The Compendium Logicae Porretanum: A Survey of Philosophical Logic from the School of Gilbert of Poitiers

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The text published here as the Compendium Logicae Porretanum is the first explicit treatment of questions on logic and language to have come to light from the school of Gilbert of Poitiers. All other works definitely attributable to Gilbert or associated with the Porretani deal principally with theological problems [1].

The author of our text acknowledges Gilbert as master and quotes from his commentaries on Boethius' theological treatises. More importantly the arguments he gives for his theses rely often upon Gilbert's characteristic ontology dividing all natural things into subsistentia and subsistentiae. It is this fundamental distinction which ties the Compendium to the Porretani even though much that is in Gilbert is not found there. For example our author has little use for the terminology of id quod est and id quo est so dear to the Bishop of Poitiers. He does not employ the terminology or even the idea of formae nativae in his account of universals and in this text, save for a passing remark on divine simplicity [III.3] and in a quotation from Boethius [III.1], God is nowhere to be found [2]. On the other hand, however, the account of universals which is given is clearly a development of that presented by Gilbert in his commentaries on Boethius' theological treatises [3]. It is interesting to note in the light of modern discussions of the status of the latter that our author is an explicit anti-realist. By his own admission universals are nothing.

1. For an attempt to reconstruct the philosophical logic of the Porretani on the basis of these sources see Lauge Nielsen, 'The Doctrine of Logic and Language of Gilbert Porret and his Followers', CIMAGL 17 (1976), pp. 40-69. The standard modern accounts of Gilbert's work are: H.C. van Elswijk, Gilbert Porret, Sa Vie, Son Oeuvre, Sa Pensée, Louvain, 1966; B. Maioli, Gilberto Porretano, Rome, 1977.


3. The best description of Gilbert's theory is in van Elswijk, op. cit, pp. 193-203.
John of Salisbury, of course, had grouped Gilbert with the realists [4]. The best short description the theory of universals found the Compendium is surely that it is a collective anti-realism since, as we shall see, they are taken to be collections of singulars united together in virtue of their resemblance. Abelard had criticized such theories but only in terms of the claim that a universal understood in this way is a thing [5]. What we have here is perhaps one sort of response to this criticism.

There is much, too, which is in the Compendium but not to be found in Gilbert. In particular we have an account of propositions in which our author takes his place in a debate which determined the later development of the theories of conditional sentences and of argument. We are also presented amongst other things with a rather remarkable semantical theory and an interesting attempt to classify moral and rational predicates on the model of the ten categories.

It seems that Gilbert is not the only or even the principal contemporary (?) authority for the doctrine of the Compendium. He appears as 'magister' [III.7-8; III.16-17] and apparently as 'magister G.' [III.12-13] in contrast to 'noster philosophus' [III.3] and 'noster summus philosophus' [III.6].*

The occasional use made by the writer of the Logica nova, principally in the form of the Topics and Prior Analytics, suggests a date in the second half of the Twelfth Century. A date, however, at which it was still useful to cite the opinions of the 'Nominales', 'Montani' and the previously unknown 'Coppaui' [III.12]. Furthermore, at one point the views of a Master Ivo are opposed to those of noster philosophus. If this Ivo is the Ivo of Chartres who followed Gilbert and the perfect tense indicates a posthumous reference then we are dealing with a work from some

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time after 1165 [6].

The main body of the text, interestingly, has the same four part division as the Ars Meliduna though a different order [7]. We are introduced first to the two sorts of significer, the term and the proposition and then to what they signify. My aim in what follows will be to give an introduction to a few of the more interesting claims found in the Compendium and their connection to Twelfth Century philosophical logic. There is far more in it, however, than can even be suggested here.

Part I: Problems of Philosophical Grammar.

[A] Names and their unity.

The first part of the Compendium is devoted to theses concerning the two independently significant elements occurring within a proposition, its terms. Following Priscian and contemporary practice we are introduced to them as varieties of other linguistic entities. First as vox, a sound produced in a particular way which our author wants to prove to be a body (corpus) [I.1], a claim rejected, for example by the writers of the glosses Promissimus and Trisunt [8]. Voces provide as if were the the material for significant discourse.

A vox becomes a significant element of language, a dictio, when it is taken up in a set of imposition to signify something. Unlike other writers of this period our author has little to say on imposition and nothing at all on the original impositor [9].

Given the distinction of vox, dictio and term, the latter being a

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6. For this date and Ivo as a follower of Gilbert along with John Beleth, Jordan Pantasmata and a certain Nicholas see N. Haring, The Commentaries on Boethius of Gilbert of Poitiers, Toronto, 1966, pp. 29-30.

7. For the Ars Meliduna see L. M. de Rijk, Logica Modernorum II.1, Assen, 1967, ch.VI-X. For the striking correspondence between its organization and the divisions of Stoic dialectic see King op. cit. p. 109.


dictio which is either a name or a verb and these, signifying id de quo fit
sermo and id quod dicatur, being what is required by human speech in order
to say something about something, the question arises as to their
relationship. This is explored in sections I.2 to I.4 and again was
controversial. For example with regard to I.2 we know from the Ars
Meliduna that there were three different opinions as to the connection
between the nominative and oblique cases of the noun:

Triplex super hoc modernorum inventur opinio. Dicunt
enim quidam oblicum esse aliud nomen quam suum rectum eo
quod alia sit eius terminacio; alii dicunt quod sit idem
nomen eo quod eadem sit significatio obliqui et nominativi;
alii quod nec idem nec aliud; non idem, quia non eadem est
vocis terminacio recti cum obliquo; non aliud, quia non alia
est eius significatio vel institucio quam recti.
<Ars Meliduna I, cap. 5, p. 293.>

Our author is a member of the second group, maintaining the unity of
names. In his own words in I.2:

... iste voces 'Plato', 'Platonis', 'Platoni' sunt unus
nomen et unus terminus, id est unus impositionis. Sic
accipere de alis nominibus et verbis.

This thesis is, of course, well known and so is the example of the
unity of 'albus', 'alba' and 'album' given in I.3. Both thesis and example
are associated by Saint Bonaventure with the group he calls the Nominales
and who, he claims, use them in arguing that the articles of faith do not
alter over time [10].

Now our author is certainly not one of the Nominales since his account
of enuntiabilia allows them to change truth value, something opposed to the
teaching of that group [11]. As mentioned above, however, Nominales do
appear in the Compendium. At III.12 in fact where we are referred to their
account of parts and wholes. Obviously more than a commitment to the unity
of names was required for association with them — and even this only if

10. "Et istic fuit opinio Nominalium, qui dicti sunt Nominales quia
fundabant positionem super nominis unitatem." St. Bonaventure, In I Sent.,
d. 41 a.2, q.2 quoted from M. D. Chenu, 'Grammaire et Theologie aux Xile et

11. See G. Nuchelmans, Theories of the Proposition, Amsterdam, 1972,
Ch. 10.
Bonaventure is correct in his identification [12]. We may note in passing that the thesis of I.2 as to the identity of the principle signification of the proper name 'Plato' with a variation of consignification with ending nicely illustrates and at an early date the convergence of the terminology of consignification with that of modes of signification [13].

[B] The substance and quality of names.

It is interesting also to note that one of our other sources on Twelfth Century accounts of the relationship of the forms of the noun, John of Salisbury, quotes Bernard of Chartres, Gilbert's master, on principle and derived nouns, an issue taken up in the Compendium at I.17. Its resolution depends on the theory of signification first introduced at I.8, where we find our author's interpretation of Priscian's claim that every noun signifies substance and quality (Inst. Gram. II.18). One of the central problems of philosophical grammar in this period being to reconcile this with Aristotle understood as demanding that a noun signify either a substance or else a quality and so on for the other categories (Cat. 4, 1b25 sq.).

The solution of the Compendium is to deploy the standard division of impositio as aliis, ex aliqua and propter alium using the first two to give signification of a substance in determining a quality of it [14]. Now, as we will see, one of the most fundamental of our author's commitments is to every quality of a subject being singular. It is this which accounts for the apparent inconsistency of his claims at I.3 - that an adjectival noun is invented to signify a common quality - and at I.11 that nothing is signified by a common or apppellative noun.

12. Just what the Nominales of the Twelfth Century believed is gradually becoming clearer and, at least as far as conditional sentences and topical inferences are concerned, they seem to have followed Abaelard. The most recent evidence for this has been found by Dr. Y. Iwakuma in ms. Munich Clm. 2950/2. There, in effect, is attributed to them the claim that conditionals with an affirmative antecedent and negative consequent are objectionable. As I will show elsewhere, this was Abaelard's opinion. I thank Dr. Iwakuma for this information. [*See text in CIMAGL 44 (1983) 82]


14. For a discussion of these three elements in Gilbert's philosophy of language see Nielsen op. cit.
What is crucial here is the writer's anti-realism with respect to universals presented first in I.11 and I.12 and developed in I.17. In I.11 we find the signification of names divided as follows:

- Proper = Invented to signify *a hoc aliud*
- Common = Invented to signify *a quale quid*

A substance

A property of a substance

Common names may be either substantival, for example, 'white' or adjectival, for example, 'man'. In neither case do they signify any thing (res). Our author's anti-realism is as explicit as one could wish. Stated first at I.12:

Nullum enim universale aliud est. At cum nulla proprietas sit que ratione significati predicatur, et cum sola proprietas sit predicabili, dicitur nihil esse quod communi nominii predicatur sicut nichil est quod eo significaretur.

Two crucial ideas are employed here, that of predication and of predication *ratione significati*. To the latter, as we will see below, is opposed predication *ratione propositi* in a distinction apparently first employed by Gilbert and which seems to correspond to the modern one between logical and surface grammar [15].

Predication is, of course, one half of the problem of universals these being what are suited to be predicated of many and any account of universals must come with an account of predication. [16] Both of these take a striking form in the Compendium. Here we find it claimed that predication is something which happens to a subject since 'to predicate' means to declare, expose or reveal something in some way. A substance is revealed through its properties and so a subject may be said to be revealed by that which signifies a property. The property signified is called a

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15. See Nielsen, *op. cit.*, Part IV.

16. See Aristotle de Int., 7: "dico autem universale quod in pluribus natum est predicari singulare quod non!"
'predicatum', the signifying term a 'predicamentum'. Properly speaking it seems that the **predicatum** inhere in a substance (its subject substance) thus revealing it as something or in some way. The **predicamentum** predicates the subject, declaring it to be something or in some way.

In this discussion, however, we find a perhaps deliberate equivocation. Whilst our author distinguishes the **predicatum** from the corresponding **predicamentum**, he employs 'subject' for both the noun in a proposition and what it signifies. In this way the **predicatum** may be said to be predicable.

Given all this we must ask the obvious question: why construe predication this way? Although we are never told so explicitly, the obvious answer would seem to be that with the account of universals we are to be given it provides an explanation of their being suited to be predicated of many.

The main treatment of universals in the Compendium is in Part III where we will find them claimed to be collections of singular forms (i.e. properties) according to similarity. This being so, we can see that a universal must be suited to be predicated of many since it consists of a collection of properties each declaring one, if we understand the collection as a set, extensionally, or suited to declare one, if we understand it intensionally. If only a singular property can in fact reveal a subject, then the appearance of a common term in proposition which is a paradigm of revelation concerning the subject must be accounted for. According to the writer of the Compendium when we are confronted with a proposition such as 'Socrates est homo' what is in fact revealed to us is Socrates' humanity, something not signified by 'homo' which signifies rather a collection and so nothing at all. So in virtue of what is signified by the grammatical predicate nothing predicates Socrates. On the other hand the proposition does reveal something, it exposes Socrates' humanity ratione propositi. Only in virtue of the predication by his singular humanity is there a predication by the universal.

This is only part of the story, of course, and we will have much more to say in our discussion of Part III. It should be clear, however, that the account does go some way to explaining the predication of many of a
universal which is not a res.

Perhaps the most interesting discussion of the semantics of names is found in section I.17. Recall that our author is going to commit himself in Part III to there being only two sorts of thing, subsistents (subsistentia) and subsistences (subsistentiae), i.e. individual substances and the forms which make them what they are and the way that they are. Within this ontology he has to find for each noun a substance and a quality which it signifies. In particular for 'Socrates', 'homo', 'humanitas', 'album', and 'albedo'. For the principal and derived terms 'albedo' and 'album' this is done in a way which makes the general solution clear. What is required is a rather broader notion of substance and quality.

We are asked at II.17 to consider the derived term 'album'. We know from I.8 that it signifies both a thing that is white and the whiteness on account of which it is white. This, according to our author, entails that signifies for substance a white thing and for quality the universal Albedo which he distinguishes from the singulars it collects together by means of the capital letter. Presumably, by I.3, the same holds for each of the forms of the adjectival common noun 'albus', 'alba', 'album'. Now, 'albedo' is the appellative name of all instances of whiteness, that is of everything collected in the universal Albedo and so these together are its substance. Thus the substance of the principle term 'albedo' is the quality of the derived term 'albus'.

The quality of the term 'albedo' on the other hand must be that which makes the substance of whiteness what it is. But whiteness is what it is in virtue of making things white, that is in virtue of what our author calls its 'substantial effect'. Thus from I.17:

Qualitas vero huius nominis 'albedo' dicitur substantialis effectus albedinum, qui et substantia forma dicitur. Sicut enim substantiali proprietate Socrates est id quod est ipse, et ea dicitur esse substantia Socratis ut humanitas, eodem modo facere album est effectus albedinis et eo albedo est id quod est. Ex eo enim quod albedo facit album, albedo est.

We should note here that the same account of the reconciliation of Priscian and Aristotle is mentioned by Petrus Helias in chapter 6 of his
Summa Super Priscianum in rather more explicitly Gilbertian terms.

[17]. Helias goes on to raise a problem not discussed in the Compendium, that of the substance and quality of 'nouns' such as 'omnia', 'nullus' and 'quae'. He suggests that some, presumably Porretani, took them to signify the forms omnitas, nullitas and infinitas. Whilst our author does not go this far and gives no indication of what he would say about such words he is, as we shall see, prepared to introduce unitas or singularitas and veritas corresponding to the terms 'unum' and 'verum'. These, however, he seems not to regard as forms.

There is much more on nouns that is interesting in Part I but we should go on now to consider what Compendium has to say on another central problem of Twelfth Century philosophical grammar the question of the verbum substantivum.

[C] The verbum substantivum.

Verbs are dealt with in sections I, 21-23 of our text where the two-type ontology and theory of predication is used to explicate their signification. Verbs, of course, are not nouns and according to Priscian it is peculiar to them that they signify either an action or a passion. However, the signification, for example, of the verb 'albet' must have something in common with that of 'albus' in 'Socrates est albus'.

Already at I.7 it has been claimed that in a proposition verb and noun are to be distinguished, the noun as signifying that about which something is said (id de quo fit sermo), the subject term, and the verb as that which is said, the predicate term. In addition we also know from Priscian that

17. "Quod tamen solvant dicentes: Aristotle intelexisse ibi substantiam illud per primum rerum genus per se existentes. Cum vero dicunt quod omne nomen significant substantiam et qualitatem, intelligunt quod omne nomen significat substantiam, id est rem quacumque ut substantiam, id est ut suscipientem formam et praeter hoc qualitatem, id est formam ipsam quae rem facit esse. Ut hoc nomen 'homo' significat rem quae est homo pro substantia, humanitate pro qualitate. Et rursus hoc nomen 'albedo' significat rem pro substantia que est albedo facere album sive albedinem, ut fingam vocabulum, pro forma, et idem de ceteris nominibus. Dicunt hoc autem esse illud quod plerique dicunt, scilicet quod omne nomen significat id quod est (id est rem quae est homo) et illud quo est (scilicet humanitate que est homo), quia homo ab humanitate homo est." From an edited transcript of mss. Paris B. N. cod. lat. 16220 ff.9va-10ra and Arsenal lat. 771 17va-18va in King op. cit. I thank Doctor King for allowing me to use this text.
'sum' is the substantive verb (verbum substantivum), albeit will have to share something with it too. The discussion in the Compendium, unfortunately, is rather brief and it does not seem possible to give a definitive account of our author's view of the copula 'est.'

A distinction is made at I.21-22 between the substance of a verb (form), the action or passion it signifies and its person. The substance is the property which it was invented to signify and thus far the signification of 'albet' is the same as that of 'albus', the substance of the verb being the quality of the common noun. But again, a verb is not a noun and so it must signify something different to the corresponding noun and, in the case of albet at least, it signifies something more since all alone it may be a proposition. Just what this extra is is got from Aristotle. The verb signifies in addition to a property, the composition of this property into a subject or, more precisely, the property effecting something in a subject. In the case of albet making the subject white. This is the action signified by the verb and the subject is its person.

After distinguishing three senses of action for a verb conclusions are drawn for the verb 'uro'. It apposes (apponit) burning to its subject and this property is its substance, just the same substance as that of the passive form and the participles which in this sense all signify the same.

The point about the participles is important since, in general, how they function will tell us something about the verbum substantivum. Unfortunately our author has nothing to say directly about the use of 'est' in accidental predication [18]. Rather, in I.23 he distinguishes three different forms of predicatable, i.e. properties, accidental such as whiteness, substantial such as humanity, and personal,

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18. If he had it seems that he would have to hold an inherence theory like that canvassed by John Malcom: "The crucial contrast between the inherence theory and the identity theory is that the predicate signifies something other than the subject, and the inherence of this other entity in the subject is expressed by the copula plus a predicate expression. It is not necessary that the inherent entity be treated as a universal nature insofar as this would imply a realist theory of universals. There is no reason why a nominalist should not adopt an inherence theory of the copula where the inherence of one individual, for example Socrates' whiteness, in another, for example Socrates, would be given by 'Socrates is white.' J. Malcom, 'A Reconsideration of the Identity and Inherence Theories of the Copula', Journal of the History of Philosophy, XVI (1979), pp. 383-400.
of which from Part III it will be clear that Socrates' individual form is an example.

Different verbs it is claimed are invented to appose these different kinds of property. For each accidental it seems that we need a different verb, 'albec' being an example for whiteness. For substantials only one verb is required, the *verbum substantivum*. This understanding of substantive being apparently the reason why there is no discussion of accidental predication with 'est' as *tertium adjacens*. Finally, one verb 'vocor' will do for the apposition of personal properties.

'Sum' alone, then can do less than 'albec' in that it signifies no determinate substance. It has a person but indicates no definite composition. The writer of the Compendium has much less to say here than one would wish but I take it that this is his point in rejecting the claims that 'sum' signifies some singular or universal. The idea seems to be that if it did, then it could not be used to appose every substantial property since it would not have the indeterminacy which prevents it from all alone being a proposition.

Finally the participle 'ens' must have the same signification as the verb, that is it must have the same substance. But of course the verb has no determinate substance and so 'ens' and also the equivalent 'aliquid' and 'unum' signify nothing determinately but everything indeterminately.

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**Part II: Problems of Dialectics.**

Part II of the Compendium Logicae deals with the second kind of significant element in language, the proposition. It raises questions belonging to logic rather than grammar although the distinction is hardly very clear cut.

[A] **Propositions and Predication.**

The account of predication introduced in Part I of our text, whilst dealing rather neatly with the requirement that a universal be suited to be
predicated of many, brings with it difficulties for the theory of the proposition. The basic problem is this: Many propositions - understood throughout the Compendium as propositional tokens - at least at first sight, have a perfectly ordinary subject - predicate form and yet cannot, given the ontology of the Compendium and its account of predication, be construed in terms of predication. Some analysis must be given, then, of how it is that they are significant.

To see just how narrowly our author understands predication and why for him there are predicative propositions in which nothing is predicated [II.3] let us return to I.6 to pick up a thread which runs through the whole text.

This thread is the tripartite division of properties and the faculties which consist in knowledge of them into natural, ethical, and rational, this division being given by Gilbert in his commentary on Boethius' De Trinitate [19].

Only natural properties make things what they are and the way that they are and only they are the predicata which reveal subjects. The 'properties' dealt with in ethical propositions are attributable, on the other hand, to human action and those in rational propositions to human reason [20]. The most explicit description of prediction is given at II.3:

...predicari sit subjectum vel subjecta declarari affectu et effectu proprietatis ad naturalem facultatem pertinentis.

II.3 draws out the consequences of this description for predicative (i.e. categorical) propositions. Later we will see that our author will not accept that there are negative facts and so a negative proposition cannot express a predication nor for that matter can a proposition which is false. Also excluded are propositions with verbs in tenses other than the present, those with an infinite or derived name as predicate term and so

19. The division into natural, ethical and rational knowledge is a division for Gilbert of speculative knowledge. Natural knowledge in general divides into natural in particular, mathematical and theological. There is no mention of this latter division in the Compendium. On this division see R. J. Westley, 'A philosophy of the Concreted and the Concrete: The Constitution of Creatures according to Gilbert de la Poiree', Modern Schoolman XXXVII (1960), pp. 237-286.

20. See in particular III, 19 and the Appendix.
on. II.4 argues the same case for modal propositions:

In nullo modali aliquum predicatur de aliquo.

But of course modal propositions and all the rest do have some meaning. A more general notion than predication is required to account for it, a notion introduced by our author at II.2 with the claim that:

Omnis propositione categorica fit sermo de aliquo vel aliquibus [21].

This idea is of great concern also to the writer of the Ars Meliduna who in his discussion of enuntiabilis examines a view like that expressed in the Compendium and seems, in part at least, to accept it [22]. In II.4 the concern is to find for certain propositions the aliquum or aliquae about which something is said. There is a suggestion here, perhaps, of supposition theory and 'descent', a suggestion even more clear in the Ars Meliduna in its brief discussion of universal and singular propositions [23]. The same sort of question is discussed in II.4 with regard to modal propositions, its resolution depending on ideas only fully discussed in Part IV on the theory of truth, falsity and enuntiabilis. The composition of forms into a subject, making it what it is and the way that it is, must, for each form, be accompanied by unity (unitas) and truth (veritas) and may be accompanied by other modes. The thing thus becomes one of whatever kind it is, truly one and so on.

In 'Socrates legere est verum' Socrates' reading is a state-of-affairs (eventus) about which something is said [24]. As the analysis of 'de' in IV.6 will make clear, however, this is in fact to say something about Socrates, that is on account of Socrates.

Veritas is not a form but rather an accompaniment (comitantia) of forms and appearing in propositions, in what we would now call the material as opposed to the formal mode, as an adverbial modification of the

21. See Aristotle, de Int. 5,6
22. See Ars Meliduna, IV, ch. 10-14 especially ch. 10 p. 363 opinion 4.
24. This is the only point in the Compendium that we find eventus used, elsewhere we read of compositio.
predicate term. Thus at II.4 we find the claim that the sense (sensus) of 'Socratem legere est verum' is 'Socrati inest lectio et verum'. We are not told anything about the relationship of the latter to 'Socrates legit'. Clearly they are not the same in so far as predication is concerned since the first is modal and so in it nothing is predicated. Presumably, however, the same is said in both about the same, that is about Socrates and his reading, and in this sense they would be equivalent.

II.9 and II.10 raise again the question of the distinction between reading a proposition ratione significati and ratione propositi. It seems fairly clear that if supposition theory has something to do with establishing what it is that a proposition reveals about the world apart from the independent signification of its terms, then we have here a connected notion. Unfortunately we are given too little information and too few examples to say anything useful about the connection.

We can, however, say more about the theory of truth and falsity in the Compendium on the basis of remarks in II.12-13 and the whole of Part IV.

[B] Truth, Falsity and Propositions

The basic principle of our authors' account of truth and falsity is the notion - developed in Part IV - that the natural world consists only of compositions of forms into substances located in space and time. In modern terminology, he takes all facts to be positive. This being so what he has to account for is what it is that a negative proposition asserts. Most of the work is done in Part IV but one result is important in Part II. Whilst the terminology here is rather loose, in II.12-13 switching freely from affirmare to significare, the idea is reasonably straightforward.

Accept that the world consists only of predications in the sense of the Compendium and that any simple predicative proposition, with the exceptions mentioned, signifies its positive content. If the proposition is affirmative it also signifies that that positive content - an enuntiable or composition - is accompanied by truth.

So, letting 'p' be any such affirmative proposition and 'p*' the
corresponding composition:

'p' signifies p* and signifies p* (as) true.

Now suppose that p* is true, then 'p' signifies what is true (as) true. If 'p' is false on the other hand 'p' signifies what is false (as) true. Either way an affirmative proposition signifies something (as) true. Notice that the idea of signification here is not obviously the same as saying something about something.

For negative propositions we again consider positive content. Thus if 'p'' is negative and '(p')*' its positive content:

'p'' signifies (p')* and signifies (p')* (as) false.

If (p')* is false, then 'p'' signifies what is false (as) false. Whereas if (p')* is true, it signifies what is true (as) false. Either way it signifies something (as) false.

This is all reasonably clear, what will be more difficult to understand is what is involved in the basic notions of truth and falsity assumed here and discussed in Part IV.

The remainder of Part II of the Compendium is devoted to compound propositions and inference, another great focus of philosophical debate in the middle of Twelfth Century [25].

[C] Compound Propositions: Conditionals and their Necessity.

Sections 16 and 17 of Part II of the Compendium raise the question of the necessity of the maximal propositions used in topical argument. There is a very long story to be told about these questions but it suffices here to point out that in Tractatus 3 of his Dialectica and in his glosses on Boethius' de Topicis Differentiis Peter Abaelard had distinguished the use of maximal propositions and the whole topical apparatus in the proof of conditional propositions from their use in dialectical argument.

25. A large number of issues are raised here and we will only be able to treat very superficially one or two of them. I hope to publish elsewhere a much more detailed account of the treatment of compound propositions and inference in the logic of the Twelfth Century.
Abaelard granted that certain maximal propositions are only probable in the classical sense of being agreed to by everyone or at least the appropriate authorities. From the point of view of their use in a dialectical argument this is not important since in such an argument one's aim is to convince someone to accept a conclusion. If he accepts a premiss, whether it is true or not, and he accepts a maximal proposition connecting that premiss to the conclusion, whether it is true or not, you have all you need to force him to accept the conclusion.

On the other hand maximal propositions may be used to support the truth of conditional propositions, as when the principle that of whatever the species is predicated, so is the genus is cited to support the conditional 'if it's a man, then it's an animal'. Abaelard took true conditional propositions to be necessary in a very strict sense and held that they express laws of a nature (lex naturae) [26]. The maximal propositions used to support the conditionals can be no weaker than they are and so in order to be true they must be at least as necessary as true conditionals. Two sorts of necessity for such propositions were explored by Abaelard. Almost in passing at II.19 the author of the Compendium mentions the sort of necessity that he finally required of conditionals, that the consequent be contained or understood in some way in (the sense of) the antecedent. A continuative hypothetical is a compound proposition formed with the connective 'si' or equivalent:

...quandoque fit huissumodi ypothetica <i.e continuativa> ad naturalem comitantiam exprimendum, quandoque ad accidentalem, ut quando<que> consequens intelligitur in antecedente et alterum est causa alterius, quandoque comitantia est accidentalis ut 'si aliquid est album, aliquid est albedo.

The opposition of natural to accidental conditionals is standard in the Twelfth Century and derives ultimately from a classification given by Boethius. The requirement of containment is not part of the classification* but it is supported by remarks he makes elsewhere [27]. The weaker sort of

26. See P. Abaelardus, Dialectica, L. M. de Rijk ed., 2nd edn., Assen, 1970, p. 281. [* The editors have decided that it is part of the classification and have amended the text to read: 'ad naturalem', ut quando consequens intelligitur ...]
27. For the classification see Boethius De Syllogismis Hypotheticis, L. Obertello ed., Brescia, 1969, I.iii; for 'containment' see, for example Commentarii in librum Aristotelis FERT HERMENIAS pars posterior, C. Meiser ed., Leipzig, 1880, II, 5, 109.29-110.10.
necessity found in an accidental conditional had been understood by
Abaelard in terms of it being impossible for the antecedent to be true and
the consequent false at same time. Unfortunately our author gives only an
eample which, although it obeys this condition, might be intended also to
satisfy another.

Abaelard developed arguments which he thought showed that his stronger
necessity was the only one acceptable for the truth of conditionals. They
rely on principles like the following, obtained from Aristotle or Boethius
[28].

(Neg) No proposition can entail its own negation

Abaelard apparently argued as follows [29]. Suppose you accept the
conditional 'if Socrates is a man, then he is not a stone', then you are
trouble since:

(P1) If Socrates is a man and a stone, then he is a man.
(P2) If Socrates is a man, he is not a stone.
Therefore If Socrates is a man and a stone, then he is not a stone. (C1)
But (P3) If Socrates is not a stone, then he is not a man and a stone.
So If Socrates is a man and a stone, then he is not
a man and a stone. (C2)
The final conclusion contradicting the principle (Neg). According to
Abaelard this argument shows that a conditional relying on opposed
predicates is not necessary, and in fact no conditional with affirmative
antecedent and negative consequent is necessary. Or rather they are
necessary in only the weaker sense.

Unfortunately Abaelard's argument is too clever. In arguing to the
conclusion (C1) he has relied upon the transitivity of implication, a
conditional true by simplification (P1) - simplification being the
apparently very plausible principle that from a conjunction there follow
both of its conjuncts - a conditional with affirmative antecedent and
negative consequent and the principle (Neg). It seems that it was Alberic

28. See An. Pr. II.4, 57a36-b16 and De Hypotheticis syllogismis I.iv)
29. See the account in the Introductio Montanes Minores, in L. M. de Rijk,
Logica Modernorum II.2, p 63. 17 sq. and Dialectica, p. 395.
of Rheims who first noticed that exactly the same sort of argument will go through with a conditional which Abaelard believed to be necessary in the strictest sense [30].

In particular Abaelard accepted that the conditional 'if Socrates is a man, then he is an animal' is necessary being supported by the maximal principle mentioned above. He also accepted the principle of contraposition. Given these, however, consider the following argument from Alberic:

(P4) If Socrates is a man and not an animal, Socrates is not a man.
(P5) If Socrates is not an animal, Socrates is not a man.
(P6) If Socrates is not a man, it is not the case that Socrates is a man and not an animal.

So If Socrates is a man and not an animal, it is not the case that Socrates is a man and not an animal. (C3)

This appearance of this argument, it seems to me, marks a turning point in mediaeval logic. Anyone who wanted to use conditional sentence had to say what was wrong with it. The discussion in II.26 is presumably the reply of the Porretani.

Various responses were available [31]:

(A) It will no longer do simply to follow Abaelard and reject conditionals with antecedent and consequent of mixed quality. This position continued to be held, however, by the Nominales [See footnote 12].

(B) One might accept the argument and redefine the truth of a conditional in terms of the weaker necessity, granting that (Neg) will be contravened in certain cases. This was the position of the Pervipontini

30. For the following argument see the Introductio Montanes' Minores pp. 65.23–66.4 and for its attribution to Alberic see the remark from a commentary on De Syllogismis Hypotheticis in ms. Berlin Lat. Fol. 624 quoted by L. M. de Rijk in 'Some New Evidence on Twelfth Century Logic', Vivarium 4(1964), p. 54–55.

31. For most of these see Ars Meliduna, Part IV, cap. 37.

32. See for example the passage from Alexander Neckham quoted in Logica Modernorum II.1, p. 290.
who claimed that anything follows from an impossibility.[32]

(C) One might worry about the interpretation of the transitivity of entailment and reject its application here. An alternative explored by Abelard in his *Dialectica* and one version of which was apparently adopted by the author of the *Introductio Montanes Minores* [33].

(D) One might reject the principle of simplification used in (P1) and (P3). Until now we did not know of a school which did this but it turns out from II.26 that it was at least part of the position of the *Porretani* [34].

(E) One might claim that there is something wrong with a conditional with an impossible antecedent — and the argument only goes through, of course, for an impossible conjunction. This is given in support of the Compendium account and cited from a *magister*.

(F) One might go even further, as did the *Melidunenses*, rejecting a conditional with a false antecedent with the principle that nothing follows from the false [35].

Of these solutions, that of the *Parvipontini* will generally be included as part of the account consequences given by later mediaeval logicians. The requirement of containment will not, however, be forgotten usually being used to pick out a special class of consequences.

Our author gives his own version of Alberic's argument in II.26. His grounds for rejecting simplification have some plausibility but as far as I know the next appearance of the suggestion is in the Twentieth Century [36]. The discussion in II.26 turns on the claim that in a true conditional the antecedent stands in an explanatory relationship to the consequent. Thus, since in the conditional 'if Socrates is a man and an

33. See Dialectica, p. 292.34sq. and Introductio Montanes Minores, p. 65.

34. See Introductio Montanes Minores, pp. 54-55 for a rather less convincing account of the rejection of simplification.

35. See Ars Meliduna, IV, cap. 37-41.

ass, then he is a man. Socrates' being an ass does nothing to explain his being a man, the proposition cannot be true, a fallacy of non causa ut causa has been committed. That is to say it cannot be true on this reading of the strong sense of necessity for conditionals. Presumably our author would have to agree that it is impossible for the antecedent to be true and the consequent false. Whether his would make true for him as expressing an accidental coincidence (comitentia) is not clear from the text.

There is much more in Part II that we cannot go into here. In particular the claim that a conditional has no contradictory at II.21 should be compared with Abelard's discussion of this question as should the remarks on conversion at II.35 [37]. The listing of types of necessary conditionals should be compared with that given in the Ars Meliduna and in general with the shorter lists of dialectical loci developed in the Twelfth Century [38].

Part III: Problems of Ontology

Part III of the Compendium whilst nominally devoted to the signification of terms considers in fact a wide range of ontological questions. I will concentrate here only on the in question of universals, singulars and individuals.

The ontological distinctions shared by our author with Gilbert of Poitiers and deriving ultimately from the latter's analysis of Boethius' remarks in in Contra Eutychen are set out in III.1. Again the central concern is with predication and just what it is that is predicated. The Compendium claims that it is substance but that this term may be construed in various ways.

37. See Dialectica p. 473 sq. for the negation of conditionals and p. 292.34sq. for a discussion related to what the Compendium has to say on conversion.

The basic distinction is between substance as subsistent (subsistens), an independent subject supporting accidents, and substance as subsistence (subsistentia), that which is supported, for our author, a singular form. We should note that this is the only point in the Compendium that we find a suggestion that matter may have any ontological function, the substance as subsistent being called 'vle' or 'silva'. Matter is not used in the Compendium as the principle of individualization. As already noted it is the subject as subsistent which should most properly be said to be predicated, that is to be revealed by a property. The usage which suggests the predication of a property results from replacing the subject by the cause of its being revealed.

In III.13, 14, 15, 29 and 32 the consequences of this ontology are developed. Given it we may demand the answers to several questions from our author> Firstly we want to know more about universals. We have already been told that they are a collection but we want to know now how they are collected. We also want need to investigate whether universals defined in this way meet the classical requirements placed upon them. Secondly we want an account of individuals and their relationship to their species. What, that is, is the principle of individualization. Thirdly we want an account of the relationship of genera to species which explains how it differs from the relationship of the latter to individuals.

III.13 opens with a list of the different kinds of things that there are in the world according to the doctrine of the Compendium:

...duo <sunt> genera rerum, unum subsistentium et aliud subsistentiarum, omne autem subiectum subsistens dicitur omnis vero forma subsistentia appellatur.

That each of these kinds of things is singular is the most basic principle of the Compendium although the singularity of one may be argued for from that of the other. Singular subsistentiae make a subject just what it is and the way that it is. Predicability as distinct from predication, is something's being suited to predicate and this only forms, singular subsistentiae can do.

Thus every predicable is singular. Our author's claim for the truth of the converse, however, seems incorrect. Subsistents are singular, though
for different reasons than *subsistentiae*, but surely they are not
predicable, rather they are predicated. This raises the problem of
putative identity statements such as 'Socrates is Socrates' and 'Cicero is
Tully'. There is no discussion of such sentences in our text but the
theory given there permits an interesting explication of them. We can say
that in such sentences a subject subsistent is predicated by its individual
form. Before we look at this, however, we have to say some more about how
*subsistentiae* and *subsistentiae* are related.

III.14 discusses the character of *subsistentiae*. They have no
properties since if they did they would be subsistents i.e. supporters of
properties. As corollary to this at III.37-39 it follows there is no
difference or similarity between any two properties. This is not such a
hard saying, however, for it holds of properties as singular forms. The
claim being that there is no difference or for that matter similarity
between Socrates' singular humanity, for example, and his singular
animality. Socrates, as we will see, still remains different and yet
similar to Plato. What holds for forms also holds according to III.14 for
both universals and the substances of forms, that is their substantial
effects.

This last point, however, seems to create a problem for the discussion
of the degrees of qualities in III.2. Here it is claimed that no
substantial form has a greater or lesser effect in one subject than in
another. This might, I suppose, be made consistent with the claim that
such an effect has no properties by saying that there is no similarity in
the effects of substantial forms either. But this will not work for
accidental forms of the same kind which do according to the Compendium have
greater and lesser effects and so effects which are comparable.

III.15 brings us to a restatement of the basic principle of the
singularity of things:

*Nil est in uno quod sit in alio*

We are not told in the Compendium how to reconcile this with the classical
demand on genera and species, that they be common to many individuals and
entire in each. Given this principle, however, anti-realism follows. No
thing can meet these demands. Rather there are as many humanities as there are men. Proven as follows in III.15:

[1] Every subject is discrete from every other.

So, as every subsistent is a subject:

[2] Every subsistent is discrete from every other.

But a subsistent is what it is and the way it is in virtue of its subsistences. So:

[3] Every subsistence is discrete from every other.

So:

[4] There are as many whitenesses as there are white things, as many humanities as there are men.

The move from [2] to [3] is obviously the tricky one and it seems that one must be an anti-realism in advance for it to be acceptable:

...cum quodlibet subsistens sua subsistentia sit aliquid vel alicuiusmodi, Socrates sua subsistentia est alium quem Plato. Quod in accidentalibus apertius vides. Cum enim sua albedine Socrates sit albus, quis dicit albedine eiusdem Platonem esse album, cum sit diversa alba?

Subsistents are, according to our author, singular for different reasons than are subsistences. Each form is accompanied by singularity or unity and the singularity accompanying Socrates' humanity, for example, makes him one man. There are as many unities in Socrates as there are forms. This point is taken up at III. 16 but we will not pursue it here.

The most explicit discussion of universals and the second and third questions mentioned above is found in III.28, 29 and 30.

Firstly at III.28 we discover that a singular is a numerically distinct thing (res discrete numero), the term being equivalent to 'unum', 'ens' 'aliquid' etc. Now since a form is a singular, it follows by the remarks at III.28, 14 and 37-39 that although numerically distinct there are no substantial or accidental differences between forms and for that matter no similarity either. It is these singulars, rather, which are the cause of the agreement and disagreement of subjects. A singular such as the whiteness of a particular white thing is what permits it to be taken together with another white thing as white, both subjects manifesting the substantial effects of whiteness.

If you take enough of these singular forms, however, there will be no other subjects which manifest the substantial effect in question. The
result of such a complete set of forms is an individual which is itself a singular form. Thus at III. 28:

Est itaque individuum forma collecta ex plenitudine substantialium et accidentalium proprietatum unius et eiusdem subjecti, quia nihil secundum plenitudinem suarum proprietatum alii vel alii<s> conformari potest

'Conformari' here should recall John of Salisbury's remark quoted above in footnote 2.

We are not told anything very much about the completeness (plenitude) of the forms making up an individual and it is one of the primitive terms of our author's theory. Obviously the substantial forms required to make a subject a man will not be enough to individuate him unless the definition is read as only requiring no actual agreement and there is only one man in existence. On the other hand, however, if all possible agreement is excluded it seems that an unlimited number of forms is required to individuate unless a finite number of forms suffices because the human species is finite i.e. there are only a finite number of men possible, the Compendium tells us nothing here. Another problem which suggests itself is that the definition needs some precision, since if spatial and temporal location are accidents, then they will suffice to individuate though not, for example, to constitute an individual man.

Given this account of an individual or, better, of an individual form, the Compendium moves easily to the definition of a personal property - an expression apparently first coined by Gilbert. It is, of course following Boethius, an individual nature of (a) rational substance. The reader should note that much of the discussion in III.28 is almost direct quotation from Gilbert [39].

III. 29 is devoted to universals. After the by now familiar division of things into two kinds we are introduced to their interdependence:

Sicut ergo omne, quod subest, causam existendi assumit ab eo quod ei inest, eodem modo omne quod inest causam existendi assumit ab eo quod est suus effectus.

The relationship of subsistent to subsistence is thus two-fold, the subsistent participates in its forms and the forms have an effect in the

39. See Expositio in Contra Eutychen et Nestorum, III.4-6, Haring ed. p. 272; PL 64 1371D
subject. As we have seen a complete set of forms is required to constitute an individual. Any subset of this plenitude will, according to our author, have an effect similar to an effect in another (possible?) subject. Similarity like completeness is primitive in this theory.

Thus, for example, Socrates' whiteness is the cause of his being white and at the same time of his being the same colour as some other thing. The universal Whiteness is just the collection of all whitenesses, each causing its subject to be white. In the end all the weight of the theory of universals is rests upon similarity:

Sicut enim homines colliguntur in unum populum quia eodem iure vivunt, et milites sub uno duce militantes exercitus, sic singularia sunt una universale retione suorum effectum simul collecta.

Unless, however, something is done to explicate similarity further it seems that as with all resemblance theories, except perhaps that which holds it to be conventional, we have simply replaced one obscure notion with another. For the problem of universals surely arises out of a concern to say how it is that things may be collected together as similar.

Our last question concerned the way in which a genus related to its species. III.29 gives an account of differentia, though not in very great detail. A differentia is simply a singular form which occurs with (adiacens) a principle substantial form and presumably there are only two such forms possible for a given substantial form. These two singulars we learn from III.32 constitute a composite form. Thus we get Socrates' humanity as a composite and yet singular form obtained by a succession of differentia in conjunction (adiacentia) with substance or more accurately with the singular form whose effect is 'Socrates' substance.

Each of the conjunctions of differentia and principle predicatum results in a singular composite form, an essence predicable of, say, Socrates. In addition to this composite form, which is his humanity, Socrates comes with a series of simple accidental forms (i.e. forms whose occurrence does not require the occurrence of another form as genus [40]).

Ignoring properties, for which see II.29, and relations which are

40. See II.32
barely mentioned, the resulting picture is as follows:

The individual form of Socrates consists of a plurality of substantial forms or essences constituting one composite singular form, his humanity. With this there are composed a number of simple accidental forms, presumably at least one from each of the nine non-substantial predicaments. Each form is a numerically distinct thing and yet they do not differ in any way nor for that matter are they in any way similar. The resulting individual form is the personal property of the singular subsistent subject Socrates.

Part IV: Problems of Semantics.

Part IV of the Compendium deals with the *significata* of propositions and contains some of the more obscure discussions in the text. If we treat them here only briefly, it is not because of their lack of interest but rather because we are not confident that we have understood the intention of the writer.

Most difficult is the doctrine of the true (*verum*) and the false (*falsum*) as opposed to truth (*veritas*) and falsity (*falsitas*) developed in IV.1. This section should be read in conjunction with *Ars Meliduna* Part IV where the same questions are discussed.

The claim in IV.1 seems to be that the word 'true' when used properly picks out a thing (*aliquid*) and that there is a derivative use in which we may say correctly 'X is true' where 'X' is not a thing but rather, for example a proposition [41]. The thing that is properly designated 'true', the true, is a composition of a form into a subject. We have already seen, and the point is repeated again here, that in any composition of subsistences into a subsistent each subsistence is accompanied by truth (*veritas*). Thus the composition is a true composition, just as it is one composition. The difficulty with this would seem to be that it introduces another sort of thing into the ontology since, as we saw 'aliquid' is

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41. See I. 13.
equivalent to 'res discrete numero' In addition to to the subsistent Socrates and the singular form humanity which makes him a man, there seems now to be the true composition 'Socrates being a man' (Socratem esse hominem). The problem parallels the familiar one of the ontological status of facts.

Expressing the issue in terms of facts may make it a little easier to see the point here. Our author is claiming in these terms that everything true is a fact. That is, ignoring modal facts, an actual composition [42]. This commits him, as he acknowledges, to all facts being positive and so to all truths being positive as he is not prepared to admit infinite forms. Socrates is made a man by his humanity but there is no form of non-assinity which prevents him being an ass [43]. Opposed to truth is falsity as privation is to habit, as division to composition i.e. as nothing opposed to something [44].:

[*] Sed cum veritas et falsitas sunt opposita, ut privatio et habitus, et omnis veritas sit habitus id est compositio, cum privatio nulla sit falsitas, sit divisione esse subiecto, falsitas sive falsum non est aliquid at nullum compositioni, que est veritas sua division, que est falsitas, est opposita.

A grave difficulty follows very quickly for this account of truth and falsity. For if all that is true is a composition and all that is false is a division how are we to account for the truth of negative propositions such as 'Socrates is not an ass' and the falsity of affirmatives such as 'Socrates is an ass'. Our author thinks he has an answer but it is not clear, to me at least, what it is. It may amount to no more than the claim discussed above from II. 12-13. saying, for example, that a negative proposition signifies its positive content and that it is not true. But then much more needs to be said about signification and in what way

42. Modal facts, in the form of necessities are considered at IV.4 in terms of the possibility or not of a composition being dissolved by a natural cause. This will hardly do as an analysis since it takes us around a very small circle. the discussion there is interesting in that it suggests that a reason for believing the thesis that nothing follows from the false is that the false is nothing and something (i.e. the true) cannot follow from nothing.

43. On this problem see Abaelard, Dialectica, p. 284.24-285.2.

44. On privation an habit see III.27. The habit mentioned here is perhaps intended in the same way as that used by Gilbert to constitute the union of id quod est and id quo est. See N. M. Haring, 'The Case of Gilbert de la Poiree Bishop of Poitiers (1142-1154)', Medieval Studies 13 (1951), Part I. [*This text has been emended by the editors. See p. 64, lines 71-76]
replacing 'not' by 'false' solves the problem. How, we need to know, is it signified that a composition is false i.e. a division.

We learn in IV.3 that an enuntiabile (enuntiabile) for our author is just what may be enuntiated in a proposition i.e. a composition, it is the dictum of a (possible) proposition, where 'proposition' is understood throughout as referring to propositional tokens [45]. Thus as a substance changes and one composition gives way to another in the succession of accidental forms so the enuntiable and, derivatively, the proposition passes from truth to falsity. Furthermore when a subject substance cease to exist so do enuntiabilia, i.e. there is no longer a possibility of saying anything about that subject. But of course we do use propositions with the names of non-existent as their grammatical subjects. An example is given in IV.7: 'Cæsar homo est'. To account for this our author returns to the demand that in every categorical proposition something is said about some thing or things (fit sermo de aliquo de aliquibus). In such a case, he claims you will be able to find something on account of which an enuntiable is true and that this is the proper way to understand 'de'.

The rest of Part IV repeats for enuntiabilia many of the results obtained in Part II for propositions.

Appendix.

In the Appendix to the Compendium some issues are dealt with more clearly than the main body of the text. In particular the question of the three different sorts of predicatable and the corresponding properties.

The division of predicabilia into natural, moral and rational is supported both by Aristotle and Boethius and in the Appendix we find an especially interesting classification of ethical terms. The major project here is to organize both ethical and rational predicates into divisions corresponding to that of the ten categories of natural predicates given by Aristotle.

45. See Ars Meliduna Part IV cap.1-7 esp. cap.1 p.1358.
The most interesting discussion provides us with an account of logic and a certain amount of epistemology. Following Gilbert our author analyses the various forms reasoning may take. Sometimes the mind has to deal with forms concreted into subsistents and for them concrete names are devised. Sometimes it considers these forms abstracted from their subjects, devising for them abstract names – the forms abstracted, note, remain singular. Finally, and most importantly for logic, there is a power in the mind to compare these abstracted forms both in their relation to one another and to their subjects:

...quandoque non abstrahit sed abstracta inter se confert et quid unaquaque sit habita collatione considerat...
Quo igitur albedo sit accidens et homo species et substantia subjectum et hoc proprium et illud differentia, sunt et dicuntur a logicis rationes.[pp.74-75]

In closing we should note that it is very suggestive that these rationes as the ways in which natural forms are in a subject or relate to one another may, according to our author also be designated as loci generailes. The procedure he suggests will generate a list of such loci and the ones which he gives, as noted above, provide a shorter list than the full series derived from Boethius. I would venture that just such ideas lie behind the shorter lists and it is no coincidence that these correspond closely to the standard classification of predicabilia from Porphyry.

Conclusion

The Compendium Logicae is a complicated and very wide ranging text. The discussion is not in general as sophisticated as that found in the Ars Meliduna, avoiding the controversy characteristic of that work. However, it is comparable with it in many ways. It provides a very considerable addition to our stock of knowledge on logic in the middle of the Twelfth Century and demands that we acknowledge a tradition deriving from Gilbert of Poitiers. Hopefully we will now be able to trace his influence further.