

ARTICLE SECTION

Tim Kraft

tim.kraft@ur.de

How to Read the *Tractatus* Sequentially

Abstract

One of the unconventional features of Wittgenstein's *Tractatus Logico-Philosophicus* is its use of an elaborated and detailed numbering system. Recently, Bazzocchi, Hacker und Kuusela have argued that the numbering system means that the *Tractatus* must be read and interpreted not as a sequentially ordered book, but as a text with a two-dimensional, tree-like structure. Apart from being able to explain how the *Tractatus* was composed, the tree reading allegedly solves exegetical issues both on the local (e. g. how 4.02 fits into the series of remarks surrounding it) and the global level (e. g. relation between ontology and picture theory, solipsism and the eye analogy, resolute and irresolute readings). This paper defends the sequential reading against the tree reading. After presenting the challenges generated by the numbering system and the two accounts as attempts to solve them, it is argued that Wittgenstein's own explanation of the numbering system, anaphoric references within the *Tractatus* and the exegetical issues mentioned above do not favour the tree reading, but a version of the sequential reading. This reading maintains that the remarks of the *Tractatus* form a sequential chain: The role of the numbers is to indicate how remarks on different levels are interconnected to form a concise, surveyable and unified whole.

1. Introduction: How to read the *Tractatus*

One of the unusual features of Wittgenstein's *Tractatus Logico-Philosophicus*¹ is the elaborated numbering it uses instead of more conventional ways of arranging a philosophical text. For several decades the dominant attitude towards the numbering system appears to have been half-ignoring it: The numbering system is dutifully mentioned, but it is not given much relevance to interpreting the *Tractatus* either.² In a fascinating recent development Bazzocchi (2010a, 2010c, 2014a, 2014b, 2015), Hacker (2015) and Kuusela (2015) argue against this attitude by construing the *Tractatus* as a text with a two-dimensional, tree-like structure, which must be read and interpreted accordingly.³ As advertised by Hacker, the tree reading explains

how the *Tractatus Logico-Philosophicus* was composed, precisely what the numbering system of the book signifies, and hence, how the book was meant to be read. [...] Read correctly, [...] the line of argument becomes clear, the anaphoric references, baffling in a consecutive reading, become evident, and the interpretation of the text becomes much easier. The *Tractatus* must be read *in accordance with the numbering system*, and that *demand*s that the reader follow the text after the manner of a logical tree. (2015: 648 f.)

If correct, the tree reading has wide-ranging consequences: It promises solutions both to problems of detail, e. g. what “this” in 4.02 refers to, as well as to central exegetical problems, e. g. how ontology and picture theory are related, how the eye analogy fits into the discussion of solipsism and whether the *Tractatus* must be read resolutely. In this paper I argue against the tree reading on two fronts: On the destructive side, I argue that the tree reading offers

¹ The *Tractatus Logico-Philosophicus* (originally published 1921/1922) is abbreviated *TLP*, the *Prototractatus* (Wittgenstein 1971) *PT*. Quotations are from the critical edition (Wittgenstein 2001) and from the translation by Pears and McGuinness (Wittgenstein 1961).

² Notable exceptions are Stenius 1960, Ludwig 1975, Mayer 1993 and Gibson 1996 who provide extended discussions of the numbering system. For interpretations that fall somewhere within the range between extraordinary overinterpretation and esoteric numerology see Finch 1971 (4 as the centre surrounded by the pairs 1/7, 2/6 and 3/5, zero remarks indicate what is unsayable), Scheier 1988 (boustrophedon reading), Lange 1989 and 1996 (*Tractatus* must be read in 141 sequences of seven remarks each).

³ Hacker mentions some precursors of the tree reading (Schroeder 2005: 23–26, White 2006: 16–18), but neither of them defends it explicitly.

neither an adequate account of the structure of the *Tractatus* nor a convincing solution to any of the exegetical issues it allegedly solves. On the constructive side, I argue that there is a version of the sequential reading – the sequential chain reading – that offers a better account of the structure of the *Tractatus* and fares at least as well with respect to the exegetical issues. After introducing the problems surrounding the numbering system of the *Tractatus* (section 2), I sketch two interpretations of the numbering system, the tree reading and the sequential chain reading (section 3). In the sections that follow I discuss three central issues: how to understand Wittgenstein’s own explanation of the numbering system (section 4), how to resolve anaphoric references within the *Tractatus* (section 5) and how the two readings differ with respect to the broader exegetical issues mentioned above (section 6). (Since sections 4–6 contain a lot of short discussions of sample passages of the *Tractatus*, readers can skip those sections they are not interested in without loss of continuity.) Finally, I summarise my case for the sequential chain reading (section 7).

2. Interpreting the numbering system of the *Tractatus*

As is well known, Wittgenstein did not take the numbering system lightly. When Ludwig von Ficker, whom Wittgenstein had contacted as a potential publisher, inquired whether the *Tractatus* could be printed without the numbers (von Ficker 1988: no. 477), Wittgenstein replied on 5 December 1919:

(By the way: the decimal numbers of my remarks absolutely must be printed alongside them, because they alone make the book perspicuous and clear: without the numbering it would be an incomprehensible jumble.) (*PT*: 18 f./1980: no. 115)

Yet, beginning with the earliest published reactions to the *Tractatus* interpreters have been rather critical of its style and numbering system (Ramsey 1923, de Laguna 1924). A similar attitude can be found in several of the early monographs on the *Tractatus* (e. g. Black 1964, Favrholt 1964). Black even went so far as to suggest that the numbering system may be “a private joke on the reader’s expense” (1964: 2).

But what explains this dismissive attitude towards the numbering system? It is difficult to tell with any certainty, but apart from being unconventional a number of reasons seem to contribute their share. The numbering system easily creates expectations that are never met by the *Tractatus*. It reminded many readers of similar numberings systems of logical and mathematical treatises, e. g. Russell and Whitehead's *Principia Mathematica*. Evidently, presenting a logical system with axioms, definitions, theorems and lemmas is not the role of the *Tractatus*'s numbering system. The numbering system may also be expected to mark chapters, sections, subsections and so on. Again, this is not how Wittgenstein uses the numbering system. Judging from their 'headings', the first two 'chapters' should be about ontology, but starting with 2.1 the predominant topic are pictures. Similarly, judging from its 'heading', the sixth 'chapter' is about Wittgenstein's claim that all sentences share a logical form. However, the remarks of this 'chapter' neither explain the symbolism nor offer an argument for this particular general form. All of that happens in the preceding 'chapter(s)'. To understand this 'chapter' readers have to go backwards searching for Wittgenstein's account of variables, the *N*-operator and so on. Of course, readers who are already familiar with the book will easily find the relevant passages, but not because the alleged headings tell what is where.⁴ In addition to its function being obscure, the numbering system also has maze-like aspects. While the hierarchical arrangement of the first eight remarks may be perspicuous, starting with the ninth remark (2.01) things get more complicated. Here readers come across the first zero remark with the first major comment (2.1) being postponed until the 50th

⁴ In this context a comment Wittgenstein made in a conversation with Drury may seem relevant: "the *Tractatus* [is] highly syncopated. Every sentence in the *Tractatus* should be seen as the heading of a chapter, needing further exposition." (Drury 1984: 159) But Wittgenstein's comment is not evidence for the table of contents interpretation of the numbering system. For his point is that every remark stands in need of further explanation, not that they were intended as an *ersatz* table of contents. This remark fits more with an episode reported by Moore: "Ramsey told me that, in reply to his questions as to the meaning of certain statements, Wittgenstein answered more than once that he had forgotten what he had meant by the statement in question." (Moore 1954: 2f.)

remark. Moreover, starting with the 14th remark (2.0123) – again quite early in the text – there is a sequence of eleven remarks (until 2.0211) containing no two neighbouring remarks that are at the same level. Finally, there are also signs of a hidden double meaning behind the numbering system that can easily strengthen the impression that its role is predominately an aesthetic one. For example, it has been suggested⁵ that it is no coincidence that 7 consists of two clauses of seven syllables each, that ‘chapter’ 1 and ‘section’ 6.5 consist of seven remarks each and that 3.5 as seven’s half and 4 as the midpoint in a series of seven items form the twin centre of the *Tractatus*.

In addition to these qualms about the numbering system as such, Wittgenstein’s actual implementation poses several challenges to any interpretation of the numbering system. A *first* challenge is the comment problem: According to Wittgenstein’s own explanation (in the footnote to 1), decimal remarks are “comments on” the remark with one digit less. This explanation has proven to be elusive: Are remarks comments individually or do siblings form a comment together? For example, is 4.5 individually a comment on 4 or does it continue the sequence 4.1, 4.2, 4.3, 4.4 to form a (unified) comment on 4? Some remarks do not even seem to be comments at all. For example, 2.1 introduces a new topic instead of merely commenting on 2.

A *second* challenge is the logical weight problem: According to Wittgenstein’s own explanation, the numbers are supposed to indicate their “logical weight (*logisches Gewicht*)” and the “stress (*Nachdruck*) laid on them”, i. e. important remarks have less digits than less important ones. But that does not always seem to be the case. For example, 4.0312 (“my fundamental idea is that the ‘logical constants’ are not representatives”) and 4.111 ff. (on philosophy) appear to be more important than the number of digits suggests.

A *third* challenge is the zero remark problem: The *Tractatus* contains fifteen sets of zero remarks, i. e. sets of remarks

⁵ For references see fn. 2. Let me emphasise that I am not endorsing any of these suggestions. To the contrary, I am mentioning them solely to explain why its numbering system may strike readers of the *Tractatus* as off-puttingly strange.

containing at least one zero. Wittgenstein's explanation of the numbering system does not cover zero remarks explicitly, but a natural interpretation is the identity thesis: 2.01, for example, is a comment on 2.0 which is identical with 2 (Stenius 1960, Ludwig 1975). But how are the two (or three) different sets of comments on a given remark related to each other? If the number of digits indicates importance, zero remarks are less important than the non-zero remarks. However, since zero remarks are always prior in order, they are always closer to their parent remark – and more, not less informative – than the non-zero remarks. Compare, for example, the informativeness as *comments* of 2.01 and 2.1 or 4.001, 4.01 and 4.1.

A *fourth* challenge is the anaphoric reference problem: The *Tractatus* contains only two explicit cross references (5.151, 5.31), but plenty of implicit cross references (anaphoric pronouns, demonstratives, indexicals, inferential particles, etc.). In some cases, e. g. 4.02, 5.64 and 6.01, interpreters struggle to resolve these references. These remarks contain anaphoric pronouns that can refer back to something mentioned in the immediately preceding remark (e. g. 4.016, 5.634 or 6.002) or in the preceding same-level remark, if there is one (e. g. 4.01, 5.63), or in the higher-level remark they are a comment on (e. g. 4, 5.6 or 6).

To sum up, readers should be forgiven for thinking that whatever the merits of the numbering system are, Wittgenstein has plainly overdone it. The numbering system appears to introduce only an additional, distracting layer to an already difficult to understand text. In the absence of a constructive account of the numbering system and its role, the *Tractatus* hands out too many invitations to dismiss it, or so it seems. Thus, why not put their numbers to the background and focus solely on the interpretation of the remarks themselves?

3. The tree reading and its rivals

There are two principled ways of responding to this question and the challenges that give rise to it: Whereas orthodox, sequential approaches take the *Tractatus* to be a linear text, non-sequential approaches take it to be a non-linear, two-dimensional text. In this

section I introduce these two approaches to the numbering system of the *Tractatus*.

The tree reading, as defended by Bazzocchi, Hacker and Kuusela, promises to explain the numbering system in a systematic way that clarifies the general outline of the *Tractatus* and avoids errors of interpretation that stem from ignoring the numbering system. To read the *Tractatus* as a two-dimensional tree means to read it not as a sequentially ordered text, but as non-linear text consisting of a root (1, 2, 3, ..., 7) from which fourteen branches (1.*m*, 2.0*m*, 2.*m*, 3.00*m*, 3.0*m*, 3.*m* and so on) originate and which in turn lead to even further branches until the leaves or endpoints are reached. These branches are in a strict hierarchical order, but not in a sequential order. The branch 2.*m*, for example, does not come before or after the branch 2.0*m* or the branch 3.*m*, but is just independent of these other branches. Although branches are not ordered, within a branch order matters. For remarks are comments jointly with their siblings. 2.1 and 2.2, for example, are not independent comments on 2, but belong to the same branch and form a comment together.⁶ The result is a text arranged like a tree: The *Tractatus* now consists of 183 branches containing on average 2.9 remarks with 1 branch containing the maximum number of nine remarks and 67 branches containing only a single remark. 72 branches lead to, usually multiple, further branches and 111 branches consist only of uncommented on remarks. Thus, when reading the *Tractatus* not a particular, predetermined order is to be followed, but the text is to be explored by following branches and nodes until an endpoint is reached and the reader must return to one of the branches or nodes she came from. There is no obvious (non-cheating) way of ensuring a complete reading, but that is presumably considered a feature, not a bug.⁷

⁶ The *Tractatus* is, therefore, not a tree in the logical or mathematical sense, even on the tree reading. Mathematical trees contain only one type of relation between nodes, but the figures by Bazzocchi (2013: 40, 2014a: 256, 2014b: i) and Hacker (2015: 655) need two kinds of lines, solid and dashed, to represent the ‘comment on’ relation and the ‘belongs to the same set of comments as’ relation.

⁷ A printed tree version of the *Tractatus* printing every branch as a single page is Bazzocchi 2014b.

Equipped with this account of the structure of the *Tractatus*, the tree reading can answer the challenges raised above.⁸ Regarding the comment problem, the tree reading takes the idea that all decimal remarks are comments on and only on the remark with one digit less seriously. This is the idea which motivates the tree reading in the first place. Regarding the logical weight problem, it distinguishes two senses of ‘important’: A remark can be important in the sense of being a remark on which other remarks depend (“weight-bearing”) or it can be important in the sense of being a ‘fruit of the tree’, that is, an important result of other, more central remarks. The “fundamental idea” of 4.0312 is important in the latter, but not the former sense (Hacker 2015: 649 n. 2). Regarding the zero remark problem, the tree reading bites the bullet: The different sets of comments are “equipollent” (Hacker 2015: 655) and it is arbitrary which set gets the zero numbers and which one the non-zero numbers. Regarding the anaphoric reference problem, the tree reading solves it in a principled way: All anaphoric references are to the preceding same-level sibling, if there is any, or to the preceding higher-level.

For interpreting the *Tractatus* the tree reading has several consequences. Most importantly, the unit of interpretation should be branches, which often consist of remarks that are not printed close to each other in traditional editions. For example, 4.1, 4.2, ..., 4.5 must be read and interpreted together, not with their sequential predecessors and successors. Moreover, there is not a single end or conclusion to the text, but a multitude of endpoints. Since all remarks are connected to a higher-order remark and their siblings, many remarks must be read and interpreted independently of remarks they are usually read and interpreted with.

It is tempting to object to the tree reading that it credits Wittgenstein with an invention that is plainly too advanced for the

⁸ For discussing the tree reading it is useful to distinguish between the thesis that the *Tractatus* can be read and interpreted as a tree and the thesis that it must be read and interpreted that way. Since the weaker thesis is too non-committal to give helpful responses to the challenges, I take the tree reading to defend the stronger thesis. Unfortunately, tree readers are not always clear on that point. According to one of Hacker’s descriptions, the tree reading is adopted “once one avoids reading the work only consecutively, and also reads it tree-wise” (2015: 649, emphasis added).

pre-computer age. Fortunately, the tree reading has a good response to this objection, namely that it fits rather well with (what we know about) how Wittgenstein actually composed the *Tractatus*. The tree structure is a natural byproduct of the genesis of the *Tractatus* as MS 104 shows, i. e. the manuscript from which the *Prototractatus* was derived (Bazzocchi 2010b, 2015). The philological details are complex, but some key recent findings are the following:⁹ Wittgenstein composed the *Prototractatus* by first writing down a core structure consisting of (some of) the cardinal remarks¹⁰ to which he added further remarks of which many are selections from his (often diary-like) notebooks. Even if we do not know how exactly Wittgenstein kept the numbering system consistent, it is clear that the *Tractatus* was not written in the order as it appears now, but was composed by adding layer after layer to a bare outline. Thus, relying on a numbering system was an important writing tool. It allowed Wittgenstein to organise his thoughts in a systematic way and to take precautions against being unable to complete his work. At any stage of composition there existed a more or less detailed, yet comprehensive summary of his ideas. At the same time the role of the numbering system is clearly not limited to its instrumental role. As Wittgenstein stated in the letter to von Ficker, the surveyability, clarity and unity of the *Tractatus* depend on it – the focus of this paper is how it achieves that, not how it helped Wittgenstein composing the *Tractatus*.¹¹

⁹ In addition to the papers by Bazzocchi see also Potter 2013, Pilch 2015 and Hacker 2015: 653–657. Examples of controversial issues are the dating of *PT*, especially when Wittgenstein *began* writing it, how exactly Wittgenstein kept the numbering system consistent over an extended period of time and the identity of various manuscripts and typescripts mentioned in so-called Hermine’s list and in various letters and recollections.

¹⁰ Due to the Pilch’s (2015) impressive philological work we know now that the original first paginated, now missing, page of MS 104 contained cardinal remarks 1–6 (with 7 and the formula in 6 being added later). The first surviving page of the MS repeats the cardinal remarks 1–6 and adds some of the first-level remarks.

¹¹ Several conjectures have been made as to which texts may have inspired Wittgenstein’s use of a numbering system. Since texts with numbers are not rare – legal documents, manifestos, modern editions of the bible, textbooks come to mind –, it is not clear how much inspiration Wittgenstein needed, but Russell and Whitehead’s *Principia Mathematica* (e.g. McGuinness 1988: 265, 301) and Tolstoy’s *Gospel in Brief* (Westergaard 2009) are the most likely candidates. Wittgenstein was familiar with both and there are at least some similarities. But similarities are not proof of an actual influence, of course.

3.2 *The Tractatus as a sequential chain*

The tree reading is a powerful challenge to orthodox, sequential readings of the *Tractatus*. At the very least, it forces proponents of an orthodox reading to explain and defend their approach. But the arguments for the tree reading also suffer from underestimating the sequential reading. This reading is not to be confused with a nihilistic reading that ignores the numbering system altogether. To the extent that arguments for the tree reading are plainly arguments in favour of paying attention to the numbering system at all, they may have a point against particular, isolated interpretations that fail to do so, but not against the sequential reading. Understood correctly, the sequential reading claims that the numbering system serves a different purpose than the tree reading assumes, not that it has no function at all. To distinguish this reading from the nihilistic reading, I also call it the '(sequential) chain reading'. Since its main tenets were not clearly stated in the literature before the tree reading was presented as an alternative to it, it is difficult to tell who does or would adopt it, but by taking up some ideas it is possible to at least sketch what a sequential reading can and should look like.

The sequential chain reading takes as its starting point the observation that the cardinal remarks are linked by overlapping elements: With the exception of 7, each cardinal remark picks up a topic from the preceding remark and introduces a new one (e. g. Stenius 1960: 6, Dietrich 1973: 6):

world (1) – what is the case (1, 2) – facts (2, 3) – thoughts (3, 4) – propositions (4, 5) – truth-functions (5, 6) – general form (6)

A central motivation of the chain reading is that this observation can be generalised to the *Tractatus* as a whole. Decimal remarks, too, are usually both backwards- as well as forwards-directed insofar as they continue the topic under discussion and link it with the (sub-)topic to be discussed in the following remarks. As an example, consider 2 and 3: What they have in common is that they are both partly about facts. But what is new in 3 (thoughts as logical pictures of facts) is prepared by 2.1 (pictures of facts) and 2.2 (logical pictures and shared form). Both 2.1 and 2.2 are, of

course, also connected to 2 with facts and states of affairs being the common thread. Thus, the sequential reading and the tree reading disagree about the basic function of decimal remarks: Whereas a decimal remark is just a comment on a particular higher-level remark according to the tree reading, a decimal remark connects remarks before as well as after it according to the sequential reading. The numbers are meant to reveal the unity and interdependence of the remarks, not their separation into distinct branches. The sequential chain reading also takes seriously what Wittgenstein has to say about the book's main topic and thesis in the preface: Its topic is to "to draw a limit [...] to the expression of thoughts" and its basic conclusion is that "what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence" (*TLP*: preface). Hence, the *Tractatus* does have a direction and leads somewhere. The chain structure combines hierarchy with a kind of progression absent in a tree: The remarks are at different levels in a hierarchy, but they also advance the discussion towards a conclusion. Of course, how exactly the *Tractatus* does so cannot be answered by looking solely at its structural features. Looking at the structural features is necessary, but by no means sufficient for understanding why the *Tractatus* is not an "incomprehensible jumble". Not any series of remarks with overlapping elements forms a unified whole. Since it is advisable to look at examples when wanting to understand how a unity is achieved by a chain of remarks, see below my discussion of 2.063/2.1 (transition from ontology to picture theory), 5.53 (on identity) and 5.63 (eye analogy) for more on advancing a discussion with the help of such chains.¹²

With that account at hand, we can return again to the four challenges raised above. Regarding the comment problem, the

¹² Although the chain metaphor is very loosely inspired by 2.03, that does not mean that the chain reading is committed to drawing an analogy between the structure of facts and the structure of the *Tractatus* itself. It is merely a coincidence that the chain metaphor can be used for both. For the same idea can be expressed by other metaphors as well, for example a train ride in a foreign country. We can take the high-speed train only stopping at major cities (seven stops) or the express train stopping at minor cities as well (32 stops) or the slow train calling at every village (526 stops). Either way we will get to know something about the country and reach our destination.

sequential chain reading accepts the objection and rejects the idea that decimal remarks are best understood as comments on their parent remark. Instead, their basic function is to connect several remarks with each other. Regarding the logical weight problem, the sequential reading differs from the tree reading. It assumes, as does the tree reading, that remarks can be important when looked at in one way and not that important when looked at in a different way. But 4.0312, for example, owes its importance not to its being a result or ‘fruit’, but to its function and context. Its importance derives from which other ideas it links with each other and how it does so. That logical constants do not refer is a “fundamental idea” because it suggests looking more closely at other parts of propositions and whether they represent something or not. It is an idea that opens up a new perspective (to put it even more metaphorically, it is a key or seed), but it is neither a premise or axiom nor a result ending an investigation. Regarding the zero remark problem, the sequential chain reading sees their function differently, too. There must be zero remarks because otherwise there would be no way to link a cardinal remark with its first supporting link. Thus, zero and non-zero remarks are not independent and equipollent. The first non-zero remark is connected to its higher-level predecessor via zero remarks that both comment on the higher-level predecessor and prepare the next step, the first non-zero remark. Regarding the anaphoric reference problem, the sequential chain reading predicts that anaphoric references need to be resolved by looking at the context. Anaphoric expressions usually do not pick up something mentioned several remarks or even pages ago.

3.3 An objection

With the two readings of the numbering system outlined, I turn to the arguments that have been advanced in favour of the tree reading in the next three sections. But before doing so, I need to address an objection: Why is there even a need to decide between the two interpretations? The bottom line is that they make incompatible predictions when applied to individual remarks: Either 2.1 continues 2.063 (as the sequential chain reading predicts)

or it does not (as the tree reading predicts), either 4.02 continues 4.016 or it does not, and so on. Of course, it may turn out that both interpretations make some correct and some incorrect predictions. But even if that were the case, it would be instructive to know which interpretation is closer to Wittgenstein's intentions. I will argue below that one interpretation – the chain reading – is clearly superior in that regard, but that does not mean that it is a bad idea to keep in mind that both interpretations of the numbering system exist and can both be applied whenever discussing specific (series of) remarks.

4. Wittgenstein's explanation of the numbering system

The first argument for the tree reading is that it can make better sense of Wittgenstein's own explanation of the numbering system by taking it at face value. It is contained in the footnote to the first remark of the *Tractatus*:

The decimal numbers assigned to the individual propositions indicate the logical weight¹³ of the propositions, the stress laid on them in my exposition. The propositions *n.1*, *n.2*, *n.3*, etc. are comments on proposition no. *n*; the propositions *n.m1*, *n.m2*, etc. are comments on proposition no. *n.m*; and so on.

What we find here is a functional claim (numbers indicate logical weight and stress) and a structural claim (numbers indicate to which other remark a remark is related). Starting with the functional claim, both terms used – “logical weight (*logisches Gewicht*)” and “stress (*Nachdruck*)” – are standing in need of some clarification. As I understand him, Wittgenstein does not define logical weight as stress or *vice versa*, but thinks of them as two sides of the same ideal: He hints at a supposed harmony between form (“stress laid on them in my exposition”, how the remarks are presented) and content (“logical weight”, what their relevance or importance is). Although one may wonder what “logical” means here, Wittgenstein's use of “logical” should not be overinterpreted.

¹³ Following Hacker (2015: 649 n.2) I have altered the translation from “importance” (*Wichtigkeit*, the term used in *PT*) to the more literal “weight” (*Gewicht*, the term used in *TLP*).

What he has in mind are not only or even predominately logical relations. The cardinal remarks are neither a system of axioms from which the other remarks follow deductively nor are they conclusions with the decimal remarks as their premises. Instead I take it that “logical” contrasts with “psychological”. By using the term “logical” Wittgenstein clarifies that importance is not meant subjectively.

The second part of Wittgenstein’s own explanation of the numbering system is the structural claim that decimal remarks are “comments on (*Bemerkungen zu*)”. On the one hand, the term used by Wittgenstein is rather unspecific: Instead of “elucidation (*Erläuterung*)”, “explanation (*Erklärung*)” or “annotation (*Anmerkung*)”, he uses the generic “comment (*Bemerkung*)”.¹⁴ In ordinary usage a “Bemerkung” on a statement can be anything from the loosely related idea to the tightly organised argument. By using a generic term Wittgenstein does not put a severe constraint on how to understand the relation between remarks. Presumably, he thinks that the precise role of a decimal remark need not be explained, but is made transparent by the remarks themselves – understanding their role is left as a case by case exercise to the reader. Yet, the tree reading asserts not only that remarks are more or less weighty comments, but also that the comment structure precludes a sequential ordering. Wittgenstein’s explanation establishes the former, but not the latter: the comment-relation is not in competition with the successor-relation. Nothing in his explanation rules out that one function of the numbering system is to order decimal remarks by arranging them with their respective higher-, same- and lower-level remarks.

Further support for the thesis that Wittgenstein’s explanation is not sufficient to establish a tree structure are two other comments on the numbering system. *First*, contrary to the footnote in *TLP*,

¹⁴ The common translation of “Bemerkung” is “remark”: The English title of Wittgenstein’s *Philosophische Bemerkungen*, for example, is *Philosophical Remarks*, not *Philosophical Comments*. In the main text I follow Ogden and Ramsey’s and Pears and McGuinness’s decision to translate “Bemerkung” as “comment”, but in both translations “Bemerkung” is also translated as “observation” (3.331) and “remark” (5.62).

the corresponding note in *PT* explicitly mentions as one function of the numbering system ordering the remarks:

The numbers indicate the order of the propositions and their importance. Thus 5.04101 follows 5.041 and is followed by 5.0411, which is a more important proposition than 5.04101. (*PT*: 42)

A straightforward explanation of why Wittgenstein does not mention ordering the remarks as a function of the numbering system in the published version of the footnote is that there is no need to mention it anymore since the remarks are by now already in their intended order. Moreover, the *PT* version does not assert that remarks with decimal numbers are *comments* on other remarks, but that they simply *follow* upon each other. That supports the impression that “is a comment on” need not mean more than “something or other that follows on”.

Second, in the letter to von Ficker in which Wittgenstein claims that the point of his book is an ethical one (undated letter to von Ficker, October or November 1919) he also explicitly mentions the “conclusion (*Schluß*)” of the *Tractatus*:

For now I would recommend you to read the *preface* and the *conclusion*, because they contain the most direct expression of the point. (*PT*: 16/1980: no. 107)

It is highly unlikely that with “the conclusion” Wittgenstein is referring to just remark 7. For it would not be a very helpful recommendation to read only a single sentence of the book in addition to its preface. Wittgenstein is most likely referring to the last several pages of the typescript and, thus, has no objection to reading them as a continuous unit.

Finally, the *absence* of any further comments on the numbering system (in the *Nachlass*, in letters, in recollected conversations) provides further evidence against the tree reading. As far as we know, he did not discuss the numbering system with Ogden or Ramsey, for example (cf. Wittgenstein 1973). Even when stressing the importance of the numbering system to von Ficker, he does not bother to explain why or in which way it is important. If the numbering system was meant as an instruction for a non-conventional way of reading a book, it would have been easy to

give von Ficker, who explicitly asked him about it, at least some hints about this alleged role of the numbering system.

5. Anaphoric references

Let us turn to the second argument for the tree reading: The tree reading is supposed to be needed to get anaphoric references between remarks right (Bazzocchi 2014b, Hacker 2015: 660 f., Kuusela 2015: 229). The *Tractatus* contains a lot of remarks that contain anaphoric pronouns, demonstratives, inferential particles etc. that refer back to earlier remarks, but 4.02 is allegedly a particularly telling example. In this section I argue for two claims: With respect to the primary example 4.02, I argue that the sequential interpretation of 4.02 did not get a fair hearing and that the tree interpretation of this remark generates its own problems. With respect to the anaphoric references in the *Tractatus* in general, I argue that independently of the interpretation of 4.02 a systematic study of all anaphoric references reveals that the tree reading has more and not less problems with resolving anaphoric references than the sequential reading. The argument for the tree reading is based on a one-sided selection of examples.

5.1 “We can see this from the fact that...” (4.02)

Let us turn to the tree readers alleged smoking gun first:

4.01 A proposition is a picture of reality. [...]

[...]

4.016 In order to understand the essential nature of a proposition, we should consider hieroglyphic script, which depicts the facts that it describes.

And alphabetic script developed out of it without losing what was essential to depiction.

4.02 We can see this from the fact that we understand the sense of a propositional sign without its having been explained to us.

4.021 A proposition is a picture of reality: for [...]

4.02 is an interesting test case not because the tree reading offers a new interpretation of it – that “we can see this from the

fact (*dies sehen wir daraus*)” refers back to 4.01 is the majority view¹⁵ – but because it can explain *why* it is correct: What other interpreters arrive at only in a cumbersome, *ad hoc* way, is the only possible interpretation according to the tree reading. “This” in 4.02 can refer either to something mentioned in its sibling 4.01, as the tree reading predicts, or to something mentioned in its immediate predecessor 4.016, as the sequential reading expects. According to the tree reading, 4.02 can only refer to something mentioned in 4.01 because 4.02 is neither a comment on nor otherwise related to 4.016. Accordingly, a fully spelled out 4.02 reads ‘We can see that a proposition is a picture of reality from the fact that...’. According to the sequential reading, 4.02 is expected to refer to something mentioned in its immediate predecessor 4.016 because an anaphoric expression refers to something mentioned several sentences earlier only under very special circumstances. Accordingly, a fully spelled out 4.02 reads ‘We can see what the essential nature of a proposition is from the fact that...’.¹⁶

Let us consider the tree reading’s interpretation first. An important argument for it is the original context of 4.02: In *PT* 4.02 is on the same page as 4.01 – between 4.01 and 4.02 are what are now 4.05 and 4.06 –, while the 4.01s including 4.016 are later additions (*PT*: 86, 88).¹⁷ It seems to be rather unlikely that a reference shift was intended. Yet, such shifts have occurred elsewhere: In *PT* “this remark (*diese Bemerkung*)” in 5.62 refers to 5.6 and not to 5.61 (*PT*: 184, 192). Since the possibility of a reference shift cannot be ruled out in advance, the genetic argument must be supplemented by an interpretation of the role of 4.02 in the final, authoritative text. With this the sibling interpretation struggles: On the one hand, it offers no plausible interpretation of 4.016. This

¹⁵ It is defended by Stenius (1960: 11), Mayer (1993: 115), Lange (1996: 93 f.), Proops (2000: 103–105), Schroeder (2006: 24), White (2006: 17), Morris (2008: 148), Bazzocchi (2010a: 180–182), Hacker (2015: 652). It is rejected (as far as I know) only by Favrholt (1964: 222), Scheier (1991: 116) and Frascolla (2007: 14). Agnosticism is chosen by Black (1964: 164).

¹⁶ The sequential reading is compatible with other ways of spelling out 4.02 as referring to something or other mentioned in 4.016. I discuss only (what I consider to be) the best candidate in the main text.

¹⁷ Since the second sentence of 4.01 does not occur in *PT* at all, this argument also supports the hypothesis that “this” in 4.02 refers only to the first sentence of 4.01.

remark now ends abruptly. Instead of making good on his promise to explain the essence of propositions, Wittgenstein would limit himself to an empirical claim about the evolution of scripts before changing the topic. It defies belief that all Wittgenstein has to say about the essence of propositions concerns the evolution of scripts. On the other hand, the sibling interpretation also runs into trouble with the subsequent remark 4.021. If “this” refers to the first sentence of 4.01, two consecutive remarks (4.02, 4.021) offer an argument for the same claim: But why should Wittgenstein use an anaphoric expression in the first remark when he then spells out his claim in full in the very next remark? If 4.02 and 4.021 were about the same claim, Wittgenstein should have used an anaphoric expression in 4.021, but not in 4.02.

The immediate predecessor interpretation avoids these problems. It avoids the second problem because it rejects that both remarks (4.02, 4.021) are about the same claim. Instead, 4.02 is about the essence of propositions while 4.021 offers the superfluousness of explaining their sense as an argument for the pictorial character of propositions. It avoids the first problem because it does not consider 4.016 to be an endpoint. Instead, the topic of 4.016 is continued in 4.02. The argument why ordinary, alphabetic propositions are pictures is also different. Wittgenstein does not offer a shallow evolutionary argument, as the tree reading must assume, but argues that they are pictures because of their shared essence with other propositions (4.016) and explains what that shared essence is in the following remarks (4.02 ff.).

Thus, although the tree reading’s interpretation is supported by the original context of 4.02 in *PT*, it does not account for the flow of the argument in *TLP*. The sequential interpretation at least takes seriously the task to explain how the various claims are connected and thus avoids treating 4.016 as a loose end and 4.021 as a pointless repetition.¹⁸

¹⁸ The reason why none of this has been discussed in the literature (see the list in fn. 15) is presumably that it does not make much of a difference for the interpretation of Wittgenstein’s account of propositions as a whole. I do not discuss the interpretation of “this” in 4.02 because it is central to understanding Wittgenstein’s account of

5.2 A systematic survey of anaphoric references

A systematic survey of all anaphoric references in the *Tractatus* reveals that of approximately seventy anaphoric references, i. e. of remarks containing at least one expression referring back to something mentioned in an earlier remark (demonstrative, indexical, pronoun, inferential particle, phrase introducing an example etc.), almost all are without doubt to their immediate sequential predecessor(s).¹⁹ The remaining cases (see below) are all controversial and open to rival interpretations. The general impression is that Wittgenstein does not follow strict rules: When giving examples for a claim made in a preceding remark, the remark containing the example(s) is sometimes on the same level (4.1272, 4.442, 5.12, 5.252, 5.5352, 6.372) and sometimes on a lower level (3.3441, 4.0411, 4.1211, 6.1201, 6.1221, 6.241, 6.341, 6.3751). When using indexicals like “here” and “now”, he uses them sometimes in a specific way, i. e. to refer to a single remark (4.1213, 4.1251, 6.1223/6.1224), and sometimes in an unspecific way, i. e. to refer not to a particular claim, but to the present state of the discussion in general (4.5, 5.4, 5.534, 5.55, 6.342).²⁰ Anaphoric expressions usually refer to something mentioned not just in the immediately preceding *remark*, but even mentioned in its last *sentence*, but again there is at least one (uncontroversial) exception (4.1272, “thus (*so*)” refers to the *first* sentence of 4.1271). These observations should suffice to counter the idea that anaphoric

propositions, but because it is an illustrative test case for accounts of the numbering system.

¹⁹ To avoid inflating the number of anaphoric references I have counted some remarks only once, namely consecutive remarks using the same anaphoric pronoun (e. g. 4.114/4.115) and remarks containing more than one anaphoric expression (e. g. 5.231). The full list is: 2.0212, 2.023, 2.025, 2.1512, 2.1513, 2.1515, 2.172/2.174, 3.201, 3.312, 3.313, 3.321, 3.324, 3.325, 3.331, 3.3441, 4.02, 4.0411, 4.0412, 4.114/4.115, 4.1211, 4.1213, 4.1251, 4.1272, 4.242, 4.28, 4.442, 4.4611, 4.5, 5.12, 5.156, 5.21, 5.231, 5.252, 5.2522, 5.4, 5.41, 5.441, 5.531, 5.532, 5.5321, 5.533, 5.534, 5.535, 5.5352, 5.542, 5.5421, 5.55, 5.5521, 5.5542, 5.62, 5.6331, 5.634, 5.64, 5.641, 6.001, 6.01, 6.11, 6.1201, 6.122, 6.1221, 6.1222, 6.1223/6.1224, 6.1251, 6.241, 6.341, 6.342, 6.3631, 6.372, 6.3751 and 6.42.

²⁰ Hacker mischaracterises the sequential reading as being committed to interpreting dialectical indexicals as referring to a single remark (2015: 660). As spatial uses of “here” and temporal uses of “now” can refer to areas and time intervals of different sizes depending on context, dialectical uses of them can refer to smaller or larger parts of the discussion as well.

references between remarks are governed by strict rules. Hence, it should not come as a surprise if no account can resolve all anaphoric references without exception.

It is a judgement call how many exceptions are too many, but the number of clear exceptions to the tree reading is not negligible. A telling case against the tree reading is 6.01 and its predecessor:

6.002 If we are given the general form according to which propositions are constructed, then with it we are also given the general form according to which one proposition can be generated out of another by means of an operation.

6.01 Therefore the general form of an operation [...]

The reference of “therefore” poses no problem for the sequential reading. The immediately preceding remark explains how to derive the general form of an operation from the general form of a truth-function or sentence. The tree reading, however, rules out a reference to 6.002 for the same reason it rules out that 4.02 refers to 4.016: As a lower-level remark 6.002 is on a different branch. Hence, “therefore” must refer to 6 which would leave 6.002 hanging in the air as a useless endpoint leading nowhere. Moreover, since 6.002 is a late addition (both this remark and “therefore” in 6.01 are missing in *PT*), Wittgenstein knew exactly what he was doing. If he had intended to follow the guidelines set by the tree reading, he should have placed 6.002 after 6.01 (as 6.011). Alas, Wittgenstein opted in favour of a different arrangement.

There are even more cases that provide further evidence against the tree reading, although their interpretation is not as obvious as the interpretation of 6.01. *First*, in Wittgenstein’s discussion of identity in 5.53 and its two subsequent series (5.5301 ff. and 5.531 ff.) the remarks are intricately linked with each other: In 5.533 “therefore” refers not just to its siblings 5.531 and 5.532, but to these remarks *as well as* the lower-level remark 5.5321. Otherwise Wittgenstein could not claim to have *shown* that the identity sign can be eliminated from logic. Moreover, 5.5321 (“thus, for example”) in turn cannot be a consequence of 5.532 because these two remarks have different topics: 5.532 is about reflexivity claims and 5.5321 about ‘only’ claims. Instead, 5.5321 follows from the general claim made in 5.53 *together with* its elucidation with respect

to the same example in 5.5301 (which is on a different branch, according to the tree reading) *together with* the technique for eliminating the identity sign applied already in 5.531 and 5.532. Similarly, 5.531 (“thus”) shows how to put into action the programmatic remark 5.53 that is defended in detail in 5.5301–03. The zero branch is as much an argument for 5.53 as it is a preparation of 5.531 and it is rather implausible to connect 5.531 only with 5.53. *Second*, in 2.1513 “conceived in this way (*diese Auffassung*)” refers to the picture theory as a whole. Everything said so far about pictures, including 2.131, 2.141 and 2.15121, is part of the picture theory and not merely what has been said in the branch leading here. *Third*, in the context of discussing laws of nature Wittgenstein asserts in 6.342 that “and now we can see the relative positions of logic and mechanics”. “and now” cannot refer only to the remarks in the branch leading to this remark since logic is barely mentioned in this part of the tree. The comparison of mechanics with logic must draw on resources from elsewhere in the book.

What these examples have in common is that in all these remarks Wittgenstein presupposes knowledge of remarks that according to the tree reading belong to different branches. In such cases the tree reading fares worse than the sequential reading when resolving anaphoric references. It does not fail in that regard due to some anomaly, but because it requires splitting up Wittgenstein’s ideas into distinct branches, although his aim to all appearances has been to weave them together into a tight, organic whole.

6. Exegetical issues

The final argument for the tree reading is that it helps to solve broader exegetical issues which are not only about interpreting single remarks or even words: These are the relation between ontology and picture theory, solipsism and the eye analogy and the resolute reading and its interpretation of 6.54.

6.1 *Ontology and picture theory (2.1)*

When read sequentially, the *Tractatus* begins with outlining an ontology (world, facts, states of affairs, simple objects) and then turns to a general theory of representation, the picture theory. The tree reading resists the temptation to conclude that Wittgenstein's ontology is prior to the picture theory because priority claims based on the order in which topics are discussed are ruled out by it. Ontology is one branch of a tree, but there is no such thing as the first branch of a tree. Hence, ontology does not precede the picture theory, but is on the same level (Hacker 2015: 656).

This is all correct as far as it goes, but the priority claim is neither here nor there. Neither is the sequential reading committed to a priority claim nor is the tree reading committed to rejecting it. It is a bad rule of interpretation *in general* to conclude priority from the order in which topics are discussed by the author. In fact, I do not know of a single interpretation of the *Tractatus* that argues for the priority of ontology based on the order of the remarks. The relation between the theory of representation and ontology, between language and world is a complex one in the *Tractatus* – that should be obvious to anyone who has read the whole book, no matter whether from beginning to end or from root to leaves.

There is, however, a residual point of interest, namely the transition from 2.063 (the last ontological remark: “the sum-total of reality is the world”) to 2.1 (the first remark on pictures: “we picture facts to ourselves”): Whereas the tree reading treats 2.063 as an endpoint of a branch that is separated from the branch 2.1 ff. (“this is where the path ends and there is nothing after it”, Bazzocchi 2010c: 332), the sequential reading tries to avoid such an abrupt break. The sequential reading therefore expects 2.063 to have both a backwards- and a forwards-directed role. Suppose 2.063 was missing and the line of thought ended with 2.062 which is about the independence of states of affairs. *In that case* the relation between 2.062 and 2.1 would be strained indeed. However, with the help of 2.063 the transition is much smoother: 2.063 summarises the preceding discussion by highlighting its central topic, i. e. the world, and prepares the next remark which is partly about facts, i. e. the world. Again there is, as the sequential reading

predicts, a topic that is shared by consecutive remarks, that is, 2.063 is not a dead end, but a link in an intricate chain.

6.2 Solipsism and the eye analogy (5.6s)

The 5.6s (limits of language and world) are a particularly difficult to interpret passage of the *Tractatus*. One of the exegetical problems is to understand the analogy Wittgenstein draws between (metaphysical) subject and its world on the one hand and the (metaphysical) eye and its visual field on the other.²¹ This analogy is inserted between the startling claim that I am my world (5.63) and the equally surprising claim that understood properly solipsism is a form of realism (5.64). How it is supposed to fit in between these remarks is the exegetical issue to be discussed here. True readers promise that their approach allows them to make considerable progress on it (Bazzocchi 2014a, 2014b: xi–xiv, Hacker 2015: 660 f.). For the relevant remarks contain several anaphoric expressions that connect these remarks with each other: (a) In 5.6331 with “for” an explanation is offered – but an explanation of what? (b) In 5.634 Wittgenstein states that “this is connected with the fact that” – but what does “this” refer to? (c) In 5.64 a conclusion is introduced by “here it can be seen that” – but what does “here” refer to?

To answer the first structural question, another issue needs to be mentioned first: The figure in 5.6331 is drawn differently in Wittgenstein’s manuscripts and typescripts than in the various printed editions (Lampert and Graßhoff 2004: 103, Bazzocchi 2014a: 260–265). His drawing of the (mistaken) form of the visual field does not show an eye in- or outside of a visual field, but uses a bold dot to mark the part of the visual field that is meant to indicate the presence of an eye.²² Accordingly, 5.6331 expands on

²¹ The metaphysical eye is to be distinguished from the biological eye. For (part of) the biological eye *is* in the visual field (eyelid and -lashes) and the distinction between subject and body (5.631) has to be applied to the eye as well for subject and eye to be analogous.

²² I follow Lampert and Graßhoff’s description of the figure here. Bazzocchi describes it slightly differently. They agree that the eye is not drawn inside the visual field. But, whereas Bazzocchi describes the eye as being outside instead, Lampert and Graßhoff describe it as follows: “Wittgenstein never depicted the eye as an extended circle inside or outside the visual field. Instead, in the original drawings a position is assigned to the eye

the last sentence of 5.63 and not on its middle paragraph. It does not explain why “you do *not* see the eye”, but why “nothing *about the visual field* allows you to infer that it is seen by an eye”²³. Wittgenstein does not argue that the eye is not part of the visual field, but makes the stronger claim that its presence is not indicated by any formal features of the visual field either. This settles the first question. But note that this answer to the first question is consistent with both the tree and the sequential reading. For both readings predict that 5.6331 expands on 5.633.²⁴

The tree reading still promises principled responses to the second and third question. Ad (b), 5.634 is connected to 5.633, but not to 5.6331: Both “this” in 5.633 and “for” in 5.6331 refer to the last sentence of 5.633, i. e. to the claim that nothing about the visual field shows that it belongs to an eye. Ad (c), 5.64 is the final remark of the sequence 5.61/5.62/5.63/5.64: “here” refers to this sequence, but not to the eye analogy at all. Thus, the tree reading puts 5.634 within the discussion of the eye analogy and 5.64 outside of this discussion. The sequential reading offers somewhat different answers to these questions. Ad (b), 5.634 is meant to draw a lesson from the eye analogy and is as much about the subject as it is about the eye: “this” refers to the main claim in this discussion, namely that both the subject and the eye are neither in the world/visual field nor indicated by their form. Ad (c), in 5.64 “here” does not refer to a particular remark, but refers in an unspecific way to the current discussion as a whole. Thus, the sequential reading treats 5.634 as connecting the two sides of the analogy, subject and eye, with each other and 5.64 as drawing the main conclusion of the discussion that began at 5.62.

by a dot at the tip of the visual field. [...] The point of this is to make clear from where one sees.” (2004: 103, my translation)

²³ I have slightly changed the translation: The phrase used by Wittgenstein – “nichts an” instead of “nichts in” – means *nothing about* or *no feature of*, but not *nothing in* (Bazzocchi 2014a: 259 n. 11). This may be an additional reason – the misleading reproduction of the figure being the other one – why some interpreters do not distinguish properly between the two claims made in 5.633.

²⁴ Bazzocchi claims that the sequential reading is responsible for misunderstanding 5.633 and 5.6331 (2014a: 258 f., 265, 2014b: xiii n. 6), but it is the reproduction of the drawing that is to be blamed here.

Beginning with (b), proposals that treat “this” as referring to a *particular* statement made in either 5.633 or in 5.6331 are problematic. They are so even for the same reason. Since Wittgenstein is drawing an analogy, a lesson from that analogy is to be expected. If one of these proposals is correct, however, 5.634 connects a remark *specifically about the visual field* with a discussion of apriority. Wittgenstein is evidently not interested in such a limited lesson. Therefore, it is mistaken to require “this” to refer to a particular statement and, instead, “this” is short for “this analogy”, “this question” or “this issue”. Assuming that this interpretation is plausible, neither the tree reading nor the sequential reading turn out to be in a better position to explain the reference of “this”. Since the issue under discussion is the same in 5.633 and 5.6331, it does not matter whether “this” refers to the immediately preceding remark(s) or only to the preceding sibling(s). Yet, looking at the immediately preceding remarks, as the sequential reading recommends, is useful for recognising what the analogy between subject and eye is supposed to be. To see this, we need to take a look at the *body* of 5.634. Wittgenstein argues for an incompatibility claim: If something is “part of our experience” (i. e. it is experienced itself or its existence can be inferred from experience), it is not apriori.²⁵ And what is part of experience is only contingently so, but, as Wittgenstein presupposes, apriority entails necessity. Thus, Wittgenstein offers a general argument for his claim that neither the existence of the eye nor of the subject can be inferred from experience. In particular, no matter what specific form the visual field is supposed to have, even if the visual field actually had that form, one could at most know that an eye exists, but not that it *must* exist – *mutatis mutandis* for the subject. This argument is lost if 5.634 is read only in connection with 5.633, as the tree reading suggests.

²⁵ Contrary to Bazzocchi’s suggestion (2014a: 258 n.7), this incompatibility is not trivial. Wittgenstein is committed to a strong conception of apriority: Whereas on a weak conception what is apriori can (but need not) be known independently of experience, on the strong conception what is apriori can *only* be known independently of experience. Only the strong conception licences the incompatibility claim.

Turning to (c), Bazzocchi’s argument is based on a misleading characterisation of the sequential reading. The sequential reading does not claim that “here it can be seen” in 5.64 must refer to and only to the immediately preceding remark 5.634. Instead, this phrase introduces a conclusion of the ongoing discussion (i. e. a whole series of preceding remarks) while leaving it somewhat open how many of the preceding remarks belong to this series.²⁶ As outlined above, Wittgenstein uses indexicals (e. g. “here”, “now”) and inferential expressions (e. g. “therefore”) to refer to the overarching line of thought several times in the *Tractatus*. Hence, my hypothesis about 5.64 is not an *ad hoc* hypothesis. Moreover, it avoids the pitfalls of the interpretation suggested by the tree reading. 5.64 is not a conclusion that one can draw from just the sequence of its siblings. Although Bazzocchi claims that “it’s easy to see the relationship” between 5.64 and 5.63 (2014a: 258), that is blatantly not the case: If subject and its world are identical, as 5.63 suggests (“I am my world”), and this world is extended, the subject cannot lack an extension. Realism is also usually a claim about *the* world, not about someone’s world. To see what is wrong with these objections the clarifications of 5.63 in the remarks between 5.63 and 5.64 are badly needed. Fortunately, the sequential reading casts a wider net and includes the explanatory remarks that are inserted between these remarks as being referred to by “here”. The tree interpretation of 5.64 also faces the challenge of explaining Wittgenstein’s renumbering of the remarks involved. In *PT* 5.64’s (= *PT* 5.3355) preceding sibling used to be 5.631a (= *PT* 5.3354): “there is no such thing as the subject that thinks or entertains ideas”. This remark is now a comment on 5.63 and, therefore, on a different branch of the tree. If, however, “here” refers to the wider context, Wittgenstein’s renumbering of the remarks did not threaten to make “here” incomprehensible because both 5.63 and 5.631 fall within the scope of “here” anyway.

²⁶ See footnote 28.

6.3 Nonsense and the ladder (6.54)

(Some) Proponents of the tree reading, argue that the tree reading conclusively rules out a recently much debated interpretation of the *Tractatus*, the resolute reading (Bazzocchi 2010a, 2010c, 2013, Hacker 2015, but not Kuusela 2015). For present purposes the resolute reading can be characterised as being defined by two interconnected claims:²⁷ On the one hand, the distinction between different kinds of nonsense is rejected. There are no ineffable truths that cannot be said, but only shown. On the other hand, 6.54 is taken at face value so that the *Tractatus* consists literally only of nonsense – with the sole exception being the so-called ‘frame’ including at least the preface and 6.54/7. This means, crucially, that the *Tractatus* does not contain a theory of meaning that is then applied to the *Tractatus*’s attempt of stating this theory to get to the conclusion that any such attempt does not meet its standards of meaningfulness.

As far as I can see, the claim that the resolute reading is ruled out by the tree reading is backed up by two arguments: *First*, according to the tree reading, 6.54 and 7 are unconnected remarks. According to the resolute reading, however, they form a unified sequence of remarks, which is the conclusion of the *Tractatus*. Together with the preface they put a frame around the other, nonsensical remarks. But if the *Tractatus* is not sequentially ordered, it neither has a ‘conclusion’ nor can there be such thing as a ‘frame’ (Bazzocchi 2010a: 193–195, 2010c: 333, Hacker 2015: 662–666).²⁸ *Second*, proponents of the resolute reading put much weight on the ladder metaphor, but according to the tree reading this metaphor does not extend beyond comparing the *Tractatus* to a tool that is

²⁷ See Diamond 1988, Conant 1989, 2002 for the resolute reading in general and Conant and Diamond 2004: 47, Bronzo 2012: 53 for (roughly) this way of characterising it.

²⁸ Bazzocchi (2013) also argues that connecting 7 to 6.54 is similar to referring into parentheses which he deems to be impossible. His argument is that in, for example, “My article is boring. (The *Tractatus*, too, is boring.) It is even mistaken.” “it” cannot refer to the *Tractatus*, but only to the utterer’s article. This is correct as far as this example goes, but the general impossibility thesis is false. To disprove it this paper contains a sentence (marked with fn.26) in which a demonstrative refers into parentheses. If any reader stumbled over that sentence, this would support Bazzocchi’s objection to some extent – but I trust that no one did.

not needed anymore once it has served its intended purpose. The metaphor of the ladder invites the idea of a *higher* point of view to be reached by climbing the ladder rung by rung. But if the *Tractatus* is a tree, there is no higher position to be reached eventually (Bazzocchi 2010a, Hacker 2015: 666–668).

Tree readers are surprisingly quick to dismiss the resolute reading (Kuusela 2015: 231). As far as Bazzocchi's and Hacker's objections are concerned, their criticism of the resolute reading is rather unconvincing.²⁹ The first argument misses that the resolute reading does not presuppose a structural claim. One might think that the distinction between frame and body would require 6.54 and 7 to form a unit. But in fact the distinction between frame and body is about content and function (frame remarks contain reading instructions or are metaphilosophical in nature), not about the order of the remarks. That is so because the *Tractatus* contains frame remarks in many places, for example, the metaphilosophical remarks 4.111 ff. (Kuusela 2015: 231, Conant 2002: 457 n. 135, Gunnarsson 2000: 51–53). The resolute reading does not even claim that it is fixed or detectable in advance which remarks belong to the frame and which belong to the body. This distinction is supposed to emerge only in the process of working through the book (Conant and Diamond 2004: 68 f.). And even if it is conceded that 6.54 and 7 must not be read together, the resolute reading is not doomed. Since 6.54 stands in need of an interpretation independently of whether it is considered only as a comment on 6.5 or as a preparatory remark towards 7, it is still an advantage of the resolute reading that it offers an interpretation of this puzzling remark that takes it at face value. If the resolute reading is mistaken, it is so because it offers an unconvincing interpretation of 6.54, not because it reads 6.54 in conjunction with 7.

The second argument is based on an uncharitable characterisation of the resolute reading. Although resolute readers regularly use the 'climbing the ladder rung by rung' analogy, not too much should be read into it. As far as the analogy goes, a

²⁹ My discussion does not affect Hacker's other objections to the resolute reading that are independent of the tree reading and much more convincing (Hacker 2000).

horizontal ladder used to cross an abyss would do as well. After all, it is just an analogy. Crucially, the resolute reading does not claim that there is a *higher* point of view from which one can “see the world aright” (6.54). Seeing the world aright after having read the *Tractatus* does not mean that a mistaken view of the world is replaced by a correct one. For by giving up nonsense one does not advance from an old position to a new one, but realises that there never even was a position to be had, but merely nonsense.

None of this is intended as a defence of the resolute reading. My aim is only to point out that the tree reading and the resolute reading are not inconsistent. That being said, the tree reading’s suggestion that 6.54 and 7 are unconnected is rather surprising given that even Wittgenstein himself thought of his book as having a conclusion. Apparently, Wittgenstein wanted to end his book with a bang – a remark that is testament to the finality and unassailability of his philosophical system. Obviously, such a remark should not be accompanied by any comments placed after it and whatever comments or elucidations Wittgenstein wanted to add he had to place before it. Since he is relying on preparatory remarks elsewhere (for example, 2.1–2.2 as preparations of 3, 3.5 as preparation of 4), it is not unexpected to find preparations of 7 in its preceding remarks.

7. Conclusion: How to read the *Tractatus* sequentially

In this I paper I have argued that the *Tractatus* should not be read as a tree, but as a sequential chain. My proposal does not promise new deep insights into the *Tractatus*. The main exegetical nuts remain as hard to crack as they used to. Just paying attention to the numbering system will not solve our exegetical problems for us. Yet, the sequential reading makes sense of Wittgenstein’s comments on the numbering system in the *Tractatus* footnote and elsewhere, resolves anaphoric references within the *Tractatus* and fares at least as well as the tree reading regarding three prominent exegetical issues. The central recommendation of the sequential reading is to pay attention to the numbering system when reading the *Tractatus* by keeping an eye on how a given remark is connected with earlier and later remarks. Wittgenstein never jumps from a

topic to another one, but develops his ideas in the form of an intricately linked chain. Readers can follow his presentation by taking all the tiny steps or by tracing only the general line of thought, i. e. by taking only the major steps. Either way the important question to ask is how Wittgenstein linked topics and claims with each other, not how Wittgenstein separated them into sub-topics and sub-claims. This way, in addition to offering sensible interpretations of all the test cases discussed above, the sequential reading can also explain how the *Tractatus* matches Wittgenstein's view of philosophy. His ideal of doing philosophy was to write philosophy as concise (i. e. clear, brief and simple), surveyable and unified as possible. This ideal is not just an aesthetic one, but also plays an epistemic role insofar as meeting it is evidence for the truth of what is said. Thus, understanding how Wittgenstein attempted to write a concise, surveyable and unified book is crucial for understanding why “the *truth* of the thoughts that are here communicated seems to me unassailable and definitive” (*TLP*: preface). Any interpretation of the numbering system should make sense of this ideal and how he intended to fulfil it. According to the sequential reading, the *Tractatus* forms a unified whole because the remarks naturally lead from topic to topic and hang together on several levels. Its unity is not derivative of the unity of a core of cardinal remarks to which the other remarks are simply attached. Conciseness and surveyability depend on the numbering system because it allows Wittgenstein to display context and connections without having to state them in a verbose way. Thus the remarks and their contents take care of themselves. Conciseness and surveyability are not achieved by dividing them into branches with a multitude of leaves.

That the *Tractatus* is far from an “incomprehensible jumble”, as Wittgenstein put it, but a “finely crafted work of art” (Hacker 2015: 649) is easy to assert, but difficult to explain. The sequential reading is an attempt to offer such an explanation.³⁰

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Biographical Note

Tim Kraft studied philosophy, mathematics and economics at Göttingen and St Andrews. After completing his PhD with a thesis defending semantic normativity (Göttingen 2011), he moved to Regensburg as a "Wissenschaftlicher Assistant" (i.e. non-tenure-track assistant professor). His research interests include philosophy of

language (rule-following, semantic normativity), epistemology (doxastic attitudes, epistemic normativity, scepticism and agnosticism, disjunctivism, epistemic closure) and the history of analytic philosophy (Frege, early and late Wittgenstein).