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THE LOGIC OF DISPUTATION IN WALTER
BURLEY'S TREATISE ON OBLIGATIONS

INTRODUCTION

Scholastic work on "obligations" has garnered increasing attention from historians of medieval philosophy. Although it is now clear that there was a long tradition of scholastic interest in obligations, it is still not clear what the nature of obligations is: it has been described variously as anything from schoolboy exercises¹ to primitive axiomatized logic.² As the rest of this article shows, I myself think that in the early fourteenth century at any rate obligations constituted a logic of disputation.³

Walter Burley's treatise on obligations,⁴ stemming from the beginning of the fourteenth century, is a representative account of obligations in an early stage of their development, before the subtle shifts of emphasis in the work of Richard Kilvington,⁵ one of the earliest of the Oxford Calculators, and before the enormous changes in obligations introduced by or represented in such philosophers as Roger Swyneshed⁶ and other later fourteenth-century logicians. Consequently, Burley's treatise is fundamental for an understanding of the logic of obligations in the fourteenth century.

As is true in general of obligations treatises, Burley's work is set in the context of dialectical disputation, in the highly structured and stylized form the scholastics inherited from Aristotle's *Topics* via Boethius. The scholastics themselves tend to attribute the source for their work on the obligations to one or another or both of two Aristotelian passages.⁷ The first, from *Topics* VIII 3 (159a 15–24), says that the primary job of the respondent in a disputation is to answer in such a way that anything impossible which the respondent is compelled to defend is the fault of the position he maintains rather than the fault of his defense of that position. The second, from *Prior Analytics* I 13(32a 18–20), says that from the possible nothing impossible follows. These two quotations together provide the theoretical foundation for obligations. If the respondent in a disputation adopts a position which is possible but is subsequently compelled to maintain something im-

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possible (something logically incompatible with the position adopted or something impossible in its own right), then he has failed in his job as respondent. Nothing impossible follows from the possible; so, because it is possible, the position adopted by the respondent does not entail anything impossible. If the respondent is then logically compelled to maintain contradictory propositions, it must be because he has made logical mistakes in responding, so that the impossible, which is not entailed by the original position the respondent adopts, is entailed by the respondent's faulty defense of that position. The job of the interlocutor, called the 'opponent' in obligations disputations, is to trap a respondent into maintaining contradictories, and the job of the respondent is to avoid such traps. Burley's own main interest is in what might be called paradoxes of disputation. A paradox of disputation occurs when, after a seemingly unimpeachable exchange between an opponent and his respondent, the opponent proposes a proposition which the respondent can neither grant nor deny because either the granting or the denial leads immediately to a contradiction. The heart of Burley's treatise is a long series of such paradoxes, each accompanied by his solution to it.

OVERVIEW OF BURLEY'S OBLIGATIONS

Burley's treatise begins with an ordered division of obligations into six species⁸: *institutio*, *petitio*, *positio*, *depositio*, *dubitatio*, and *sit verum*. Burley's main interest is clearly in *positio*, and his examination of *positio* alone constitutes more than three-fifths of the entire treatise. I will say something briefly about these various species of obligations and then follow Burley in concentrating on *positio*.

Institutio is a new imposition for some utterance, giving it a new signification.⁹ Burley's first example is this: 'let "A" signify a donkey in a true proposition, a man in a false proposition, and the disjunction 'a-man-or-not-a-man' in an uncertain proposition [i.e., a proposition whose truth-value is not known to the respondent¹⁰].' Cases of *institutio*, like this one, frequently resemble or just are insolubilia: self-referential paradoxes.

For *institutio*, as for all the species, Burley has in mind three basic rules, which he says constitute the essence of the art of obligations. They are these:

- (1) Everything which follows from (a) the *positum* with (b) a granted proposition or propositions or with (c) the opposite(s) of a correctly denied proposition or propositions, known to be such, must be granted.
- (2) Everything which is incompatible with (a) the *positum*, with (b) a granted proposition or propositions, or with (c) the opposite(s) of a correctly denied proposition or propositions, known to be such, must be denied.
- (3) Everything which is irrelevant (that is, every proposition to which neither rule (1) nor rule (2) applies) must be granted or denied or doubted according to its own quality, that is, according to the quality it has in relation to us (i.e., if we *know* it to be true, we grant it; if we *know* it to be false, we deny it; if we *do not* know it to be true or know it to be false, we doubt it).¹¹

Although Burley casts these rules in terms of the *positum*, the first proposition which the opponent puts forward to the respondent in a *positio*, they are meant to apply to all species of obligations, from *institutio* to *sit verum*, except for *depositio* and *dubitatio*, as I will explain later. These rules, together with the original definitions of the basic species of obligations, constitute obligations as can be seen in the examples that follow.

Petitio is the species of obligations in which the opponent asks or obligates the respondent to *do* something. In *positio*, the first proposition which an opponent asks his respondent to grant might be something such as ‘Socrates is running’. In *petitio*, that same first proposition must be of the form “You respond affirmatively to the proposition ‘Socrates is running’”, or “You respond negatively to ‘Socrates is running’”, or something of the sort which makes reference to an action on the part of the respondent.

Sit verum is the species of obligations in which what is obligated always includes mention of your knowing, your not knowing, or your being in doubt.¹² So, for example, the first proposition put forward in a case of *sit verum* is not ‘You are running’, or something of that sort, but rather ‘You know that you are running’, or ‘You do not know that you are running’ or ‘You are in doubt whether you are running’.

Depositio and *dubitatio* are just like *positio*, except that while one is obligated to maintain the *positum* as true, one is obligated to maintain the *depositum* as false and the *dubitatum* as uncertain; and con-

sequently there are basic rules for *depositio* and *dubitatio* different from the rules for any of the other species of obligations. So, for example, one of the rules for *depositio*, which is roughly analogous to rule (1) for *positio*, is

- (4) Every proposition antecedent to the *depositum*, taken by itself or with some correctly granted proposition or propositions, known to be such, is to be denied.¹³

That is, every proposition p from which the *depositum* q (with or without other previously maintained propositions) follows must be denied, because we are obligated to maintain the *depositum* as false; and if we did not maintain p as false, we would (*per impossibile*) have a valid inference $p, \therefore q$ in which p was true and q was false.

For *dubitatio* a basic rule is this:¹⁴

- (5) One should respond ‘I am in doubt about it’ (a) to any proposition convertible with the *dubitatum*, (b) to the contradictory of the *dubitatum*, (c) to any proposition following from the *dubitatum* if that proposition is false, and (d) to any proposition antecedent to the *dubitatum* if that proposition is true.¹⁵

PARADOXES

A typical paradox or sophisma involving *petitio* is this:

- (E1) I request that you grant the king to be seated or not to be seated, in such a way that there is a disjunction of the *petitio*. Then I propose this to you: the king is seated. If you grant this, you grant what is uncertain while you are not obligated, because although you are obligated to grant the king to be seated or not to be seated, you are not obligated to grant the king to be seated. If you deny it, you deny what is uncertain while you are not obligated; therefore you answer badly. If you doubt it, then I propose this: ‘The king is not seated’. If you grant it, you grant what is uncertain, to which you are not obligated, because although you are obligated to grant the king to be seated or not to be seated, nonetheless you are not obligated to grant the king not to be seated. If you deny it, you deny what is uncertain, to which you are not

obligated. If you doubt it, the disputation is over: it was requested that you grant the king to be seated or not to be seated, and you have done neither: therefore you have answered badly.¹⁶

We can schematize this *petitio* argument as follows:

<i>Opponent</i>	<i>Respondent</i>	<i>Reason</i>
(1) You grant the king to be seated or not to be seated.	(1a) T	(1b) (1) is the <i>petitum</i> .
(2) The king is seated.	(2a) ?	(2b) (2) is irrelevant and uncertain.
(3) The king is not seated.	(3a) –	

Because (2) neither follows from (1) nor is incompatible with it, (2) is irrelevant and must by obligations rule (3) be responded to according to its own quality which it has in relation to the respondent; and since the respondent in fact does not know whether or not the king is seated now, he responds by doubting (2). The difficulty in this sophisma is supposed to arise at (3a). As in the case of (2), (3) neither follows from nor is incompatible with what has been previously maintained. Therefore it is irrelevant, and so, just as in the case of (2), the correct response is apparently to doubt (3). But to doubt (3), in the context of the sophisma, is to end the disputation by responding in an obviously faulty way: having agreed to grant the king to be seated or not to be seated, you have in fact granted neither disjunct but instead doubted each.

Burley's solution to this sophisma is to say that the respondent *must* either grant that the king is seated or grant that the king is not seated, and the respondent should just choose arbitrarily to grant one or the other of the disjuncts. If the opponent objects to such a move, the respondent can ask the opponent to specify the hypothesis further for this case and to stipulate the king's present position, so that the hypothesis will include a statement that in reality the king is seated, for example. If the opponent will not make such a stipulation, then the respondent should refuse to play, on the grounds that, in effect, this is an incoherent case of obligations, one which is structured in such a way as to generate an *insoluble* difficulty for the respondent.¹⁷

Our initial response to this sophisma and to Burley's solution is likely to be irritation at what appears to be a stupid and uninteresting

confusion. Consider, after all, this disjunction: Reagan is in the White House now or Reagan is not in the White House now. It is perfectly possible for this disjunction to be true and for me to know that it is true, without my having any idea concerning the truth or falsity of either of the disjuncts. I may have no opinion at all about Reagan's whereabouts and still know for sure the truth of the disjunction that he is or is not in the White House. But Burley is not ignorant of such a possibility; and in connection with *positio*, as we shall see, he discusses cases in which a disjunction is to be granted although neither disjunct taken separately is to be granted.¹⁸ What gives Burley pause in this particular case and what keeps him from solving *this* sophisma by saying simply that the disjunction is to be granted even though neither of the disjuncts is to be granted, I think, is primarily that this sophisma is supposed to be a case of *petitio*, not of *positio*. That is, the first proposition which the opponent puts forward in this case is *not* the disjunction 'The king is seated or the king is not seated', as it would be if this were a case of *positio*. If it were a case of *positio*, then I think Burley would accept a response of 'True' to the disjunction which is the *positum* and a response of 'I am in doubt about it' to each of the two disjuncts put forward separately. But in *this* case the initial proposition is 'You grant the king to be seated or the king not to be seated'. And the proposition 'You grant *p* or not-*p*' contains a scope ambiguity, or what medieval logicians considered an ambiguity between the compounded and divided senses of the proposition. The proposition (1) 'You grant the king to be seated or not to be seated' can be taken to mean either (1C) 'You grant (that the king is seated or the king is not seated)', which is the compounded sense of the proposition, or (1D) 'You grant that the king is seated, or you grant that the king is not seated', which is the divided sense. I have translated (1) in a way that I hope preserves the ambiguity, but even so our ordinary intuitive understanding of (1) consists in taking it as (1C), I think. Burley, on the other hand, plainly takes it as (1D) as he indicates by saying that this is "a disjunction of the *petitio*"; and taking it as (1D) does give rise to the worries of this sophisma. If you grant (1D), then you are maintaining that (i) you grant that the king is seated or (ii) you grant that the king is not seated; and in order for (1D) to be true, it must be the case that (i) is true or (ii) is true. But if in the course of the disputation you fail to grant that the king is seated and you fail to grant that the king is not seated, then neither (i) nor (ii) is true, and so (1D) is not true either. Hence, as Burley says, if

(1D) is true, then you must grant either step (2) or step (3) of the original argument; that is, you must grant that the king is seated or you must grant that the king is not seated.

The bulk of Burley's treatise on obligations, however, is devoted to *positio*; and the following case is typical of examples of *positio*:

- (E2) And let this be posited: 'You are in Rome or that you are in Rome is to be granted'. Then let this be put forward: 'That you are in Rome is to be granted'. This is false and irrelevant, and therefore it must be denied. Then let this be put forward: 'That you are in Rome follows from the *positum* and the opposite of something correctly denied'. This is necessary because this conditional is necessary: 'If it is the case either that you are in Rome or that that you are in Rome is to be granted, and that you are in Rome is not to be granted, then you are in Rome'. Once this is granted, [namely], 'that you are in Rome follows from the *positum* and the opposite of something correctly denied', then let this be put forward: 'That you are in Rome is to be granted'. If you grant [this], you have granted and denied the same thing, and therefore [you have responded] badly. If you deny it, the disputation is over; you have denied something which follows by a rule [of obligations]. Because if the rule is good, then this follows: 'That you are in Rome follows from the *positum* and the opposite of something correctly denied; therefore, that you are in Rome is to be granted'.¹⁹

We can show the structure of this example in the following way.

<i>Opponent</i>	<i>Respondent</i>	<i>Reason</i>
(1) (i) You are in Rome or (ii) that you are in Rome is to be granted.	(1a) T	(1b) (1) is the <i>positum</i> .
(2) That you are in Rome is to be granted.	(2a) F	(2b) (2) is irrelevant and false.
(3) That you are in Rome follows from the <i>positum</i> and the opposite of something correctly denied.	(3a) T	(3b) (3) follows from the truth of (1) and the falsity of (2)
(4) That you are in Rome is to be granted.	(4a) –	

Trouble arises for the respondent at (4a), on Burley's view, in this way. The respondent cannot grant (4) since he has already denied the same proposition at (2a). On the other hand, he cannot deny (4) either. From (3) it follows that you are in Rome; and if it follows, it must be granted, and so (4) is true.

At first glance, Burley's solution to this paradox looks bizarre. On his view,

It is said that this should be denied: 'That you are in Rome follows from the *positum* and the opposite of something correctly denied'. Nor is this [(3)] necessary. Even if it were necessary that it follows from the posited disjunction with the opposite of one of the disjuncts that you are in Rome, nonetheless it is not necessary that this disjunction be posited.²⁰

But if we look again at (3) and the reasons given for granting (3), we should see that there is an important confusion. (3) does *not* follow from the truth of (1) and the falsity of (2), as (3b) alleges; (1i) follows (as Burley acknowledges), but (3) does not. Suppose we then consider (3) irrelevant and judge it on its own merits. According to Burley, we ought to judge it false. If (3) read "that you are in Rome follows from the conjunction of this disjunction, namely, 'You are in Rome or that you are in Rome is to be granted', with the denial of the second disjunct", then Burley would, I think, agree that (3) had to be granted. But (3) does not read that way; and if we are considering (3) as it stands, on its own merits, then Burley seems to think we should deny it because the phrase 'from the *positum*' need not refer to the particular disjunction which just happens to be the *positum* in this particular case of obligations. It *could* refer to some other *positum*; but unless it refers to *this* one, (3) is false. Therefore, on Burley's view, it is a mistake to grant (3).

This reading helps make Burley's solution intelligible, but it does not in fact resolve the paradox. Because suppose that we deny (3), on the rather dubious grounds that it is irrelevant and false in virtue of the ambiguous phrase 'the *positum*'. Then let (4) be put forward again. Remember that the reasoning for *granting* (4) in the paradox went like this: (3) that you are in Rome follows from the *positum* and the opposite of something correctly denied; therefore (4) that you are in Rome is to be granted. And what Burley attacks is *not* the inference from (3) to (4), but the truth of premiss (3). He seems to have in mind the mistaken notion that if (3) is false, (4) is false – hence we can deny (4) and the

paradox is solved. But, of course, he has not solved the paradox by such means since (4) can be true even if (3) is false. Furthermore, if Burley is willing to accept the *inference* from (3) to (4), we can show him that on his own views (4) must be true. The inference from (3) to (4) depends on accepting as valid the inference from (1i) 'You are in Rome' to (4) 'That you are in Rome must be granted'; and there is some reason for accepting this inference in an obligations disputation. If the proposition 'You are in Rome' is true in an obligations disputation, it is to be granted. And so in an obligations disputation, the inference from p to ' p is to be granted' is a good one. Or to put it another way, if the respondent must grant p , he must also grant that he must grant p .

Now consider step (4) of the argument, supposing for the moment that we have accepted Burley's argument and have denied (3) for the reasons he gives. Even with the denial of (3), however, from the truth of (1) and the falsity of (2), it follows that you are in Rome. And so, given the validity of the inference from (1i) to (4), from 'You are in Rome' it follows that 'You are in Rome' is to be granted. Hence even with the denial of (3), we are committed, on Burley's own views, to the truth of (4). And so even if we give Burley all he wants – the falsity of (3) and the validity of the inference from (3) to (4) – we can demonstrate that the paradox remains. The respondent is committed to the truth of (4) although he has correctly denied the same proposition at (2a).

The real solution to this paradox depends, I think, on considering at the outset the relations between the two propositions (1i), 'You are in Rome', and (1ii) or (4), 'That you are in Rome is to be granted'. It will help in this discussion to take 'is true' as meaning 'is true in an obligational disputation' or 'must be granted by a respondent', and analogously for 'is false'. Now if (1i) is true, (1ii) is true, as I have already argued. And we can also show the converse, that if (1ii) is true, (1i) is true. If you grant (1ii), you are granting that (1i) is to be granted. But if you grant that (1i) must be granted, you cannot consistently deny (1i) and so you must also grant (1i). Hence, if (1ii) is true, so is (1i). Consequently, (1i) and (1ii) are logically equivalent. Now in the obligations paradox we are considering, the *positum*, which we are obligated to maintain as true, is a disjunction of (1i) and (1ii). But since (1i) and (1ii) are equivalent, the disjunction can be true only in case both (1i) and (1ii) are true, because

$$[(p \leftrightarrow q) \ \& \ (p \vee q)] \rightarrow (p \ \& \ q).$$

Hence, in this case, it is a mistake to consider (2) in the schematization of (E2) as irrelevant. In fact, it follows from the *positum* and the implicit logical relationship between (1i) and (1ii). And so (2) ought to be granted. In this way, I think, the paradox is really solved, or more accurately in this way the paradox fails to arise in the first place.

THE RULE FOR IRRELEVANT PROPOSITIONS

Burley's solution to this paradox is worth considering again for what it tells us about the rule for irrelevant propositions. On that interpretation, Burley is taking (3) as irrelevant; and so by the obligations rule for irrelevant premisses, he considers (3) on its own merits. But the way in which he does so suggests that he is taking the rule for irrelevant premisses in an extreme way, although his interpretation of it may well have been typical for his time. Burley's decision to judge (3) false stems apparently from his feeling that, after all, the phrase 'from the *positum*' which occurs in (3) could refer to just any *positum*. But, of course, it cannot if we remember that (3) is occurring within *this* obligations disputation. To feel the force of the ambiguity of the phrase 'from the *positum*', it is necessary to wrench (3) out of its context in this disputation and to consider it altogether apart from the disputation in which it occurs. It is as if Burley took the obligations rule for irrelevant premisses to read in this way: If a proposition does not follow from or is not compatible with what has been previously maintained, it is irrelevant; and if it is irrelevant, then forget everything said in the disputation so far – in fact, forget that you are in an obligations disputation – and judge the irrelevant proposition as you would if you were not engaged in an obligations disputation. That is an extreme interpretation of the rule for irrelevant propositions, with significant implications for his entire understanding of obligations, as we can see a little more clearly by considering Burley's discussion of this paradox of disputation and a general rule of thumb for cases of *positio*:

- (E3) Another rule is this: if a contingent falsehood is posited, it is possible to prove any falsehood compossible with it, in this way. Let it be posited that you are in Rome. Then let [this] be put forward: 'You are not in Rome or you are a bishop'. This must be granted because it is true and irrelevant. Then [let this be put forward]: 'You are a bishop'. This follows,

and in this way it is possible to prove any falsehood compossible with the *positum*.²¹

We can schematize this argument as before:

<i>Opponent</i>	<i>Respondent</i>	<i>Reason</i>
(1) You are in Rome	(1a) T	(1b) (1) is the <i>positum</i>
(2) You are not in Rome or you are a bishop	(2a) T	(2b) (2) is irrelevant and true
(3) You are a bishop	(3a) T	(3b) (3) follows from the truth of (1) and the truth of (2)

The purpose of this argument is to show that in obligations disputations it is possible to prove any falsehood compossible with the *positum*. In this particular case, Burley does so by taking as the second step in the argument a disjunction of a special sort. It does not follow from and is not incompatible with what has gone before and so is irrelevant; and it is constructed in such a way that only the first disjunct is true outside the disputation, but within the disputation (after the granting of the disjunction) only the second disjunct is true. Since the disjunction is irrelevant, it is judged on its own merits, apart from the obligations disputation; and on that basis, because of the truth of the first disjunct – ‘You are not in Rome’ – the disjunction is accepted as true. Once accepted, however, the disjunction in conjunction with the *positum* allows the derivation of the second disjunct, (3), ‘You are a bishop’. There are other ways in which to construct step (2) of this argument in order to achieve the same result; for example, Burley presents an alternative version of the argument with this as the second step: (2’) (a) That you are in Rome and (b) that you are a bishop have the same truth-value. Like (2), (2’) is irrelevant. Outside the disputation (2’) is true in virtue of the fact that (2’a) and (2’b) are both *false*. Within the disputation, (2’) in conjunction with the *positum* entails that (2’b) is *true*; and so the *positum* and (2’) entail the truth of (3), ‘You are a bishop’. And in these ways we could construct other obligations arguments which would prove any falsehood compossible with the *positum*.

Burley gives a more thorough discussion of this example and the rule it is supposed to illustrate than he generally gives for his examples. He considers an interesting objection directed not against the rule but rather against the sort of argument used to illustrate the rule:

(O) A disjunction is not true unless one or the other disjunct is true. Therefore, a disjunction is not to be granted unless one or the other disjunct is to be granted. But neither disjunct of the disjunction 'You are not in Rome or you are a bishop' is in the first place to be granted. For one disjunct [namely, 'You are a bishop'] is false and irrelevant, and the other disjunct [namely, 'You are not in Rome'] is incompatible with the *positum*. Furthermore, if this were posited: 'You are in Rome', and this were [then] put forward: 'You are in Rome, and that you are in Rome and that you are a bishop have the same truth-value', this [conjunction] would have to be denied – and not because of the conjunct 'You are in Rome', therefore because of the conjunct 'that you are in Rome and that you are a bishop have the same truth-value'. Therefore, this [second conjunct] is to be denied in the first place, and so it is not proved by means of [this] rule that you are a bishop.²²

This objection has two parts. The first has us consider step (2) of the argument in (E3). If *at step* (2) the opponent were to put forward the proposition 'You are a bishop', it would have to be denied: it is irrelevant and false. If *at step* (2) the opponent were to put forward 'You are not in Rome', it would also have to be denied because it is incompatible with the *positum*. So neither disjunct can be granted at step (2). But, the objector maintains,

- (D) a disjunction is not to be granted unless one or the other of the disjuncts is to be granted.

And since at step (2), neither disjunct can be granted, the disjunction ought not to be granted either.

Burley dismisses this objection by denying principle (D), on which it depends. It is perfectly possible, Burley argues, to grant a disjunction even if neither one of the disjuncts is to be granted. He is right to deny the objector's principle, but I think he does not need to go so far in order to refute the objector's move. The objector's principle (D) is, after all, not strong enough to support his argument. In fact, in the argument of (E3), one of the disjuncts of the disjunction in question *is* granted, namely at step (3). What the objector needs to support his objection is the stronger principle

- (D') a disjunction is not to be granted at a particular step (*n*) of an obligations argument unless one or the other of the disjuncts is also to be granted at step (*n*) of that argument.

That (D') can fail to be true is virtually guaranteed by the basic obligations rule for irrelevant propositions, on which the whole possibility of proving compossible falsehoods depends. Suppose, as in the argument of (E3), that the *positum* is of the form *p*, and the disjunction

at step (2) is of the form $\sim p \vee q$ where q is irrelevant to p and false. The disjunction is irrelevant to the *positum*, and so will be judged apart from the obligations disputation. So considered, it will be true in virtue of the first disjunct since the *positum* is always not true. Hence the disjunction is true, and true in virtue of the truth of one of the disjuncts. But neither of the disjuncts can be granted *at step* (2) of the argument. The first disjunct, whose truth outside the disputation guarantees the truth of the disjunction, is not irrelevant if it is put forward separately at step (2); and so it has to be assessed within the disputation, rather than apart from it, as the disjunction is. And *within* the disputation, it is incompatible with the *positum* and so must be denied. The second disjunct is also irrelevant at step (2) and happens to be false, and so it cannot be granted *at step* (2) either, although *after* step (2) it must be granted. Hence, the rule for irrelevant propositions brings it about that a second and different set of criteria for determining the truth-value of propositions is sometimes brought into play in assessing the premisses of obligations arguments. In general, in obligations disputations, we assess the truth or falsity of propositions proposed by the opponent by considering them with regard to the false *positum* and other previously granted or denied propositions. But when a proposition is irrelevant, we assess it instead by considering only the state of affairs actually obtaining in the world as it now is. And if we construct a disjunction in just the right way, we can ensure that the truth-value of at least one of the disjuncts has to be assessed by differing criteria from those used to assess the truth-value of the whole disjunction if the disjuncts are put forward separately at the same step of the argument as the disjunction. In our example here, on the criteria used to assess the disjunction $\sim p \vee q$ at step (2), $\sim p$ is true, because the criteria require us to assess the disjunction apart from the obligations disputation since $\sim p \vee q$ is irrelevant, and outside the disputation $\sim p$ is true. (And it is only in virtue of the truth of $\sim p$ that $\sim p \vee q$ is true.) But if $\sim p$ is put forward separately, we assess it by a different set of criteria, assessing it *within* the disputation, and by those criteria $\sim p$ is false since it is incompatible with the *positum*. Furthermore, the rule for irrelevant propositions makes us assess q as *false* if it is put forward *at step* (2) of the argument. But if it is put forward *after* step (2), the rule for irrelevant propositions no longer applies; we assess q by different criteria from those we use if q is put forward at (2); and we judge q *true*. So the principle (D'), which is what the objector needs for his objection, is to be rejected as a principle

for obligations; and what guarantees that (D') will *not* hold in all cases is the rule for irrelevant propositions.

We can get further insight into the importance of this rule for irrelevant propositions and its significance for the function of obligations by considering the second part of objection (O). Suppose, the objector says, that at step (2) of the argument in (E3) we had this conjunction:

- (2C) (a) You are in Rome, and (b) that you are in Rome and that you are a bishop have the same truth-value.

This conjunction, the objector maintains, would have to be denied if put forward at step (2); furthermore, it is to be denied *not* because of the falsity of (2Ca) but rather because of the falsity of (2Cb). And since that is so, the conjunct (2Cb) ought to be denied if it is put forward separately at step (2). What the objector seems to have in mind is this. (2Ca) is the *positum* and so must be granted. But if (2Ca) is true, it is true that you are in Rome, and since it is false that you are a bishop, it is false that 'You are in Rome' and 'You are a bishop' have the same truth-value. Therefore (2Cb) is false. And if it is false, it ought to be denied when it is put forward at step (2) of the argument.

We should by now be on our guard against the sort of inference in the last move of the objector's argument, namely, that since (2Cb) is false when we are evaluating (2C) as a whole, we ought to deny it if it is put forward separately at step (2) of the argument. That is, the objector in this last inference of his objection is relying on a tacit principle analogous to (D')

- (C') If a conjunction is not to be granted at step (*n*) of an obligations argument, one or the other (or both) of the conjuncts is (are) not to be granted at step (*n*) of that argument either.

As we saw, (D') does not hold for all cases of obligations arguments because of the peculiar circumstances brought about by the rule for irrelevant propositions. And the same is true of (C'), as we can see if we return to the objector's evaluation of (2C).

The objector thinks that (2C) is false because (2Ca), as the *positum*, is true and consequently (2Cb) is false. But just how is he evaluating (2C) then? Surely not by any of the three basic rules of obligations. By the basic rules of obligations, (2C) is irrelevant. It neither follows from the

positum 'You are in Rome' nor is incompatible with it. If it is irrelevant, however, it must be evaluated altogether on its own merits, apart from the obligations disputation in which it occurs. But evaluated on its own merits, its first conjunct (2Ca) is *false*. You are not in Rome. Furthermore (2Cb) is true; 'You are in Rome' and 'You are a bishop' are both false and so have the same truth-value. And Burley replies to the objector along just these lines. He says simply that (2C) is irrelevant and false in virtue of the falsity of (2Ca), and so he defuses the objector's objection. We can see the invalidity of principle (C') from Burley's correct assessment of (2C). The conjunction (2C) is to be denied at step (2) of the argument. If (2Ca) were put forward at step (2), however, it would have to be *granted*, since when it is presented separately, it is not irrelevant and is identical with the *positum*. Similarly, (2Cb) would have to be granted. Presented separately at step (2), it is irrelevant; and evaluated as irrelevant, it is true and must be granted. So in the correct evaluation of (2C), we have a counter-example to (C'): the conjunction must be denied at step (2) of the argument, but neither conjunct presented separately is to be denied at step (2). Here, as before, the counter-instances to (C') depend on the rule for irrelevant propositions. Because of that rule (2Ca) is evaluated differently when considered separately at step (2) and when considered as part of (2C) presented at step (2). And (2Cb), which is accepted as true if presented separately at step (2) in virtue of being irrelevant, would have to be rejected as false if presented after (2C) because then it is no longer irrelevant and so is assessed by different criteria. Assessed *within* the disputation, (2Cb) is false because its negation is entailed by the *positum* and the denial of (2C).

Even if the objector's objection is based on an invalid principle and a confused evaluation of (2C), nonetheless I do not think that his objection is without philosophical interest. The objector has just cast (2C) in a form which is unfortunate for his purposes. We can help him out by recasting it as a conditional:

(2C') If (a) you are in Rome, then (b) 'You are in Rome' and 'You are a bishop' have the same truth-value.

Like (2C), (2C') is irrelevant, and evaluated as irrelevant, it is false. It is false that you are a bishop, so when (2C'a) is true, (2C'b) is false, and hence (2C') as a whole is false. It is true to say of (2C'), then, as it is not true to say of (2C), that it is false not in virtue of the falsity of (a) but

rather in virtue of the falsity of (b). Now remember that, on Burley's view, (b) is to be granted if presented separately at step (2) of the argument, because presented separately, it is irrelevant, and assessed as irrelevant, it is true. What (2C') shows us is that if we were to continue to maintain the truth of the *positum* while evaluating (b) at step (2), we would evaluate it as *false*. It is only because the rule for irrelevant propositions in effect *interrupts* the obligations disputation and excises the irrelevant proposition entirely from its context in the disputation *before* it is evaluated that we are compelled to accept (b) as true if it is presented separately at step (2). The rule for irrelevant propositions, then, keeps the *positum* and all propositions previously granted or denied from exerting their influence over any propositions not entailed by or incompatible with one or more of them. That this understanding of the rule for irrelevant propositions is responsible for an incoherence in the theory of obligations was seen soon after Burley wrote his treatise. In the forty-seventh of his *Sophismata*.²³ Richard Kilvington shows that on the basis of this rule we can derive contradictory propositions from the same *positum*. Much (but not all) of the work on obligations by the Oxford calculators seems aimed at trying to remove this incoherence.²⁴

CONCLUSION

The role of Burley's rule for irrelevant propositions is enough to show us that obligations, at least at the stage represented by Burley's treatise, is not a logic of counter-factuals, though that is a role which has recently been suggested for them.²⁵ Instead, in Burley's work obligations is a complicated set of rules for consequences or inferences set in a disputational context, where the disputational context makes a difference to the evaluation of the inferences. Frequently, the complications arise because there is a reference in the premisses themselves to the evaluator of those premisses or to an action within the disputation (such as granting or denying something) by the evaluator. (E2) is an example of such a case; the validity of the crucial inference from (1i) to (1ii), for example, in (E2) depends on the disputational context. The analogous inference '*p*; therefore Socrates must grant *p*' or even 'Socrates is in Rome; therefore Socrates must grant that he is in Rome' is invalid.

But we need not have a reference in the premisses to the evaluator of

those premisses in order to generate the sort of difficulties of interest in Burley's obligations. Other characteristics of disputation, such as the passage of time, will do just as well. Consider, for example, this very simple disputational argument (which Burley presents in connection with a different issue to show that we must sometimes and without penalty grant an impossible proposition if it has *become* impossible in the course of the disputation):

- (E4) For example, let A be the instant at which the *positum* is posited. And let it be posited that it is A. Then let [this] be put forward: 'It is A'. This should be granted since it is the *positum* and yet it is impossible *per accidens* . . .²⁶

Because A designates the instant at which the *positum* is posited, the proposition 'It is A' is true only at the instant at which the *positum* is posited. At any step of the argument after the first, the proposition 'It is A' is not only false but impossible, since it maintains in effect that an instant which is past (namely, instant A at any time after step (1) of the argument) is present. Nonetheless, the proposition 'It is A' is the *positum*, and so by the basic rules of obligations it must be granted whenever it is put forward in the disputation. And so this paradox arises solely in virtue of the passage of time, which must be taken serious account of in an obligations disputation as it need not be or even should not be in a straightforward logical evaluation of inferences outside the context of disputation.

What we have in Burley's obligations, then, is a concern with special sorts of difficulties in evaluating consequences or inferences as a result of the disputational context in which the inferences occur. What we have in the developments of obligations after Burley,²⁷ in the work of the Oxford Calculators and of late fourteenth-century logicians, is still obscure.²⁸

NOTES

¹ James Weisheipl, *Early Fourteenth-Century Physics and the Merton 'School' with special reference to Dumbleton and Heytesbury*, unpublished Ph.D dissertation, Oxford University 1956, p. 150. For a brief survey of contemporary literature on obligations, see Paul Vincent Spade, 'Roger Swyneshed's *Obligations*: Editions and Comments', *Archive d'histoire doctrinale et litteraire du moyen age* 44, 1977, 243–85.

² Philotheus Boehner, *Medieval Logic: An Outline of Its Development from 1250-c. 1400*, Manchester University Press, 1952.

³ See also Eleonore Stump, 'William of Sherwood's Treatise on Obligations', *Historiographia Linguistica* 7, 1980, 249–64 and 'Obligations from the Beginning to the Early Fourteenth Century' in *The Cambridge History of Later Medieval Philosophy*, N. Kretzmann et al. (eds.), Cambridge University Press, 1982, pp. 315–34. Portions of this paper are adapted from my *Cambridge History* chapter.

⁴ Edited in Romuald Green, *The Logical Treatise 'De Obligationibus': An Introduction with Critical Texts of William of Sherwood (?) and Walter Burley*, The Franciscan Institute, forthcoming. Because Green's work will not be published for some time, I have based my citations on the revised version of Green's dissertation, made available by the Franciscan Institute. References to the edition of Burley use Green's paragraph numbers.

⁵ I am grateful to Norman Kretzmann, who is editing Kilvington's *Sophismata*, for calling my attention to the material on obligations in Kilvington's *Sophismata*.

⁶ See Spade, 1977, *Obligations and 'Obligations: Developments in the Fourteenth Century'* in *The Cambridge History of Later Medieval Philosophy*, *op. cit.* See also Eleonore Stump, 1981, 'Roger Swyneshed's Theory of Obligations', *Medioevo* 7, 135–174.

⁷ Green, *op. cit.*, Intro: Chapter II.

⁸ *Ibid.*, Burley 0.02.

⁹ *Ibid.*, Burley 0.02 and 1.01.

¹⁰ *Ibid.*, Burley 1.03: "Significet A asinum in propositione vera, hominem in propositione falsa, et hoc disiunctum: homo vel non homo, in propositione dubia."

¹¹ *Ibid.*, Burley 2.07: "In omni obligatione ponuntur tres regulae generales, scilicet, quod omne sequens ad obligatum est concedendum, intelligendo per obligatum, concessum vel necessario concedendum. Similiter, omne repugnans obligato est negandum. Similiter, ad impertinens respondendum est secundum sui qualitatem."

¹² *Ibid.*, Burley 6.01ff.

¹³ *Ibid.*, Burley 4.02: "Omne antecedens ad depositum per se vel cum bene concessio vel concessis, scitum esse tale, est negandum".

¹⁴ *Ibid.*, Burley 5.05: "Unde regulae sunt istae: ad dubitatum et ad suum convertibile et ad suum contradictorium et ad suum consequens, si sit falsum, et ad suum antecedens, si sit verum, respondendum est dubie." The rules for *dubitatio* bear at least some resemblance to three-valued logic, and scholastic attempts to solve the problem of foreknowledge and free will by using three-valued logic are sometimes couched in obligations-terminology. For the use of obligations in such a context see, for example, Ferdinand of Cordoba, in Leon Baudry, *La Querelle des futurs contingents*, J. Vrin, 1950, p. 145. I am grateful to Anthony Kenny for the reference.

¹⁵ The point of the rule seems to be this. Case (5a). If p and q are convertible, then they have the same truth-value. So if we assign a truth-value of true or of false to p , we are committed to assigning the same truth value to q . Hence if we want to give the response 'I am in doubt about it' to q , we will have to give the response 'I am in doubt about it' to p . Case (5b). For similar sorts of considerations as those for Case (5a), if p and q are contradictories, we must give the response 'I am in doubt about it' to p if we want to give that response to q . Case (5c). If q entails r , then we will have to deny q if we deny r . On the other hand, we ought not to grant r since it is by hypothesis false. Hence if we want to maintain q as uncertain, we ought to maintain r as uncertain also. Case (5d). If p entails q , then we ought not to grant p since doing so requires also granting q . On the other hand, we ought not to deny p since it is by hypothesis true. Hence if we want to maintain q as

uncertain, we ought to maintain *p* as uncertain also. See Burley 5.04 for his spelling out of these reasons.

¹⁶ *Ibid.*, Burley 2.16: “Aliud sophisma est: peto te concedere regem sedere vel non sedere; ita quod sit disiunctio petitionis. Deinde, propono tibi istam: rex sedet. Si concedas, concedis dubium, non obligatus. Quia et si sis obligatus ad concedendum regem sedere vel non sedere, tamen non es obligatus ad concedendum regem sedere. Si neges, negas dubium, non obligatus, igitur male. Si respondeas dubie, propono istam: rex non sedet. Si concedas, concedis dubium, ad quod non es obligatus, quia si sis obligatus ad concedendum regem sedere vel non sedere, non tamen es obligatus ad concedendum regem non sedere. Si neges, negas dubium, ad quod non es obligatus. Si respondeas dubie, cedit tempus, petitum fuit te concedere regem sedere vel non sedere, et neutrum fecisti, igitur male.”

¹⁷ *Ibid.*, Burley 2.17.

¹⁸ *Cf. ibid.*, Burley 3.68.

¹⁹ *Ibid.*, Burley 3.21: “Et ponatur ista: tu es Romae vel ‘te esse Romae’ est concedendum. Deinde, proponatur: ‘te esse Romae’ est concedendum. Haec est falsa et impertinens, igitur neganda. Deinde, proponatur: ‘te esse Romae’ sequitur ex posito et opposito bene negati. Haec est necessaria, quia haec conditionalis est necessaria: si tu es Romae vel ‘te esse Romae’ est concedendum, sed ‘te esse Romae’ non est concedendum, igitur tu es Romae. Concessa ista “‘te esse Romae’ sequitur ex posito et opposito bene negati”, proponatur ista: ‘te esse Romae’ est concedendum. Si concedas, idem concessisti et negasti, igitur male. Si neges, cedat tempus, negasti sequens per regulam. Quia, si regula sit bona, tunc sequitur: ‘te esse Romae’ sequitur ex posito et opposito bene negati, igitur ‘te esse Romae’ est concedendum.”

²⁰ *Ibid.*, Burley 3.22: “Dicitur quod haec est neganda: “‘te esse Romae’ sequitur ex posito et opposito bene negati”. Nec haec est necessaria. Et, si sit necessarium ‘te esse Romae’ sequi ex disiunctiva, quae ponitur, cum opposito alterius partis, tamen non est necessarium istam disiunctivam poni.”

²¹ *Ibid.*, Burley 3.61: “Alia regula est ista: posito falso de contingenti, contingit probare quodlibet falsum sibi compossibile. Hoc modo: ponatur te esse Romae. Deinde, proponatur: tu non es Romae vel tu es episcopus. Haec debet concedi, quia vera et impertinens. Deinde: tu es episcopus. Hoc sequitur, et sic contingit probare quodlibet falsum contingens compossibile posito.”

²² *Ibid.*, Burley 3.67: “Disiunctiva non est vera, nisi altera pars sit vera. Igitur disiunctiva non est concedenda, nisi altera pars sit concedenda, sed neutra pars huius ‘tu non es Romae vel tu es episcopus’ primo loco est concedenda. Nam una pars est falsa et impertinens, et alia pars est repugnans posito. Praeterea, si ponatur ista: ‘tu es Romae’, et proponatur ista: ‘tu es Romae, et te esse Romae et te esse episcopum sunt similia’, haec esset neganda, et non ratione huius ‘tu es Romae’, igitur ratione huius ‘te esse Romae et te esse episcopum sunt similia’. Haec igitur est neganda primo loco, et ita per regulam non probatur te esse episcopum”.

²³ See note 5. For a full exposition of this sophisma of Kilvington’s, see Kretzmann’s commentary on it in his forthcoming edition of the *Sophismata*.

²⁴ For a discussion of this work of Kilvington’s and the subsequent work of other Oxford Calculators on obligations, see Stump (1981) and Paul Spade, ‘Three Theories of

Obligations', *History and Philosophy of Logic* 3, 1982, 1–32.

²⁵ See Spade, 'Three Theories'; for a thorough discussion of Spade's claim, see Stump (1981).

²⁶ *Op. cit.*, Burley 3.59: "Verbi gratia: sit A: instans in quo ponitur positum. Et ponatur A esse. Et proponatur: A est. Hoc debet concedi, quia est positum. Et tamen est impossibile per accidens . . ."

²⁷ For an excellent discussion of obligations after Burley, see the introduction to E. J. Ashworth's forthcoming edition of Paul of Venice's work on obligations in the series of volumes of his *Logica Magna*, Oxford University Press. I am very grateful to Professor Ashworth for her generosity in supplying me with this material.

²⁸ I am grateful to my friend Norman Kretzmann for his comments and suggestions on this paper, and I am indebted to John Crossett whose efforts on my behalf made this paper possible.

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