Durham Research Online

Deposited in DRO:

20 October 2016

Version of attached file:

Published Version

Peer-review status of attached file:

Not peer-reviewed

Citation for published item:

Uckelman, Sara L. (2016) 'Book review : Jean Buridan, Treatise on Consequences. Translated with an introduction by Stephen Read, editorial introduction by Hubert Hubien. New York : Fordham University Press, 2015, pp. 185. ISBN 978-0-8232-5718-8 (hardback), 45.', *Studia logica.*, 104(6). pp. 1319 − 1323.

Further information on publisher's website:

Publisher's copyright statement:

Additional information:

Review of Jean Buridan, *Treatise on Consequences*, translated with an introduction by Stephen Read, editorial introduction by Hubert Hubien (New York: Fordham University Press, 2015. ISBN▮ 978-0-8232-5718-8 (hardback). 185 pages.

In this book, Stephen Read gives the first translation into English of the *Treatise on Consequences* by the French logician Jean Buridan, written in the 1330s or 40s. John Buridan was one of the most important logicians in the 14th-century, and his treatise on consequences one of his most important works on logic. The value of this new translation, which makes his work available to those who do not read Latin, cannot be overemphasized. When I, as someone trained in contemporary logic who has spent the better part of the last decade studying logical developments of the High Middle Ages — the 13th to 14th centuries in particular — was asked if the present book was one that readers of *Studia Logica* should know about, I gave an unhesitating and unqualified yes. But the average reader of *Studia Logica* has probably spent the last decade much differently from me, and probably sees that 14th-century date and wants to know why she should be interested in something almost 700 years old. Surely logic has moved on from where we were 700 years ago, surely there has been some progress in the field, so surely such a treatise could be nothing more than a curiosity of history. (We could even turn this into a syllogism, thus showing that if we were to go back into the history of logic, Aristotle alone would do.)

In the course of this review, I will not only outline and summarize the contents of the book, but I will also demonstrate why this is a book contemporary logicians should be interested in, even if they have no interest in the history of logic, and why they could do far worse than starting here if they *are* interested and wish to learn more. To quote from Read's introduction: "Buridan's treatise on consequences is a highly original and influential study of the concept of logical consequence. It moves not only beyond Aristotle's ideas, which had dominated medieval though, but also beyond the already insightful developments of the *logica modernorum* [the 'modern logic', i.e., 12th and 13th-century developments]" [p. 51]

The book comprises four parts. The first is Read's introduction, which provides an overview of Buridan's views in a way that both provides the necessary background to medieval logical and semantical theory necessary to understand Buridan's innovations as well as is often more clear, because more verbose, than Buridan's own exposition. The introduction is nearly half the length of the treatise itself, and provides an indispensable guide through the treatise, particularly for those readers who are not versed in

2

medieval semantics or the technical terms used in logic in the 14th-century. Given that there is yet no good modern introduction to medieval logic, this introduction serves as a good interim measure.

The second part is Read's translation of the editorial introduction that Hubert Hubien wrote for his critical edition of the treatise, hitherto available only in French. This editorial introduction covers the manuscript and incunabula tradition of the text, as well as questions of authorship, as earlier 20th-century commentators had questioned its attribution to Buridan. Hubien demonstrates that the treatise is unequivocally Buridan's, and also argues that it was written in 1335 (p. 57). Read, argues, however, that evidence from the subject matter "favor[s] a date in the 1340s" (p. 5). Whichever date is correct, when he composed this treatise, Buridan was an Arts Master at the University of Paris, and thus was in regular contact with undergraduates, all of whom were required to study logic before progressing to the higher faculties of medicine, law, or theology. The treatise was immensely popular with three incunabula editions from 1493, 1495, and 1499; the first modern edition was Hubien's from 1979 [p. 5]. But the treatise is not a mere textbook for undergrads; rather, it is a highly technical development of the central notion, that of 'consequence', in the logical sense of the word. The third part of the book is the translation of the treatise itself, about which more below, and it is followed by the fourth part: endnotes (yes, sadly, endnotes rather than footnotes; there is also no separate bibliography, so citations must be located by skimming the endnotes until they are found), a glossary of terms that the person unfamiliar with medieval logic will find very useful [pp. 177–180], and an index of persons and concepts [pp. 181–185].

The treatise itself is divided into four books: The first discusses first consequences in general and then the special case of consequences between assertoric propositions. The second covers modal consequences. The topic of the third is syllogisms with assertoric propositions, and the fourth is on modal syllogisms. In each book, Buridan begins by defining the relevant concepts and terms and then, on the basis of these, proving a number of conclusions (i.e., theorems) that follow from these definitions.

What is a 'consequence'? More specifically, what does Buridan mean by 'consequence', and how does it relate to our contemporary notion of logical consequence? In Book I, ch. 3 Buridan gives a syntactic definition of 'consequence':

> A consequence is a compound [i.e., not subject-predicate] proposition, for it is constituted from several propositions conjoined by the

expression 'if' or the expression 'therefore' or something equivalent [p. 66].

This purely syntactic definition is revised soon after to add a semantic component, so that only those compound if-then statements which are true will be called 'consequences'. When discussing the truth-conditions of consequences, Buridan begins by outlining other peoples' views:

> Many say that of two propositions one is antecedent to the other if it is impossible for the one to be true without the other being true, and one is consequent to the other if it is impossible for the one not to be true when the other is true, so that every proposition is antecedent to every other proposition for which it is impossible for it to be true without the other being true [p. 67].

He rejects this definition, because "Every human is running, so some human is running" is a good (or true) consequence, but it does not meet the above definition. Why not? Because truth, for Buridan and other nominalists, attaches to proposition-tokens rather than proposition-types, and if someone creates a token "Every human is running" without creating a token of the other proposition, the consequent will not be true, since it doesn't exist. He next considers a definition of consequence which avoids this problem by adding the caveat "when they [the antecedent and the consequent] are formed together" [p. 67], but this is also problematic, because "No proposition is negative, so no ass is running" is not a good consequence, and yet when both propositions are formed, it is impossible for the antecedent to be true, so it is impossible for both the antecedent to be true and the consequent false. (To see that "No proposition is negative" is necessarily false, when formed, note that this very proposition is itself a negative proposition.) A third definition is offered:

> [O]ne proposition is antecedent to another, which is such that it is impossible for things to be altogether as it signifies unless they are altogether as the other signifies when they are proposed together [p. 67].

This option is rejected because "it assumes that every true proposition is true because things are altogether as it signifies" [p. 67], an assumption that was earlier denied:

> Some claim that every true proposition is true because things are altogether as it signifies they are, namely, in the thing or things

> signified in reality. [But this is not so] Because if Colin's horse, who
> cantered well, is dead, "Colin's horse cantered well" is true, but things
> are not in reality as the proposition signifies, because the things have
> perished" [p. 63].

Buridan gives other, similar, examples where truth of a proposition and things being altogether as the proposition signifies come apart, but then goes on to say that with appropriate provisos, we can adopt a notion of truth along these lines, and hence also a notion of logical consequence of this type [p. 67].

With his definition in hand, Buridan next sets out different divisions of consequences, the first of which is into material consequences and formal consequences. A formal consequence is one which is "valid in all terms retaining a similar form" while a material one is "one where not every proposition similar in form would be a good consequence, or, as it is commonly put, which does not hold in all terms retaining the same form" [p. 68]. Material consequences are further divided into those which are simply good, "since it is not possible for the antecedent to be true the consequent being false", and those which are merely good as-of-now, "things being as a matter of fact as they are" [p. 68]. Formal consequences are divided into two types at the beginning of the third book, where syllogistic consequences (i.e., syllogisms) are distinguished from ones which are consequences "from one simple subject-predicate to one simple subject-predicate [proposition]", or which are a conjunct from a conjunction or a disjunction from a disjunct [p. 113]. The remainder of the first book is dedicated to these non-syllogistic formal consequences without modalities.

The second book addresses modal propositions, and the inferential rules that apply to them. Buridan begins by weighing in on the question of what counts as a modal proposition. He, like many other medieval logicians, accepts a wide range of modalities, but in this chapter focuses only on the alethic ones: the "modals of possibility and impossibility, of necessity and contingency, and of truth and falsity" [p. 95]. The first point he makes is that "propositions are not said to be of necessity or of possibility in that they are possible or necessary, but from the fact that the modes 'possible' or 'necessary' occur in them. . . So a proposition can indeed be necessary when it is not one of necessity", i.e., when it is not a modal proposition [p. 95]. For example "A human is an animal" is necessary, but it is an assertoric proposition; conversely "A human of necessity runs" is a modal proposition, but it is not necessary, rather, it is false and impossible [p. 95]. This focus on the syntactic construction of the proposition mirrors his approach to defining

consequences. It is in this book that we see Buridan's take on the *de dicto/de re* issue — though in his case, he frames it in terms of the more-usual-for-the-14th-century language of 'divided sense' vs. 'composite sense'. A composite modal proposition is one which combines a mode and another proposition such that the mode is the subject and the proposition is the predicate, or vice versa. For example "That a human runs is possible" is a composite modal proposition [p. 96]. A divided modal proposition is also formed out of a mode and another proposition, but neither is the subject and neither is the predicate; rather, part of the proposition is the subject, part is the predicate, and the mode comes in between them. For example, "A human is possibly running" is a divided modal proposition [p. 96]. Some medieval authors favor one of these constructions over the other, calling one of them the true modals and dismissing the others as not really modal; Buridan, on the other hand, considers both types equally and devotes the remainder of Book II to the rules of inferences that govern both types.

Buridan's treatment of composite modal propositions is distinctive, and worthy of a special note here. When he discusses composite modal propositions in ch. 7 of Book II, he uses examples such as "Every possibility is that B is A", which, on the face of it, can also be interpreted as a standard universal affirmative assertoric proposition, with 'possibility' being the subject term and 'that B is A' the predicate; and this construction must be distinguished from ones such as "Every B being A is a possibility", wherein 'Every B being A' is the subject term and the entire proposition is indefinite, rather than universal [pp. 105–106]. This means that there is an ambiguity between "(Every A is B) is possible" and "Every (A is B) is possible". This ambiguity must be attended to when determining the legitimacy of inferences.

The final two books address syllogistic consequences. Here, Buridan goes beyond Aristotle by considering sentences with "non-normal" conclusions, that is, where the predicate comes before the copula. A "normal" conclusion would be one like "Socrates is an animal", while its non-normal form would be "Socrates an animal is". Such examples illustrate one of the difficulties of translating a logical text written in a 'natural' language, rather than a symbolic one*: Latin syntax is much more free than English syntax, and in some cases it is impossible to translate Buridan's Latin sentences into English ones that maintain the required distinctions and are grammatical. Read does

---

*Many historians of medieval logic have argued that the Latin which is used is no longer natural-language-Latin, but is rather a semi-formal or regimented language. We don't wish to deny this here by calling Buridan's Latin 'natural'; we simply are trying to distinguish between logic written in symbols and logic written in words.

an admirable job navigating between the Scylla of ungrammaticality and the Charybdis of nonsense.

When considering modal syllogisms, Buridan extends his scope to consider intensional words, and there treats with issues familiar to contemporary treatments of such terms. For example, the 3rd conclusion of Book IV is that composite modal consequences with epistemic modalities are not closed under consequence, thereby avoiding the problem of logical omniscience [p. 142].

By the foregoing I hope to have given readers a taste of what can be found in the treatise, and to whet their appetite for more. Now I must speak to some of the negatives. Buridan is attempting to articulate some extremely subtle and complicated logical notions and he's doing so with impoverished means. Though he proceeds from definitions to theorems and proofs, and his conclusions are derived on case-by-case bases. As a result, his methods are not easily generalizable, and, reading the treatise, one may be left wondering whether adequate foundations for his systems of logic can be found. Recently, contemporary logicians have tackled exactly this worry; I point the reader to [2] and [1] for two formal reconstructions. Thus, setting aside worries concerning the success of Buridan's project, there is nothing left for me to do but enthusiastically and whole-heartedly recommend this entire book — text and commentary — to anyone interested in the concept of logical consequence, modal logic, or the history of logic.

References

[1] Spencer Johnston. A formal reconstruction of Buridan's modal syllogism. *History and Philosophy of Logic*, 36(1):2–17, 2015.

[2] Anthony Willing. Buridan's divided modal syllogistic. *Notre Dame Journal of Formal Logic*, 32(2):276–289, 1991.

Dr. Sara L. Uckelman, Department of Philosophy, Durham University, 50 Old Elvet, DH1 3HN, England, `s.l.uckelman@durham.ac.uk`