ABELARD ON MENTAL *

A BELARD was the author of the first full-fledged theory of Mental Language in the Middle Ages. Unlike his predecessors Augustine and Anselm, Abelard was not concerned to explore the theological dimension of the mental Word. Instead, Abelard crafted a 'language of thought' to provide the semantics for ordinary languages, based on the idea that thoughts (*intellectus*) have linguistic character. His is the most sophisticated account of Mental Language until the efforts of Burleigh, Ockham, Buridan, and others at the start of the fourteenth century. Yet unlike these later versions, Abelard's theory of Mental Language has not received the attention it deserves.[1] Most commentators have touched on only three aspects of Abelard's theory of Mental Language, and that typically as an adjunct to his discussion of the problem of universals: the mechanics of acquiring understandings, the nature of mental content, and the production of one understanding from another (*e. g.* by abstraction).[2] Important as these are for Abelard's philosophy of mind, they are only a small part of the story for his account of Mental Language. Here I shall concentrate instead on Abelard's insight that thoughts have linguistic character. To clarify this insight we first have to describe Abelard's semantic framework (§1), connecting language and thought. According to Abelard, Mental Language generally obeys a principle of compositionality, so that the meaning of a whole is a function of the meaning of its parts – an idea that Abelard applies to words and expressions[3] by describing the psychological realities underlying the semantics (§2). Once

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* All translations are mine. The text of *LI De int.* is taken from the forthcoming edition by Jacobi and Strub, with their paragraph numbering. The text of *TI* is taken directly from the manuscript, with paragraph numbering from Morin [1994].

1 Abelard is mentioned only in passing in Panaccio [1999], otherwise an excellent survey of its topic; there is no discussion of Mental Language in the recent *Cambridge Companion to Abelard*; and so on. See Fodor [1987] for the "Language-of-Thought hypothesis" described here. The main texts in which Abelard lays out his account of "the signification of understandings" are his commentary on Aristotle's *De interpretatione*, the third installment of his *Logica 'ingredientibus'* [hereafter *LI*], and his *Tractatus de intellectibus* [hereafter *TI*].

2 See Tweedale [1976], Marenbon [1997], and Guilfoy [2004] for discussion of these issues.

3 Some terminology: Abelard uses 'expression' (*oratio*) to pick out strings of more than one word which are in grammatical agreement; a single word is not an *oratio* but a *dictio* – that is, not an expression but merely a word. Abelard takes the distinction from *De int.* 4 16^b26–27.

we have a grip on how that works we can tackle the difficult case of state-
ments, or more exactly sentences used to make statements (§3). That will
provide a framework for further research into Abelard's account of Mental
Language.

1. ABELARD'S SEMANTIC FRAMEWORK

Abelard, with Boethius as a guide, takes his inspiration about the nature
of language from Aristotle's brief remarks opening the *De interpretatione.* In
Abelard's version of Boethius's Latin translation, they are as follows:[4]

> Sunt ergo ea quae sunt in uoce earum quae sunt in anima passionum notae, et
> ea quae scribuntur eorum quae sunt in uoce. Et quemadmodum nec litterae sunt
> omnibus eaedem, sic nec eaedem uoces. Quorum autem primorum hae notae
> sunt, eaedem omnibus passiones animae sunt, et quorum hae similitudines sunt,
> res etiam eaedem.

> Therefore, the things that are in the utterance[5] are indications of these passions
> that are in the soul, and things that are written are [indications] of these that are in
> the utterance. And just as letters are not the same for everyone, so too utterances
> are not the same. However, these passions of the soul, of which the first ones[6]
> are indications, are the same for everyone, and the things of which they are the
> likenesses are also the same.

Abelard drew a series of morals from Aristotle's remarks: (1) there are distinct
levels of language; (2) understandings are natural rather than conventional;
(3) understandings are universal; (4) understandings provide the semantics
for the other levels of language; (5) there is a distinction between signifying
things and signifying understandings, roughly the contemporary distinction
between sense and reference. A word about each is in order.

Ad (1). In keeping with Aristotle's mention of inscriptions, utterances, and
thoughts,[7] Abelard holds that there are three distinct levels of language: *Writ-*

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[4]   Aristotle, *De int.* 1 16^{a}3–8: Ἔστι μὲν οὖν τὰ ἐν τῇ φωνῇ τῶν ψυχῇ παθημάτων σύμβολα,
       καὶ τὰ γραφόμενα τῶν ἐν τῇ φωνῇ. καὶ ὥσπερ οὐδὲ γράμματα πᾶσι τὰ αὐτά, οὐδὲ φωναὶ
       αἱ αὐταί· ὧν μέτοι ταῦτα σημεῖα πρώτων, ταὐτὰ πᾶσι παθήματα τῆς ψυχῆς, καὶ ὧν ταῦτα
       ὁμοιώματα πράγματα ἤδη ταὐτά. I have given a reconstruction of Abelard's text of
       Boethius's Latin translation, based on Abelard's lemmata in *LI De int.* 3.01.11–91.
       My translation is guided by Abelard's explanations of what Aristotle means, and
       is thus rather idiosyncratic.

[5]   Abelard insists that the awkward phrase "[things] that are in the utterance" (*ea quae
       in uoce*) here and below is meant to mark 'utterance' as a category including both
       naturally and conventionally significant sounds (*LI De int.* 3.01.63).

[6]   'The first ones': See Abelard's explanation in *LI De int.* 3.01.69 of this obscure
       phrase, in the discussion of (5) below.

[7]   Here oddly identified as "passions of the soul": *LI De int.* 3.01.85, following

ten, *Spoken*, and *Mental*, associated respectively with the activities of writing, speaking, and thinking. Presumably each is a language in its own right, with vocabulary and grammar (syntax and formation-rules); this certainly holds for Written and Spoken, and arguably for Mental as well, as we shall see. The three levels are hierarchically ordered. The ordering is piecemeal rather than holistic: particular inscriptions are conventionally correlated with particular utterances, since the phonetic representation is up to us; utterances in turn are conventionally correlated with particular understandings, since we may say *rabbit* (English) or *lapin* (French) or *coniglio* (Italian) *etc.* to express the understanding |rabbit|.[8] Broadly speaking, Abelard's account of Mental is a technical version of a common intuition about language, roughly that words get their meanings from the ideas they are associated with, with the additional proviso that ideas are more fundamental. Hence in speaking we encode our thoughts in spoken or written form to communicate them externally, and the meaning of a word is what it brings to mind when it is heard.

Ad (2). Abelard reads Aristotle's claim that "passions of the soul" (understandings) are "the same for everyone" as asserting that they are in a strong sense *natural*. Unlike the inscriptions and utterances making up spoken and written languages, the understandings that are the basic vocabulary of Mental Language are non-conventionally correlated with things in the world. An understanding, according to Abelard, is naturally linked to that of which it is the understanding. This is a logical point about their nature: what it is to be the understanding-of-φ is bound up with being φ. More exactly, Abelard holds that an understanding has a given content depending on what the mind is directed towards (*attentio*).[9] Hence understandings are by definition related to the things of which they are the understandings. In ordinary cases, an understanding will be caused by the thing that is understood; the objectivity of the world of things and of the causal relation underwrites the naturalness of signification, as Abelard describes in *LI De int.* 3.01.71:[10]

Boethius, *In De int. maior* 1.1 11.19–30.

[8] I'll use the notation |φ| for the understanding-of-φ, that is, the understanding conventionally associated with the inscription or utterance of φ and naturally linked to φs in the world.

[9] This needs much more explanation. See the discussion of Abelard's account of mental content (though it is not so-called) in Tweedale [1976], Marenbon [1997] 162–173, and Guilfoy [2004].

[10] "Intellectus autem eosdem apud omnes in eo perhibet esse, quod per linguae diuersitatem non est animi diuersa conceptio. Si enim Graecus et Latinus simul equum uiderint, nequaquam iste hominem esse, ille uero equum esse existimabit sed uterque secundum naturam equi, eundem, hoc est consimilem de substantia

> Furthermore, Aristotle asserts that understandings are the same for everyone because mental conceptions don't differ due to different languages. If a Greek and a Latin simultaneously see a horse, in no way will the one hold that it's a man while the other that it's a horse! Rather, in accordance with the nature *horse*, each will have the same (*i. e.* mutually similar) understanding of the horse's substance. But when each wants to point out the thing and to express his understanding, he employs a different utterance than the other does.

The horse naturally causes each person to have the same understanding. Utterances and inscriptions differ as a matter of convention, but "understandings and things ARE THE SAME FOR EVERYONE, *i. e.* they pertain to nature" (*LI De int.* 3.01.90).[11] The expression of the understanding may differ; that is a matter of its conventional encoding. Abelard argues that the same understandings underlie different conventional languages, such as Welsh or Kurdish, guaranteed by the sameness of things; otherwise bilingual people wouldn't have the same understandings (*LI De int.* 3.01.88).

Ad (3). The same considerations prompt Abelard to maintain that understandings are universal. This universality is a matter of structure of Mental Language, not its content. We do not necessarily all have the same stock of understandings; I may completely lack the understanding-of-rabbit, |rabbit|, which you possess, due to our different past interactions with the world.[12] But the structure is the same for all, meaning roughly that all people have similar mental abilities: we can each combine simple understandings into complex understandings, for example, as we'll see in §3. Put linguistically, the 'vocabulary' of Mental may differ but its syntax and semantics remain the same for everyone. Furthermore, different people have "mutually similar" understandings – tokens of the same type as we might say – which is a matter of their content, however the understandings may have been acquired. This guarantees a certain measure of objectivity to Mental. The identity of understandings, and the proper sense of a term, may be spelled out by the term's definition: the sense of 'human being' is *rational mortal animal*, for instance, even though humans can be conceived in an endless variety of ways. Hence an understanding that attends to rationality and mortality and animality in a unified whole is an understanding of human beings, and is the sense associ-

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    equi habebit intellectum, sed cum uterque rem ipsam ostendere suumque intellectum manifestare uoluerit, alia uoce utetur quam alius."

[11] "Intellectus et res SUNT EAEDEM APUD OMNES, id est ad naturam pertinent."

[12] See *LI De int.* 3.05.88: "The understandings that belong to a Greek and a Latin are not essentially diverse according to the diversity of the language, but due to the diversity of the foundations (*propter diuersitatem fundamentorum*)." By 'foundations' Abelard has in mind the things in the world with which a person may have come into contact. See also *LI De int.* 3.01.66.

ated with 'human being'. Mental Language therefore explains what it is for a written or spoken term to have a meaning, namely to be associated with an understanding; furthermore, it explains both sameness in meaning (synonymy) and difference in meaning (equivocity) – terms of spoken or written languages are synonymous when they are associated with the same understanding(s) in Mental Language,[13] and equivocal when associated with distinct understandings.[14]

Ad (4). Abelard holds that particular inscriptions or utterances are said on the one hand to 'express' (*exprimere*) or 'make evident' (*manifestare*), and on the other hand to 'generate' (*generare*) or 'constitute' (*constituere*), an understanding;[15] the former refer to the speaker's meaning, the latter to the hearer's meaning. So Abelard in *LI De int.* 3.00.5:[16]

> Nouns and verbs are also said to designate understandings, whether this be the understanding belonging to the person speaking the utterance or the person hearing it. For the utterance is said to signify the speaker's understanding in that he makes it evident to the person who hears it, as long as it produces a mutually similar understanding in the hearer.

Here, as above, Abelard insists on the understandings in the speaker and the hearer being 'mutually similar' (*consimilis*). In *Dial.* 54.5–17, Abelard asks what the meaning of a term is when the speaker and the hearer have different understandings; he concludes that we should appeal to how the term is typically used (*secundum humanum consuetam acceptionem*). Mental Language is the very stuff of thought, but the point of 'natural' languages such as Japanese and Afrikaans is communication: the speaker, and likewise the author, chooses his words to convey ideas to the members of his audience, by causing them to have certain understandings in accordance with the habitual conventions

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[13] This point also explains how translation from one conventional language to another is possible, which is a matter of identifying the relevant utterances or inscriptions subordinated to the same expression of Mental Language.

[14] In contemporary terms, a semantics is a function from well-formed formulae to meanings, sufficiently well-behaved to individuate meanings. It may have further properties as well, such as compositionality (see §2), so that the meaning of an expression is a function of the meanings of the constituent parts of the expression.

[15] See, for instance, *LI Cat.* 2.1 136.31–32 and *Dial.* 112.30 – two passages of many. The notion that signification is a matter of "constituting an understanding" is taken from Aristotle, *De int.* 3 16^{b}20–21.

[16] "[Nomina et uerba] intellectus quoque designare dicuntur, siue is sit intellectus proferentis uocem siue audientis eam. Nam intellectum proferentis in eo significare uox dicitur, quod ipsum auditori manifestat, dum consimilem in auditore generat." See also *LI De int.* 3.01.91.

that make up linguistic competence.[17] Mental Language therefore functions as the semantics for conventional 'natural' languages, spelling out the meaning of their utterances and inscriptions, explaining sameness and difference in meaning.

Ad (5). Abelard rejects the traditional view of language as a system of signs, which takes the meaning of a sign roughly to be the thing it signifies.[18] In its place, Abelard offers his breakthrough distinction between sense (*significatio*) and reference (*nominatio*): "Nouns and verbs have a twofold signification, one of understandings and the other of things." (*LI De int.* 3.00.4)[19] Abelard claims to find the distinction at the beginning of *De int.* 1, in Aristotle's vague allusion to "the first ones" (16^a7: πρώτων = *primorum*), which he explains in glossing the passage in *LI De int.* 3.01.69:[20]

> Read Aristotle as follows: THE UTTERANCES that signify understandings ARE NOT THE SAME for everyone, but THE PASSIONS OF THE SOUL, *i. e.* the understandings, ARE THE SAME. Then Aristotle says OF WHICH THESE FIRST ONES neutrally, for 'of which initial utterances', as though to say: OF WHICH passions of the soul, THESE utterances ARE INDICATIONS, *i. e.* significative, OF THE FIRST (*i. e.* primary) SIGNIFICATES – namely because although things as well as understandings are picked out by utterances, the understandings are signified principally and the things secondarily, that is, according to the reason the utterances were devised, which was done only for the sake of the understanding, as we established above.

[17] The conventional meaning of an inscription or utterance is therefore a proper Lewis convention: the fact that others will respond to a given utterance in a certain way is a reason to use it that way. There are liars, of course, and others who will use language to conceal rather than reveal their minds, but their usage can only be understood against the background of the expected conventions.

[18] See Augustine's discussion of signs in his *De magistro.* Anselm is also an Augustinian in his philosophy of language; see King [2004]. The problems with trying to make a single semantic relation (signification) do all the work are well-known nowadays, unforgettably caricatured by Gilbert Ryle as "the 'Fido'–Fido theory of meaning."

[19] "Nomina enim et uerba duplicem significationem habent, unam quidem de rebus, alteram de intellectibus."

[20] "Sic iunge: Voces quae intellectus significant, non sunt eaedem sed PASSIONES ANIMAE, hoc est intellectus, SUNT EAEDEM OMNIBUS. QUORUM PRIMORUM neutraliter dicit pro 'quarum primarum' ac si diceret: 'quarum, scilicet passionum animae, HAE, uidelicet uoces, SUNT NOTAE, id est significatiuae, primarum, id est in primo loco significatarum'; pro eo uidelicet quod cum a uocibus tam res quam intellectus designentur, principaliter intellectus, secundario res significantur secundum causam inuentionis uocum, quae scilicet propter intellectus tantum facta est, ut supra docuimus."

The distinction between sense and reference is a staple of contemporary philosophy of language. Signification, as we have seen, is a quasi-psychological property, like Fregean *Sinn*; it is a matter of the causal force a term has in giving rise to an understanding – in first approximation, the sense of a term is what its expression would cause most competent speakers of the language to think of. Reference, on the other hand, is the semantic prerogative of nouns and noun phrases above all, linking words to the world. Its paradigmatic form is naming; hence Abelard's general term for reference, *nominatio*, is the verbal form derived from 'name', *nomen*. What it is for any name to have reference? Abelard, in keeping with twelfth-century practice, assimilates this question to the question of how a name acquires reference. This takes place through imposition (*impositio*), a performative act akin to baptism, which by fiat associates a linguistic item with things in the world. The reference of a proper name is fixed arbitrarily, as 'Socrates' is associated with Socrates. The reference of a common noun is fixed by the nature of the thing to which it is applied: 'human' is associated with whatever is a rational mortal animal, for instance, since that is human nature, though it would refer to humans even if we were ignorant of what human nature consists in.[21] Despite the apparent appeal to 'nature', Abelard thinks that no abstract entities are appealed to; 'human' refers to Socrates and Plato in virtue of Socrates's being human and Plato's being human – which, in each case, is just a matter of what each one is.

2. COMPOSITIONALITY

The vocabulary of Mental Language is made up of understandings, which play a dual role for Abelard. On the one hand, understandings have a psychological aspect. They are literally the elements of thought: *thinking of φ* just is *having an understanding-of-φ*. As such, understandings are the primary building-blocks of thought itself. We acquire them from our interaction with the world: "all human knowledge arises from the senses" (*TI* §77).[22] Thus Mental Language is at least a partial description of the way human minds actually function. On the other hand, understandings have a semantic as well as a psychological aspect. As part of a language, understandings are normatively governed and have semantic features that can be considered independently of their psychological properties, and so does Mental Language *qua* language.

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[21] Thus 'water' refers to whatever is H_2O, rather than XYZ, regardless of our knowledge of water's nature or our ability to correctly identify samples.

[22] See also *TI* §3 and *LI De int.* 3.01.122. The most recent modern discussion is Guilfoy [2004].

Hence there are two sides to every story about Mental Language, the psychological and the semantic; Abelard typically grounds semantics in psychology, by giving his ultimate explanation of semantic features in terms of psychological properties.

Abelard's dual approach to Mental Language is nowhere more evident than in his extensive treatment of compositionality, the thesis that the semantic value of a composite is a function of the semantic values of its component parts. Applied to sentences, he formulates the principle of compositionality as follows (*LI De int.* 3.00.8):[23]

> Just as a sentence materially consists in a noun and a verb, so too the understanding of it is put together from the understandings of its parts.

Abelard loosely sketches how the process works psychologically (*TI* §32):[24]

> Someone who hears [the sentence "Man walks"] proceeds by collecting the appropriate understandings from each of the words: first by understanding *man* when he hears 'man' (which is instituted to signify it); thereafter by understanding *walking* when he hears 'walks'; finally, connecting it to *man.*

The psychological process of grasping the understanding of each successive part, as the sentence is being heard, parallels the semantic process of combining the meanings of the words into the meaning of the entire sentence. Here the mind connects the understanding of the noun 'man' and the understanding of the verb 'walks' into a unified whole.[25] Putting aside the complexities that are involved in the case of sentences, we need only take the point that the understanding of a complex may generally be treated as a complex of understandings. Abelard devotes much of his energies to considering how different parts of speech and different words and utterances contribute to the semantic value of the whole of which they are part: conjunctions and prepositions, word-inflections (declensions and conjugations), and the like.[26] It is no exaggeration to say that the bulk of his logical works are given over precisely

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[23] "Quippe sicut propositio materialiter constat ex nomine et uerbo, ita intellectus illius materialiter iungitur ex intellectibus partium."

[24] "Qui audit [*Homo ambulat*] ex singulis dictionibus proprios colligendo intellectus procedit: primum quidem hominem intelligendo, cum uidelicet audit homo quod ad significandum hominem institutum est; postea ambulationem, cum audit ambulat, eam insuper homini copulando." Abelard gives a parallel account in *LI De int.* 3.01.117; see his general discussion of compositionality in *LI De int.* 3.01.112–114.

[25] Abelard devotes *LI De int.* 3.02–03 to exploring the systematic differences in the understandings of nouns and the understandings of verbs, and how this is related to their syntax.

[26] See Pinziani [1995] and Jacobi [2004].

to such analyses.[27] For the most part, this is a matter of saying how things are in Mental Language: what understandings do in fact correspond to modes of expression in written and spoken 'conventional' languages, and how they are combined in the mind. To mention just two examples: the various 'oblique' grammatical cases of nouns in Latin correspond to the same understanding in Mental as the nominative case does, with added relations corresponding to the grammatical functions for each case (*LI De int.* 3.02.56–59); likewise auxiliary prepositions that govern cases correspond in Mental to explicit relations they indicate (*LI De int.* 3.02.24 ans *TI* §50).

Abelard is careful to note that the semantic equivalence that may obtain between an understanding of a complex and a complex of understandings does not erase their psychological distinctness. He makes the point with a lively example (*TI* §34):[28]

> The same things can be conceived either through a simple understanding at once, or through a composite understanding successively. Indeed, I see three stones put in front of me at once with a single glance, or, alternatively, I see one stone after another in turn with several glances.

So too the simple understanding associated with *human* is psychologically distinct from the complex of understandings associated with *rational mortal animal*, though they are semantically equivalent, the former corresponding to a simple action of the mind and the latter to a connected complex sequence of actions.[29] The moral of Abelard's story is that simple understandings need not be understandings of simple things, though they may be treated as such.

Abelard follows up his distinction between simple *vs.* composite understandings with a pair of related distinctions, conjoint *vs.* conjunctive understandings and disjoint *vs.* disjunctive understandings: in each case, the first member of the distinction refers to the content of what is understood, the second member to the internal structure of the understanding.[30] These distinctions allow him to spell out precisely how compositionality works in the

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[27] This reflects Abelard's use of Latin as a technical language, capable of formal rigour, as well as a living language. Hence it goes too far to say that Abelard adopts a strict principle of compositionality, of the sort found in contemporary systems of logic – a principle that allows for a recursive definition of well-formed formulae. But it does not go too far to say that he recognized such a principle as an ideal. See Jacobi [1983].

[28] "Possunt itaque eaedem res et per simplicem simul intellectum concipi, et per compositum succedentem. Nam et tres lapides ante me positos uno intuitu modo simul uideo, modo per successionem pluribus obtutibus unum post alium uideo." Abelard mentions the same example in *LI De int.* 3.01.94.

[29] See *TI* §§35–38 and *LI De int.* 3.01.94.

[30] The following discussion is based on *TI* §§38–45 and *LI De int.* 3.01.95.

case of words and expressions, treated here, and lays the groundwork for his discussion of sentences in the next section.

According to Abelard, an understanding is 'conjoint' if the things that are understood are understood as joined together, 'disjoint' if they are understood as separated from one another. The simple understanding of three stones is thus a conjoint understanding, since it conceives the stones together in a single mental act. Likewise, the simple understanding corresponding to 'human' conceives rationality, mortality, and animality as combined into "a single unified substance." Now to conceive the stones 'together' is a matter of spatial juxtaposition, whereas to conceive the forms defining humanity 'together' is a matter of their producing something *per se* one. By contrast, the simple understanding corresponding to a negated term – what Abelard calls an 'unlimited' term (*terminus infinitus*) – conceives of things disjoint from one another: 'nonanimal' of things to which *animal* does not (cannot?) apply.[31] Privative terms, such as 'blind', appear to fall into this category as well. Thus understandings are conjoint or disjoint as a function of their content – whether the things thought in an act of thinking are somehow combined or set apart. (Hence understandings that involve only a single thing are neither conjoint nor disjoint.) Abelard does not offer a general account of what being 'combined' or 'set apart' might consist in, and there may not be one. Roughly, conjoint and disjoint understandings correspond to single simple[32] words, each bound up with many things, that may be either positive or negative in character, such as 'crowd' or 'pseudo-intellectual'.

Conjoining and disjoining understandings, on the other hand, are acts of understanding that each put together or set apart understandings (and so the things thought in each constituent understanding). Whereas conjoint and disjoint understandings are simple understandings of complexes, conjoining and disjoining understandings are complexes of understandings. As Abelard puts it: "An understanding is *conjoining* if, by proceeding successively, it combines some things understood at first with other things understood later" (*TI* §40).[33]

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[31]   Abelard regards unlimited terms as semantically simple. We do not recognize term-negation in contemporary logic; but we would be likely to take them as logically complex. Abelard, like most mediæval logicians, takes negation not as a logical operator but to cover (*a*) an alternate version of the copula found in negative statements, and (*b*) an indivisible part of a (unlimited) term. The notion of an 'unlimited term' is taken from Aristotle, *De int.* 2 16^{a}30–33.

[32]   By 'simple' Abelard means words that do not have significative parts, such as 'switchboard', 'windshield', or 'lamplighter'. It is not an easy task to determine when a word is simple or compound. See Wilks [1992].

[33]   "Ille autem coniungens est intellectus qui, per successionem progrediendo, quibus-

The key point is that a conjoining understanding combines some things with others by processing the constituent understandings one at a time. The understanding of compound phrases, for example, requires the successive understanding of each part, which is then appropriately combined with the understandings of the parts already understood. In hearing 'red rose' we first have the understanding |redness| from 'red', then |rose| from 'rose', and finally an understanding that combines them: ||redness| + |rose|| = |red rose|, the mental action of understanding redness as inhering in the rose. (The mental action of combining the constituent understandings corresponding to such an attributive phrase results in the understanding them as combined, which is internally complex.) Similarly for disjoining understandings, the difference being that the things thought are set apart rather than combined; Abelard offers as an example the understanding of the expression 'thing that is not an animal', which "separates the nature *animal* from a thing" (*TI* §42). Conjoint and disjoint understandings, as we have seen, are paired with single simple words; analogously, conjoining and disjoining understandings are paired with expressions.

A final point. Abelard's distinctions apply only to understandings *qua* understandings, and in particular not to whether they accurately reflect the way the world is. The expression 'rational stone' corresponds to a conjoining understanding, in this case ||rational| + |stone||, as much as 'red rose' does, despite the fact that there are red roses and there are no rational stones. Whether an understanding accurately reflects the world is a separate question, namely whether it is "sound or empty/vain" (*sanus uel cassus/uanus*), as Abelard puts it. Semantics is not metaphysics.

3. SENTENCES AND STATEMENTS

Is there anything other than the details left to discuss once the general principle of compositionality has been put forward for expressions? This is the issue Abelard raises in *LI De int.* 3.01.112:[34]

> We shouldn't pass over this question: since we say that the understandings of expressions are materially constituted out of the understandings of their parts, whether the understanding of an expression is nothing but the understandings of its parts, or whether it has parts that differ from [the understandings of the parts] of the expression.

dam rebus prius intellectis alias postmodum intellectas aggregat."

[34] "Illud quoque non est praetereundum, cum intellectus orationum ex intellectibus partium constitui materialiter dicamus, utrum nil alius sit intellectus orationis quam intellectus partium, an etiam alias partes quam orationis habeat."

Compositionality requires only that the semantic value of a composite be a
function of the semantic values of its component parts; it allows for there to be
a further element involved in the semantic value of the composite that is not
involved in the understanding of its constituent parts. Abelard immediately
points out that this must be the case for conditionals (*LI De int.* 3.01.112–114).
But it is also the case for ordinary expressions: a conjoining understanding,
for instance, adds something not present in the understandings of its con-
stituents, namely their combination. The understandings |red| and |rose| are
the same whether they are mere idle thoughts passing through the mind, one
after the other, or are thought together in the combination |red rose|; the
former is a case of multiple isolated understandings, the latter a single unified
whole – Abelard's distinction between multiple and unitary understandings.[35]
What sets the understanding of the combination apart from the understand-
ings of its constituents is the mental action of combining, as described in §3:
a conjoining understanding, or *mutatis mutandis* a disjoining understanding.

Abelard's point needs to be handled with care. The mental action of
combining is not itself an understanding; it is instead something done with
understandings. The end result, however, is an understanding that does com-
bine the constituent understandings, which is the understanding of the ex-
pression as a unified whole. The mental action of combination C is therefore
a function from understandings to understandings:

$$C : |\alpha|, |\beta| \rightarrow ||\alpha| + |\beta|| = |\alpha\beta|$$

The net result, $|\alpha\beta|$, is the conjoining understanding of the expression. The
principle of compositionality still holds; we now know more about the psy-
chological side of the composition, so to speak. Abelard does not talk of
functions, of course, but his descriptions of conjoining and disjoining under-
standings are clear and precise, leaving no doubt that he was well aware of the
distinction between the mental action of combination and the understanding
that is produced by the mental act of combination. He says as much when
explaining the semantical role of the copulative verb in a simple categorical
sentence, that is, an affirmative sentence of the form 'S is P' or a negative
sentence 'S is-not P' (*LI De int.* 3.02.28–29):[36]

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[35]   See *LI De int.* 3.01.96 and *TI* §§46–55. Note that a unitary understanding can be
       simple or composite.

[36]   "Unde nostram ponamus sententiam. *Est* uerbum interpositum ad coniunctionem
       terminorum, unde scilicet est tertium adiacens, nullius rei significationem ibi ex-
       ercet, plus tamen ad uim affirmationis proficit coniungendo terminos significantes
       quam ipsi termini; similiter *non est* ad uim negationis. Et licet intellectus non con-

Now I'll lay out my view. The verb 'is', which is inserted to join the terms [of the sentence] together (*viz.* as an added third element), doesn't involve the signification of anything there. Instead, it contributes more to its affirmative force by putting the signifying terms together than do the terms themselves. (Likewise for 'is-not' to its negative force.) Now although ['is' and 'is-not'] do not constitute understandings, they bring it about that the soul has some conjunction or disjunction of things that are understood – yet ['is' and 'is-not'] don't *signify* that conjunction or disjunction, despite bringing it about, since they do not give rise to an understanding in themselves but rather make it be the case that we have the combination or the separation of the things that are understood. Hence there are three 'actions' in the understanding of a sentence: the understandings of its parts, [namely its subject-term and predicate-term], and the combination (or the separation) of the things understood. Nor is it inappropriate if the latter action, which is *not* an understanding, is part of the understanding of the entire sentence.

Start with Abelard's final point: the mental action of combination (*a*) is not an understanding, but (*b*) is part of and contributes semantically to the final understanding, which it does by (*c*) appropiately combining the constituent understandings of the subject-term and the predicate-term. This is the analogous point, in the case of sentences, to the distinction sketched above for incomplete expressions: the mental action that combines elements is not an understanding, which is why the inscription or utterance of 'is' or 'is-not' has no signification, but nevertheless results in a composite understanding. For Abelard's other claims about the semantics of sentences we need to draw some distinctions.[37]

Consider an ordinary incomplete expression, say, 'red rose' (inscription) or *red rose* (utterance). It is a unitary expression: the token-inscriptions 'red' and 'rose' are juxtaposed in proper left-to-right fashion, the token-utterances *red* and *rose* are given voice successively without undue delay – in each case

stituant, quandam tamen coniunctionem uel disiunctionem intellectarum rerum animam habere faciunt, quam tamen coniunctionem uel disiunctionem non significant, licet haberi faciunt, quia intellectum non dant in se, sed intellectorum coadiunctionem uel separationem habere nos faciunt. Sunt itaque tres actiones in intellectu propositionis, intellectus scilicet partium, coniunctio uel disiunctio intellectarum rerum. Nec est incongruum, si ea actio, quae intellectus non est, sit pars intellectus totius propositionis." Abelard, like all mediæval logicians, distinguishes sentences by their quality (affirmative and negative) as well as by their quantity (universal and particular), and the quality of a sentence is a primitive logical feature of it: hence there are distinct copulas, 'is' for affirmative sentences and 'is-not' for negative sentences – which, despite involving two words, is logically simple and indivisible (hence the hyphen).

37 See Nuchelmans [1973], de Rijk [1975], de Libera [1981], Jacobi [1983], and Guilfoy [1999] for other discussions of the semantics of sentences.

a conventional sign of multiplicity in expressions. It is furthermore a well-formed expression (*congruens*), conforming to the rules of grammar: the adjective agrees with the noun in number, and, in Latin, in gender as well. Clearly the parts are meant to be taken 'together'. Here that amounts to *attribution*: the characteristic signified by the adjective is attributed to the item signified by the noun.[38] Attribution is strictly speaking a linguistic act; it is something we do with words, by appropriately combining them, though it is not itself linguistic. (Juggling is not a ball the juggler juggles.) It is the semantic side of the grammatical and syntactic requirements for a well-formed expression. In Mental Language, it is the mental action that accompanies conjoining or disjoining understandings.

Consider a simple categorical sentence, say, "Socrates is fat." Sentences are complete expressions, so they must be appropriately well-formed, as described in the preceding paragraph. In this case we have a three-part sentence: for the subject-term a noun in the nominative case, 'Socrates'; for the predicate-term the phrase 'is fat', which breaks into the copula 'is' and the predicate adjective 'fat'. Since verbs can be replaced by the copula combined with the verbal participle, so that "Socrates runs" is semantically the same as "Socrates is running" (and arguably "Socrates is a runner"), there is no loss of generality in dealing with the case of predicate adjectives. Now clearly in "Socrates is fat" we are attributing fatness to Socrates, though not quite the way 'fat Socrates' does. What's the difference?

Abelard notoriously rejected the view that sentences and subsentential expressions differ in their constituent understandings: "Socrates is fat" and 'fat Socrates' have the same understandings, namely |Socrates| and |fatness| (*LI De int.* 3.05.4).[39] The difference between them is not a matter of the meanings of their parts, but the way in which the meanings of the parts are put together. In the expression, there is no linguistic sign of attribution; the burden is carried by the juxtaposition of the tokens. In the categorical sentence, there is a copula, a linguistic sign of what we may call *predicative attribution*, which accomplishes two things in the sentence: (*a*) the characteristic signified by the predicate adjective is attributed to the item signified by the subject-term; (*b*)

[38] Abelard often describes this in a metaphysical mode: the form *redness* inheres in the substance *rose*, a habit reinforced by traditional grammar. That's fine as long as it is firmly borne in mind that it has nothing to do with the world. The same account holds for 'rational stone' or 'colorless green ideas' as much as for 'red rose'.

[39] Abelard's view is presented in Jacobi, Strub, and King [1996], which further details the disagreement of one of Abelard's circle with this view and his alternative proposal.

the attribution has an affirmative or a negative quality, depending on the copula involved, describing the way things stand or do not stand. The last feature, (*b*), sets sentences apart from incomplete expressions. A sentence puts forward a connection among things, a way things stand; the sentence "Socrates is fat" affirmatively connects Socrates and fatness, "Stones are rational" stones and rationality. (The truth of sentences is another matter altogether.) Predicative attribution is a linguistic act that is accomplished by appropriately linking terms through a copula. As with simple attribution, its semantics are spelled out by the series of mental actions involved in the linguistic performance. Since (*a*) is not the same as simple attribution, though, and (*b*) is wholly different, the mental actions by which (*a*)–(*b*) are accomplished are different. And so they are, as Abelard explains in *LI De int.* 3.01.127:[40]

> The understanding of an affirmation (*i. e.* the understanding signified by an affirmation) is called *compounding*, whereas the understanding of a negation is called *dividing*. Anyone who understands Socrates to be a philosopher compounds philosophy with Socrates – connects and joins them – in his understanding. But anyone who understands Socrates not to be a philosopher separates and divides philosophy from Socrates in his understanding. Thus the understanding of an affirmation is called 'compounding' and the understanding of a negation 'dividing'.

By 'connects and joins' (*copulat et coniungit*) Abelard is referring to (*a*) and (*b*) respectively, and likewise with 'separates and divides' (*separat et diuidit*).

Yet this is not the whole story. For "Socrates is fat" may be used to make a statement (an affirmative statement), or it may not. Embedded in the conditional "If Socrates is fat then Plato is tall" there is a predicative attribution of fatness to Socrates, but no statement is made; the conditional does not say that Socrates is fat, nor that Plato is tall, and parts of it do not say anything at all. The point of uttering a simple categorical sentence is to make a statement, that is, "to say something of something" in Boethius's version of Aristotle:[41]

> Harum autem haec quidem simplex est enuntiatio, ut aliquid de aliquo uel aliquid ab aliquo.
>
> A simple statement says something of something, or takes one thing away from another.

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[40]   "Componens dicitur intellectus affirmationis, hoc est qui ab affirmatione significatur, diuidens uero intellectus negationis. Qui enim intelligit Socratem esse philosophum, intellectu suo philosophiam Socrati componit, id est copulat et coniungit. Qui uero intelligit Socratem non esse philosophum, in intellectu suo philosophiam a Socrate separat et diuidit, et ita intellectus affirmationis componens, intellectus negationis diuidens appellatur." See also *LI De int.* 3.03.37.

[41]   Aristotle, *De int.* 5 17^{a}21–22: Τούτων δὲ ἡ μὲν ἁπλῆ ἐστὶν ἀπόφανσις, οἷον τὶ κατά τινος ἢ τὶ ἀπό τινος, ἡ δὲ ἐκ τούτων συγκειμένη οἷον λόγος τις ἤδη σύνθετος. See also *De int.* 6 17^{a}25–26.

Sentences consist in words but are not simply sequences of words; the combination of words into a sentence used to make a statement goes beyond anything in the words themselves. Sentences are a way of *doing* something with words, namely making a statement. So much is commonplace, derived from Boethius and ultimately from Aristotle (*De int.* 5 17^{a}9–10). The missing ingredient in the analysis, in Abelard's eyes, is what he calls 'constative force' (*uis enuntiationis*: *LI De int.* 3.01.98–102).[42] Predicative attribution gives the content of the sentence; constative force makes it into a statement, a declaration that something *is* as the content describes. The freestanding assertion of "Socrates is fat" makes a statement, and as such can be assessed for its truth-value. (Likewise for "Stones are rational.") The sentential content is common to statements and to unasserted predicative attributions alike, as well as to nondeclarative contexts such as commands, wishes, and so on (*LI De int.* 3.05.9–16). Indeed, Abelard no sooner raises the question about compositionality mentioned at the beginning of this section than he mentions the occurrence of categoricals embedded in conditionals (*LI De int.* 3.01.113).[43] With this distinction in place we can now say that a statement involves a predicative attribution with constative force. The semantic job of sentences is to *say* something, which is not to be confused with naming or denoting; it is instead a matter of describing or proposing how things are (*Dial.* 160.25–36):[44]

[42] The striking phrase *uis enuntiationis* is used in *LI Isag.* 16.39–40, and again in *LI De int.* 3.10.128, 3.12E.60, and 3.12E.68. In *LI De int.* 3.01.100 Abelard speaks of a declarative sentence as "to propose constatively what is or is not the case" (*enuntiando proponere id quod est in re uel non est in re*), and shortly afterwards points out that only declarative sentences have this constative mode (*modus enuntiandi*). Unfortunately he tells us no more about constative force, which is one of the points on which he was criticized: see Jacobi, Strub, and King [1996] for more details.

[43] The distinction between the (constative) force of a statement and its (unasserted) content is precisely Frege's distinction between force and content, which he drew with respect to propositions embedded in conditionals. Geach [1965] 449 even dubs it "the Frege point," unaware that Abelard made the same point nearly eight centuries before Frege.

[44] "Iam enim profecto nomina oporteret esse, si res designarent ipsas ac ponerent propositiones, quae quidem ab omnibus in hoc dictionibus differunt quod aliquid esse uel non esse aliud proponunt. Esse autem rem aliquam uel non esse nulla est omnino rerum essentia. Non itaque propositiones res aliquas designant simpliciter, quemadmodum nomina, immo qualiter sese ad inuicem habent, utrum scilicet sibi conueniant annon, proponunt; ac tunc quidem uerae sunt, cum ita est in re sicut enuntiant, tunc autem falsae, cum non est in re ita. Et est profecto ita in re, sicut dicit uera propositio, sed non est res aliqua quod dicit. Unde quasi quidam rerum modus habendi se per propositiones exprimitur, non res aliquae designantur." [*Reading *earum* for De Rijk's *eorum* at 160.24.] Abelard uses the

> If sentences were to denote or put forward real things, then surely they would
> have to be names. But sentences differ from all words precisely in this regard,
> namely that they propose something to be (or not to be) something else. Yet
> 'being (or not being) some real thing' is *not* itself any real thing at all. Thus
> sentences do not simply denote any real things, the way names do, but instead
> propose how they stand towards one another, namely whether they are suitable
> to one another or not. Then they are true when it is so in reality as they state, and
> false when it is not so in reality. And surely it is so in reality as a true sentence
> says, but there isn't any real thing that it says. Accordingly, a sort of 'way things
> stand' is expressed by sentences; they don't denote any real things.

Sentences say things, and they even say things about things – better: sen-
tences say how things stand – but they do not refer to or denote things,
whether ordinary things like Socrates or extraordinary entities like proposi-
tions (which then 'correspond' to things), despite the fact that we can and do
refer to what they say. Abelard even hesitates to speak of a 'way things stand,'
immediately hedging this 'way' (*modus*) with 'sort of' (*quasi*) to take away any
metaphysical bite it might have. Again, semantics is not metaphysics.

How do Abelard's distinctions play out in Mental Language? He answers
the question in full generality, for all types of statements, in *TI* §§47–48:[45]

> An understanding is a single conjunction or division (*i. e.* disjunction) when the
> mind proceeds continuously by single mental impulse and is directed by a single
> intention, through which it conjoins or disjoins something to what it understood
> initially (or disjoins it from something else): the mind finishes without interruption
> the process it somehow undertook. The mind has a single conjunction of this
> sort when it pays attention to things successively in such a way that it fits them
> together with each other, so that it completes a single item[46] by running through
> them. What is more, the mind somehow binds any number of understandings
> to each other into the force of a single affirmation either by predication, or by a
> conditional conjunction like 'if', or a temporal conjunction [like 'when'], or some

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same line of argument in *LI De int.* 3.04.22–23.

[45] "Una autem est coniunctio uel diuisio (siue disiunctio) intellectus per quam ani-
mus continue, ex uno mentis impulsu, progreditur et una dirigitur intentione, per
quam ei quod primum intellectum est aliquid coniungendo uel disiungendo, uel
inter ipsum et aliud disiungendo, cursum quodammodo inceptum sine interrup-
tione consummet. Tunc autem unam huiusmodi coniunctionem animus habet,
cum sic aliqua per successionem attendit, ut ea sic inuicem aptet, ut per ea dis-
currendo unam conficiat etiam, et insuper quotienscumque ad uim unius affirma-
tionis quocumque modo aliqua inuicem colligat, siue per praedicationem scilicet,
siue per conditionis uel temporis coniunctionem, uel quolibet alio modo, dum hoc
uidelicet, ut supra generaliter commemorauimus, uno mentis impulsu continue
fiat."

[46] "A single item": *essentia*. Morin [1994] 54.3 prints *entiam* (!!!) here, apparently
believing this to be the accusative of *ens*, correcting Cousin and Ulivi.

other way, provided this occur continuously by a single mental impulse, as noted
generally above.

There is a "single mental impulse" that knits together the various parts of a
sentence into a statement. Abelard explicitly says that the mind "somehow
binds any number of understandings to each other" by an action that cor-
responds to the kind of sentence it is. Categorical sentences use the copula
to make statements ("by predication"). Conditionals make statements, too,
about relations among how things stand, using 'if'. Conjunctions of sentences
also say something, since the conjunction of assertions is the assertion of the
conjunction. (Disjunctions of sentences are not as well-behaved.) The impor-
tant thing is that a statement-making sentence has what Abelard calls "a single
dominant conjunction" – roughly, an operator or functor of widest scope over
a well-formed formula.[47] Abelard describes it in *TI* §§51–53:[48]

> Now it often happens that several conjunctions or divisions or disjunctions occur
> in a single understanding. Yet singleness isn't thereby absent from the under-
> standing, since in the whole understanding there is the dominance of a single
> conjunction... Therefore, when several conjunctions agree in a single under-
> standing such that they are all subordinate to a single [dominant] conjunction,
> and accordingly they are taken so that a single one is fashioned out of them, the
> understanding must be single, and to have it the mind is directed continuously by
> a single mental impulse.

A categorical sentence is one in which the copula is the logically dominant
functor, taking the subject-term and the predicate-term as its arguments, and
resulting in a predicative attribution with constative force: it says that the sub-
ject has the attribute marked out by the predicate. Abelard takes conditional
sentences to be similar, in that the if/then functor takes two sentences as its ar-
guments, resulting in a statement that says a certain relation obtains between
two ways in which things stand. The psychology underpinning the semantics
is clear (*LI De int.* 3.01.118):[49]

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[47]   Abelard does not use this terminology in the *Logica 'ingredientibus'*, but the view is
       clearly present: see *LI De int.* 3.01.41, for instance (Martin [2004] 168). Abelard
       takes his inspiration from Abelard's remark that sentences other than simple cate-
       gorical affirmations or negations are "one by conjunction" (*De int.* 5 17^{a}9–10: οἱ δ'
       ἄλλοι πάντες συνδέσμῳ εἷς).

[48]   Saepe autem contingit in uno intellectu plures fieri coniunctiones aut diuisiones
       siue disiunctiones, nec tamen ideo unitas tollitur intellectus, quia in toto intellectu
       unius coniunctionis summa est... Cum itaque plures coniunctiones in uno intel-
       lectu ita conueniunt ut uni subseruiant omnes, et propter hoc istae habentur ut
       una ex eis constituatur, unum necesse est intellectum esse ad quem habendum
       uno mentis impulsu continue animus tenditur.

[49]   "Similiter et in *Si Socrates est margarita, Socrates est lapis*, uis coniunctionis 'si' toti

> Likewise, in the case of "If Socrates is a pearl, Socrates is a stone" the force of the particle 'if' carries the given act of attention on the understanding's part to the whole consequence, which necessarily puts the antecendent together with the consequent. This act of attention is clearly a third action and, along with the actions belonging to the two sentences [that are the antecedent and the consequent], makes up the action that is a unitary understanding.

Clearly, much more needs to be said about categorical sentences and the several types of 'molecular' (*hypotheticae*) sentence. Abelard has provided a framework in which this work can be done: Mental Language.

CONCLUSION

Abelard's account of compositionality in Mental Language is, as we have seen, subtle and sophisticated. With no more than mere hints available in Aristotle and Boethius, he developed a rich and articulated theory of the psychology and the semantics underlying ordinary 'conventional' languages. Abelard's version of the language of thought is a stunning achievement and deserves to be recognized as such. Not until the rise of the great philosopher-logicians of the early fourteenth century would the insight that thought has a linguistic structure receive such careful elaboration.

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consequentiae confert attentionem quadam parte intellectus, quae scilicet necessario coniungit hoc illi, quae uidelicet attentio est tertia actio et cum actionibus duarum propositionum componit unius intellectus actionem.

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