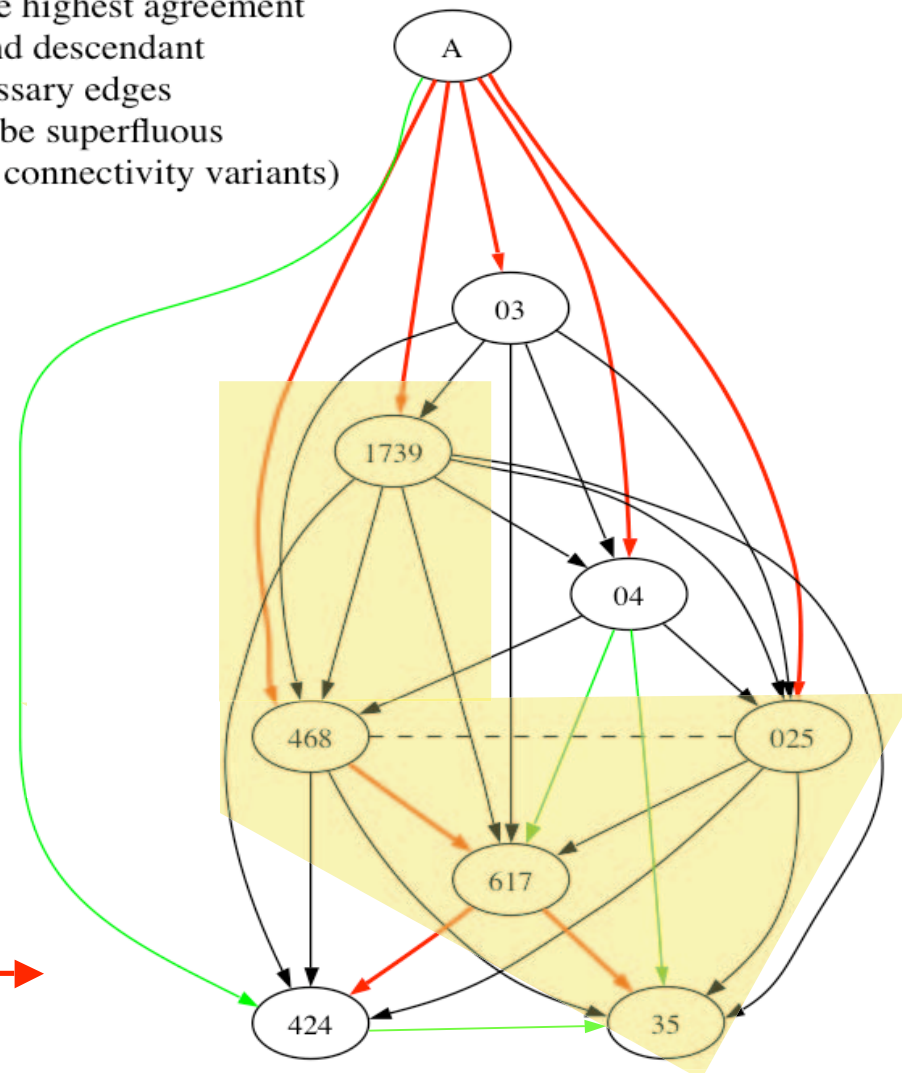
Between 468 and 025 there is no direction of textual flow. The dashed line stands for undirected genealogical coherence. For this issue, cf. Mink (2004), 63-67.

Vorf	Vorfan	Stellen	Post	Fragl	Offen	Hinweis	Nachf
617.424.468.025.1739.04.	6	3013	27	6	0	<<	35
617.468.025.1739.04.	5	3012	28	6	0	<<	
617.468.025.1739.	4	3010	30	6	0	<<	
424.468.1739.							
424.1739.							
617.							

for instance
descendant 35

TOP OF THE GLOBAL STEMMA (excerpt)

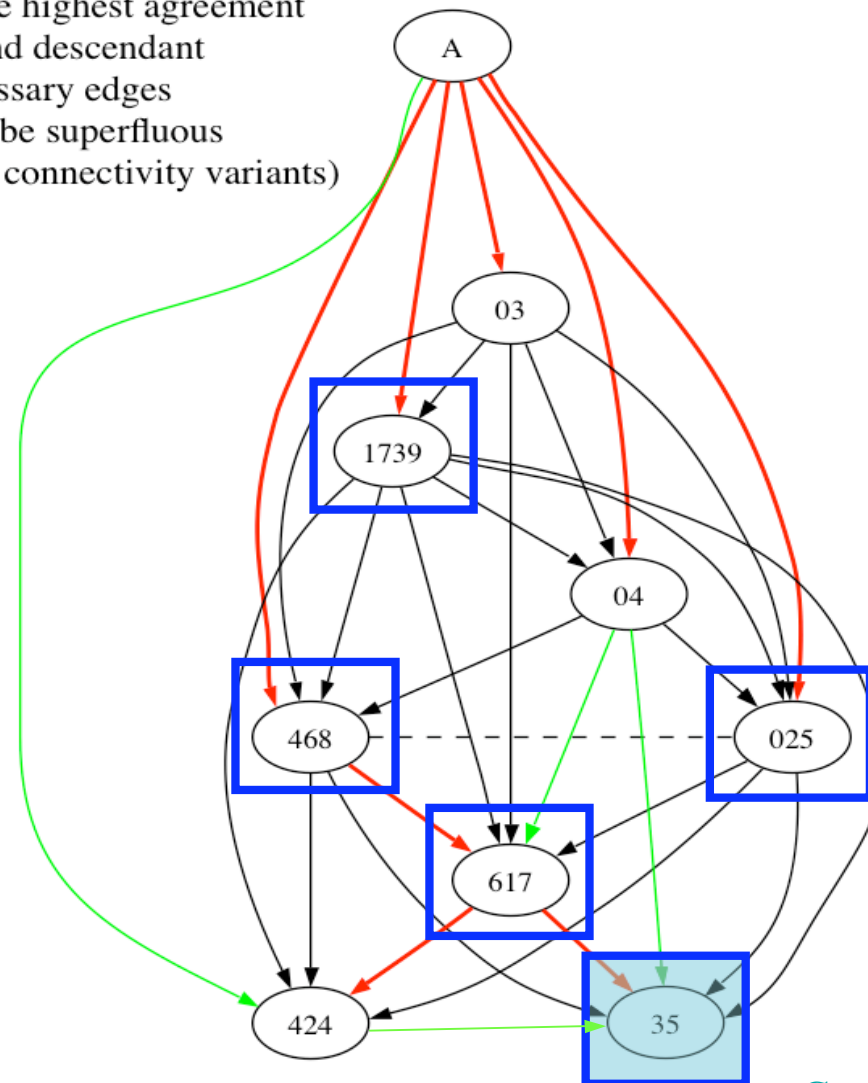
red: edges with the highest agreement
of ancestor and descendant
red or black: necessary edges
green: edges may be superfluous
(based on low connectivity variants)



Descendant and ancestors
are in a coherent field.

TOP OF THE GLOBAL STEMMA (excerpt)

red: edges with the highest agreement
of ancestor and descendant
red or black: necessary edges
green: edges may be superfluous
(based on low connectivity variants)



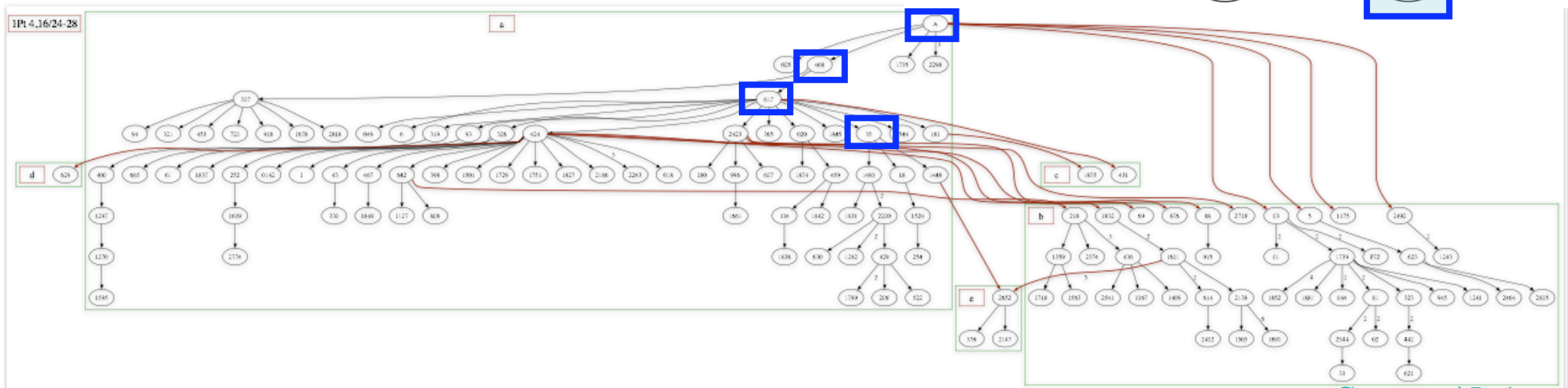
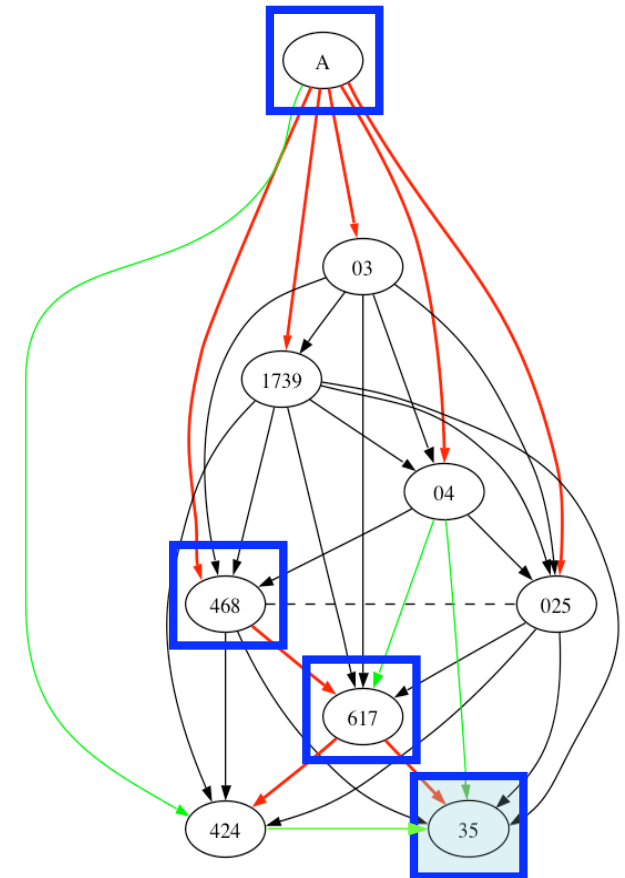
The stemmatic arrangement of these witnesses can be compared with textual flow diagrams which are based on genealogical coherencies only.

1Pt 4,16/24-28 δοξαζετω δε τον θεον εν ...

- a τω μερει τουτω c τω μερει τουτ
b τω ονοματι τουτω d τουτω τω μερε
e τω μερει τουτω η τω ονοματι τουτω

This is a textual flow diagram comprising the attestations of all the variants in 1Pt 4,16/24-28. Please compare the situation in the global stemma with that in the textual flow diagram.

Please continue to zoom in ...



[Contents](#) | [Index](#)

1Pt 4,16/24-28 δοξαζετω δε τον θεον εν ...

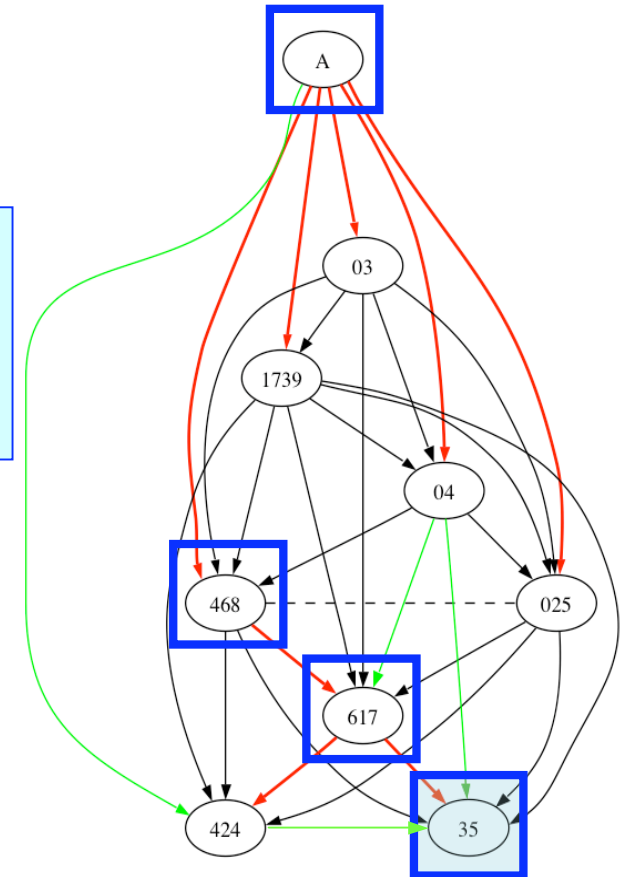
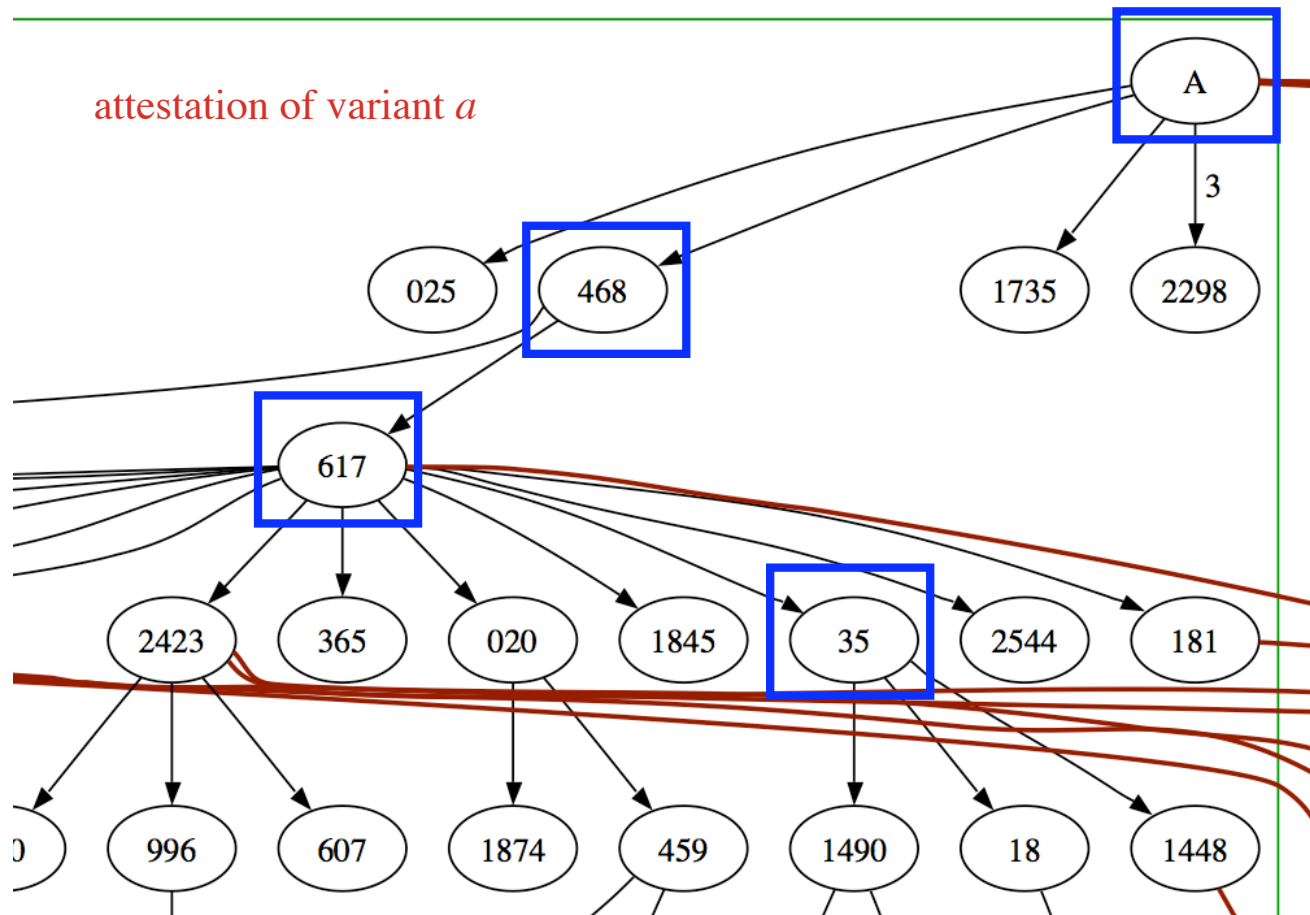
α τω μερει τουτω

ο τω μερει τουτου

β τω ονοματι τουτω

δ τουτω τω μερει

Although the compilation of textual flow diagrams is very different from constructing a global stemma, for the most part the diagrams make relatively reliable predictions of the relationships which will be found in the global stemma.

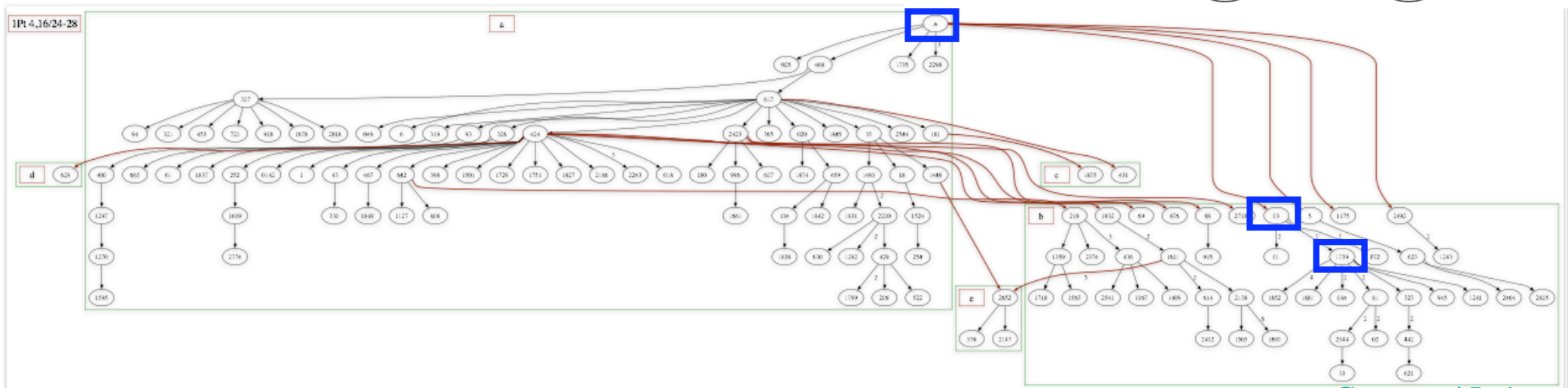
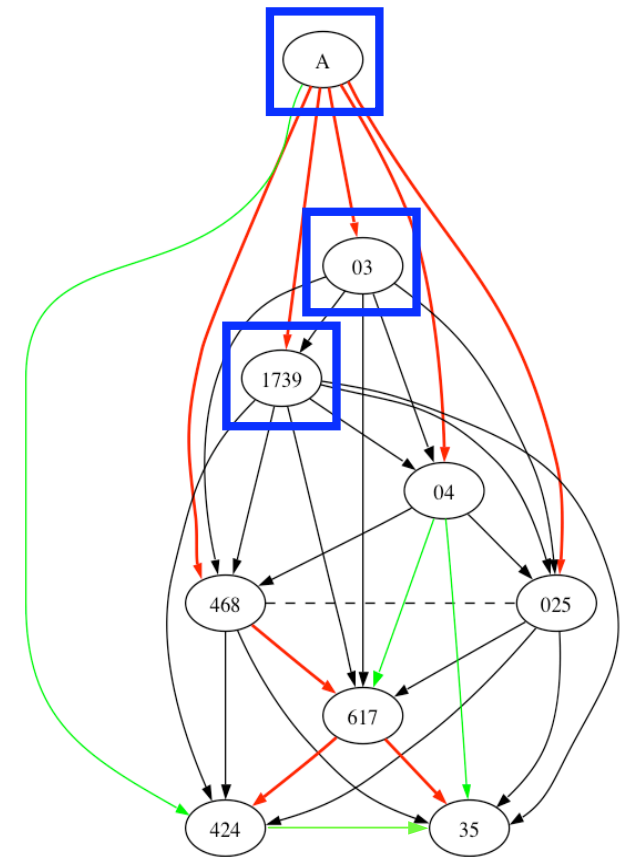


1Pt 4,16/24-28 δοξαζετω δε τον θεον εν ...

- a τω μερει τουτω c τω μερει τουτου
b τω ονοματι τουτω d τουτω τω μερει
e τω μερει τουτω η τω ονοματι τουτω

Another example: the way from the initial text to 1739 (variant b).

Please continue to zoom in ...



[Contents](#) | [Index](#)

1Pt 4,16/24-28 δοξαζεται δε τον θεον εν ...

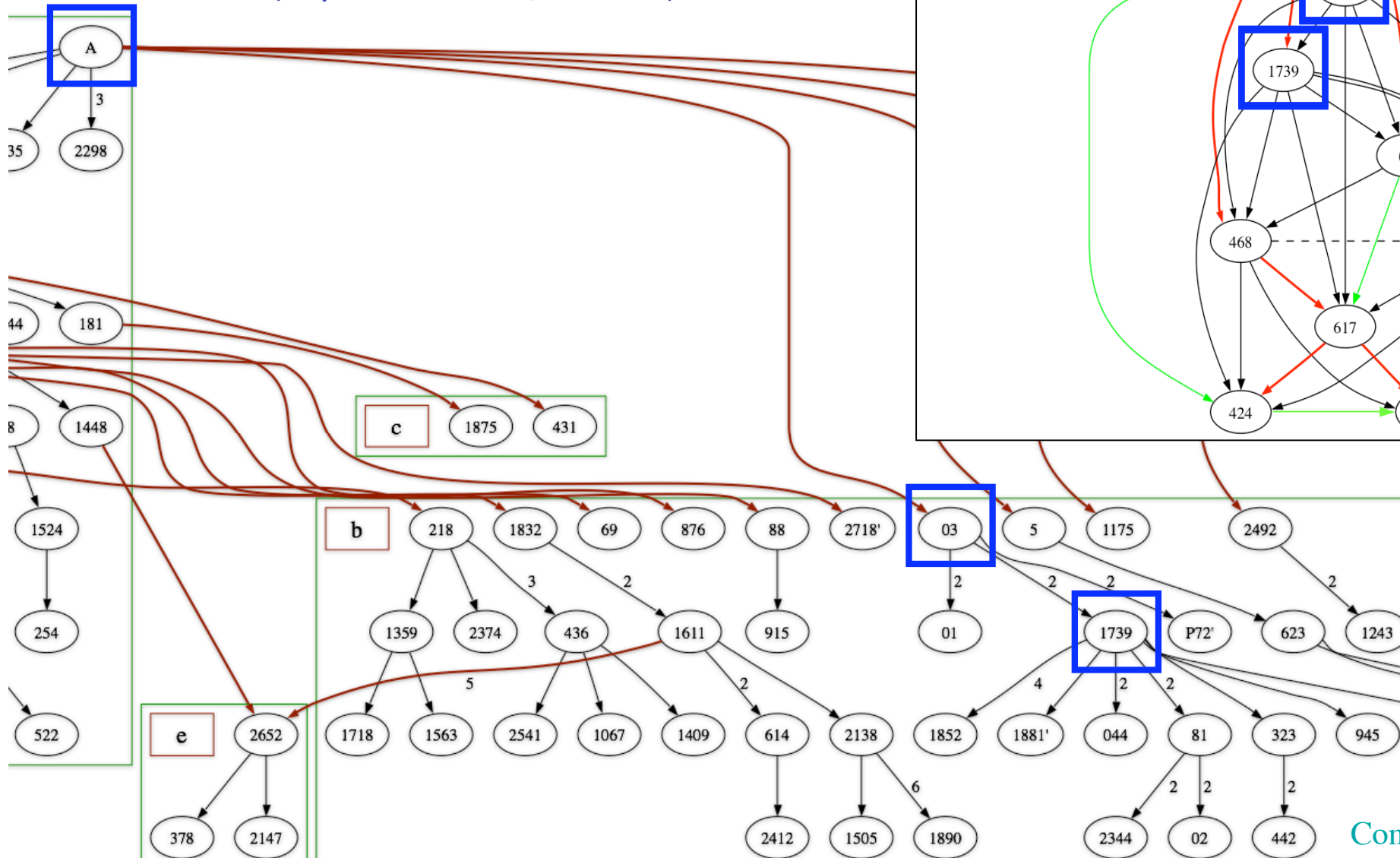
a τω μερει τουτω

c τω μερει τουτου

b τω ονοματι τουτω

d τουτω τω μερει

e τω μερει τουτω η τω ονοματι τουτω



[Contents](#) | [Index](#)

TOP OF THE GLOBAL STEMMA (excerpt)

red: edges with the highest agreement
of ancestor and descendant
red or black: necessary edges
green: edges may be superfluous
(based on low connectivity variants)

1Pt 4,16/24-28 δοξαζετω δε τον θεον εν ...

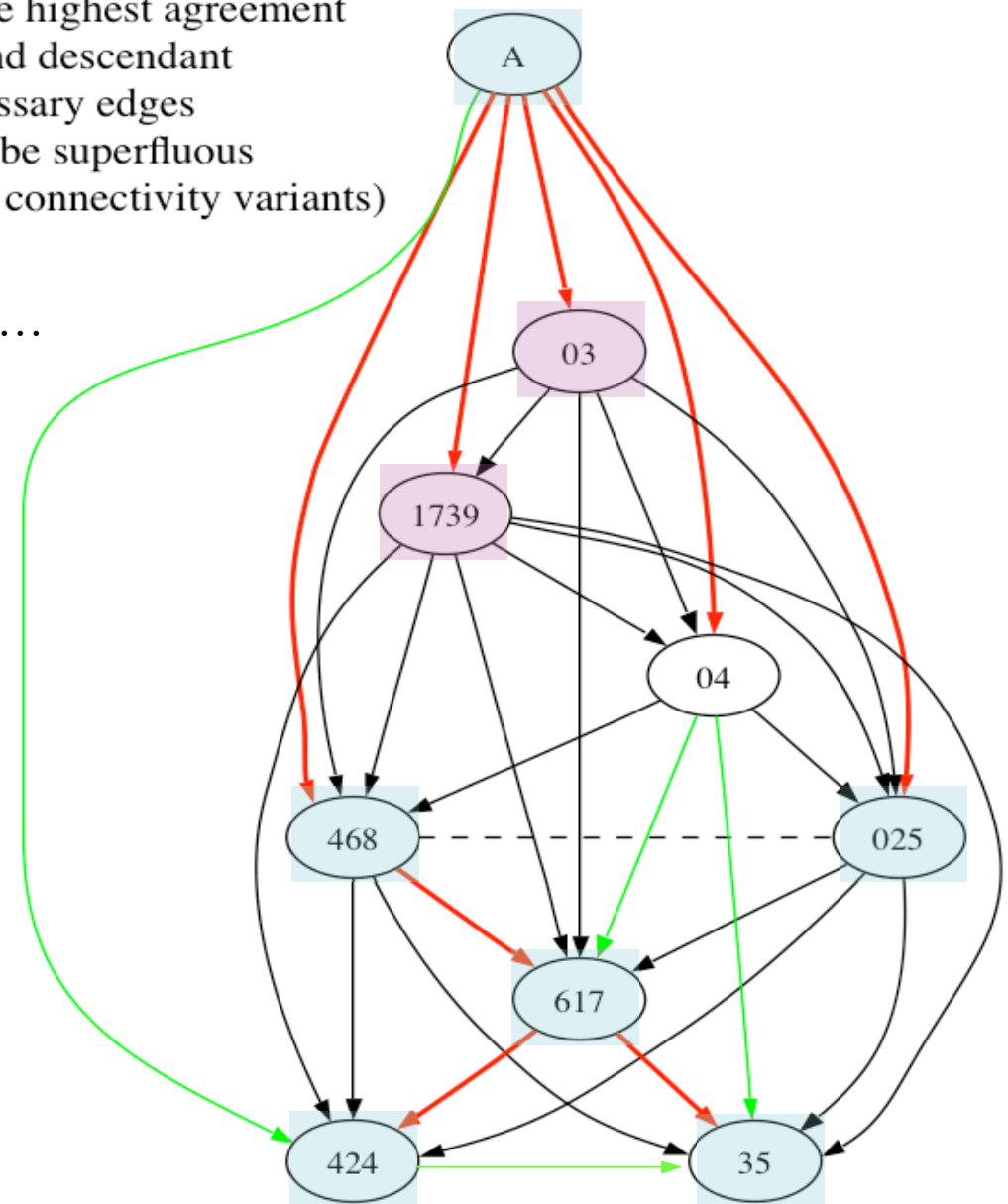
a τω μερει τουτω

b τω ονοματι τουτω

local stemma of these variants:



Between A and 03 variant *b* emerges.
Apart from that, please follow the arrows
pointing to witnesses with the same colour.
Between 468 and 025 there is no genealogical
direction despite close relationship.



[Contents](#) | [Index](#)

TOP OF THE GLOBAL STEMMA (excerpt)

red: edges with the highest agreement
of ancestor and descendant
red or black: necessary edges
green: edges may be superfluous
(based on low connectivity variants)

1Pt 4,16/24-28 δοξαζετω δε τον θεον εν ...

α τω μερει τουτω

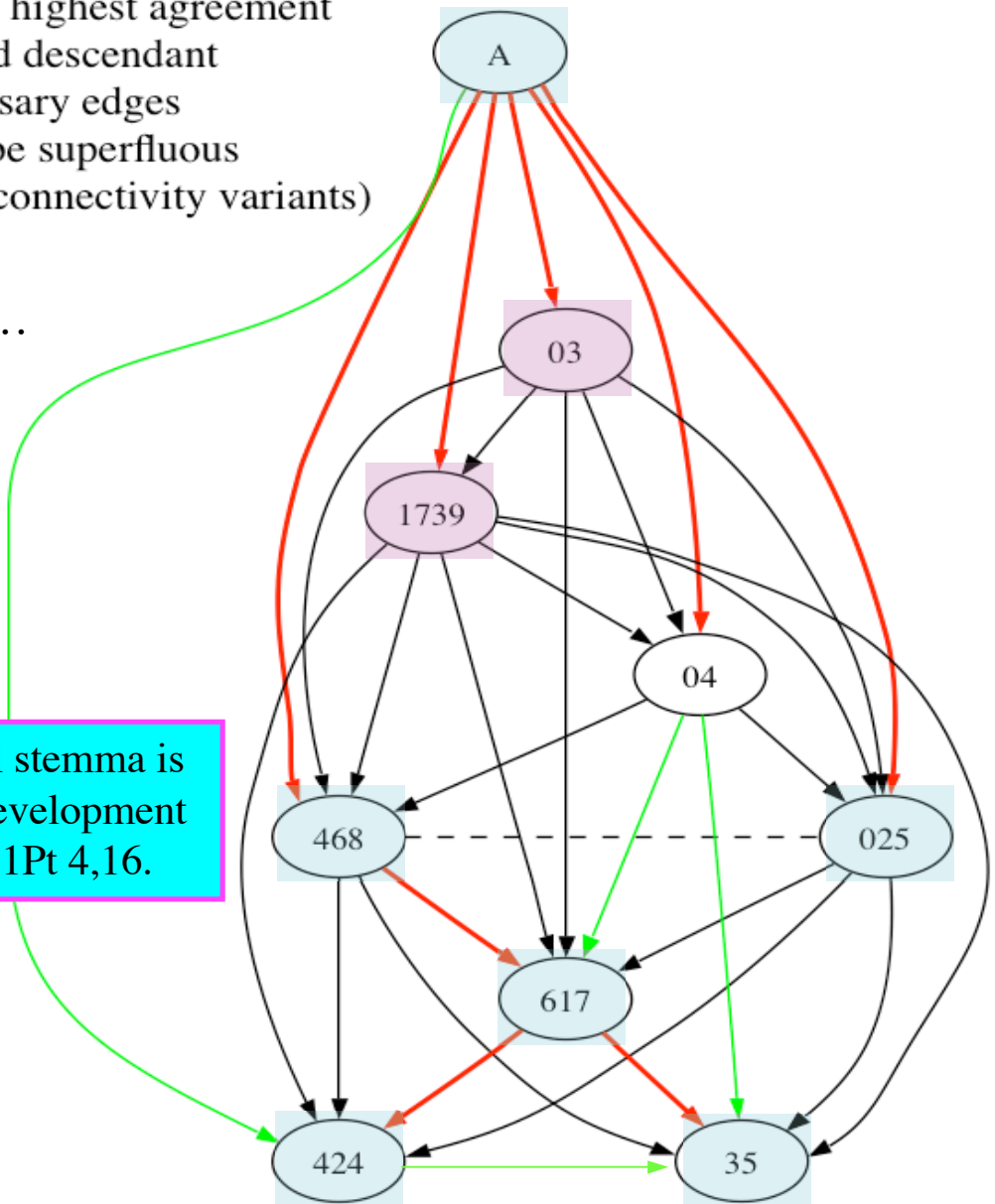
6 τω ονοματι τουτω

local stemma of these variants:

a
↓
b

This extract of the global stemma is in accordance with the development of variants assumed in 1Pt 4,16.

Between A and 03 variant b emerges.
 Apart from that, please follow the arrows
 pointing to witnesses with the same colour.
 Between 468 and 025 there is no genealogical
 direction despite close relationship.



Contents | Index

TOP OF THE GLOBAL STEMMA (excerpt)

red: edges with the highest agreement
of ancestor and descendant
red or black: necessary edges
green: edges may be superfluous
(based on low connectivity variants)

Jas 1,12/31 τον στεφανον ον επηγγειλατο ...

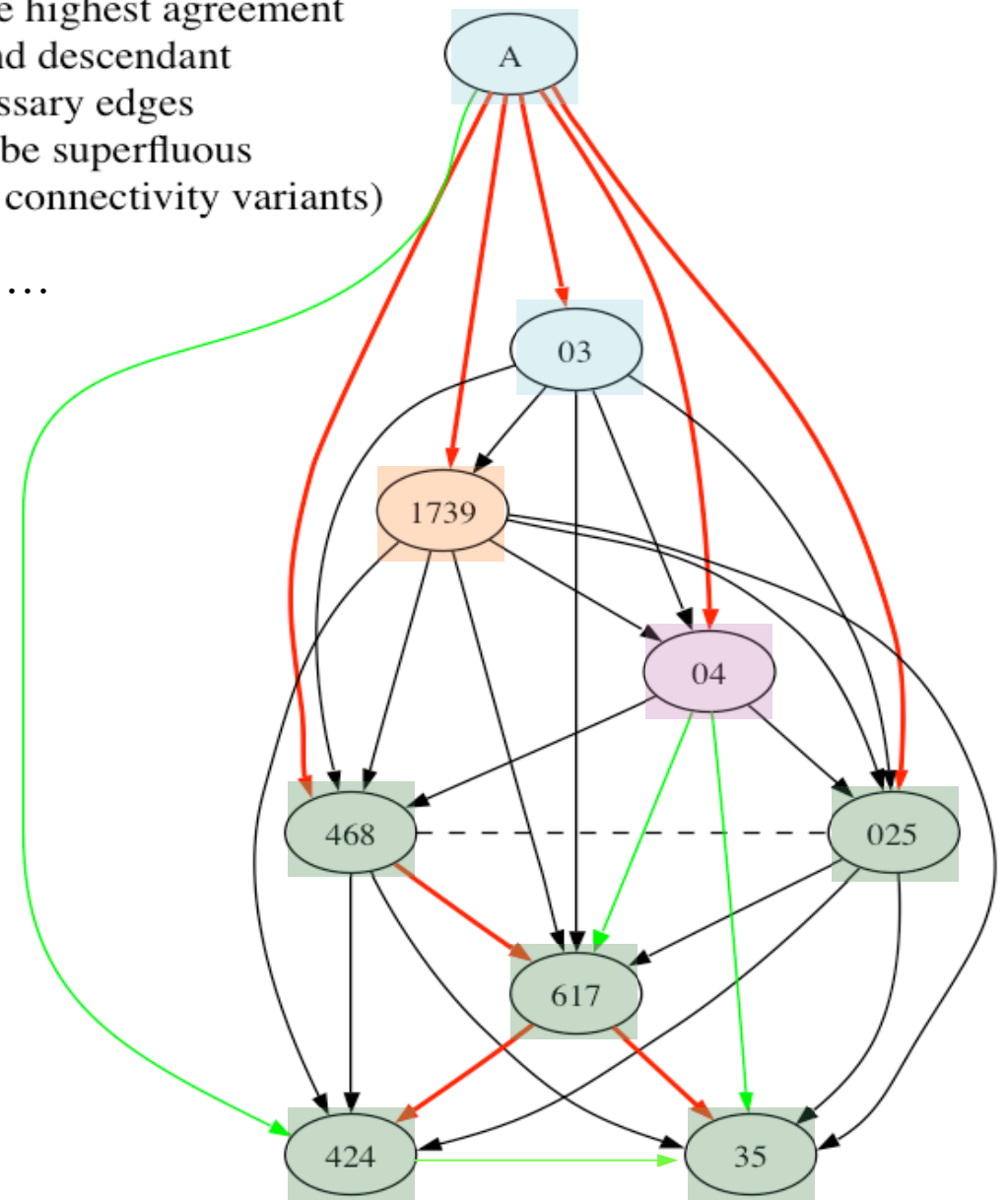
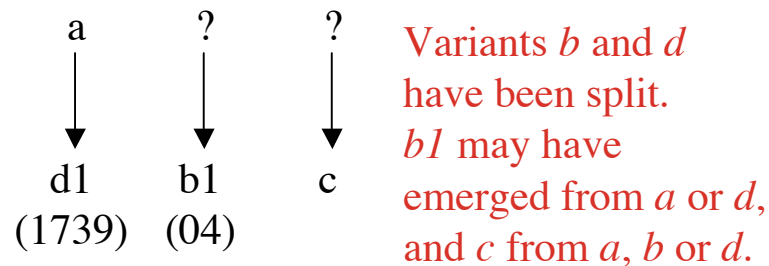
a om.

b κυριος

c ο κυριος

d ο θεος

local stemma of these variants
(only for witnesses displayed
in this extract of the global stemma):



[Contents](#) | [Index](#)

Between *A* and 1739 variant *d1* emerges.
 Between *A* or 1739 and 04 variant *b1* emerges.
 Between *A* or 1739 or 04 and 468 or 025
 variant *c* emerges.
 Apart from these connections, please follow
 the arrows pointing to witnesses with the same colour.

GLOBAL STEMMA (excerpt)

the highest agreement
 and descendant
 necessary edges
 may be superfluous
 (based on low connectivity variants)

Jas 1,12/31 τον στεφανον ον επηγγειλατο ...

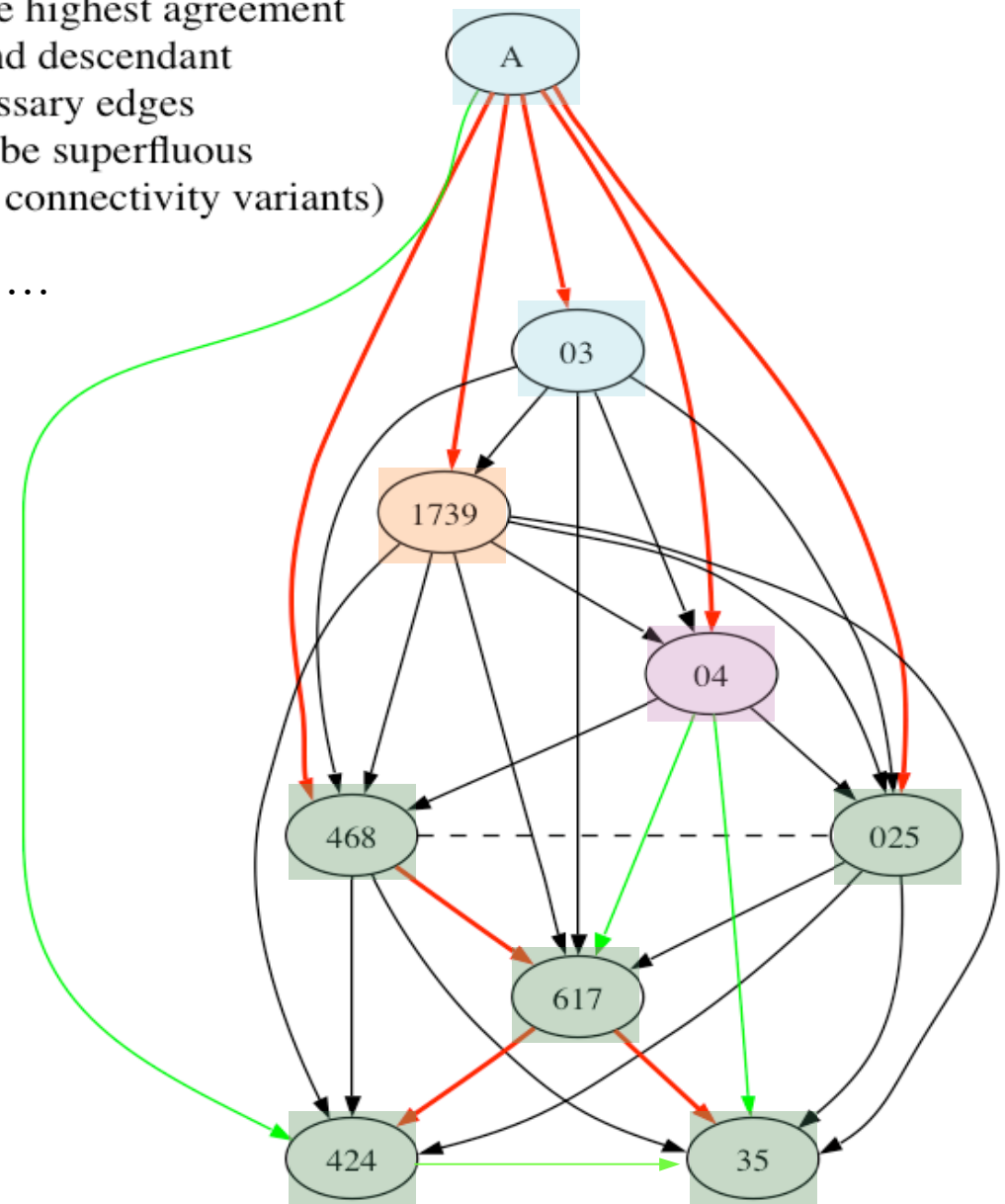
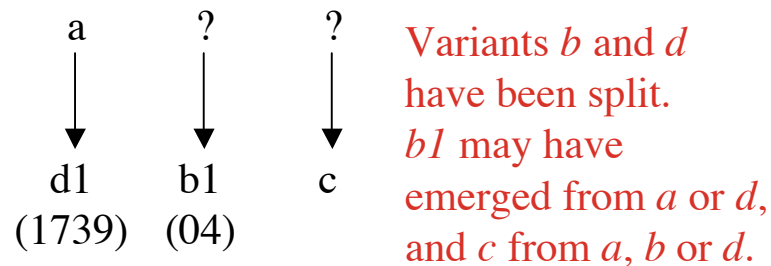
a om.

b κυριος

c ο κυριος

d ο θεος

local stemma of these variants
 (only for witnesses displayed
 in this extract of the global stemma):



[Contents](#) | [Index](#)

Between *A* and 1739 variant *d1* emerges.
 Between *A* or 1739 and 04 variant *b1* emerges.
 Between *A* or 1739 or 04 and 468 or 025
 variant *c* emerges.
 Apart from these connections, please follow
 the arrows pointing to witnesses with the same colour.

GLOBAL STEMMA (excerpt)

the highest agreement
 and descendant
 necessary edges
 may be superfluous
 (based on low connectivity variants)

Jas 1,12/31 τον στεφανον ον επηγγειλατο ...

a om.

b κυριος

c ο κυριος

d ο θεος

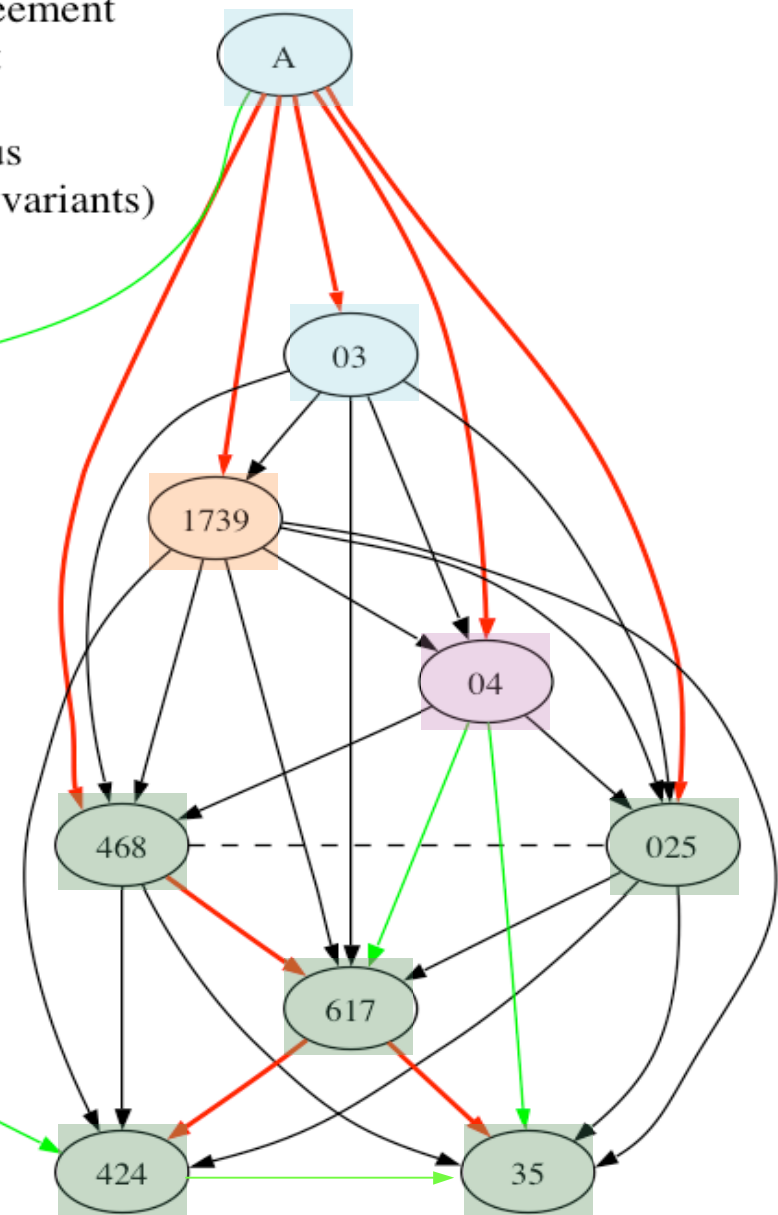
local stemma of these variants
 (only for witnesses displayed
 in this extract of the global stemma):

a ? ?
 ↓ ↓ ↓
 d1 b1 c
 (1739) (04)

Variants *b* and *d*
 have been split.

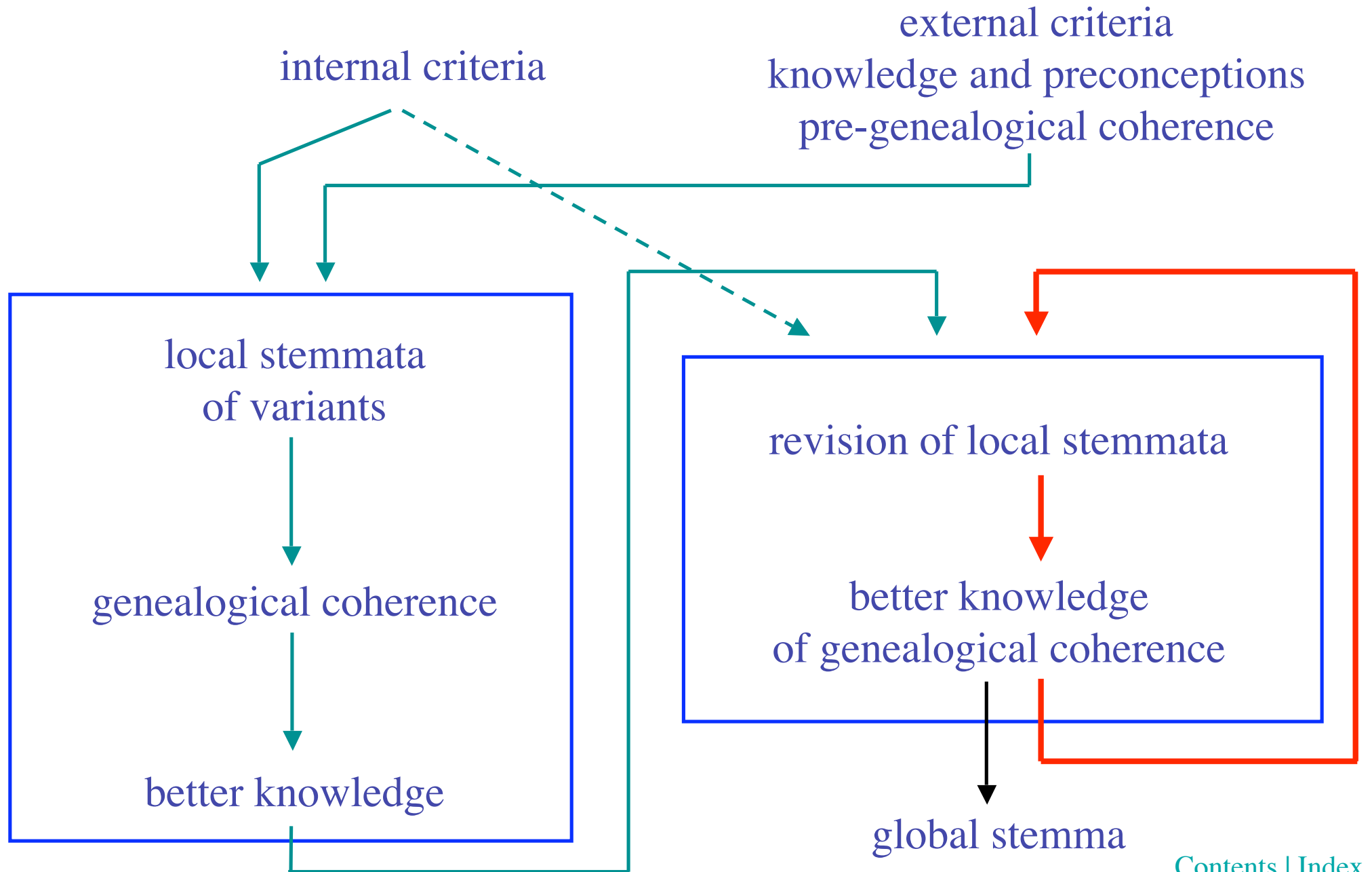
b1 may have
 emerged from *a* or *d*,
 and *c* from *a*, *b* or *d*.

The sources
 of these variants
 remain unclear.



[Contents](#) | [Index](#)

The iterative process



Some final remarks

The CBGM does not make textual decisions.

The CBGM does not dispense with philological reasoning.
Quite the contrary, it is based on it.

The CBGM is only a tool that helps
to get an over-all view,
to find structures within the tradition,
and to see the consequences of what you are doing.

The CBGM is a meta-method.

You can integrate everything that you found out using other methods.
It can be applied irrespective of what your position is –
reasoned eclecticism, radical eclecticism, Byzantine priority ...

Institut für neutestamentliche Textforschung Institute for New Testament Textual Research

INTF

Arbeitsstelle Editio Critica Maior

der Nordrhein-Westfälischen Akademie der Wissenschaften

Academy Project Editio Critica Maior

of the North Rhine-Westphalian Academy of Science and Humanities

<http://www.uni-muenster.de/INTF/>