

THE FIRST PAULINE CHRONOLOGIST? PROBABLY NOT: A REVIEW  
OF RYAN SCHELLENBERG'S 'THE FIRST PAULINE CHRONOLOGIST'  
FROM A BAYESIAN PERSPECTIVE

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The aims of historically-focused New Testament scholarship broadly conform to the aims of historical investigations in cognate or related fields, especially classics, but also ancient and modern history.<sup>1</sup> Scholars in all such disciplines, in the production of their historiography (writing about history), may be greatly helped by the voluminous literature devoted to the philosophy of history/historiography, which is concerned with the theoretical and methodological analysis of historiography.<sup>2</sup> In this essay I bring recent

1. Debate about their nature as 'historical' notwithstanding, such aims often concern what is traditionally covered within so-called New Testament introduction, concerning date, authorship, historical context, situation and the like. For a consideration of related issues and the nature of New Testament studies, see Wayne A. Meeks, 'Why Study the New Testament?', *NTS* 51 (2005), pp. 155-70. On the relationship, for example, between New Testament studies and Classical studies, see a traditional perspective in F.F. Bruce, 'The New Testament and Classical Studies', *NTS* 22 (1975), pp. 229-42.

2. The philosophy of history/historiography is a sub-field within philosophy. Flagship journals are the *Journal of the Philosophy of History* (Brill) and *History and Theory* (Wesleyan University). A sample of recent guides and reference works include: Anna Green and Kathleen Troup (eds.), *The Houses of History: A Critical Reader in History and Theory* (Manchester: Manchester University Press, 2nd edn, 2016); Aviezer Tucker (ed.), *A Companion to the Philosophy of History and Historiography* (Blackwell Companions to Philosophy, 41; Oxford: Blackwell, 2009); Mark Day, *The Philosophy of History: An Introduction* (New York: Continuum,

discussion in the field of the philosophy of history, concerning historical epistemology, to bear in a critical review of Ryan Schellenberg's 2015 *JBL* article 'The First Pauline Chronologist?'. Specifically, I consider the article from the perspective of Bayesian epistemology.<sup>3</sup> Schellenberg's article is selected for its presentation of what may be seen as a historiographical analysis of a hotly debated area of research within New Testament studies: the historical Paul and Paul in Acts.<sup>4</sup> While the bulk of the article focuses on Schellenberg's work, one aim of the present study is also to demonstrate the utility of Bayesian epistemology for historical reasoning in New Testament studies. Thus, the initial section takes sufficient space to introduce what will be a new framework to many readers.

I first introduce and defend Bayes's Theorem as a conceptual framework for good historiographic reasoning and as a description for what Schellenberg is doing in his essay. After articulating a procedure for the use of Bayesian reasoning in the present analysis, I recast and critique Schellenberg's essay through a Bayesian framework.<sup>5</sup> It is shown that, while making

2008); Nancy Partner and Sarah Foot (eds.), *The SAGE Handbook of Historical Theory* (London: SAGE, 2013).

3. See Ryan Schellenberg, 'The First Pauline Chronologist? Paul's Itinerary in the Letters and Acts', *JBL* 134 (2015), pp. 193-213. By 'historical epistemology', I mean reasoning about historical evidence, and about the generation of plausible historical hypotheses in light of that evidence and other knowledge. In introducing Bayesian epistemology then, I conceive of Bayes's Theorem as offering a tool with which to reason about historical hypotheses, but not a historical method per se, as it might work synergistically with historical methods (such as literary, linguistic, social-scientific or other methods).

4. This discussion reaches back at least to Baur and the Tübingen school (moving forward through the well-known Knox-Vielhauer bifurcation of Paul's chronology [Knox] and theology [Vielhauer]), but probably to the Christian philosopher William Paley before him, in his *Horae Paulinae*. See W. Ward Gasque, *A History of the Interpretation of the Acts of the Apostles* (Eugene, OR: Wipf & Stock, rev edn, 2000), pp. 17-20; cf. Thomas E. Phillips, *Paul, His Letters, and Acts* (Library of Pauline Studies; Peabody, MA: Hendrickson, 2009), pp. 30-49; Stanley E. Porter, *Paul in Acts* (repr., Peabody, MA: Hendrickson, 2008), pp. 187-206.

5. I note here that recasting the article along a Bayesian framework is integral to what I am proposing in this study, and that such a conceptualization makes the logic of historiographic inference explicit, thereby exposing strengths and weaknesses in a systematic and explicit way (defended and demonstrated below).

an important contribution, Schellenberg's presentation of the dependency hypothesis does not achieve high plausibility. Also, the relative plausibility of alternate hypotheses is briefly reconsidered.

*1. The Philosophy of History and Historical Epistemology: Bayesian Considerations*<sup>6</sup>

The field devoted to the philosophy of history is substantial and theoretically complex, and its relevance for biblical studies is being recognized by a growing number of biblical scholars.<sup>7</sup> In light of its complexity, my effort in this section is modest and focused: to demonstrate that a Bayesian approach to historical epistemology is particularly well suited for describing and analyzing reasoning that seeks to promote plausible historiographic hypotheses based on evidence, of which Schellenberg's essay is a good example.

Bayes's Theorem is a mathematical theorem used in such diverse fields as statistics, astronomy, cognitive psychology, legal theory and historiography.<sup>8</sup> This section introduces the theorem's utility for the present analysis, representing the formula in a qualitative fashion, then demonstrating its warrant and precedence for use in historiography, considering also what it cannot do for such investigations.

6. Thanks are due to Lydia McGrew for a number of helpful comments regarding Bayes's Theorem itself. My particular decisions or conclusions do not necessarily reflect her views.

7. As an example, and for a survey of issues, see especially Beth M. Shepard, *The Craft of History and the Study of the New Testament* (SBLRBS, 60; Atlanta: SBL, 2012). For a recent example in practice, see Karl L. Armstrong, *Dating Acts in its Jewish and Greco-Roman Contexts* (LNTS, 637; London: T. & T. Clark, 2021).

8. For a readable introduction to its history and use, see Sharon Bertsch McGrayne, *The Theory That Would Not Die: How Bayes' Rule Cracked the Enigma Code, Hunted Down Russian Submarines, and Emerged Triumphant from Two Centuries of Controversy* (New Haven: Yale University Press, 2011). For a more technical collection of essays, see Richard Swinburne (ed.), *Bayes's Theorem* (Proceedings of the British Academy, 113; Oxford: Oxford University Press, 2002).

*Bayes's Theorem and its Warrant and Precedence for Historical Reasoning* Bayes's Theorem, named for Thomas Bayes (the eighteenth-century English clergyman first to formulate a basic iteration of its logic) is formally a theorem (and family of theorems) of probability calculus, yet it is also an *epistemological framework for logical confirmation*.<sup>9</sup> '[T]he Bayesian approach', writes Horwich, 'rests upon the fundamental principle: That the degrees of belief of an ideally rational person conform to the mathematical principles of probability theory'.<sup>10</sup> A basic example of the conformity between probability and degree of belief would be as follows: the probability of belief (P) in a given hypothesis (H), *plus* the probability of its *negation* (–H), is equal to one, or  $P(H) + P(-H) = 1$ .<sup>11</sup> In other words, the sum of the probability of an exhaustive set of hypotheses is equal to 1. Bayes's Theorem is formally more complex than this, but the logic is just as simple to grasp.

As a mathematical formula, Bayes's Theorem can be represented as follows:<sup>12</sup>

$$P(H|E\&B) = [P(E|H\&B) \times P(H|B)]/P(E|B)$$

From left to right, written *qualitatively*, the formula states the following

- $P(H|E\&B)$ : the probability (P) of a hypothesis (H), given (|) specific evidence (E) and background knowledge (B), is called the *posterior probability*, and is the goal of the exercise. It is equal to
- $P(E|H\&B)$ : the probability of the evidence given the hypothesis and background knowledge—referred to as the 'predictive power' of the hypothesis—multiplied by  $P(H|B)$ —the probability of the hypothesis given the background knowledge

9. On Bayesian confirmation theory and epistemology, see 'Bayesian Epistemology', William Talbott, *Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/epistemology-bayesian/>.

10. Paul Horwich, *Probability and Evidence* (Cambridge: Cambridge University Press, 1982), p. 11.

11. Horwich, *Probability*, p. 11.

12. This specific notation is taken from Aviezer Tucker, *Our Knowledge of the Past: A Philosophy of Historiography* (Cambridge: Cambridge University Press, 2004), p. 96. This is a standard formulation of the theorem.

alone, referred to as the ‘prior probability’ of the hypothesis. These two factors being divided by

- $P(E|B)$ : the probability of the *evidence* given the background knowledge alone, referred to as the ‘expectancy’ of the evidence.<sup>13</sup>

The formula offers a complete and explicit logic for testing a given hypothesis against some specific evidence, and in light of background knowledge. As stated above and demonstrated below, I suggest that this represents a tool for historical epistemology that is superior to other available tools.<sup>14</sup> Yet, while it is noncontroversial that such a formula works mathematically (and thus with precise numerical inputs and statistical data), its utility for the present analysis requires further demonstration. To do this, I first consider five telling features of the *logic* of the formula that do not depend upon mathematical representations.

13. See Tucker, *Our Knowledge*, pp. 96-98 for a fuller description with various examples for each component. Cf. Christoph Heilig, ‘Methodological Considerations for the Search of Counter-Imperial “Echoes” in Pauline Literature’, in John Anthony Dunne and Dan Batovici (eds.), *Reactions to Empire: Sacred Texts in their Socio-Political Contexts* (WUNT 2.372; Tübingen: Mohr Siebeck, 2014), pp. 73-92 (80-82); In using ‘predictive power’, I follow Richard Swinburne, ‘Introduction’, in Richard Swinburne (ed.), *Bayes’s Theorem* (Proceedings of the British Academy, 113; Oxford: Oxford University Press, 2002), pp. 1-20 (10).

14. Such as the positivist Deductive-Nomological model of Carl Hempel, famous in the so-called covering-law model of scientific historiography. See Carl G. Hempel, ‘The Function of General Laws in History’, *Journal of Philosophy* 39 (1942), pp. 35-48. See abductive approaches, or other similar approaches: C. Behan McCullagh, *The Logic of History: Putting Postmodernism in Perspective* (New York: Routledge, 2004); cf. Michael R. Licona, *The Resurrection of Jesus: A New Historiographical Approach* (Downers Grove, IL: IVP Academic, 2010), pp. 107-30. Regarding the methodology of N.T. Wright, see Theresa Heilig and Christoph Heilig, ‘Historical Methodology’, in Christoph Heilig *et al.* (eds.), *God and the Faithfulness of Paul: A Critical Examination of the Pauline Theology of N.T. Wright* (Philadelphia: Fortress Press, 2014), pp. 115-50. The Bayesian model is superior to merely abductive models as it either uses abductive insights in a compatibilist fashion (see below) or defends their articulation from the theorem itself.

(1) The whole Bayesian framework structures a process of reasoning which reasons from effect to cause (which fits with the constraints of historical disciplines); (2) disambiguating and clearly articulating the differences between a hypothesis, evidence being explained and background knowledge has a determinative effect on the end-result concerning the likelihood of the hypothesis; (3) such a formula can logically systematize these elements and may thus provide a reliable, rational justification of outcomes; (4) for non-statistical usages, it seems apparent that the logic requires subjective inputs for prior probability, predictive power and expectancy;<sup>15</sup> and (5) because the *overall* expectancy of the evidence is considered, the logic of the formula builds in hypothesis competition.<sup>16</sup>

These considerations are suggestive of the utility of even a qualitative representation of the Bayesian framework for historical reasoning. This is not to say that such reasoning is invalid if it does not utilize the Bayesian framework, but rather that such a framework makes what is otherwise a private exercise explicit, systematic, coherent and thus logical and rational (even if subjectively so). The Bayesian framework, however, does not just have a methodological or procedural utility, it also has theoretical warrant for good historiography, which I now briefly consider.

Historians do not access the past, but rather access present evidence which is about the past (in some sense), and which is itself the object of historiographic explanation.<sup>17</sup> Strictly speaking, historiography is thus not an

15. Note that there are subjectivist and objectivist views of Bayes's Theorem. See Swinburne, 'Introduction', pp. 10-12; cf. Heilig and Heilig, 'Historical Methodology', p. 129 n. 67. Here, I take a subjectivist view. For the classic defense of subjectivist Bayesian confirmation, see Colin Howson and Peter Urbach, *Scientific Reasoning: The Bayesian Approach* (Chicago: Open Court, 3rd edn, 2006).

16. This is less apparent and more technical. See Tucker, *Our Knowledge*, p. 97. Expectancy,  $P(E|B)$ , can be extrapolated out as  $P(E|B) = [P(E|H\&B) \times P(H|B)] + [P(E|\neg H\&B) \times P(\neg H|B)]$ . This may seem complex, but it just means that expectancy implies consideration of *both* a hypothesis (H) and its negation ( $\neg H$ ).

17. Tucker, *Our Knowledge*, pp. 17, 93; Stanley E. Porter, 'The Witness of Extra-Gospel Literary Sources to the Infancy Narratives of the Synoptic Gospels', in Bernardo Estrada *et al.* (eds.), *The Gospels: History and Christology. The Search of Joseph Ratzinger-Benedict XVI/ I Vangeli: Storia e Cristologia. La ricerca di Joseph Ratzinger-Benedetto XVI* (2 vols.; Rome: Libreria Editrice Vaticana, 2013), I, pp. 419-65 (431-32).

empirically objective enterprise, and historiographical *explanations* are therefore subjective *inferences about evidence*. Yet historical knowledge is not radically subjective or fictional: there are evidentiary constraints placed upon interpretation that restrict the interpretation of independent historians to some degree in various contexts.<sup>18</sup> Because historiography is not certain, yet not fictional, it is best conceptualized as being *probabilistic*.<sup>19</sup> This is tacitly agreed upon by all New Testament scholars who appeal to a cline of probability when making historiographic judgements (i.e. if a conclusion is more-or-less likely).<sup>20</sup>

If the reasoning between a historiographic hypothesis, evidence and accepted background knowledge is probabilistic, then based on the above, I propose that Bayesian reasoning offers a systematic and reliable logic of probabilistic inference. Historical truth in this technical sense refers to probable belief in context.<sup>21</sup> Precedence for the use of Bayesian reasoning in historiography can also be demonstrated.

Bayes's Theorem as applied to historical questions and presented in historiography is well-established across multiple fields in the academic literature: it has been practically applied as an overall framework to historical

18. These constraints still require interpretation, and are linguistic, material/geographical or may result from a complex set of shared beliefs, assumptions and accepted evidences. One suggestive example would be that professional historians of every stripe agree that holocaust denial is disallowed by the evidence. See Richard J. Evans, *In Defense of History* (New York: W.W. Norton, 2000), p. 106 and n. 44. Though it is not clear that they all agree on what precisely constrains interpretation; it could be moral intuition, documentary evidence or both.

19. Aviezer Tucker, 'The Reverend Bayes vs. Jesus Christ', *HistTh* 55 (2016), pp. 129-40 (129).

20. See Licona's listing of qualitative probability scales by biblical scholars in Licona, *Resurrection*, pp. 120-25. See Richard I. Pervo, 'Acts in the Suburbs of the Apologists', in Thomas E. Phillips (ed.), *Contemporary Studies in Acts* (Macon, GA: Mercer University Press, 2009), pp. 31-34 for a very clear example of considerations about the probabilistic nature of hypotheses that could also be articulated with Bayesian logic.

21. For a fuller reflection to this end, see Aviezer Tucker, 'Historical Truth', in Vittorio Hösle (ed.), *Forms of Truth and the Unity of Knowledge* (Notre Dame: Notre Dame University Press, 2014), pp. 232-59.

questions in the work of analytic philosophers,<sup>22</sup> its methodological utility has been defended by philosophers of history,<sup>23</sup> and, more germane to the present study, it has been applied to historical investigations in both Old Testament studies and New Testament studies by biblical scholars or ancient historians.<sup>24</sup>

Concerns may yet persist regarding what is seen to be the application of a mathematical probability theorem to historical questions in New Testament studies. A disclaimer is thus warranted for what Bayes's Theorem *cannot* do for such investigations: Bayes's Theorem cannot objectively prove or disprove historiographic hypotheses, nor should its quantitative nature be seen to lend it a greater veneer of objectivity over qualitative

22. For examples, see John Earman, *Hume's Abject Failure: The Argument against Miracles* (Oxford: Oxford University Press, 2000); Richard Swinburne, *The Resurrection of God Incarnate* (Oxford: Oxford University Press, 2003); Timothy J. McGrew and Lydia McGrew, 'The Argument from Miracles: A Cumulative Case for the Resurrection of Jesus of Nazareth', in William Lane Craig and J.P. Moreland (eds.), *The Blackwell Companion to Natural Theology* (Blackwell Companions to Philosophy; Malden, MA: Wiley-Blackwell, 2012), pp. 593-662.

23. See especially Tucker, *Our Knowledge*, pp. 92-140. Cf. Day, *Philosophy of History*, pp. 31-49; Mark Day and Gregory Radick, 'Historiographic Evidence and Confirmation', in Aviezer Tucker (ed.), *A Companion to the Philosophy of History and Historiography* (Blackwell Companions to Philosophy, 41; Oxford: Blackwell, 2009), pp. 85-97; John H. Zammito, 'Post-Positivist Realism: Regrounding Representation', in Nancy Partner and Sarah Foot (eds.), *The SAGE Handbook of Historical Theory* (London: SAGE, 2013), pp. 401-23.

24. For an example from Old Testament studies, see Efraim Wallach, 'Bayesian Representation of a Prolonged Archaeological Debate', *Synthese* 195 (2018), pp. 401-31. For an example from New Testament studies, see Christoph Heilig, *Paul's Triumph: Reassessing 2 Corinthians 2:14 in its Literary and Historical Context* (BTS, 27; Leuven: Peeters, 2017); Heilig, 'Considerations'; Heilig and Heilig, 'Historical Methodology', pp. 115-50; Nevin Climenhaga, 'Papias's Prologue and the Probability of Parallels', *JBL* 139 (2020), pp. 591-96; Richard Carrier, *On the Historicity of Jesus: Why We Might have Reason for Doubt* (Sheffield: Sheffield Phoenix Press, 2014); *Idem*, *Proving History: Bayes's Theorem and the Quest for the Historical Jesus* (Amherst, NY: Prometheus, 2012). Carrier's treatments offer the fullest application of the theorem and are thus commendable (and in this sense perhaps undervalued) projects. However, they are not without critique from a methodological perspective. See Tucker's review, 'Reverend Bayes', pp. 129-40.

formulations, and in general, subjective reasoning. Furthermore, the theorem *itself* does not do anything, but is subject to selective inputs made on the basis of other methods and knowledge, and is thus subject to the garbage-in-garbage-out rule. It also does not determine how probable a hypothesis must be in order for it to be *believed*: acceptance depends on contexts and values, and varies depending upon perceived consequences.<sup>25</sup>

In light of the above discussion, it is clear that if one accepts Bayesian logic as a reliable descriptive framework for good historiographic reasoning, it follows that it is a potentially useful framework for critiquing historiographic reasoning. I will now demonstrate how Bayes's Theorem can be set forth as a procedure of analysis for the present critique.

## *2. Bayes and 'The First Pauline Chronologist?': A Procedure for Analysis*

It has been demonstrated that Bayes's Theorem can theoretically be presented as a logical framework for historical reasoning. I will here offer a general procedure for using the logic of Bayes's Theorem to critique historiographical hypotheses, and advocate that this logic be supplemented with key contributions from abductive reasoning in the form of 'explanatory virtues' (logical criteria for developing plausible hypotheses).<sup>26</sup> Virtues such as *low disconfirmation*, *simplicity* (or low-ad-hocness), *explanatory scope* and *falsifiability* bring an explanatory coherence to Bayesian logic and aid in the development of an initially plausible hypothesis and in identifying what constitutes evidence and background knowledge. I consider and define these explanatory virtues in greater depth in the final analysis below. At this point it is important only to indicate that without such 'explanatory virtues', apparently plausible but counter-intuitive hypotheses may be internally

25. This highlights the importance of 'epistemic contextualism', that what we consider truth depends on context. For a discussion, see Tucker, 'Historical Truth', pp. 252-55. This also suggests that what one believes as true, or what one acts upon, does not necessarily correspond directly to what may or may not be shown to be probable.

26. This is not an idiosyncratic move, but is a known position within Bayesian confirmation. Here I am following Day, *Philosophy of History*, pp. 31-49, and Day and Radick, 'Historiographic Evidence', pp. 87-97.

confirmed on Bayes's Theorem.<sup>27</sup> This supplementation of Bayesian confirmation with abductive reasoning is called a 'compatibilist' approach.<sup>28</sup>

My procedure is as follows: after showing that Bayesian logic describes what Schellenberg is doing in his essay, I will then summarize and represent his argument along the Bayesian framework presented above. I will then offer a critique of his argumentation on the basis of Bayesian logic and the explanatory virtues just introduced. In the final analysis, I will provide an assessment of the probability of his hypothesis.

### 3. *The First Pauline Chronologist? A Bayesian Analysis*

In this section I will first demonstrate that Bayesian reasoning describes what Schellenberg is doing. I will then very broadly categorize his hypothesis, evidence and relevant background knowledge in an effort to provide orientation for the summary. Finally, I will provide a more detailed summary and categorization of his essay.

#### *Does Bayesian Reasoning Describe what Schellenberg is Doing?*

When Schellenberg states that he 'propose[s] to test the hypothesis ... by examining its credibility as an explanation', and that proposed evidence may 'provide strong confirmation of the explanatory value to the hypothesis', he is shown to be presenting the relationship between his hypothesis

27. Bertrand Russell's 'five-minute hypothesis' is a good example: how does one know that the universe was not created five minutes ago with only an *appearance* of billions of years and false memories planted in our heads? The 'explanatory virtue' of a hypothesis not being *ad-hoc* is highly suggestive that the hypothesis is not plausible. See Day and Radick, 'Historiographic Evidence', p. 95.

28. It is important to note here that some proponents of Bayesian reasoning who are non-compatibilist in terms of its relationship to abductive reasoning would see such 'explanatory virtues' as reducible to, and derivative from, Bayesian logic itself. See Swinburne, 'Introduction', pp. 8-9. One example is that the logic of the theorem *itself* can model virtues such as confirmation and disconfirmation, where the predictive power is updated based on the way in which additional relevant evidence confirms or disconfirms the hypothesis. The import of such considerations on the *compatibilist* approach offered here is discussed below.

and the evidence as one of plausible inference, which is in keeping with the goals of Bayesian logic.<sup>29</sup>

Additionally, when Schellenberg considers the question as to whether his explanation is ‘preferable’ to competing hypotheses, he is also reasoning in a way which accords with Bayesian logic.<sup>30</sup> When Tucker argues that ‘Bayesian logic is the best explanation of the actual practices of historians’, even when they are unaware, this is the kind of reasoning to which he refers.<sup>31</sup> Therefore, I propose that the following summary and recasting of Schellenberg’s essay along a Bayesian framework is not only warranted, but vital for assessing his methodology.

#### *Hypotheses, Evidence and Background Knowledge*

Schellenberg’s initial hypothesis is rather straightforward: in his words, his proposal is ‘to test the hypothesis of Luke’s dependence on the Pauline corpus ... as an explanation for ... Paul’s itinerary in Acts 16–20’.<sup>32</sup> In short, his hypothesis is that Luke is dependent on the Pauline corpus.

The evidence that his hypothesis is tested against (that which it is purported to explain) is Paul’s itinerary in Acts 16–20.<sup>33</sup> The logic presented for his testing of his hypothesis against this evidence is presented in the form of two questions: (1) ‘to what extent can the itinerary of Acts 16–20 ... be explained as Luke’s deduction from his reading of Paul’s letters?’ and (2) ‘are there features of the narrative that make this explanation preferable to other common proposals, specifically, that Luke had access to an independent “itinerary” source, or was a travelling companion of Paul?’<sup>34</sup> This logic is recast along the framework of P(H|E&B) below.

Regarding background knowledge, it is vital only to identify the ‘knowledge that concerns the basic parameters which are presupposed by the assumption of a hypothesis’.<sup>35</sup> I will thus only initially identify two very

29. Schellenberg, ‘The First Pauline Chronologist’, pp. 194, 195 and 213, respectively.

30. Schellenberg, ‘The First Pauline Chronologist’, p. 212.

31. Tucker, *Our Knowledge*, p. 96 (cf. 4).

32. Schellenberg, ‘The First Pauline Chronologist’, pp. 194-95.

33. Schellenberg, ‘The First Pauline Chronologist’, p. 195.

34. Schellenberg, ‘The First Pauline Chronologist’, p. 195.

35. Heilig, ‘Considerations’, p. 81. In other words, knowledge that can aid in confirming or disconfirming a hypothesis.

broad elements of background knowledge which Schellenberg presents or strongly implies in his essay, without yet offering critical discussion.

First, Schellenberg is apparently following Richard I. Pervo and the conclusions of the Acts Seminar of the Westar Institute that the book of Acts was written late enough for the author to have had access to the completed Pauline corpus.<sup>36</sup> Thus, though it need not be stated, the pre-existence of the entire Pauline corpus is background knowledge for Schellenberg's argumentation.<sup>37</sup>

A second, implied element of background knowledge is that Luke is a user of sources with certain editorial practices. This becomes explicit and forms a major piece of discussion in the third section of Schellenberg's essay.<sup>38</sup>

This broad categorization provides the necessary elements to be slotted into the posterior probability component of Bayes's theorem, P(H|E&B). Schellenberg is seeking to test the probability (P) of Luke's dependence on the Pauline corpus (H) given the data in Acts 16–20 (E), and given the background knowledge that the author had access to the completed Pauline corpus and that he was a user of sources (B).

I will now provide a more detailed summary of Schellenberg's essay and argumentation. In the process, I will sharpen the above broad categorizations of H, E and B based upon further considerations therein. This is necessary as Schellenberg is not self-consciously attempting to provide a

36. Schellenberg, 'The First Pauline Chronologist', p. 194; cf. Richard I. Pervo, *Dating Acts: Between the Evangelists and the Apostles* (Santa Rosa, CA: Polebridge, 2006), pp. 51-147; *idem*, 'Dating Acts', *Forum* NS 5 (2002), pp. 53-72; Dennis E. Smith and Joseph B. Tyson, 'Introduction', in Dennis E. Smith and Joseph B. Tyson (eds.), *Acts and Christian Beginnings: The Acts Seminar Report* (Salem, OR: Polebridge, 2013), pp. 1-19 (2). Schellenberg does not specifically state that he takes a position on the date, yet this may be a critical piece of background knowledge for his analysis. See Craig S. Keener, *Acts: An Exegetical Commentary* (4 vols.; Grand Rapids: Baker Academic, 2012), I, pp. 233-34, 400-401, for a discussion on the relationship between date and access to Paul's letters. This is discussed further below.

37. See below, as Schellenberg conceives of dependency on both the undisputed and disputed Epistles, as well as those traditionally dated among the earliest and latest of the Epistles.

38. Schellenberg, 'The First Pauline Chronologist', pp. 204-11.

Bayesian analysis, and as such his argument needs to be recast with care and precision.

*'The First Pauline Chronologist?' A Summary*

Schellenberg sets the stage for his analysis by first considering that the work of Pervo and Tyson has opened the door to reconsidering the question of Luke's dependence on the Pauline corpus for his presentation of Paul in Acts.<sup>39</sup> Schellenberg here formulates this question as a hypothesis for explaining the *itinerary* data in Acts 15.36–20.16 (hence the subtitle of the essay). Thus, his initially stated evidence (E) is quickly sharpened, as *itinerary* data in Acts 15.36–20.16.<sup>40</sup>

As a distillation of his evidence, Schellenberg provides a chart bringing together toponyms in Acts 15.36–20.16 with identical or corresponding toponyms in Paul's Epistles (in Romans, 1 and 2 Corinthians, Galatians, Philipians, 1 Thessalonians and 2 Timothy), highlighting their similarity.<sup>41</sup> On the basis of this chart, he considers that Luke's itinerary of Paul 'could quite easily have been constructed from cues in the letters', and imagines how such a reconstruction may have been accomplished by Luke.<sup>42</sup>

Schellenberg, in light of apparent inconsistencies (discussed below), makes the point that Luke need not have had Paul's letters open before him for reference, but his familiarity need only have been 'general', and his reconstruction, 'creative'.<sup>43</sup> His initial hypothesis that Luke is dependent on the Pauline corpus has thus been qualified: Luke is dependent on the Pauline corpus *in a general and creative way*. Here as well, his evidence (E) is further sharpened to *topographical* data in the itinerary in Acts 15.36–20.16.

Schellenberg next offers a criterion for testing his hypothesis against his sharpened evidence. The two sides of this criterion are referred to as 'narrative expansion' and 'redundant toponyms'.<sup>44</sup> First, he indicates that Luke's narrative in Acts 15.36–20.16 selects for narrative expansion *only* places which are also mentioned by Paul, with the exception of Beroea. Secondly,

39. Schellenberg, 'The First Pauline Chronologist', pp. 193-94.

40. Schellenberg, 'The First Pauline Chronologist', p. 195.

41. Schellenberg, 'The First Pauline Chronologist', pp. 196-97.

42. Schellenberg, 'The First Pauline Chronologist', pp. 198-200; he also makes note of some apparent discrepancies.

43. Schellenberg, 'The First Pauline Chronologist', p. 200.

44. Schellenberg, 'The First Pauline Chronologist', p. 201.

where Luke mentions places *not mentioned* by Paul, he apparently ‘tells us nothing except that Paul came and went’.<sup>45</sup> He refers to these as ‘redundant toponyms’.<sup>46</sup> These two observations are relevant because Schellenberg points out that neither Luke nor Paul is exhaustive in his itinerary data, and therefore, such an apparent overlap of emphasis is for him highly suggestive.<sup>47</sup>

Next, in efforts to raise the plausibility of the hypothesis that Luke is dependent on the Pauline corpus, Schellenberg expands the initial type and scope of evidential data to include conceptual/terminological ‘intertextual echoes’ (new data-type) between Acts 19.21, 20.22 (v. 22 exceeding the sharpened scope of 15.36–20.16) and Rom. 15.25.

This supplement to the evidence states that because of the language in Acts 19.21 and 20.22—that Paul’s movements were undertaken by the prompting of the Holy Spirit (ἐν τῷ πνεύματι and δεδεμένος ἐγὼ τῷ πνεύματι) and his destination was Jerusalem (πορεύεσθαι εἰς Ἱεροσόλυμα and πορεύομαι εἰς Ἱερουσαλήμ), respectively—these two verses from Acts are to be read in tandem. When they are read in tandem, Schellenberg sees them as an intertextual echo of Rom. 15.23-25, which includes the phrase πορεύομαι εἰς Ἱερουσαλήμ.<sup>48</sup>

45. Schellenberg, ‘The First Pauline Chronologist’, p. 201.

46. Schellenberg, ‘The First Pauline Chronologist’, p. 201. He uses the terminology from Thomas Hägg, *Narrative Technique in Ancient Greek Romances: Studies of Chariton, Xenophon Ephesius, and Achilles Tatius* (Skrifter Utgivna av Svenska Institutet i Athen 80.8; Uppsala: Almqvist & Wiksell, 1971), pp. 87-89, by way of Loveday Alexander, ‘The Pauline Itinerary and the Archive of Theophanes’, in John Fotopoulos (ed.), *The New Testament and Early Christian Literature in Greco-Roman Context: Studies in Honor of David E. Aune* (NovTSup, 122; Leiden: Brill, 2006) pp. 148-62 (153-54) (see Schellenberg, ‘The First Pauline Chronologist’, p. 201 n. 32). Beroea is an exception only for the first criterion.

47. Schellenberg, ‘The First Pauline Chronologist’, p. 201, here drawing upon a consideration of Morton Scott Enslin, ‘Luke and Paul’, *JAOS* 58 (1938), p. 84.

48. Schellenberg, ‘The First Pauline Chronologist’, pp. 202-203. It is important to note here that, his passing reference to Green notwithstanding, Schellenberg does not define what he means by intertextuality or consider any potential problems with the concept. On the origination of the term, and representing a poststructuralist perspective, see Julia Kristeva, ‘Bakhtine, le mot, le dialogue et le roman’, *Critique* XXIII.239 (1967), pp. 438-65. It is not clear that this is the sense in which Schellenberg uses the term. In any case, its potentially problematic nature has been

Additionally, Schellenberg observes that later verses in the discourse in Romans (Rom. 15.30-31) provide a sense of foreboding for Paul's travels to Jerusalem (where Paul asks for prayer that he may be rescued from unbelievers in Judea), and that this is echoed in Acts 20.22-23 (where Paul is aware that imprisonment and persecutions await him in every city). Finally, Schellenberg notes that both Acts 19.21 and Rom. 15.23-25 indicate Paul's desire to 'see' Rome after his travels to Jerusalem (ἐλπίζω γὰρ διαπορευόμενος θεάσασθαι ὑμᾶς, Paul's desire to see the Romans in Rom. 15.24; δεῖ με καὶ Ῥώμην ἰδεῖν, Paul's stating he must see Rome in Acts 19.21).<sup>49</sup>

Schellenberg's estimation of the importance of this evidentiary supplement for his case must be recognized, as he states: 'Luke's knowledge of the itinerary itself could easily enough reflect an independent historical memory, but such correspondence with Paul's anticipatory description of it is difficult to explain unless one acknowledges a literary relationship.'<sup>50</sup> Schellenberg does consider that Luke uses similar language elsewhere with no clear evidence of intertextual echo, but still argues that Luke's language may reflect a knowledge of Paul's itinerary from his letters. He sees such instances as being creative reiterations and integrations of Pauline material into his wider narrative. The implication is that in such places, while dependency is assumed, it is imperceptible.<sup>51</sup>

At this juncture Schellenberg's evidential dataset has been expanded and sharpened, and his argument can thus be re-stated along the Bayesian framework of P(H|E&B). What is being tested now is the probability (P) that Luke is dependent on the Pauline corpus in a general and creative way (H), given the topographical data in Acts 15.36–20.16 (E<sub>1</sub>) and specific phrasing in Acts 19.21 and 20.22 (E<sub>2</sub>), and given the background knowledge that the author had access to the completed Pauline corpus (especially Rom 15.23-25 and Rom 15.30-31) and that he was a user of sources (B).

discussed. See Stanley E. Porter, *Sacred Tradition in the New Testament: Tracing Old Testament Themes in the Gospels and Epistles* (Grand Rapids: Baker Academic, 2016), pp. 3-26.

49. Schellenberg, 'The First Pauline Chronologist', p. 203.

50. Schellenberg, 'The First Pauline Chronologist', p. 203.

51. Schellenberg, 'The First Pauline Chronologist', pp. 203, 203 n. 38, citing Acts 13.4 and 16.6-10. He wrongly cites Acts 13.4 as Acts 13.24.

By this point, Schellenberg has identified corresponding material between the Epistles and Paul's itinerary in Acts, first in topographical data from Acts 15.36–20.16 and a number of Paul's Epistles, and next in terminology found between Acts 19.21, 20.22 and Rom. 15:23-25, 15.30-31. In both instances, Schellenberg has considered that creativity on the part of the author of Acts accounts for apparent differences.<sup>52</sup> Such creativity is seen either in topographical features of Acts which are additional to the data found in the Epistles (such as Beroea), or in distinctly Lukan presentations of Paul that do not *seem* to depend on his 'source material', the Pauline corpus, in the way other passages apparently do.<sup>53</sup>

Schellenberg is aware that what he calls creative editing could in theory 'easily enough reflect' independent knowledge,<sup>54</sup> but he seeks to neutralize such a consideration by conceiving of it as a window through which to view the apparent creative redactional tendencies of Luke's Gospel with the Gospel of Mark, which in turn supports his initial hypothesis and deals with objections that it is disconfirmed.<sup>55</sup> This argumentation occupies the third and final section of Schellenberg's essay and expands on the background knowledge introduced more generally above: that Luke was a user of sources.

This section of Schellenberg's essay expands the evidence even further and qualifies the background knowledge that Luke is a user of sources by seeking to demonstrate that he is a creative user of sources *in the Gospel of Luke*, also introducing *new* background knowledge in the process. Here Schellenberg seeks to raise the plausibility of his hypothesis, which states that Luke's dependence on the Pauline corpus is general, creative and from memory.<sup>56</sup>

52. Schellenberg, 'The First Pauline Chronologist', pp. 200, 203, 203 n. 38, 204, 207.

53. The logic on pp. 203-204 is not explicit, and the inference is difficult to follow. I believe I have done justice describing the flow of his logic here.

54. Schellenberg, 'The First Pauline Chronologist', p. 203.

55. Schellenberg, 'The First Pauline Chronologist', p. 204. It is clear here that Schellenberg is aware of the critical importance of data beyond his initial scope. The delicate nature of this issue will be discussed in the analysis below.

56. He considers his initial hypothesis to be 'enhanced' by this supplementary argument. Schellenberg, 'The First Pauline Chronologist', pp. 204-205. Specifically, he addresses those who may not hold to Markan priority, or to a single author for Luke-Acts (the two assumptions he makes in this section), that 'the credibility

As far as new background knowledge is concerned, Schellenberg states that he ‘assume[s] Markan priority’.<sup>57</sup> His new selected *evidence* is straightforward: synoptic elements between the Gospel of Luke and the Gospel of Mark.

Here Schellenberg seeks to demonstrate three proposals from what he sees as Lukan redaction of Mark’s Gospel: (1) ‘Luke is more concerned with the demands of his narrative than with fidelity to the chronology suggested by his sources’,<sup>58</sup> (2) Luke ‘finds travel thematically suggestive and is willing, if necessary, to generate more of it than his sources provide’, yet also ‘feels free to omit travel’<sup>59</sup> and (3) Luke ‘is not averse to adding geographical specificity where it is lacking in his source’.<sup>60</sup>

Schellenberg’s conclusion is that since Luke can be shown to be a narratively concerned and creative redactor of his apparent primary source for his *Gospel*, when his material in Acts 15.36–20.16 exceeds or apparently differs from the Pauline data in the Epistles, this can be seen as creative redaction.<sup>61</sup> The particular perspective on the synoptic problem and sources in the Gospel of Luke will not specifically be critiqued below. In this summary I wish to highlight only the presumed logical relation between this additional data and Schellenberg’s initial argument.<sup>62</sup>

At this juncture, having fully summarized Schellenberg’s essay, his initial hypothesis and evidential dataset have been expanded once more. It can

of my account of the use of sources in Acts [i.e. the dependency account as he makes clear in the preceding paragraph] is enhanced by but not dependent on these positions [the positions of Markan priority and a single author for Luke–Acts]’.

57. Schellenberg, ‘The First Pauline Chronologist’, p. 205. This is not uncontroversial, which Schellenberg does well to note.

58. Schellenberg, ‘The First Pauline Chronologist’, p. 205.

59. Schellenberg, ‘The First Pauline Chronologist’, p. 206.

60. Schellenberg, ‘The First Pauline Chronologist’, p. 207.

61. Schellenberg, ‘The First Pauline Chronologist’, pp. 208-11.

62. However, it can be noted that the argumentation in this section is simplistic. For example, Luke’s omissions or additions of travel material against his perceived sources (Mark’s Gospel and Q) do not hint at creative editing the way his supposed lack of fidelity for chronology may. Such apparently contrasting data may be better explained on alternate views of the synoptic problem and related issues. It has not always been apparent that Luke is a liberal editor; cf. Adolf von Harnack, *Luke the Physician: The Author of the Third Gospel and the Acts of the Apostles* (trans. J. R. Wilkinson; London: Williams & Norgate, 1909), p. 87.

be finally restated as follows, again on the Bayesian framework  $P(H|E\&B)$ . Schellenberg is testing the probability (P) that Luke is dependent on the Pauline corpus in a general and creative way (H), given: the topographical data in Acts 15.36–20.16 ( $E_1$ ) and specific phrasing in Acts 19.21; 20.22 ( $E_2$ ); the background knowledge that Luke had access to Paul's letters, was a user of sources; and the synoptic data in the Gospel of Luke with Mark and Markan priority (B).<sup>63</sup>

Having summarized and essentially recast Schellenberg's essay along a Bayesian framework, his hypothesis, evidence, background knowledge and reasoning can now be critiqued. This will be done through an examination of issues pertaining to background knowledge, the relationship between background knowledge and evidence and finally through subjecting his hypothesis and overall argumentation to critique by the explanatory virtues mentioned above. This critique does not exhaust everything Schellenberg raises in his article, but focuses on the above representation of his argumentation. It is shown here that while Schellenberg offers provocative and interesting points in his essay, he greatly lessens the probability of his initial hypothesis precisely where he presumes to be enhancing it.

#### *4. The First Pauline Chronologist? Bayesian Pressure-Testing*

Having summarized Schellenberg's essay, I now offer a critique of his argumentation. I begin by examining Schellenberg's background assumptions. I then examine his selected evidence and consider the interrelationship between evidence and background knowledge. Finally, I provide an analysis of how his hypothesis tests against these in light of the explanatory virtues introduced above. The goal here is not to ascertain whether Schellenberg's hypothesis is a possible explanation of the evidence, but whether it is the most plausible explanation of the evidence, and whether his argument as a whole exhibits the kind of explanatory coherence which demonstrates reliable and acceptable reasoning. I suggest that Bayesian reasoning shares this

63. I have placed the entire synoptic element of Schellenberg's argument as background knowledge here, though it is presented as evidence in his essay. This is self-conscious and explicated below.

goal with biblical criticism, which ‘must not be content with mere possibility, but must endeavour to find out the probable’.<sup>64</sup>

### *Background Knowledge*

I have identified the relevant background knowledge evident in Schellenberg’s essay as the following: (1) Luke had access to Paul’s letters, (2) Luke was a user of sources and (3) the Mark-Luke synoptic data and Markan priority. These three background elements form the necessary knowledge for Schellenberg to run the logic of testing his hypothesis against the evidence. I will address each of these in turn.

1. *Luke Had Access to Paul’s Letters*. The first element of background knowledge for Schellenberg’s argument, indeed, the one which the entire investigation is predicated upon, is that Luke had access to some or all of Paul’s Epistles. My aim here is not to outright reject Schellenberg’s background assumptions (to do so would be to invalidate his argument and so avoid analysis), but rather to critically evaluate its strength with a goal towards nuancing this element of his reasoning as I approach the final analysis.

The suggestion that Luke had access to Paul’s letters is not new. And thus, the supposition of this as background knowledge has a certain degree of initial warrant for Schellenberg’s thesis.<sup>65</sup> The difficulty for such a position, but not such a difficulty as to disqualify it, is that this view has not enjoyed wide acceptance in the field, and even among those who conceive that access to Paul’s letters was plausible, many nonetheless claim Luke did not make use of them.<sup>66</sup>

64. Ferdinand Christian Baur, *Paul the Apostle of Jesus Christ: His Life and Work, His Epistles and His Doctrine* (trans. and ed. Eduard Zeller; repr., Peabody, MA: Hendrickson, 2003), pp. 184-85.

65. For a list of notable proponents of this view, see William O Walker, Jr., ‘Acts and the Pauline Letters: A Select Bibliography with Introduction’, *Forum* NS 5 (2002), pp. 105-16. See also Pervo, *Dating Acts*, pp. 51-147; *idem*, *The Mystery of Acts: Unraveling Its Story* (Santa Rosa, CA: Polebridge, 2008), p. 4, which provides a defense of this position.

66. On the majority of scholars rejecting this view, see Keener, *Acts*, I, p. 234, 234 n. 91. See Walker, ‘Acts and the Pauline Letters’, pp. 108-10 for a list of notable works which reject this view. Cf. Joseph A. Fitzmyer, *Luke the Theologian: Aspects of his Teaching* (New York: Paulist, 1989), p. 16. For scholars who

When surveying the proponents of the various positions regarding Luke's access to Paul's letters, the relative groups are seen to be heterogeneous: English and German-speaking scholarship alike from the nineteenth and twentieth centuries advocated for both conservative and liberal viewpoints. I do not state this as an appeal to consensus against Schellenberg's background assumptions in any way, but only to note that consensus, where it is heterogeneous (and presumably not coerced, and sufficiently large), may indicate where to look for reliable reasoning about background knowledge.<sup>67</sup> Schellenberg is well-aware of the debate and does well to clearly describe his orientation towards the question in refraining to address it specifically.<sup>68</sup> Yet a minimal defense of the position would at least provide a nuance to this aspect of background knowledge which is lacking explicit treatment in Schellenberg's essay.<sup>69</sup>

Such desired nuance can be found in Walker's survey and is helpful to repeat here. It is clear that there are actually three distinct possibilities regarding the thesis of Luke's access to and use of Paul's Epistles: (1) Luke did not have access to or use any of Paul's letters, (2) Luke had access to some or all of Paul's letters but did not use them and (3) Luke had access to

considered that Luke may or must have had access to Paul's letters but did not use them, see Walker, 'Acts and the Pauline Letters', pp. 110-11.

67. Consensus and paradigms in any field present a problem for those who see them as a proxy for knowledge (on the issue broadly, see Thomas S. Kuhn, *The Structure of Scientific Revolutions* [Chicago: University of Chicago Press, 3rd edn, 1996]). Consensus is often a poor proxy for knowledge because it can be coerced, homogenous and not large enough to count. However, the process by which heterogeneous, uncoerced and large consensuses emerge might be a proxy for *reliable* reasoning (but not for true knowledge by appeal to consensus). This is a modification on some reflections found in Aviezer Tucker, 'The Epistemic Significance of Consensus', *Inquiry* 46 (2004), pp. 501-21, and Tucker, *Our Knowledge*, pp. 23-45. Admittedly, there are intangibles regarding consensuses and they should not on their own stand in for argumentation.

68. Schellenberg, 'The First Pauline Chronologist', p. 194 n. 8.

69. Schellenberg's survey is concise but useful. See Schellenberg, 'The First Pauline Chronologist', pp. 193-94 nn. 3-8. Tucker's treatment of the nature and role of consensus may compel Schellenberg to reconsider the utility of bracketing off this debate. But his doing so can hardly be held against him in an article with a word-limit.

and used some or all of Paul's letters.<sup>70</sup> Schellenberg's own position falls into category three, but requires further parsing out below.<sup>71</sup>

Schellenberg's list of dependency does not include all of Paul's letters, but his selection runs the chronological spectrum of their generally proposed dates (including both Galatians and 2 Timothy), and includes selections from the so-called undisputed (Romans, 1 and 2 Corinthians, Galatians, Philippians, 1 Thessalonians), and disputed (2 Timothy) Epistles. Hence, it seems clear that Schellenberg conceives of Luke having had access to the completed Pauline corpus as traditionally conceived, yet his hypothesis only demands that he used some of them.

This raises one further aspect of background information previously unmentioned but requiring consideration, namely the date of Acts. What is relevant here is the *relative* dating of the Epistles to the book of Acts. In this regard it is obvious and hardly worth stating that Schellenberg's background assumption is that Acts chronologically follows the writing and circulation of the entire Pauline corpus and is hence later than them.

This sequence (completed Pauline Epistles → book of Acts) *is* conceivable even if one takes Acts to be written early (i.e. it is possible to see the Pauline corpus as being completed and collected early and thus also see an early date for Acts which allows the dependency hypothesis).<sup>72</sup> However, a late date for Acts on the dependency hypothesis appears to be the simpler consideration, and is the one taken by Pervo, Tyson and the Acts Seminar, whom Schellenberg follows.<sup>73</sup> Schellenberg thus presumably takes a late-date for Acts, likely ~120 CE.<sup>74</sup>

70. Walker, 'Acts and the Pauline Letters', pp. 108-111.

71. Schellenberg, 'The First Pauline Chronologist', pp. 196-97, 213.

72. Cf. Stanley E. Porter, 'Paul and the Process of Canonization', in Craig A. Evans and Emanuel Tov (eds.), *Exploring the Origins of the Bible: Canon Formation in Historical, Literary, and Theological Perspective* (Acadia Studies in Bible and Theology; Grand Rapids: Baker Academic, 2008), pp. 173-202 for a critique of later dating for the completion of the Pauline corpus.

73. Pervo, Tyson and the Acts seminar are acknowledged by Schellenberg as providing general orientation toward the initial question. Schellenberg, 'The First Pauline Chronologist', pp. 193-94.

74. I am splitting the difference between Pervo and Tyson, whom Schellenberg follows: Pervo sees Acts written c. 110–120 CE and Tyson 120–125 CE. Richard I. Pervo, *Acts: A Commentary* (Hermeneia; Minneapolis: Fortress Press,

This raises one potential issue for the strength of Schellenberg's argument as it concerns its superiority over the eyewitness hypothesis if he indeed does take such a position on date: it virtually disqualifies the eyewitness hypothesis a priori.<sup>75</sup>

If Schellenberg does take a late date, then the multiple points in his essay where he claims to be entertaining the hypothesis that the author of Acts was a companion of Paul may seem to be disingenuous, as he is instead dismissing it for evidential reasons *within his argumentation*.<sup>76</sup>

I do not intend here to put a date in Schellenberg's essay where there is none. Instead, I intend to demonstrate the potential problems raised by failing to highlight relevant background knowledge. In spite of this, it can safely be assumed that Schellenberg's background knowledge is simply that Acts follows the circulation of the entire Pauline corpus, and that the dates for these documents are early enough for the author of Acts also to have plausibly been an eyewitness to some events in theory.<sup>77</sup> I will now consider background knowledge pertaining to Luke's use of sources.

2. *Luke Was a User of Sources*. The general piece of background knowledge initially introduced above in this essay is the assumption that Luke was a user of sources. This general notion is unproblematic. It is clear, if one

2008), pp. xv, 5; Joseph B. Tyson, *Marcion and Luke–Acts: A Defining Struggle* (Columbia: University of South Carolina Press, 2006), pp. 1-23. Cf. Armstrong, *Dating Acts*, pp. 15-19. One could also see the Epistles as early and Acts as quite removed from them temporally; see Fitzmyer, *Luke the Theologian*, p. 16.

75. For the author of Acts to have been an eyewitness to events as early as the late 40s or early 50s, only to write about them fifty to seventy years later (c. 100–120 CE), would push his age quite high: 70–90 years old if a young starting age of twenty is assumed. Cf. Keener, *Acts*, I, p. 400, n. 117 and pp. 400-401 for a discussion on the age of the author and the date of Acts.

76. See especially Schellenberg, 'The First Pauline Chronologist', pp. 200-201; cf. pp. 195 n. 10, 203.

77. This could be a middle-of-the-road date, as taken by Keener who considers the relationship between date and the potential age of the author in *Acts*, I, pp. 400-401. This middle-of-the-road dating is itself not unproblematic. For a fuller discussion on the issues, see Stanley E. Porter, 'Dating the Composition of New Testament Books and Their Influence upon Reconstructing the Origins of Christianity', in Israel Muñoz Gallarte and Jesús Paláez (eds.), *Mari Via Tua: Philological Studies in Honor of Antonio Piñero* (Estudios de Filología Neotestamentaria, 11; Córdoba: Ediciones El Almendro, 2016), pp. 553-74.

takes the position that Luke–Acts is a work by one author, that this author was known to have used sources (Lk. 1.1-4). As a general piece of background knowledge that may be relevant for Schellenberg’s essay, this is a fine supposition. However, in the particular section of Schellenberg’s essay where this background knowledge is made explicit, questions arise as to whether this specific articulation of background data is legitimate for testing the dependency hypothesis in Acts. This is discussed below.

3. *Markan Priority and Luke’s Use of Mark*. The third section of Schellenberg’s essay inserts new background information from an analysis of the synoptic relationship between Luke’s and Mark’s Gospels. What is pressing here is the question as to whether the synoptic problem qualifies as a genuine analogy for the book of Acts and the Pauline corpus.

In this section of his essay, Schellenberg indicates that he is following a precedent set primarily by Ben Witherington.<sup>78</sup> Witherington’s own analysis does not consider the analogy between the synoptics and Acts to concern the ‘we’ passages (which partly overlap with and extend beyond Schellenberg’s itinerary selection from Acts), but rather considers passages preceding the ‘we’ sections to be analogous. On either view, such an analogy is not immediately clear. And while Schellenberg notes Haenchen’s rejection of using the synoptic problem as an analogy for the situation in the book of Acts, he does not deal with any of Haenchen’s arguments.<sup>79</sup>

Haenchen’s own critique concerns his view of the contexts of the Gospel of Luke and the book of Acts, two contexts which he sees as ‘utterly

78. Schellenberg, ‘The First Pauline Chronologist’, p. 204. Cf. Ben Witherington III, ‘Editing the Good News: Some Synoptic Lessons for the Study of Acts’, in Ben Witherington III (ed.), *History, Literature, and Society in the Book of Acts* (Cambridge: Cambridge University Press, 1996), pp. 324-47 (326). However, it should be noted that Schellenberg sees Witherington as warranting analysis precisely where Witherington claims this perspective is *not* warranted. See Witherington, ‘Editing the Good News’, p. 326 n. 8; cf. pp. 326-27.

79. Surprisingly, Witherington does not mention Haenchen in his essay. Ernst Haenchen, *The Acts of the Apostles* (Oxford: Blackwell, 1971), pp. 81-90. Additionally, Witherington recognizes that despite his fivefold introductory argument to the contrary (‘Editing the Good News’, pp. 324-25), the situation in Acts is very different than it is for the Gospel of Luke on the Markan priority hypothesis: ‘we have little and in some cases no access to those Acts sources now’. See Witherington, ‘Editing the Good News’, p. 326.

different'.<sup>80</sup> Haenchen's estimation, which likewise takes a view of Markan priority, is based on the fact that no sources are as clearly identifiable in the book of Acts as Mark apparently is in the Gospel of Luke.<sup>81</sup> While Haenchen indicates that source-critical contributions to Acts such as the Antiochene and travel-journal sources need to be taken seriously, his point is that even then such views are not analogical to the source question in the Gospel of Luke.<sup>82</sup>

The relevance for the present critique is that if one takes Markan priority, and even if one assumes that Luke had access to Paul's letters and hypothetically used them, his use is clearly not the same as his apparent use of Mark's Gospel. This is not a problem of source-criticism as much as it is one of redaction-criticism. Sources may well be postulated for Acts, but redactional practices cannot be ascertained unless those sources can be independently accessed.

This problem exposes a flaw in Schellenberg's argumentation: The analogy between Luke and Mark, and Acts and Paul, must be *assumed* for the comparison to be valid, but the validity of the analogy is apparently dependent upon the comparison. While one could say something about Lukan redaction more broadly if the dependency hypothesis is assumed as background knowledge and then compared with the synoptic data (a different project than Schellenberg's or Witherington's), the synoptic data alone, due to its non-symmetry with the situation in Acts, does not apparently qualify as relevant information for testing this hypothesis. This is not to say it cannot or should not be considered, but that its weight in such an argument should not be overestimated.

This problem is related to further considerations of source-critical questions in Acts and is seen to be more egregious after an examination of Schellenberg's selection of Acts 15.36–20.16 as his primary evidence.

#### *Evidence (and Background Knowledge Again)*

1. *Acts 16–20 and the Problem of Evidence Selection.* The main piece of evidence Schellenberg tests his hypothesis against is the topographical data in the section of Paul's itinerary found in Acts 15.36–20.16. This initially appears as a curious selection of evidence, given the predominance of the

80. Haenchen, *Acts*, p. 81; cf. pp. 81-90.

81. Haenchen, *Acts*, p. 82. He also notes Q as being more-or-less identifiable.

82. Haenchen, *Acts*, pp. 82-83.

‘we’ passages in source-critical questions concerning Paul’s itinerary and the author of Acts’s potential relationship with Paul.<sup>83</sup>

Schellenberg, however, makes clear at the end of his essay that he considers that traditional source-critical positions (presumably the Antioch source, itinerary source, or ‘we’ source) regarding the book of Acts have failed: ‘attempts to identify sources on solely stylistic grounds—including the use of the first-person plural—have famously floundered, the scarcity of such data leaves very little scope for additional reconstruction’.<sup>84</sup>

This is a curious position as well for Schellenberg’s argumentation, as it is precisely this kind of perspective (whatever one thinks of it) that leads Dibelius and Haenchen to consider that the situation in the book of Acts is quite different from that of the Gospel of Luke (where sources seem to be more evident).<sup>85</sup> Such a position could be seen as poisoning the well against the view that Pauline sources would be identifiable on stylistic grounds.

What is relevant for the present critique is to note that Schellenberg feels free to select a particular dataset for evidence that fails to correspond to any other source-critical theory, as he sees such views as being insufficient.<sup>86</sup> This identifies a crucial omission in Schellenberg’s essay, which is highlighted by Bayesian logic. While Schellenberg’s proposed evidence can certainly be accepted as a test-case, this does *not* mean that additional relevant evidence can be bracketed out of the discussion. Such a quarantining of the data is disallowed by Bayesian logic.

The logic of Bayesian reasoning disallows ostensibly relevant evidence (the ‘we’ passages, for example, or Paul’s fuller itinerary in Acts) to be removed from an overall argument. This is because relevant evidence, if not depicted as the specific evidence being tested, will be relegated to

83. Cf. Porter, *Paul in Acts*, pp. 9-46 for a reappraisal and defense of a ‘we’ source in Acts. See Haenchen, *Acts*, pp. 24-34, 81-90 for discussions on sources.

84. Schellenberg, ‘The First Pauline Chronologist’, p. 212.

85. Martin Dibelius, *Studies in the Acts of the Apostles* (ed. Heinrich Greeven; trans. M. Ling; New York: Scribner’s, 1956), p. 5; Haenchen, *Acts*, pp. 81-83.

86. It is also not made on the basis of a linguistic or literary argument for what counts as a linguistic or literary unit of a text. For considerations of discourse boundaries, see Stanley E. Porter, *Idioms of the Greek New Testament* (Biblical Languages: Greek, 2; Sheffield: Sheffield Academic Press, 2nd edn, 1994), pp. 301-302.

background knowledge.<sup>87</sup> Relevancy is determined by the breadth of a hypothesis. In our case, the dependency hypothesis is at least broad enough to compete against various itinerary hypotheses and the eyewitness hypothesis.

While it seems that Schellenberg brackets out wider Pauline data in Acts as evidence, Bayesian considerations bring such data back into the logic as background knowledge. In other words, the hypothesis is tested against the evidence of the topographical data in Acts 15.36–20.16, yet is also tested against the background knowledge of *all* of the Pauline data in the book of Acts (or again, at least all the data which would be tested on competing hypotheses).

Schellenberg seems subconsciously aware of the interrelation between evidence and background knowledge when he pushes out from his initial evidential boundaries of Acts 15.36–20.16 to make the so-called intertextual argument from Acts 20.22 recounted above, and especially when he considers the possibility that synoptic data is relevant background information for dealing with the problem of Beroea on his topographical thesis. Schellenberg even notes in his final discussion that the toponymical pattern persists *outside* his selected evidence, albeit now with a *multiplicity* of disconfirmation (not just Beroea).<sup>88</sup> This issue will be considered below as I approach the final analysis.

In this section I have shown that Bayesian logic critiques a number of features of Schellenberg's reasoning, particularly in his selection of evidence and background knowledge. I suggest that the above discussion calls into serious question the apparent relevance of the synoptic data for the dependency hypothesis in Acts, but also raises the wider Pauline data from the book of Acts for consideration as relevant background knowledge. I will consider below how explanatory virtues leverage such considerations against the plausibility of the dependency hypothesis by bringing a sharper edge to the probability costs of these decisions for Schellenberg's hypothesis.

87. Swinburne, 'Introduction', p. 10. In this sense, division between evidence and background knowledge is not set in stone, and will change depending upon the nature of the hypothesis.

88. Schellenberg, 'The First Pauline Chronologist', p. 227 n. 58.

*Hypothesis, Explanatory Virtues, and Bayesian Assessment*

As has been proposed above, explanatory virtues can supplement Bayesian reasoning. For the purposes of this critique, I consider the explanatory virtues present within abductive reasoning to primarily aid the development of good hypotheses. In this case, such explanatory virtues may be seen as criteria that aid in making ‘inferences to the best *hypothesis*’.<sup>89</sup> The virtues of *explanatory scope*, *low disconfirmation*, *simplicity* (or low ad-hocness) and *falsifiability* are defined below.<sup>90</sup> Examining these will shed light on the relative strength or weakness of the various components of the Bayesian calculus (predictive power, prior probability, etc.) as they interact with Schellenberg’s hypothesis.

*Explanatory scope* is self-explanatory, and simply indicates that a hypothesis implies ‘the probable existence of a great quantity and variety of the available data’.<sup>91</sup> For my critique, *low disconfirmation* can be seen as a partner-principle to explanatory scope, which refers to the confirmatory quality between the hypothesis, evidence and background knowledge. In short, the hypothesis is not disconfirmed (rendered improbable) by any relevant data.<sup>92</sup> A *simple* hypothesis is one which contains no ad-hoc components to it; that is, it contains no additional components apparently designed to accommodate dis-confirmatory data.<sup>93</sup> For my critique, *falsifiability* may be seen as a partner-principle to simplicity, as the ad-hoc nature of a hypothesis may be such that it renders itself unfalsifiable.<sup>94</sup>

89. See Heilig and Heilig, ‘Historical Methodology’, p. 130 (emphasis added).

90. I see the first three as a distillation of those virtues outlined by McCullagh, *Logic of History*, pp. 51-52. For a discussion on these (and additional virtues which I see as unnecessary for the present analysis), see Licona, *Resurrection*, pp. 109-10. I have added falsifiability as an explanatory virtue, as, while it may be considered by some to be subsumed under other categories, it is a unique emphasis of post-positivist historiography and aids in bringing awareness to that specific component of hypothesis testing. See Zammito, ‘Post-positivist Realism’, pp. 413-17.

91. McCullagh, *Logic of History*, p. 52.

92. McCullagh, *Logic of History*, p. 52. See n. 28 above regarding how Bayesian logic updates plausibility on the basis of whether new evidence confirms or disconfirms.

93. McCullagh, *Logic of History*, p. 52.

94. See Zammito, ‘Post-positivist Realism’, pp. 413-17.

These ‘explanatory virtues’ are broadly uncontroversial, and while they do not prove or disprove a hypothesis, they describe the features of hypotheses that are normally accepted as plausibly true (i.e. they tend to be descriptive of known successful hypotheses). To transgress these explanatory virtues is thus to transgress the kind of reliable reasoning necessary when seeking to present a hypothesis as plausible and potentially worthy of acceptance.<sup>95</sup> I will now show how Schellenberg’s hypothesis, and his reasoning in general, gets stuck between the wrong ends of these explanatory virtues with no seeming way out. The result is that, even given Schellenberg’s main assumptions, alternate hypotheses are more plausible.

1. *Explanatory Scope and Low Disconfirmation.* I will first consider the virtues of explanatory scope and disconfirmation together as they identify a first dilemma in Schellenberg’s reasoning.

Schellenberg’s initial hypothesis (as has been outlined in detail above) is that Luke follows Paul in the topographical itinerary data in Acts 15.36–20.16.<sup>96</sup> Consideration of scope and disconfirmation allows a number of points to be synthesized regarding the overall argument and from the Bayesian formulation above as well, which can then be considered in light of the two further explanatory virtues in the following section:

1. The explanatory scope is unnecessarily and arbitrarily low (selecting only Acts 15.36–20.16 as the evidence being explained). Even on this narrow scope, the hypothesis is already disconfirmed with the Beroea account in Acts 17.10–13.
2. If he seeks to strengthen his argument by expanding the relevant evidence (which he later does), he increases the disconfirmation of his original hypothesis: adding Cyprus (13.1–12), Caesarea (9.30; 21.8–14; 24) and Malta (28.1–10) to Beroea (17.10–13) as places not mentioned by Paul, yet

95. Cf. Swinburne, ‘Introduction’, pp. 8–9, for a discussion of how some of these criteria may be seen as emerging out of Bayesian reasoning itself.

96. Specifically, he only narrates toponyms which overlap with the Pauline corpus. Schellenberg, ‘The First Pauline Chronologist’, p. 201.

mentioned and expanded upon by Luke, thus disconfirming his initial hypothesis.<sup>97</sup>

3. The problem for his argument is that, on the Bayesian framework, he is not able to avoid this disconfirmation as it becomes a feature of the background knowledge. Crucially, this suggests that the *prior probability*,  $P(H|B)$ , of Schellenberg's hypothesis is low.<sup>98</sup>
4. The above analysis however indicates that the *expectancy*,  $P(E|B)$ , remains high, as there is nothing in the background knowledge that indicates what he could not or would not have been able to narrate as he did without recourse to the dependency thesis, as Schellenberg admits.<sup>99</sup>
5. The greatest strength of Schellenberg's thesis for his selected evidence, namely its potential predictive power,  $P(E|H\&B)$ , is lowered by its low prior probability and further still by its interaction with a high expectancy of the evidence without reference to his hypothesis.<sup>100</sup>

The net result is a low posterior probability for Schellenberg's *initial* hypothesis. The only option available at this juncture to escape the double-edged sword of scope and disconfirmation is to add *qualifiers* to his hypothesis. This is the main contribution of Schellenberg's section three, where he initially recognizes the hypothetical enhancement this may offer, yet fails to

97. Schellenberg himself notes this in 'The First Pauline Chronologist', p. 207 n. 58.

98. This is because data outside his selected evidence (i.e. background knowledge) disconfirms the dependency thesis on toponymical and narrative grounds. Thus, the prior probability  $P(H|B)$  is low as it considers the strength of the hypothesis *without* recourse to the evidence in question. This is not abnormal in the case of good hypotheses, but it indicates an obstacle which must be overcome, and which is not sufficiently treated by Schellenberg.

99. Again, see Schellenberg, 'The First Pauline Chronologist', p. 203.

100. Qualitative values such as 'likely' and 'not likely' could be attached to these variables, or, mathematically, the effect is that the outcome is fractional to a problematic degree.

realize that this puts his arguments in an even tighter bind, as his updated, qualified hypothesis now transgresses the explanatory virtue of simplicity, and may in the final analysis appear unfalsifiable. I will demonstrate this below.

2. *Simplicity and Falsifiability.* If the only requirement for a given articulation of Bayesian reasoning were consistency of one's own subjective probabilities, an ad-hoc hypothesis and selective elements of evidence and background knowledge could in theory yield a high probability for a hypothesis in spite of the issues raised above. When the virtues of simplicity and falsifiability are worked into the overall coherence testing, however, this is disallowed. Hence, while Schellenberg should be commended for the consistency of his reasoning, I now draw final attention to its overall incoherence (technically, not pejoratively) in light of these remaining explanatory virtues.

When Schellenberg qualifies his hypothesis in the final analysis as merely positing that Luke had passing familiarity with the sources and creatively used them—and when he defines creative usage as such a usage that can insert whole narratives about places not mentioned by Paul (thus vitiating his initial criterion of ‘narrative expansion’ and ‘redundant toponyms’: Cyprus, Caesarea, Beroea and Malta)—he makes his hypothesis plausible, but at the cost of making it ad-hoc and virtually unfalsifiable.

To put it simply, it is intuitive that a hypothesis such as ‘Luke relied on Paul’s Epistles’ is falsifiable in theory, or can be shown to have a low probability. This is especially the case when such a hypothesis is given criteria for testing, such as the toponymical criteria Schellenberg provides. However, when, in the presence of disconfirmation, this hypothesis is altered to say that ‘Luke was dependent on Paul’s letters in a general and creative way’, and data that seems to disconfirm toponymical criteria can be explained away, it becomes intuitive that such a hypothesis is now very difficult to falsify, because it explains *all dis-confirmatory data*.

Analysis by these explanatory criteria puts Schellenberg in the difficult position of sliding between equally devastating dilemmas for his hypothesis. This can be summarized by considering what is now clear given the above critique: (1) when Schellenberg’s hypothesis is simple and plausible, its *explanatory scope is very low*; (2) when his hypothesis is simple and high in scope, it is *disconfirmed and implausible*; and (3) when his hypothesis is high in scope and low in disconfirmation, it is *ad-hoc and its falsifiability decreases*. The result is that there seems to be no clean way to heighten the

final posterior probability of his hypothesis, given his own argumentation (as outlined in points 3-5 above).

I propose that this assessment is a principal demonstration of how Bayesian and abductive reasoning enrich one another and offer an ideal and reliable framework for critiquing the kind of reasoning in Schellenberg's essay. This section has shown that, even if the general contours of Schellenberg's selections of evidence and background knowledge are accepted (their issues notwithstanding), Schellenberg's argumentation does not escape the problems of coherence raised on examination by explanatory criteria, nor the problematic Bayesian calculus in light of the overall critique above. I will now consider the implications of this before offering a final concluding summary.

#### *4. Implications Briefly Considered*

Bayesian logic can summarize the import of the above critique and expose the implausible nature of the dependency hypothesis on the framework  $P(H|E\&B)$ .<sup>101</sup> Schellenberg is testing the probability (P) that Luke is dependent on the Pauline corpus (H), given the itinerary in Acts 15.36–20.16 (E), all the Pauline material in Acts and the Pauline corpus (B).

I have retained the simplicity of his initial hypothesis (thus avoiding ad-hocness). I have also removed the problematic synoptic background data, but have incorporated *all* the relevant Pauline data into the background knowledge. Without considering the other kinds of data which may be investigated (chronology, theology), the topographical form of the thesis should now be seen to be implausible (given high disconfirmation and lack of explanatory coherence), and estimates could thus be worked back into the full form of Bayes's Theorem.

I therefore suggest that the dependency hypothesis fails to achieve a high plausibility. This is suggestive of the relatively higher plausibility of alternate hypotheses, since the negation of this hypothesis, that the author of Acts was *not* dependent on Paul's letters, would thus be a comparatively more plausible explanation of the evidence.<sup>102</sup> These positions themselves

101. Here updated on the recommendations offered in the above critique.

102. Regarding the itinerary-source hypothesis, see Dibelius, *Acts of the Apostles*, pp. 196-201; Porter, *Paul in Acts*, pp. 10-46 for different representations of this

can be explicated as positive hypotheses (like the itinerary-source hypothesis or the hypothesis that the author of Acts had independent historical memory of Paul's itinerary), and could also be tested in light of other evidence and background knowledge necessary to make those cases.<sup>103</sup>

A final note concerns the importance and key contribution, in my mind, of Schellenberg's article. In highlighting the observation that '[n]ot once does Luke name a city that appears in Paul's letters and then neglect to provide his readers with an account of Paul's work there', Schellenberg identifies a pattern that is *not* disconfirmed in the broader evidence (unlike the opposite criteria regarding narrative expansion of places not mentioned by Paul). This contribution is suggestive, and alternate positive hypotheses must deal with it in order to better interact with the evidence.<sup>104</sup>

### 5. Conclusion

I have sought to demonstrate that Bayes's Theorem can form the basis for a critical and potentially positive procedure of reasoning about evidence given the normal constraints of what might be called historical hypotheses. Specifically, I have sought to demonstrate that the dependency hypothesis vis-à-vis Acts and Paul—that the author of Acts had access to Paul's corpus and used it in his work in an identifiable way—is shown to be implausible along the lines Schellenberg presents. In sum, Bayesian reasoning applied to Schellenberg's essay has revealed that his hypothesis is significantly impaired precisely where he attempts to strengthen it: in his consideration of evidence beyond his initial scope. Future defenses of the kind of position for

sort of hypothesis for explaining Pauline data in Acts. Dibelius considers the entire travel itinerary from 13.4–21.18 as a travel source regarding Paul, while Porter considers the 'we' passages themselves in 16.10–17; 20.5–15; 21.1–18; 27.1–29; 28.1–16 as an independent source for those parts of Paul's itinerary. For a standard representation of the position that Luke was a companion of Paul, see Colin J. Hemer, *The Book of Acts in the Setting of Hellenistic History* (ed. Conrad H. Gempf; WUNT, 49; Tübingen: Mohr Siebeck, 1989), pp. 308–63.

103. While that is not the present task, other elements of background knowledge may be suggestive for such investigations, such as the literary genre of the relevant corpora (Luke–Acts and Paul's letters).

104. This may well be suggestive for the relatively higher plausibility of the itinerary-source hypothesis over against others.

which Schellenberg argues need not use Bayes's Theorem, but will need to seriously consider the interrelated nature of hypothesis, evidence and background knowledge. Schellenberg should be commended for an excellent article that makes an important contribution to Acts and Pauline studies, and may indeed strengthen other hypotheses such as the itinerary source hypothesis.