ELEONORE STUMP

ROGER SWYNESHED'S THEORY OF OBLIGATIONS

Estratto da:

MEDIOEVO

RIVISTA DI STORIA DELLA FILOSOFIA MEDIEVALE · VII (1981)

EDITRICE ANTENORE
VIA G. RUSCA 15
PADOVA

ELEONORE STUMP

ROGER SWYNESHED'S THEORY OF OBLIGATIONS

The Problem

Although recent studies have done a great deal to aid our understanding of the complicated and often obscure medieval tradition of obligations,[1] there is still no general agreement about the purpose and function of obligations. Published characterizations range from claims that obligations are codified methods for examining students in logic[2] to arguments that they constitute one of the earliest known attempts at a logic of counterfactuals.[3] But there is a consensus about the description of obligations in the historical tradition up to the work of Roger Swyneshed. Obligations during that period may be roughly described as written sets of fictive oral disputations in which the respondent «obligates» himself to maintain a certain view or attitude throughout the disputation. In the subsequent course of the disputation, the opponent attempts to maneuver the respondent into maintaining contradictories and thus answering badly and losing the disputation.

1. See, for example, L.M. de Rijk, *Some Thirteenth Century Tracts on the Game of Obligation*, «Vivarium», 12 (1974), 94-123; 13 (1975), 22-54; and 14 (1976), 26-49; P.V. Spade, *Roger Swyneshed's 'Obligationes', Edition and Comments*, «Arch. hist. doctr. litt. M.A.», 44 (1977), 243-285; *Richard Lavenham's 'Obligationes'*, «Riv. crit. stor. filos.», 33 (1978), 225-242; *Robert Fland's 'Obligationes': An Edition*, «Med. Stud.», 42 (1980), 41-60; «Obligations: Developments in the Fourteenth Century» in *The Cambridge History of Later Medieval Philosophy*, ed. N. Kretzmann *et al.*, Cambridge University Press, Cambridge 1982; P.V. Spade and E. Stump. *The Treatise on Obligations Ascribed to William of Sherwood* (forthcoming); R. Green, *The Logical Treatise 'De Obligationibus': An Introduction with Critical Texts of William of Sherwood and Walter Burley*, The Franciscan Institute, St. Bonaventure, N.Y. 1982; E. Stump. *William of Sherwood's Treatise on Obligations*, «Historiographia Linguistica», 7 (1980), 249-264; «Obligations: From the beginning to the Early Fourteenth Century» in *The Cambridge History of Later Medieval Philosophy*; and *Obligations According to Walter Burley* and *Topics, Consequences, and Obligations in Ockham's 'Summa logicae'* in *Boethius's In Ciceronis Topica*, (forthcoming).

2. See, for example, A. Perreiah, *What Obligations Really Are*, «Mediaevo», 5 (1979).

3. P.V. Spade, *Three Theories of 'Obligationes': Burley, Kilvington and Swyneshed on Counterfactual Reasoning*, «History and Philosophy of Logic», 3 (forthcoming). I am grateful to Professor Spade for letting me see the typescript.

For Walter Burley, whose treatise on obligations[4] represents the state of the development of obligations just before the work of the Oxford Calculators, there are six species of obligations: *petitio, sit verum, institutio, positio, depositio*, and *dubitatio*.[5] These are distinguished both by the sort of statement with respect to which the respondent obligates himself and by the attitude he takes toward that statement. In *positio*, the paradigm species of obligations, the *positum* (the statement in this species with respect to which the respondent is obligated) is known to be contingently false, and the respondent obligates himself to it as true for the duration of the disputation. In *depositio*, the *depositum* is known to be contingently true, and the respondent must maintain it as false. In *dubitatio*, the *dubitatum* is a statement known to be contingently false or known to be contingently true which the respondent must maintain as doubtful; that is, he must respond to the *dubitatum* as if he did not know whether it was true or false. All the remaining three species of obligations are like *positio* except that the *obligatum* has a special character. In *petitio* it always specifies an obligational response on the part of the respondent; for example, a respondent might obligate himself to maintain as true a statement of the form 'You deny that Socrates is running' or 'You grant that Socrates is running'. In *sit verum* the statement obligated always includes a propositional attitude. It specifies that the respondent knows, does not know, or is in doubt about something. The *obligatum* is not, for example, 'Socrates is running' (as in *positio*) or 'You grant that Socrates is running' (as in *petitio*) but rather 'You know that Socrates is running', 'You do not know that Socrates is running', or 'You are in doubt whether Socrates is running'. Finally, *institutio* is a new imposition for some utterance, giving that utterance a new signification. A typical *obligatum* for this species is 'Let «God exists» signify that a man is a donkey'.

4. Edited in Green forthcoming. It is possible that Burley wrote more than one treatise on obligations. The obligations treatise currently ascribed to Sherwood may be by Burley instead; see Stump and Spade, *The Treatise on Obligations*.

5. For a detailed examination of Burley's obligations, see Stump, *Obligations According to Walter Burley*.

Species	*Example of obligatum*	*Respondent maintains obligatum as*
positio	'Socrates is running'	true
depositio	'Socrates is running'	false
dubitatio	'You are seated'	doubtful
petitio	'You grant that Socrates is running'	true
sit verum	'You know that Socrates is running'	true
institutio	'«God exists» signifies that a man is a donkey'	true

There are three basic rules for all these species of obligations (except *depositio* and *dubitatio*, which have their own analogous rules):

(1) Everything which follows from (a) the *obligatum*, 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 *obligatum*, 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 (*impertinens*) – 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 as we know it (that is, we grant it if we know it to be true, we deny it if we know it to be false, and we doubt it if we neither know it to be true nor know it to be false).

Roger Swyneshed's treatise on obligations represents a radical break with this tradition in two significant ways. In the first place, he alters the basic rules for obligations to these:

(S1) Everything which follows from the *obligatum* must be granted.

(S2) Everything which is incompatible with the *obligatum* must be denied.[6]

6. For an edition of this treatise, see Spade, *Roger Swyneshed's 'Obligationes'*. Subsequent references to this treatise will be given by page and paragraph number in parentheses in the text or in the footnotes. Swyneshed's three rules are more complicated than I have indicated in these English versions of them, but the complication is irrelevant to my purposes in this paper. The complete Latin originals of these rules are quoted in the remainder of this note and in note 8 below.

(S1) « Omne sequens ex posito sine obligatione ad hoc pertinente non repugnans positioni in tempore obligationis est concedendum » (266, § 67).

(S2) « Omne repugnans posito sine obligatione ad hoc pertinente non repugnans positioni in tempore positionis est negandum » (266, § 68).

7. « Propositio impertinens est propositio non obligata, et propter obligatum nec est concedenda nec neganda » (252, § 8).

8. (S3) « Nulla propositio impertinens scita ab aliquo sibi principaliter significare sicut est est neganda sine obligatione ad hoc pertinente nec scita significare principaliter aliter quam est est concedenda, nec scita significare principaliter dubie est neganda vel concedenda » (256-7, § 31).

(S3) Everything which is irrelevant – that is, everything to which neither rule (S1) nor rule (S2) applies[7] – must be replied to in accordance with the way in which it principally signifies (that is, if it is known to signify principally as is the case, it must be granted; if it is known to signify principally otherwise than is the case, it must be denied; and if it is known to signify principally uncertainly, it must be doubted).[8]

The major difference between these rules and the rules found in Burley is the greatly extended range of irrelevant propositions. Because *relevant* propositions in Swyneshed's rules are restricted to those that follow from or are incompatible with the *obligatum alone* (rather than from or with the *obligatum* and all previously granted propositions or the opposites of all correctly denied propositions) many more propositions are irrelevant under Swyneshed's rules than under Burley's. Furthermore, under Swyneshed's rules, a respondent's job at any step of an obligational disputation is greatly simplified. Rather than considering a proposed proposition's relations to all previous steps of the argument, a respondent need only consider whether it follows from or is incompatible with the *obligatum*. If it neither follows from nor is incompatible with the *obligatum*, it is irrelevant; and the respondent must reply to it as he would ordinarily outside the obligational disputation.

Furthermore, to these three basic rules Swyneshed adds two corollaries:

(S4) One need not grant a conjunction in virtue of having granted all its conjuncts;

(S5) One need not grant any disjunct of a disjunction in virtue of having gran-

ted that disjunction.[9] (Or, in Fland's formulation, 'A disjunction is to be granted both of whose disjuncts are to be denied'.[10])

Subsequent medieval philosophers themselves felt that these two corollaries typified the sort of obligations propounded in Swyneshed's treatise. Robert Fland, for example, cites these two rules as characteristic of what he calls the « *nova responsio* » in obligations.[11]

This « *nova responsio* », as far as we now know, is found in full-fledged form first in Swyneshed's treatise. It raises at least three puzzles. First, how could anyone, and especially a skilled logician such as Swyneshed, maintain these two corollary rules, which appear to be denials of fundamental logical laws? And what considerations would motivate a philosopher to produce and adopt such rules in the first place? Secondly, why did the *nova responsio* arise at this time? There was clearly an explosion of interest in obligations among the Oxford Calculators.[12] Can we discern any trends or developments in the work of the Oxford Calculators which elucidate the *nova responsio*? Thirdly, what are we to make of the fact that Swyneshed himself in his treatise on obligations does not abide by these new rules?

That Swyneshed appears to violate his own rules, and not just once but repeatedly, is indisputable. Consider the following example:

Then let there be the following sophisma. Suppose a conjunction of this sort is posited: 'This is a man and this is a donkey'; and everything indicated by 'this' is a man. Then this is proposed: 'This is a donkey'. If it is denied or doubted, the disputation is over.

But on the contrary: it is a conjunct of the conjunction posited; therefore, it must be granted.

Once it is granted, this is proposed: 'This thing indicated is a donkey'. If that

9. (S4) « Propter concessionem partium copulativae non est copulativa concedenda nec (S5) propter concessionem disjunctivae est aliqua pars eius concedenda » (257, § 32).

10. « Disjunctiva est concedenda cujus utraque pars est neganda » (Spade, *Robert Fland's 'Obligationes'*, 45, § 17).

11. See Spade, *Robert Fland's 'Obligationes'*, 45, §§ 14-17.

12. See Green, *The Logical Treatise*, for a partial list of Oxford Calculators who wrote on obligations.

is granted, let this be proposed: 'A donkey is a man'. If this is denied, the disputation is over.

But on the contrary, it follows from the *positum*; therefore, it must be granted. The premiss is proved because this follows: 'Everything indicated is a man; this thing indicated is a donkey; therefore, a donkey is a man'.

So if 'This thing indicated is a donkey' is denied, this is proposed: 'This is a man'. This must be granted. Once it is granted, this is proposed: 'This is nothing other than this thing indicated'. This follows, for this follows: 'This is this; and this is nothing other than this thing indicated; therefore, this is this thing indicated'. If that is granted, then it follows that this thing indicated is a donkey, which was denied earlier.

So if 'This is nothing other than this thing indicated' is denied, its contradictory is proposed: 'This is something other than this thing indicated'. Then it follows that this thing indicated is.

Once that is granted, this is proposed: 'This thing indicated is a donkey'. If this is granted – on the contrary, the same thing is granted and denied within the disputation; therefore one has replied badly.

If 'This thing indicated is a donkey' is denied, the disputation is over. It follows from the things that have been granted. For this follows: 'This is a donkey; this is this thing indicated; therefore this thing indicated is a donkey'.[13]

To see that Swyneshed apparently violates his own rules in this argument, the diagram below will be helpful. In the diagram 'T' indicates the reply 'I grant it', 'F' indicates 'I deny it', and '?' indicates that no justification under the rules of obligations (or no reply justified by those rules) is available. Because

13. « Sit ergo illud sophisma: Ponatur talis copulativa 'Hoc est homo et hoc est asinus'. Et omne demonstratum per ly 'hoc' est homo. Deinde proponitur illa 'Hoc est asinus'. Si negatur vel dubitatur, cedat tempus. Contra: Illa est pars copulativae positae. Igitur, concedenda. Qua concessa proponitur illa 'Hoc demonstratum est asinus'. Si conceditur proponatur illa 'Asinus est homo'. Si negatur, cedat tempus. Contra: Illud sequitur ex posito. Igitur, concedenda. Assumptum probatur. Nam sequitur: Omne demonstratum est homo; hoc demonstratum est asinus; igitur, asinus est homo. Ideo si negatur illa 'Hoc demonstratum est asinus', proponitur illa 'Hoc est homo'. Haec est concedenda. Qua concessa proponitur 'Hoc non est aliud quam hoc demonstratum'. Si conceditur, proponatur illa 'Hoc est hoc demonstratum'. Illud est sequens. Nam sequitur: 'Hoc est hoc; et hoc non est aliud quam hoc demonstratum; igitur, hoc est hoc demonstratum'. Si conceditur, tunc sequitur quod hoc demonstratum est asinus, quod prius erat negatum. Ideo si negatur illa 'Hoc non est aliud quam hoc demonstratum', proponitur ejus contradictorium 'Hoc est aliud quam hoc demonstratum'. Tunc sequitur quod hoc demonstratum est. Qua concessa, proponitur 'Hoc demonstratum est asinus'. Si conceditur, contra: Idem conceditur et negatur infra tempus. Igitur, male respondetur. Si negatur illa 'Hoc demonstratum est asinus', cedat tempus. Illa sequitur ex concessis. Nam sequitur: 'Hoc est asinus; hoc est hoc demonstratum; igitur, hoc demonstratum est asinus' » (276-277, § 105).

the argument is complicated by the consideration of alternative moves, I will present the alternatives in the diagram with asterisked premiss numbers. Italicized premiss numbers indicate steps of the argument at which Swyneshed apparently does not abide by the new rules.

Ia.

Opponent	*Respondent*	*Reason for Response*
1. This is a man and this is a donkey (where everything indicated by 'this' is a man).	1a. T	1b. 1 is the *positum*.
2. This is a donkey.	2a. T	2b. 2 follows from 1.
3*. This thing indicated is a donkey.	3*. T	3*b. ?
4*. A donkey is a man.	*4*a*. T	4*b. 4* follows from 1 and 3*.

Ib.

1. This is a man and this is a donkey (where everything indicated by 'this' is a man).	1a. T	1b. 1 is the *positum*.
2. This is a donkey.	2a. T	2b. 2 follows from 1.
3. This thing indicated is a donkey.	3a. F	3b. ?
4. This is a man.	4a. T	4b. 4 follows from 1.
5*. This is nothing other than this thing indicated.	5*a. T	5*b. ?
6*. This is this thing indicated.	*6*a*. T	6*b. 6* follows from 5*.
7*. This thing indicated is a donkey.	*7*a*. T	7*b. 7* follows from 2 and 6*.

Ic.

1. This is a man and this is a donkey (where everything indicated by 'this' is a man).	1a. T	1b. 1 is the *positum*.
2. This is a donkey.	2a. T	2b. 2 follows from 1.
3. This thing indicated is a donkey.	3a. F	3b. ?
4. This is a man.	4a. T	4b. 4 follows from 1.
5. This is nothing other than this thing indicated.	5a. F	5b. ?
6. This is something other than this thing indicated.	*6a*. T	6b. 6 follows from the denial of 5.
7. This thing indicated is.	*7a*. T	7b. 7 follows from 6.
8. This thing indicated is a donkey.	*8a*. ?	8b. 8 follows from 2 and 6*, but has already been denied at 3.

There are several problems with this argument. For instance, Swyneshed does not explicitly explain or justify responses (3*a), (5*a), and (5a) in terms of the basic rules for obligations; his reasons for thinking that (7) is needed in the argument and for judging that (7) follows from (6) are obscure; and his argument for granting (8) mistakenly includes a premiss from a rejected alternative argument. But what is important for my purposes here is that the responses and the arguments for the responses at steps (4*), (6), (6*), (7), (7*), and (8) all violate Swyneshed's first three rules of obligations. In each of these cases a statement is granted solely on the grounds that it follows from previously granted steps of the argument (either by themselves or in conjunction with the *positum*). Swyneshed's solution to the difficulty posed by (8) is obscure (perhaps in part because of textual difficulties);[14] but no matter how we read Swyneshed's solution, the most that can be said for it is that it accepts (5*) rather than (5) and attacks the argument for granting (7*). Swyneshed says nothing to indicate that he rejects the sort of inference used to warrant the granting of (4*), (6), (6*), (7), (7*), or (8); and the recurrence of similar arguments elsewhere in his treatise strongly suggests that he is not troubled by these apparent violations of his rules.[15] And yet according to his revised rules we should deny (4*) as irrelevant and false, since it neither follows from nor is incompatible with the *positum* and in reality is false, and the same is true for (7*) and (8). On the other hand, (6*), (6), and (7) should be doubted as irrelevant and uncertain. If the *nova responsio* orginated with Swyneshed or even if he was simply one of the first to systematize it, how can we explain the fact that he himself seems not to adhere to it?

In order to deal effectively with the three puzzles I have

14. See 277, §§ 106-108 and Spade's notes to these sections.
15. See, for example, 257, § 32; 273-274, § 98-99, and 284, § 137.

raised, it is useful to consider the history of obligations immediately preceding Swyneshed's treatise. Burley's treatise on obligations, which is a model of the tradition Swyneshed was rejecting, was written in 1302. Ockham's discussion of obligations in his *Summa logicae* was written around 1324 and is still squarely within the tradition represented by Burley. The first break with that tradition, as far as we now know, occurs in Richard Kilvington's *Sophismata*, which was probably written around 1325.[16]

Kilvington's Sophismata

Kilvington's discussion of obligations occurs basically in his forty-seventh sophisma (S47), the penultimate sophisma of the book; but for a proper understanding of S47, we should see that this sophisma is part of a thematically connected group consisting of S45, S46, S47, and S48. Though obligations terminology in fact occurs throughout these four sophismata (and to a lesser extent throughout the *Sophismata*), the central concern of all four is not with obligations but with an apparent paradox concerning knowledge.

S45 poses this puzzle: suppose you see Socrates from a distance and do not know that it is Socrates; is it true that this is everything which is this? S46, which Kilvington introduces as similar to S45, is this: suppose that you see Plato and Socrates, who are altogether alike, at the same time and that you become confused and do not know which of them is which, although the one being pointed out to you is in the place where Socrates was before you got confused; is it true, then, that you know that this is Socrates? Kilvington's reply to S46 depends on claiming that one may doubt and know the same proposition.

16. This work is being edited by Norman Kretzmann and Barbara Ensign Kretzmann with translation and commentary. I am grateful to Professor Kretzmann for giving me access to the edition and translation. I have used Kretzmann's translation here but have been free in revising it to emphasize the technical obligations terminology. For the dating of Kilvington's treatise, see Kretzmann's introduction. For the dating of Burley's treatise, see the introduction to Green's edition; and for the dating of Ockham's *Summa logicae*, see the introduction to the edition by P. Boehner, S. Brown, and G. Gàl, The Franciscan Institute, St. Bonaventure. (N. Y.) 1974.

The point of S47 is to justify this apparently paradoxical claim:

> So if someone proposes a proposition in speech representing this proposition in thought: 'This is Socrates', one would have to reply by doubting [the proposition proposed]. And yet it is compatible with this that the proposition in thought corresponding to [the proposition proposed] be known by you, as will be clear in the next sophisma [which is S47] [17]

Kilvington's reply in S47 does indeed depend on this principle, which the sophisma is designed to justify. In his solution to the sophisma Kilvington says, « But this does not follow: 'This proposition must be doubted by me; therefore this proposition is not known by me'; for a proposition must be doubted on an occasion when it is known, and so it must sometimes be doubted when it is not known by me whether it is known ».[18] And according to Kilvington the difficult sophisma '*A* is known by you' (which is S48) can be solved by this sort of reply.[19]

Kilvington's innovative work on obligations, then, is done in the context of a larger issue, namely, the justification of the principles that the same proposition can be simultaneously doubted and known by the same knower and that it is possible for an individual not to know that he knows something. With that larger issue in mind, I want now to examine S47 in detail.

The question S47 raises is this. Suppose that we take as a *positum* 'If the king is seated, you know the king is seated; and if the king is not seated, you know the king is not seated'. Given that *positum*, is the sophisma sentence 'You know the king is seated' true? To answer the question, Kilvington gives two arguments, which can be schematized in this way.[20]

17. « Unde si proponatur aliqua propositio in voce repraesentans istam in conceptu: 'Hoc est Socrates', respondendum foret dubitando. Et tamen cum hoc stat quod ista propositio in conceptu correspondens illi sit scita a te, ut patebit in proximo sophismate, quod est hoc » (S46).

18. « His visis, respondeo aliter ad sophisma, dubitando istud sophisma 'Tu scis regem sedere' et dubitando istam similiter: 'Rex sedet'. Non tamen dico quod haec est mihi dubia: 'Rex sedet'. Nec sequitur "Haec propositio 'Rex sedet' est a me dubitanda; igitur haec propositio 'Rex sedet' est mihi dubia"; quia propositionem esse dubiam est propositionem esse non scitam. Sed non sequitur 'Haec propositio est dubitanda a me; igitur haec propositio non est scita a me'; quia propositio est dubitanda in casu quando scitur, et ideo est dubitanda aliquando quando nescitur a me utrum sciatur » (S47).

19. S47.

20. « Tunc probatur sophisma sic. Tu scis regem sedere vel tu scis regem non sedere,

II. *Proof*

1.	If the king is seated, you know the king is seated; and if the king is not seated, you know the king is not seated.	1a. T	1b. 1 is the *positum*.
2.	You know the king is seated or you know the king is not seated.	2a. T	2b. 2 follows from 1 and the tautology 'Either the king is seated or the king is not seated'.
3.	You do not know the king is not seated.	3a. T	3b. 3 is irrelevant and in reality true.
4.	You know the king is seated.	4a. T	4b. 4 follows from 2 and 3.

III. *Disproof*

1.	If the king is seated, you know the king is seated; and if the king is not seated, you know the king is not seated.	1.a T	1b. 1 is the *positum*.
2.	You know the king is seated or you know the king is not seated.	2a. T	2b. 2 follows from 1 and the tautology 'Either the king is seated or the king is not seated'.
3.	You do not know the king is seated.	3a. T	3b. 3 is irrelevant and in reality true.
4.	You know the king is not seated.	4a. T	4b. 4 follows from 2 and 3.
5.	It is not the case that you know the king is seated.	5a. T	5b. 5 follows from 4.

What Kilvington's proof and disproof show us is that by the traditional rules for obligations we can generate a genuinely insoluble sophisma; neither the proof nor the disproof for this sophisma can be faulted. And what that apparently shows us is

sed tu non scis regem non sedere; igitur tu scis regem sedere. Maior patet per casum, et minor patet quia est vera non repugnans. Quod patet, nam ista non repugnant: 'Si rex sedet, tu scis regem sedere; et si rex non sedet, tu scis regem non sedere' et 'Tu non scis regem non sedere'. Ad oppositum arguitur sic. Tu scis regem non sedere; igitur tu non scis regem sedere. Antecedens patet, quia tu scis regem sedere vel tu scis regem non sedere, sed tu non scis regem sedere; igitur tu scis regem non sedere. Et per consequens sophisma est falsum. Et minor patet ut prius, quia est vera et impertinens» (S47).

that the traditional rules are incoherent; they can be used to prove contradictories.[21] It is easy to see how the contradictories are generated in this case. For all practical purposes, we can take as the *positum* the disjunction at step 2 of the proof and disproof. That disjunction is incompatible with the conjunction of the proof's step 3 and the disproof's step 3; but by the traditional rules of obligations either conjunct taken singly is irrelevant to the disjunction and is in reality true. That is, (D) '(1) You know that the king is seated or (2) you know that the king is not seated', neither entails nor is incompatible with 'You do not know the king is seated', and the same can be said for (D)'s relation to 'You do not know the king is not seated'; but (D) *is* incompatible with (C) '(1) You do not know the king is seated and (2) you do not know the king is not seated'. Thus the combination of (D) with either (C1) or (C2) entails the denial of the other conjunct and consequently entails one or the other of the disjuncts. The proof takes as a premiss the second conjunct (C2) and derives the first disjunct (D1). The disproof takes as a premiss the first conjunct (C1) and derives the second disjunct (D2); and since (D1) and (D2) are contraries, (D2) entails the denial of (D1). In this way the correct application of the traditional rules of obligations leads to the proof of contradictories from the same *positum*, and thus there is an apparent incoherence in the rules.

Faced with this paradox, Kilvington proposes *three* different solutions. The third and weakest solution consists in claiming that only formal consequences are acceptable and that the two consequences in the *positum* are not formal (where by 'formal consequence' he seems to mean at least that the antecedent cannot be true without the consequent). Since on views of consequences then current all consequences are either necessary or

21. There are, of course, different ways of being incoherent and different ways of warranting contradictories. Burley's rules do not warrant contradictories in the same obligational disputation but rather *warrant contradictories in two disputations, each starting with the same positum*. For a thorough discussion of this issue, see Spade, *Three Theories*.

impossible,[22] if the consequences that make up the *positum* are not acceptable, they are impossible. But only possible propositions may be posited, and therefore this *positum* ought to be disqualified from the outset. For complicated reasons[23] Kilvington himself rejects this solution. He is right to do so, I think, and for a simpler reason than any he offers: the entire paradox can clearly be generated from the disjunction at step 2 of the proof and disproof, so that we can dispense entirely with consequences such as those that constitute the *positum*, and generate the paradox simply by positing the disjunction. Whatever restrictions Kilvington may have attached to the positing of consequences, he gives no hint that he felt any similar compunctions about the positing of disjunctions.

Though he seems not to recognize the fact, Kilvington's second solution is equally weak. It takes this form. Arguments (II) and (III) depend crucially on the rule for irrelevant propositions and are analogous to this standard argument for demonstrating that all falsehoods compossible with the *positum* are provable:

IV.

1. You are in Rome.	1a. T	1b. 1 is the *positum*.
2. 'You are in Rome' and 'you are a bishop' are the same in truth-value.	2a. T	2b. 2 is irrelevant and in reality true (since in reality both propositions are false).
3. You are a bishop.	3a. T	3b. 3 follows from 1 and 2.

Kilvington attempts to refute *this* argument by pointing out that since words signify only by convention and conventions may be altered at will, we can never validly argue « 'p' is true; therefore, p » or « p; therefore 'p' is true ». On these grounds, Kilvington rejects the inference from (1) and (2) to (3) in argument IV. Whatever else one may think about this attempted refutation, it is vitiated by the fact that it applies to only one method of showing the provability of compossible falsehoods. Against the method in which the second step of IV would be given as the disjunction 'You are not in Rome or you are a bishop', Kilvington's refutation is useless; and it is just as impotent against the proof and disproof for S47.

22. See, for example, Swyneshed's discussion of this position in Spade, *Roger Suyneshed's 'Obligationes'*, 268, §§ 77-80.

23. Kilvington's exposition of this attempt at a solution is complicated by counter-proposals, replies to the counter-proposals, etc. For the sake of brevity, I have given only the opening position of this attempted solution.

Kilvington's best solution consists in an attack on the traditional rule for irrelevant propositions. The rule itself is an obvious culprit in the generation of the paradox of S47, and it is essential to any argument attempting to show the provability of all falsehoods compossible with the *positum*.[24] In its traditional formulation, the rule brings it about that two incompatible sets of criteria for determining truth-values are sometimes brought into play in assessing obligational statements. If we construct a conjunction (or disjunction) in the right way, we can ensure that the individual conjuncts (or disjuncts) are assessed by criteria different from those used to assess the truth-value of the whole conjunction (or disjunction) when the conjuncts (or disjuncts) are put forward singly at the same step of the argument as the conjunction (or disjunction). So, for example, in the proof and disproof of S47, either conjunct of (C) put forward at step 3 of the argument is irrelevant; consequently, it is assessed outside the obligational context, and so assessed each conjunct is true. But the whole conjunction, put forward at step 3, is *not* irrelevant; consequently, it must be assessed within the obligational context. Assessed in that way, it is false, and so at least one of the conjuncts must also be false. Kilvington's other two solutions depended (respectively) on refusing to admit the sophisma's *positum* and on rejecting the inference from the *positum* and a premiss to the conclusion. His best solution employs the only remaining strategy of attack: denying the irrelevant premiss, or at least showing that the irrelevant premiss does not have to be granted. This strategy, however, requires revising the traditional rule for irrelevant propositions;

24. For more discussion of this point in connection with Burley's work, see Stump, *Obligations According to Walter Burley* and Spade, *Three Theories*.

and this is what Kilvington does, though frustratingly succinctly.

He begins with a general consideration:

> In another way, however, one should say in such cases that when 'You are in Rome' is posited and then "'You are in Rome' and 'You are a bishop' are the same in truth-value" is proposed, this proposed proposition ought to be denied. For supposing you are in Rome and not a bishop, this would not have to be granted: "'You are in Rome' and 'You are a bishop' are the same in truth-value"; and so the same proposition should be denied by you now.[25]

In the immediately following passage, in which he applies this general consideration to the rule for irrelevant propositions, Kilvington does not express himself clearly (and there are textual difficulties besides):

> And when one argues 'This is true and irrelevant; therefore, this must be granted', to this I say that speaking of what is irrelevant as [that term] is commonly understood – for a proposition that does not follow from or is not incompatible with the *positum* or a previously granted proposition, and the rest – this does not follow: 'This proposition is true and irrelevant; therefore, it must be granted'. But if this term 'irrelevant' is taken for a proposition which is now true and which would not be true in virtue of its being in reality as signified by the *positum*, then I say that this proposition "'You are in Rome' and 'You are a bishop' are the same in truth-value" is irrelevant to the *positum* 'You are in Rome'. Because if you were in Rome and were not a bishop, this would have to be denied: "'You are in Rome' and 'You are a bishop' are the same in truth-value".[26]

It is very unlikely that Kilvington meant to restrict irrelevant propositions to those that are now true, though the passage just quoted seems to give such an impression. If we therefore ex-

25. « Aliter tamen dicendum est in talibus quando ponitur ista 'Tu es Romae' et deinde proponitur "'Tu es Romae' et 'Tu es episcopus' sunt similia", neganda est haec propositio proposita. Quia te existente Romae et te non existente episcopo, non foret haec concedenda: "'Tu es Romae' et 'Tu es episcopus' sunt similia"; et ideo nunc est eadem propositio neganda a te » (S47).

26. « Et quando arguitur 'Ista est vera et impertinens; igitur ista est concedenda', ad illud dico quod loquendo de impertinenti ut communiter sumitur – pro propositione non sequenti vel repugnanti posito vel concesso, et ita de aliis – non sequitur 'Haec propositio est vera et impertinens; igitur est concedenda'. Si tamen accipiatur iste terminus 'impertinens' pro propositione quae nunc est vera et quae non foret vera ex hoc quod ita foret ex parte rei sicut significatur per positum, tunc dico quod ista propositio "'Tu es Romae' et 'Tu es episopus' sunt similia" est impertinens huic posito, quod est 'Tu es Romae'. Quia si tu esses Romae et non esses episcopus, haec foret neganda: "'Tu es Romae' et 'Tu es episcopus' sunt similia" » (S47).

pand the account of irrelevant proposition along the lines Kilvington suggests, it would presumably take this form:

> (K3) An irrelevant proposition is either (a) one which is now true but would not be true in virtue of its being in reality as is signified by the *positum* or (b) one which is now false but would not be false in virtue of its being in reality as is signified by the *positum*.

Even our expanded (K3), however, is not complete as an alternative to the traditional rule of obligations, both because it does not specify a *response* to irrelevant propositions and because it leaves out of account irrelevant propositions whose truth-value would not be altered «in virtue of its being in reality as is signified by the *positum*». Kilvington's practice in his examples and his purpose in altering the traditional rule together suggest that Kilvington means all irrelevant propositions to be given the responses which would be appropriate if the *positum* were true. Presumably, if an irrelevant proposition would not alter its truth-value «in virtue of its being in reality as is signified by the *positum*», then one's response to it within the disputation would be the same as one's response outside the disputation. A completed version of Kilvington's altered rule for irrelevant propositions would have to be something of this sort:

> (K'3) An irrelevant proposition is one which neither follows from nor is incompatible with the *positum* and/or previous steps of the argument. (a) If an irrelevant proposition would be true in virtue of its being in reality as is signified by the *positum*, it must be granted. (b) If it would be false, it must be denied. (c) If is not the case that it would be true and not the case that it would be false, then it must be responded to according to the quality (as far as we know it) which it has in reality now.

Kilvington no doubt confines himself to alternative (a) in formulating his altered version of the rule because it is *true* irrelevant propositions which are crucial to the sophisma and to arguments showing the provability of all falsehoods compossible with the *positum*.

This revised rule for irrelevant propositions, or that portion of it immediately useful for his purposes, Kilvington uses to solve S47 in this way:

And that this sophisma ['You know the king is seated'] must be doubted is clear, because if the king is seated, you know that the king is seated; and if the king is not seated, you know that the king is not seated – by the hypothesis. But whether the king is seated or not seated must be doubted, and so whether you know the king is seated must be doubted. That this proposition 'The king is seated' must be doubted is clear in view of the fact that, on the basis of the hypothesis, it is no more to be granted than denied or distinguished [into different senses] ... [As far as the disproof goes] the minor premiss assumed must be doubted – namely, 'You do not know the king is not seated'. Because if the king is seated, you do not know that the king is not seated (by the hypothesis); and you must doubt the antecedent; therefore, you must doubt the consequent. And when one argues 'This minor premiss is true and irrelevant; therefore, it must be granted', I say that in the first way of speacking about what is irrelevant the consequence is not acceptable. But in the second way of speaking about what is irrelevant it must be *doubted* whether the minor is true and irrelevant.[27]

Kilvington, then, uses his revision of the rule for irrelevant propositions as a basis for *doubting* the third steps of the proof and disproof of the sophisma. He justifies his response in this way. Suppose the *positum* is true. Its truth entails nothing about whether the king is actually seated or not. So, by (K'3c), since you do not in reality know whether or not the king is seated, 'The king is seated' is in doubt for you. But since on the hypothesis it must be the case that you know the king is seated or you know the king is not seated, if it is also true that you doubt whether the king is seated, then it follows that you are in doubt whether you do not know the king is seated and whether you do not know the king is not seated. And if you doubt these premisses of the proof and disproof for S47, you must also doubt

27. « Et quod istud sophisma sit dubitandum apparet; quia si rex sedet, tu scis regem sedere; et si rex non sedet, tu scis regem non sedere – per casum. Sed dubitandum est utrum rex sedet vel non sedet, et ideo dubitandum est an tu scis regem sedere. Quod ista propositio 'Rex sedet' sit dubitanda patet eo quod ex isto casu non est magis concedenda quam neganda vel distinguenda. Et tamen, licet ista propositio sit dubitanda a te, non tamen est concedendum quod ista propositio 'Rex sedet' est tibi dubia. Unde iste terminus 'dubitandum a me' est superius ad istum terminum 'dubium mihi'. Ad argumentum concedendum est quod tu scis regem sedere vel tu scis regem non sedere. Sed minor coassumpta est dubitanda – scilicet, haec: 'Tu non scis regem non sedere'. Quia si rex sedet, tu non scis regem non sedere – per casum – et antecedens est dubitandum; igitur consequens est dubitandum. Et quando arguitur 'Ista minor est vera et impertinens; igitur est concedenda', dico quod primo modo loquendo de impertinenti consequentia non valet. Sed secundo modo loquendo de impertinenti dubitandum est utrum minor sit vera et impertinens » (S47).

their conclusions, because if a truth-value were assigned to either of the conclusions, it together with the *positum* would entail truth-values for the premisses which are supposed to be doubted. The doubting of the conclusions of the proof and disproof, then, follows from the truth of the *positum* and the doubting of the minor premisses. In this way Kilvington solves the sophisma, siding neither with the proof of the sophisma sentence 'You know the king is seated' nor with its disproof, but instead doubting it.

In this same way, Kilvington also blocks the traditional arguments showing the provability of all falsehoods compatible with the *positum*. Those arguments depend on an irrelevant premiss which typically has the form '*p* and *q* have the same truth-value' or '$\sim p \vee q$', where *p* is the positum and *q* is irrelevant to *p* and false. The traditional rule for irrelevant propositions requires us to grant such premisses. (K'3), on the other hand, requires us to deny them because it evaluates these premisses on the assumption that *p* is true and that *q* is false and falls into the category of propositions specified in (K'3c). And so Kilvington solves the general problem of which this sophisma is a special, particularly interesting case, namely, that starting from any *positum p* by the traditional rules of obligations we can in two obligational disputations show *q* and $\sim q$ respectively, where *q* and $\sim q$ are propositions compossible with *p*. The *traditional* rule for irrelevant propositions was responsible for such arguments because it made it possible to apply two incompatible sets of criteria in evaluating steps of an obligational argument, one which was and one which was not influenced by the falsity of the *positum*. The mingling of these two sets of criteria in one disputation is what allows the proving of any falsehood compossible with the *positum*. So when $\sim p \vee q$ is evaluated as irrelevant, $\sim p$ is true and *q* is false; but once the disjunction is granted and brought into the disputational context $\sim p$ is false and *q* is true. Kilvington's *revised* rule for irrelevant propositions rules out the possibility of evaluating the same proposition by two incom-

patible sets of criteria; in the process it allows a broader range of propositions to be influenced by the falsity of the *positum*.

William Heytesbury's Regulae

The second chapter of William Heytesbury's *Regulae solvendi sophismata*, entitled *De scire et dubitare*, seems to be directed against Kilvington's last four sophismata;[28] at any rate, if Heytesbury in *De scire et dubitare* is not intentionally attacking Kilvington's own work, he is attacking something which is very like it. Examination of *De scire et dubitare*, then, gives us a sample of at least one reaction among the Oxford Calculators to Kilvingtonian ideas and so contributes to our picture of the historical background of Swyneshed's treatise.[29]

28. I am grateful to Norman Kretzmann for first suggesting this idea to me and for sharing with me his corrected typescript of Linda Watson Robinson's text of *De scire et dubitare*, prepared from the Venice 1494 edition and selected manuscripts.

29. This is true even if Weisheipl is right in claiming that the *Regulae* was written after Swyneshed's treatise, because it is unlikely that Heytesbury's views were unknown in Oxford until he produced the *Regulae* in 1335. Already by 1330 there is a record of Heytesbury as a fellow of Merton College (See C. Wilson, *William Heytesbury. Medieval logic and the Rise of Mathematical Physics*, University of Wisconsin Press, Madison, Wisc. 1960, 7); and the *Regulae* is not an esoteric work for select specialists but a textbook for beginning students, as Heytesbury himself explains in the Prologue. But, in fact, Weisheipl's argument about the relative dating of Heytesbury's *Regulae* and Swyneshed's treatise on obligations is not strong enough to support the conclusion that « we can be certain, therefore, that Roger [Swyneshed] wrote his two popular treatises on logic before 1335 » (*Roger Swyneshed, O.S.B.*, in *Oxford Studies Presented to Daniel Callus*, Clarendon Press, Oxford 1964, 245). Weisheipl claims that since the first opinion on insolubles discussed in the *Regulae* is the same as that adopted by Swyneshed, Heytesbury must have had Swyneshed's two treatises on logic in mind in writing the *Regulae*. But, of course, this argument is acceptable only in case (a) no one who wrote before Swyneshed and whose thought was accessible to Heytesbury held the opinion in question, (b) Heytesbury could have known of Swyneshed's opinion only from his treatise, and (c) Swyneshed's work on insolubles was written at the same time as his work on obligations. Since Weisheipl's is the only argument for dating the *Regulae* after Swyneshed's treatises, an opinion about the relative dating of the works of these scholastics should, I think, be held in abeyance. In fact, as this section of my paper will show, there is some evidence in *De scire et dubitare* on the other side of the issue. That chapter of the *Regulae* is concerned partly with obligations and clearly rejects Kilvington's innovation but does not seem aware of a *nova responsio* in obligations. A move like Swyneshed's occurs, as I will explain, in Heytesbury's chapter, but it is an isolated occurrence, with apparently no awareness that that move compels a break with traditional obligations, as Swyneshed's work shows that it does. All this is much more consonant with the *Regulae's* being prior to Swyneshed's treatise on obligations rather than the other way around. It is, of course, possible that despite the common prologue in the manuscript on which Spade based his edition of Swyneshed, there were originally two different treatises, one on obligations, and one on insolubles, which were written at different times, one shortly before and one shortly after Heytesbury's *Regulae*, but were afterwards combined into a single treatise.

The opening sentence of *De scire et dubitare*, which expresses the theme of the whole chapter, shows the claim Heytesbury is at pains to prove here: « 'To know' is understood in many ways; but whether it is used strictly or broadly, nothing is known by anyone which is also in doubt for him ».[30] This is a rejection of one of the principles around which Kilvington built his last four sophismata, on the basis of which he though, he could solve the paradox in sophisma S48 and (at least partially) for the sake of which he changed the traditional rule for irrelevant propositions. In the examples he gives, such as that in argument V below, Heytesbury is at pains to reject the other principle also, namely, that someone can doubt whether he knows something.

Heytesbury gives seven obligational arguments in support of the position he himself wants to reject, namely, that the same proposition *can* be both known and in doubt. Roughly summarized, these are the *posita* of those arguments:

(1) Suppose it is posited that you know that *A* is one or the other of these: 'God is' or 'A man is a donkey'; one of these you know to be true and necessary (namely, 'God is'), and the other you know to be false and impossible (namely 'A man is a donkey'). And you do not know which of these is *A*.

(2) Suppose it is posited that you know that *A* is the true one of these – indicating these contradictories which are in doubt for you: 'The king is seated', 'No king is seated' – in such a way that you know that whichever one of these is *A* is true and that it alone is *A* and vice versa. And with this you know that *A* is the true one of these, but you do not know which of these is *A*, as you do not know which of these is true.

(3) Suppose it is posited that you know that this is this (indicating Socrates) and that you do not know that this is Socrates.

(4) Suppose it is posited that this is Socrates or Plato, but you do not know whether this is Socrates and you do not whether this is Plato.

(5) Suppose that you know what is indicated by the subject of this proposition 'This is a man', and that you know that this proposition signifies exactly as

30. I am using the Robinson-Kretzmann transcription but will give references in parentheses in the text and footnotes to the Venice 1494 edition. « 'Scire' multis modis accipitur; sed sive dicatur proprie sive communiter, nihil scitur ab aliquo quod eidem est dubium » (f. 12va).

its terms generally purport to signify, and that you know something to be a man, and that there is nothing which you doubt to be a man.

(6) Suppose there are three propositions – *A*, *B*, and *C*, – of which you know two (namely, *A* and *B*) and are in doubt about the third, *C*. And you do not know which of the three *A* and *B* are, and it is hidden from you which of these you are in doubt about.

(7) Suppose it is posited that yesterday you saw Socrates, and you know up till now that the man you saw yesterday is Socrates; you see Socrates now and it is hidden from you whether it is Socrates, but rather you believe that the man whom you now see is Plato (and you see no one but Socrates).

Using these seven *posita*, Heytesbury constructs obligational arguments on behalf of the opposing position. Several of these arguments are strongly remniscent of Kilvington's sophismata. The argument associated with (2) is very similar to Kilvington's S47, and (5) examines the issues of S47 on the basis of a different example. (3) is remniscent of S45; (4) resembles S46; and (6) is related to S48.

Most of *De scire et dubitare* is devoted to showing that the arguments based on the *posita* (1) – (7) are unacceptable and to developing in the process some general principles about the compounded and divided senses of expressions. Throughout the chapter Heytesbury's often reiterated thesis is that it is impossible for the same proposition to be simultaneously known and doubted by the same person. And his concluding remarks contain an explicit rejection of Kilvington's innovation in obligations, the revised rule for irrelevant propositions (although without naming Kilvington):

> In this material the respondent benefits especially from paying careful attention not only to the content of the hypothesis assumed but also to its words and to their order and examining the difference which quickly decides between the compounded and divided sense, and *from replying to no irrelevant proposition differently because of the hypothesis than he would reply apart from the hypothesis.*[31]

31. « Maxime autem in hac materia promovet responsalem ut non solum sententiam sed quod verba casus supposita necnon illorum ordinem diligenter attendat et examinet diversitatem quae discernat velociter inter sensum compositum et divisum, et quod ad nullam propositionem impertinentem aliter respondeat propter casum quam faceret absque casu » (f. 16va).

There is no space here for a detailed examination of Heytesbury's disagreements with Kilvingtonian ideas, but for present purposes it is sufficient to see that Heytesbury opposes the general principle informing Kilvington's last four sophismata and the main idea behind Kilvington's new approach to obligations. In S47, however, Kilvington does expose an incoherence in the rules for obligations, and to reject Kilvingtons's solution is not to resolve the incoherence. If Heytesbury is unwilling to accept a Kilvingtonian solution, does he have an alternative suggestion of his own? In his consideration of the first opposing argument in *De scire et dubitare*, there is some indication that he does.

The first opposing argument attempting to show that someone can doubt that he knows something can be schematized this way.

V.

1. You believe firmly that the king is in London.	1a. T	1b. 1 is the *positum*.
2. The king is in London.	2a. D	2b. 2 is irrelevant and in reality is in doubt for you.
3. You know that the king is in London.	3a. D	3b. No response is open to you but the doubting of 3.[32]

The reasons for thinking that at V (3a) there is no correct response other than doubting are these:

(3bi) (3) follows from (1) and (2); (1) is known by you to be true, but (2) is in doubt for you. Since, however, the consequence is acceptable and the antecedent is in doubt for you, you cannot deny the consequent - if you denied the consequent, you would have to deny the antecedent as well.

(3bii) You cannot claim V (3) to be irrelevant and then on that basis grant it, because considered as irrelevant it is false.

32. « Ponatur quod credas firmiter sine haesitatione quod rex est Londonis. Tunc proponatur ista 'rex est Londonis'. Et cum in rei veritate sit tibi dubia et impertinens, sequitur quod illam habes dubitare. Sed ex tibi dubio in casu illo tu scis quod rex est Londonis. Non enim poteris tunc bene negare quod tu scis regem esse Londonis, quia sequitur per te: rex est Londonis, et credis firmiter absque haesitatione quod rex est Londonis; igitur scis quod rex est Londonis. Maior est tibi dubia et minor est casus. Igitur consequens non est a te negandum, nec etiam concedendum, quia falsum et impertinens; igitur dubitandum. Et sic sequitur quod tu dubitas an scias quod rex est Londonis, quod fuit probandum » (f. 13vb).

And in this way the opposing argument seems to have shown «that you doubt whether you know that the king is in London». I have fleshed out the meager statement of (3bii) in the text in the only way that seems reasonable. The text itself says only «and it [(3)] must not be granted because it is false and irrelevant». The general point of that remark seems to be this. If we consider (3) within the disputational context, we cannot deny it; but neither can we grant (3) by trying to claim it as irrelevant, because considered as irrelevant (3) is false. So we can neither deny nor grant (3), and therefore we must doubt it.

(3bi) includes the logical principle on which Kilvington's solution to S47 depends; he defends it explicitly near the beginning of S47:

> Since this proposition 'You know the king is seated' is a consequent *ut nunc* to 'The king is seated' on the hypothesis, therefore if with regard to the same instant this proposition 'You know the king is seated' were proposed to you, you would have not to deny this. I prove the consequence: because otherwise it would follow that with regard to some instant of reply some consequence would be good and the antecedent would have to be doubted and the consequent denied – which does not appear reasonable.[33]

In response to argument V, Heytesbury grants the *positum*, V (1), and agrees that one ought to doubt V (2), 'The king is in London'. But instead of doubting V (3), as the opposing position does, Heytesbury denies it on the grounds that it is irrelevant and false. And so he also denies the principle in (3bi), which purportedly guarantees that the doubting of V (3) is entailed by the admitting of V (1) and the doubting of V (2). The section of the text in which Heytesbury rejects that principle is worth quoting in full.

> And this consequence is not acceptable: 'such a proposition follows from the hypothesis and a proposition in doubt for you; therefore it must not be denied by you'. Instead, although it follows from the hypothesis and a proposition known by me, nevertheless with regard to the hypothesis it would have to be denied [by me]. So, for example, if this proposition is posited to me 'I am in Rome', then this proposition 'You are in Rome' follows from the hypothesis and a proposition known by me, because this follows: 'I am in Rome, and you are in the same house in which I am; therefore, you are in Rome'. And nevertheless this proposition 'You are in Rome' proposed in the first place would have to be denied. Hence it does not follow, nor is it a rule that if a consequence is good and known by you to be good and the antecedent is in doubt for you, that the consequent must not be denied by you. Nevertheless, where a consequence is known by you to be good and you have responded by doubting the antecedent, and the consequent is altogether irrelevant to the hypothesis as well as to all other granted or denied [propositions] (if there were any up to that point), then the consequent must not be denied. But with regard to the proposed antecedent (that from which it follows that you know the king is in London), it is *not* in doubt for you, although one conjunct is in doubt for you and the other follows from the hypothesis. For you know that the whole conjunction is false, because you know well that that hypothesis is false. For although it is supposed that you believe without hesitation that the king is in London, nevertheless in reality you know that you do not believe this. And so the argument is not successful.[34]

Without giving clear reasons for doing so, Heytesbury here rejects the principle in its Kilvingtonian version, though he does accept a revised version of it which specifies that the whole antecedent, and not just a part of it, must be in doubt. And he rejects the argument that V (3) must not be denied, on the grounds that only a part and not the whole of the antecedent of V (3) is in doubt, claiming that the whole antecedent is in fact not in doubt but rather known to be *false*. The whole ante-

33. «Cum haec propositio'Tu scis regem sedere' sit consequens ad istam ut nunc 'Rex sedet', per casum, igitur si pro eodem instanti proponeretur tibi haec propositio 'Tu scis regem sedere', ista non foret a te neganda. Consequentiam probo, quia aliter sequeretur quod pro aliquo instanti responsionis aliqua consequentia foret bona, et antecedens foret dubitandum et consequens negandum – quod non apparet conveniens» (S47).

34. «Et non valet talis consequentia: talis propositio sequitur ex casu et una propositione tibi dubia; igitur illa non est a te neganda. Immo quamvis illa sequitur ex casu et una propositione scita a me, ipsa tamen in casu esset neganda. Sicut posita mihi hac propositione 'ego sum Romae', tunc illa propositio 'tu es Romae' sequitur ex casu et una propositione scita a me. Quia sequitur: 'ego sum Romae et tu es in eadem domo in qua ego sum; igitur tu es Romae'. Et tamen illa propositio 'tu es Romae' primo loco proposita esset neganda. Unde non sequitur nec est regula quod si consequentia sit bona et scita a te esse bona et antecedens sit tibi dubium, quod consequens non est a te negandum. Ubi tamen consequentia est scita a te esse bona et responsum est tibi dubitando antecedens et consequens est omnino impertinens tam casui quam omnibus aliis concessis vel negatis, si qua fuerunt huiusmodi pro tunc, consequens non est negandum. Sed in proposito antecedens, illud ex quo sequeretur quod tu scis quod rex est Londonis, non est tibi dubium, quamvis una pars sit tibi dubia et alia sequitur ex casu. Scis enim quod tota copulativa est falsa, quia tu scis bene quod ille casus est falsus. Quamvis enim supponatur quod credas sine haesitatione quod rex est Londonis, tamen in rei veritate scis quod tu non sic credis. Et ideo non procedit argumentum» (ff. 13vb-14ra).

cedent consists of the conjunction of V (1) and V (2), where V (1) is the *positum* and V (2) is an irrelevant proposition in doubt for you. But, according to Heytesbury, « you know that the whole conjunction is false because you know well that the hypothesis is false ».

The issue under discussion here is what response a respondent must give to V (3). According to the opposing position, the respondent has no alternative but to doubt V (3) because the doubtfulness of V (3) is entailed by the doubtfulness of the antecedent. Heytesbury counters by claiming that the antecedent of V (3) is false, and so V (3) is also false – by contraposition in this particular case since V (3) entails V (1) and V (2). But why would Heytesbury judge the antecedent of V (3) – the conjunction of V (1) and V (2) – to be false? Because, he says, *in reality* you know that you do not believe that the king is in London. The phrase 'in reality' marks the evaluation as occurring outside the disputational context, and only irrelevant propositions are so evaluated. Hence, without explicitly saying so, Heytesbury is adding the conjunction of V (1) and V (2) as a step in the argument – call it V (2') – and is judging V (2') as irrelevant. Evaluated as irrelevant, V (2') is indeed false because of the falsity of the conjunct which is the *positum*.

This move of Heytesbury's has important implications. If we enter V (2') as a step in the argument following V (2) and then deny V (2'), we will have denied a conjunction after having granted one of its conjuncts and doubted the other. And since Heytesbury says he would take the same approach if V (2) were a proposition known by him to be true, he is clearly willing to allow the denial of a conjunction whose conjuncts have all been granted. This amounts to Swyneshed's first corollary – (S4) 'One need not grant a conjunction in virtue of having granted all its conjuncts' – though Heytesbury does not describe his move in this way or show any awareness of it as an established but controversial innovation in obligations.

Furthermore, Heytesbury's move entails (biconditionally) a change in the traditional obligational rules (1) – (3). If we follow

the pattern of Heytesbury's move whenever we want to evaluate a step (S) in the argument as following from (or incompatible with) previous steps, we must first conjoin all those previous steps and evaluate their conjunction outside the disputational context. Either such a conjunction includes the *positum* and/or something derived from the *positum*, or it does not; if it does not, all the previous steps are irrelevant propositions, and so (S) is also irrelevant. Suppose, for example, that we have as previous steps only irrelevant propositions such as 'You are an animal', 'You are rational', and 'You are mortal', which together entail 'You are a man'. If the previous steps are indeed irrelevant, then 'You are a man' must be irrelevant also since anything that entailed 'You are a man' or its contradictory would entail the truth or falsity of at least one of the preceding irrelevant propositions. Consequently, (S) can be evaluated either as irrelevant or as following from previous steps in the argument. The response will be the same in either case. On the other hand, suppose the conjunction entailing (S) (or its contradictory) contains the *positum* and/or something derived from the *positum*. Then we enter that conjunction as a step in the argument. If it is composed *entirely* of steps derivable from the *positum*, then the conjunction will also follow from the *positum* (by the principle of distribution). Consequently, (S) (or its contradictory), which is entailed by the conjunction, will itself follow from the *positum*. If, however, the conjunction is composed of the *positum* and *irrelevant* propositions, then according to Heytesbury's move it is judged outside the disputational context and (because the *positum* is always false) is false. But if the conjunction entailing (S) is false, we cannot use a response to that conjunction as grounds for a response to (S) because to do so would be to commit the fallacy of denying the antecedent. Hence in this case (S) again has to be evaluated as irrelevant. The result of Heytesbury's move, then, is that for any step (S) of the argument, either (S) (or its contradictory) follows from the *positum* or (S) is irrelevant. And this result is equivalent to Swyneshed's revised rules (S1) – (S3) for obligations, although Heytesbury shows no

sign of making or using a recognized and controversial alteration of the traditional rules.

In fact, there are several indications that Heytesbury is not dependent on Swyneshed for this move of his. Writers whose works are unquestionably after Swyneshed's treatise on obligations and who are sympathetic to Swyneshed's views, such as Robert Fland and Rhichard Lavenham, dismiss out of hand inferences like that from V (1) and V (2) to V (3) on the grounds that they violate Swyneshed's corollary (4).[35] Heytesbury makes no reference to such a rule but rather argues laboriously for his rejection of the inference to V (3). Furthermore, he gives no justification for claiming that the conjunction of V (1) and V (2) is irrelevant to the *positum* V (1) and so is irrelevant *simpliciter*.

On the contrary, he seems not even to recognize that his move commits him to a new rule for irrelevant propositions. In the one place in this section in which he spells out what he means by 'irrelevant', he does so in the way required by the old, traditional rule: «irrelevant to the hypothesis (*positum*) as well as to all previously granted or denied [propositions]». These considerations suggest, though of course they do not prove, that *De scire et dubitare* was written before Swyneshed's treatise on obligations. To see whether these suggestions are right or simply misleading would require a careful and through study of all the obligational arguments in Heytesbury's work.[36]

35. For Fland, see, for example, Spade, *Robert Fland's 'Obligationes'*, 56-7, §§ 76 and 81; for Lavenham, see, for example, Spade, *Richard Lavenham's 'Obligationes'*, 231, § 13 and 233, § 16.

36. Heytesbury discusses obligations in two other places. The first is a *Casus obligationis* attributed to Heytesbury. I am very grateful to Professor John Murdoch, who was kind enough to send me a photocopy of Oxford Bodl. *Canon. Lat.* 278, ff. 70-72, which includes the *Casus*, and to Professors Stephen Brown and Girard Etzkorn, who very graciously sent me copies of their transcriptions of ff. 70va-vb which comprise the *Casus*. The work exists in two other manuscripts as well, Venice San Marco *Z. Lat.* 310 (1577), f. 96va-vb and *Vat. Lat.* 3038, ff. 37v-39r (Wilson, *William Heytesbury*, 206), which I have not been able to check. In Oxford Bodl. *Canon. Lat.* 278, the *Casus* is just an abbreviation of *De scire et dubitare*. Casus I and its response are equivalent to the seventh principal argument and its response in that chapter of the *Regulae*. Casus II and its response are just like the second principal argument and its response. Casus III corresponds to the fourth principal argument; the response to III is a considerably abbreviated version of the response in the *Regulae*. Casus IV and its response correspond to the sixth principal argument and its response. Casus V is just like the fifth principal argument; its response is a severely abbreviated version of Hetyesbury's long and complicated response to the fifth principal

Finally, it is worth considering Heytesbury's move in connection with the paradigm argument purporting to demonstrate the provability of all falsehoods compossible with the *positum* to see how it compares with the positions held by Burley, Kilvington, and Swyneshed.

VI.

1. You are in Rome.	1a. Burley, Kilvington, Heytesbury, Swyneshed } T	1b. (1) is the *positum*.	
2. 'You are in Rome' and 'you are a bishop' are the same in truth-value.	2a. Kilvington F	2b. Kilvington: (2) is irrelevant and by (K'3) is false.	
	Burley, Heytesbury, Swyneshed } T	Burley, Heytesbury, Swyneshed: (2) is irrelevant and in reality is true.	

argument. In every case, the *Casus* excerpts and abbreviates the text in the *Regulae*; though there are some discrepancies between the two, these seem to me minor. There is also a short discussion of obligations in Heytesbury's treatise on the compound and divided senses. (I am grateful to Norman Kretzmann for calling this passage to my attention). In that place, Heytesbury makes plain both his repudiation of Kilvington's innovation in obligations and his own allegiance to the traditional view of obligations:

«Ideo omnino oportet advertere in hac arte sicut in quacumque obligatione quid est sequens et quid [re]pugnans, quia ad omnem propositionem impertinentem primo loco propositam respondendum est sicut responderetur ad eandem omnino si nullus casus esset positus. Accidit tamen frequenter quod propositio primo loco [pro]posita est impertinens omnino, sed in secundo et tertio loco satis pertinens est. Quia forte ex illa cum opposito bene negati sequitur oppositum casus vel oppositum sequentis ex casu vel oppositum prius concessi. Et ideo forte in tali loco proposita quamvis fuerit prius dubitanda erit ista simpliciter concedenda vel neganda. Ideo diligentissime est advertendum posito quocumque casu et proposita aliqua propositione in aliquo uno sensu vel in alio numquid sit ipsa pertinens vel impertinens, non solum prima vice vel alia qua proponitur sed quandocumque fuerit concessa vel negata. Quia postquam concessa fuerit semel vel negata erit magis pertinens quam infra ... Si volueris exemplum in prius dictis satis patet qualiter sit eadem propositio primo loco proposita in casu dubitanda vel neganda, in secundo vero vel tertio loco concedenda. Verbi gratia, ponatur ista disiunctiva: 'Rex sedet vel tu es Romae'. Tunc si proponatur illa 'Rex sedet' cum ipsa sit dubitanda et impertinens debet dubitari. Deinde proponatur illa 'Tu es Romae'. Cum ipsa sit falsa et impertinens debet negari. Et tunc si proponatur iterum ista 'Rex sedet' debet concedi cum ipsa sit sequens ex posito cum opposito bene negati. Quia bene sequitur 'Rex sedet vel tu es Romae, sed tu non es Romae, igitur rex sedet'. Consequentia est bona, quia arguitur a tota disiunctiva cum destructione unius partis super alteram partem, quomodo arguendo est bona consequentia, etc.» (1494 edition, f. 4ra-rb).

3. You are a bishop.	3a. Burley	T	3b. Burley: The truth of (3) follows from the truth of (1) and (2).
	Kilvington	F	Kilvington: The falsity of (3) follows from the truth of (1) and the falsity of (2).
	Heytesbury Swyneshed	F	Heytesbury, Swyneshed: Since the conjunction of (1) and (2) is false, (3) is irrelevant; and in reality (3) is false.

Heytesbury's move, then, does constitute a solution to the problem raised by Kilvington in S47; and, like Kilvington's solution, Heytesbury's move has the virtue of blocking *any* argument attempting to demonstrate the provability of all falsehoods compossible with the *positum*. Any such argument must proceed by combining the *positum* with an irrelevant proposition, and Heytesbury's move will always reject such a combination as false. Furthermore, Heytesbury's move is more elegant than Kilvington's solution. Kilvington's solution consists in an *ad hoc* change of the rules, but Heytesbury's move amounts simply to applying the traditional rules strictly. Every step in the argument must be expressed explicitly and judged; if steps are combined and something is inferred from their conjunction, that conjunction itself must be listed as a step in the argument and evaluated. Once the rules are rigorously applied in this way, it becomes clear that all three traditional rules of obligations are wrongly or at least misleadingly expressed, because, as I showed above, any step in the argument will either follow from the *positum* or be irrelevant. Hence, the phrases «from previously granted or denied propositions», etc. are vacuous, and the three traditional rules of obligations can and should be revised to read as do Swyneshed's (S1) – (S3).

Roger Swyneshed: The Puzzle

With this background it is much easier to deal with the puzzles posed by Swyneshed's obligations. Swyneshed's two corollaries, which Fland takes as characterizing the new response, are not denials of logical laws, but apply to conjunctions composed of a false *obligatum* and true irrelevant propositions and to disjunctions composed of the contradictory of a false *obligatum* and false irrelevant propositions. If proposed separately, the conjunct which is the *obligatum* must be granted, and so must any conjunct which is irrelevant and true: but the whole conjunction is irrelevant and false in virtue of the conjunct which is the *obligatum*. Similarly, a disjunction composed of the contradictory of the *obligatum* and a false irrelevant proposition is itself irrelevant, on Swyneshed's view (indicating that Swyneshed, like virtually every other medieval logician, would reject material implication); and considered as such, it is *true* in virtue of the disjunct which is the contradictory of the *obligatum*. Either of the disjuncts, however, must be rejected if proposed separately, one because it is irrelevant and false and the other because it is the contradictory of the *obligatum*. The corollaries, then, do not deny the logical laws that the truth of all the conjuncts entails the truth of their conjunction and that the truth of a disjunction entails the truth of at least one of the disjuncts; rather they specify just what we have to *grant* in an obligational context when we have committed ourselves to maintaining as true a false conjunct of a conjunction (or the contradictory of a true disjunct of a disjunction).

The motivation for adopting these corollaries should be clear from the preceding discussions of the work of Heytesbury and Kilvington. Evidence for this interpretation of Swyneshed is given partly by way in which Swyneshed proves his two corollaries:

> The first corollary is proved in this way. Let *a* be a conjunction composed of the false *obligatum* and an irrelevant proposition signifying principally as is the case. Let *b* be that *obligatum*. Then once the conjuncts have been granted, the whole conjunction is irrelevant to the *obligatum* [and] known to signify

principally otherwise than is the case. Therefore, it is to be denied ... The second corollary is proved in this way. Let *c* be the opposite of such a conjunction, *b* being the *obligatum* as before. The argument proceeds in this way. The disjunction *c* is the opposite of a denied conjunction; therefore it must be granted.[37] And that each disjunct must be denied is clear. For one disjunct is the opposite of the *obligatum b*; therefore, it must be denied. And the other disjunct is an irrelevant proposition signifying principally otherwise than is the case; therefore it must be denied.[38]

And in another place Swyneshed defends corollary (S4) by claiming that a proposition which follows from two others would not follow unless those two others were in fact conjoined (260, § 41 - 261, § 43); hence any conclusion follows only from the conjunction of its premisses, and that conjunction must itself be explicitly evaluated.

The effect of Swyneshed's revisions of obligations is to isolate the falsity of the *obligatum*. The traditional rules established two incompatible sets of criteria for evaluating an obligational proposition and allowed the two sets to mingle. The mingling of those criteria made it possible to prove all falsehoods compossible with the *obligatum* and consequently generated incoherent results. Kilvington's solution makes it impossible to have two incompatible sets of criteria, with the result that a much narrower range of propositions is considered irrelevant in the sense that their truth-value is not affected by the *obligatum*. Swyneshed's solution to the problem takes the opposite form. He allows two sets of criteria for evaluating obligational propositions; but because of his two corollary rules, the different sets of criteria are not allowed to mingle. Consequently, the

37. Note the apparent violation of Swyneshed's first revised rule of obligations (S1) in this first inference.

38. « Prima pars conclusionis probatur sic: Sit *a* una copulativa facta ex obligato falso et impertinente significante principaliter sicut est. Sit *b* illud obligatum. Tunc concessis istis partibus tota copulativa est impertinens obligato scita principaliter significare aliter quam est. Igitur, neganda. Consequentia patet per secundam suppositionem. Secunda pars conclusionis probatur sic: Sit *c* oppositum talis copulativae, *b* existente obligato sicut prius. Et arguitur sic: *c* disjunctiva est oppositum copulativae negatae. Igitur, illa est concedenda. Et quod utraque pars sit neganda patet. Nam una pars est opposita *b* obligato. Igitur, illa est neganda. Et alia est impertinens significans principaliter aliter quam est. Igitur, est neganda » (257, § 32). For very similar explanations on Swyneshed's part, see, for example, the argument in 282, § 130-283, § 135; arguments depending on one or another of the corollaries are scattered throughout the treatise.

proving of false compossibles is again blocked but in such a way that a much broader range of propositions is irrelevant, that is, not influenced by the falsity of the *obligatum*.

We are now left with the third of the puzzles with which I began, namely, why Swyneshed apparently does not follow his own rules. In the example of Swyneshed's arguments which I gave earlier, there were six inferences which seemed to violate the rules of the *nova responsio*, because the conclusion of each of those six inferences is warranted in virtue of following from something other than the *positum* alone. If it is true, however, that the point of Swyneshed's innovations is to keep the *positum* and whatever it entails from being combined with any irrelevant propositions, we can see that these inferences are only apparent and not real violations of Swyneshed's rules.

For example, I (4*) follows from the conjunction of the *positum* and I (3*). The response for I (3*) is given no justification in the text; and in fact the difficulty with the third step of the argument apparently arises because one could argue that either the granting or the denial of I (3*) follows from the *positum*. Presumably the respondent who chooses to grant I (3*) would warrant his response as following from the *positum*, on the grounds that one of the conjuncts of the *positum*, namely, 'This is a donkey', entails I (3*) 'This thing indicated is a donkey'. But then I (4*) follows from the conjunction of the *positum* and something which follows from the *positum*; and so I (4*) follows from the *positum*. Hence, contrary to appearances, the inference to I (4*) does not violate Swyneshed's rules. And this will be the case whenever a conclusion is derived from a set of propositions each of which is either the *positum* or derived from the positum.

The inference from I (5*) to I (6*) is harder to explain, because a warrant for the response to I (5*) is harder to decide on. If I (5*) follows from the *positum*, the inference to I (6*) is on a par with that to I (4*). If I (5*) is a tautology, then it follows from anything; and, again, the justification of the inference to I (4*) applies to the inference to I (6*). What if I (5*) is irrelevant to the *positum*, however? In that case, if I (5*) is true, I (6*) is irrelevant

and true also. And we can express our warrant for granting I (6*) by saying either that it is irrelevant and true or that it follows from I (5*).

In short, the only inferences which the *nova responsio* rules out are those from premisses which combine irrelevant propositions with the *positum* and/or propositions derived from the *positum*. Inferences from irrelevant propositions alone or from the *positum* with or without any other propositions entailed by the *positum* are compatible with the rules of the *nova responsio*. In this way, we can explain a good deal of otherwise incongruous practice not only on Swyneshed's part but also on the part of other logicians sympathetic to the *nova responsio*.[39]

Roger Suyneshed: An Evaluation

One further point is perhaps worth making about Swyneshed's obligations. The *nova responsio* blocks the proving of all falsehoods compossible with the *obligatum* and thus resolves the paradox pointed out by Kilvington. We may think, then, that Swyneshed's work on obligations is a considerable improvement on traditional obligations as represented in Burley's work. But any evaluation of Swyneshed's theory of obligations would be incomplete without an examination of Swyneshed's tendency to allow a second *obligatum* in any obligational disputation. For example, in contructing an argument with 'You are in Rome or a man is a donkey' as the *positum*, Swyneshed midway through the argument introduces as a *second positum* 'You are not in Rome'; and from that point in the discussion the two *posita* must be maintained together, as if at that point in the discussion the *positum* had become 'You are in Rome or a man is donkey; and you are not in Rome'.[40] With this

39. For an example of an apparent violation of the rules in someone other than Swyneshed, see, for example, Lavenham's *Obligationes*; in the argument which runs from 231, § 13 to 232, § 14, Lavenham makes this inference: «Sed cum ista copulativa, videlicet, 'Omnis homo currit et tu es homo' sit neganda [since it is irrelevant and false], oportet quod suum contradictorium sit concedendum, videlicet, 'Non omnis homo currit vel tu non es homo'».

40. For examples of second *posita* see, for example, 275, § 102 and 273, § 98.

device of a second *positum*, Swyneshed reintroduces all the defects of Burley's account or more. Consider, for example, the following pair of obligational arguments.

VII.

1. Every citizen of Rome is running.	1. T	1b. (1) is the *positum*.
2. You are a citizen of Rome.	2a. T	2b. (2) is a second *positum*.
3. You are running.	3a. T	3b. (3) follows from the two *posita*.

VIII.

1. Every citizen of Rome is running.	1a. T	1b. (1) is the *positum*.
2. You are not running.	2a. T	2b. (2) is irrelevant and in reality false.
3. You are a citizen of Rome.	3a. ?	3b. Either (3) is now impossible and so cannot be admitted as a second *positum*, or we can admit contradictories in the same disputation (since from the two *posita* would follow the denial of (2)).

If we can admit the second *positum after* 'You are not running' in VIII, we will have contradictories within the same disputation since VIII (1) and (3) entail 'You are running'.[41] If we cannot, we will nonetheless have a recurrence of the original problem which concerned Kilvington, because we have 'You are running' granted in one disputation and denied in the other when both disputations begin with the same *positum* and are conducted correctly according to the rules of obligations. As in Burley's obligations, the order of the propositions matters; and depending on the order in which the propositions are proposed, it is again possible to prove all falsehoods compossible with the *positum*, as VII shows. That this is the effect of allowing more than one *positum* should be no surprise. What Burley's rule for

41. Spade, *Three Theories*.

irrelevant propositions does in effect is to add arbitrarily to the *positum* at randomly chosen stages of the disputation, and thus the effects of the rule are the same as those of allowing second *posita*. Swyneshed, having rejected Burley's rule for irrelevant propositions, reintroduces all its effects with his device of second *posita*. Why Swyneshed should have chosen to allow second *posita* is not clear.

The Purpose and Function of Obligations

It is appropriate, I think, to conclude this paper with some comments on the purpose and function of obligations. Recently it has been claimed that obligations in all periods of medieval philosophy were a logic of counterfactuals. On this view, the *obligatum* is the antecedent of a counterfactual, and an obligational argument shows what would follow if the *obligatum* were true:

> One might describe such a [obligational] disputation as incompletely specifying – but more and more completely as the disputation progresses – a class of possible worlds in which the positum is true but that otherwise differ as little as possible from what, for all the respondent knows, the actual world is like; for every obligational disputation with positum A in which B is conceded or $\sim B$ denied, there is a true (and assertable) counterfactual $A \Box\!\!\rightarrow B$, and for every such disputation in which B is denied or $\sim B$ conceded, there is a true (and assertable) counterfactual $A \Box\!\!\rightarrow B$.[42]

If this interpretation is evaluated with respect to the variety of obligations represented by Kilvington's S47, we could perhaps give it a cautious assent. Kilvington's innovation in the rules for obligations does appear to make obligations resemble a logic of counterfactuals,[43] though if my interpretation of his revised rule for irrelevant statements is correct, we would have to be able to evaluate counterfactuals before we could use his method for

42. Spade, *Three Theories*.

43. For further discussion of this point, see Stump, *Obligations: From the beginning*, and Spade, *Three Theories*. The point that Kilvington's S47 resembles logic of counterfactuals was first raised by Norman Kretzmann in an unpublished lecture *Obligations and Counterfactuals*.

evaluating counterfactuals. But the answer for other authors, such as Burley, and Swyneshed, is, I think, a definite No.

Perhaps the most important reason for this negative answer concerns the provability of all falsehoods compossible with the *positum*, which is guaranteed by Burley's rule for irrelevant statements and Swyneshed's device of second *posita*. On Swyneshed's and Burley's theories, we can begin with a possible false proposition A as the *positum* and in two separate disputations prove B and $\sim B$ respectively for *any and every* pair of contradictory propositions each of which is compossible with A. The false member of the pair is proved as in IV or VII; the true member of the pair is added as irrelevant. Suppose, for example, A is 'I am standing' (when in fact I am sitting). From this we can « prove » all of the following in the same or separate disputations depending on whether or not they are compossible among themselves:

(1) Verdi and Bizet are both Italian.
(2) Verdi and Bizet are not both Italian.
(3) New York is in Georgia.
(4) New York is not in Georgia.
(5) The moon is made of green cheese.
(6) The moon is not made of green chese.
(7) God exists.
(8) God does not exist.

That we can prove (1) – (8) from 'I am standing' makes it incontrovertibly clear that (a) an obligational disputation does *not* specify (incompletely or otherwise) a class of possible worlds in which the *positum* is true but that otherwise differ as little as possible from what the actual world is like; and (b) it is *not* the case that there is a true counterfactual $A \Box\!\!\rightarrow B$ for every obligational disputation in which B is proved on the basis of the *positum* A. A world in which I am standing rather than sitting and in which (1), (3), (5) and either (7) or (8) (depending on one's views) is true is not a world in which the *positum* is true but which otherwise differs as little as possible from what the actual world is like. Furthermore, according to our ordinary intuitions,

all the counterfactuals composed of 'I am standing' as the antecedent and one of (1) - (8) as the consequent are *false*. But if obligations were a logic of counterfactuals of the sort described above, the *obligatum A* would have to entail counterfactually not only *all* of (1) - (8) but also all other contradictory pairs of propositions each member of which was compossible with *A*. Given this fact, it is clear that what we have in Burley's and Swyneshed's theories of obligations is not a «theory of counterfactuals with problems»,[44] but no theory of counterfactuals at all.[45]

44. Spade, *Three Theories*.

45. Spade makes the additional claim that scholastics understood the nature of their enterprise as work on counterfactuals and intended to contribute to a study of the logic of counterfactuals. For example, he says, « It might be argued that this situation shows that Burley did not intend his theory as an account of counterfactuals at all. But in virtue of the evidence presented in 3, I think it more likely that he did so intend it... » (*Ibid.*). The evidence against this claim seems to me overwhelming. First of all, the evidence against Spade's first claim presented in the text of this paper counts against this additional claim, too. Secondly, although someone might think of *positio* and *depositio* (and just conceivably *dubitatio*) as belonging to a logic of counterfactuals, no one could seriously propose such an account of the remaining species of obligations, *petitio, impositio* (or *institutio*), and *sit verum*. The *obligatum* in *petitio* and *sit verum* is a specification of a certain propositional attitude or obligational response on the part of the respondent to a particular proposition; and the *obligatum* of *impositio* is the imposition of a familiar expression on an unconventional meaning, such as the imposition of 'God exists' on the ordinary meaning of 'A man is a donkey'. If *impositio*, too, were a logic of counterfactuals, we would have to suppose that the scholastics were interested in showing what the world would be like if 'God exists' meant that a man is a donkey; and such a supposition is obviously highly implausible. Therefore, to maintain that *positio* is a logic of counterfactuals requires maintaining that in their treatises on obligations scholastics intended to work on counterfactuals and on something completely different (of some sort or other), all of which they lumped together in one treatise, without differentiation. Finally, there are features of obligations which this interpretation cannot explain. The nature of the *obligata*, which are supposed on this interpretation to be antecedents of counterfactuals, is very different from what one would expect in examples of counterfactuals. On our ordinary understanding of counterfactuals, they express contingent propositions about the actual world. This is not the case with Swyneshed's obligational examples, even when the *obligata* are combined with subsequent obligational steps into conditionals, as the following partial list of *obligata* shows:
(1). The expression 'to be a man' signifies that a man exists (Spade, *R. Swyneshed's 'Obligationes'*, 262, § 53);
(2) The expression 'God exists' signifies that a man is a donkey (264, § 58);
(3) 'a' is 'God exists' or 'A man is a donkey' and you do not know which of these is 'a' (268-9, § 81);
(4) 'You run' is posited to you (270-1, § 89);
(5) Nothing is posited to you (271, § 91);
(6) This is a man and this is a donkey (276, § 105).
The list of Swyneshed's *obligata* suggests certain philosophical concerns, but they are not those we commonly associate with counterfactuals, at least in part because the *obligata* cannot in any interesting sense be said to be about the actual world.

The philosophical concerns that Swyneshed's examples suggest are diverse. Scholastics themselves tended to associate obligations with insolubles,[46] and that interest is reflected in the list of Swyneshed's *obligata*. They also reflect concern with epistemic logic, indexicals, propositional attitudes, and other issues in the philosophy of language. And this diversity of interests suggests some methodological reflections on questions such as, 'What is the true purpose and function of obligations?' If by such a question we are asking what part of contemporary philosophy obligations is the medieval counterpart of, there may be no answer. Medieval philosophy, and perhaps medieval logic in particular, does not map neatly onto contemporary philosophy. If, on the other hand, we are asking what recognizable branch of medieval philosophy obligations beongs to, the answer may vary from one period or author to another; and for certain authors there may be no clear answer. That this is not a peculiarity of medieval philosophy is clear. If we ask what branch of philosophy contemporary concern with indexicals belongs to, the answer will range from philosophy of religion or metaphysics to philosophy of language or epistemology, depending on the concerns of the individual philosopher examining the subject.[47] And if we ask how to classify Castenada's early papers on indexicals,[48] it may not be possible to give an unambiguous answer.

The case is similar for obligations. The very early history of obligations is still obscure, but by Burley's time, as I have argued elsewhere,[49] the general concern of obligations seems to be logical or semantic paradoxes based on some sort of reflexivity

46. For detailed discussion of claim, see Stump, *William of Sherwood's Treat. on Obligations* and Green, *The Logical Treat. 'De obligationibus'*, (Introduction).

47. Cf., for example, the concern with indexicals in N. Kretzmann, *Omniscience and Immutability*, « J. Philos. », 63 (1966), 409-421; J. Perry, *The Problem of the Essential Indexical*, « Nous », 13 (1979), 3-21, and H. Noonan, *Identity and the first Person*, in *Intention and Internationality*, ed. C. Diamond and J. Teichmann, Cornell University Press, Ithaca (N.Y.) 1979.

48. See, for example, H. N. Castañeda, *He: A Study in the Logic of Self-Consciousness*, « Ratio », 8 (1966), 130-157; *Indicators and Quasi-indicators*, « Amer. philos. Quart. », 4 (1967), 85-100, and *Omniscience and Indexical Reference*, « J. Philos. », 64 (1967), 203-204.

49. Stump, *W. of Sherwood's Treat. on Oblig.; Obligations: From the Beginning* and *Obligations According to Walter Burley*.

which resemble but are generally weaker than the self-referential paradoxes of insolubles in that they depend on the disputational context for their paradoxical character. Sometimes, especially in *impositio*, the disputational context is simply used to contruct an insoluble, as in Burley's example, «Let 'A' signify a donkey in a true statement, a man in a false statement and 'a man or not a man' in a statement in doubt and then let 'You are A' be proposed».[50] More often, the disputational context contributes to the generation of a paradox by the use of indexicals, by a reference in the premisses to the respondent who is evaluating those premisses or (less frequently) by a temporal indexical, such as a reference to the present instant. Contemporary work on indexicals has shown convincingly, I think, that indexicals and their corresponding referents are not always interchangeable *salva veritate* in individual statements. Obligations as represented by Burley give us reason to think that replacing indexicals with the appropriate referents can on occasion also affect evaluation of the validity of an argument. In the work on obligations of the Oxford Calculators, the interest in insolubles and indexicals persists, but becomes overlaid with other concerns. In the relevant portions of Kilvington's *Sophismata* and Heytesbury's *Regulae*, the main emphasis is clearly on epistemic logic. In the last four sophismata, in which his innovative work on obligations occurs, Kilvington claims to be providing reasons for rejecting the view that knowing something entails knowing that one knows. Heytesbury's work on obligations occurs in *De sensu composito et diviso* and in *De scire et dubitare*, where he is concerned to reject the epistemological claims of Kilvington's last four sophismata because they entail that someone can know and doubt the same statement. So with regard to the purpose and function of obligations, there is a considerable shift of emphasis even in the

50. Green, *The Logical Treat. 'De Obligationibus'*, § 1.03.

brief period between Burley and the era of the Oxford Calculators (ca. 1315-1335), with a consequent change in the ways in which we can relate medieval obligations to contemporary philosophy.[51]

51. I am grateful to Norman Kretzmann for his numerous helpful comments and suggestions on an earlier draft of this paper, and I am indebted to John Crosset († 1981), whose efforts on my behalf made this paper possible.