



Letters and Syllables in Plato

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## LETTERS AND SYLLABLES IN PLATO

**I**N HIS later dialogues Plato makes a lot of use of the notions of letters of the alphabet and the spelling of syllables out of these letters. He frequently uses these notions for the sake of analogies which help him to expound some more abstract matters.

There is one of his uses of the letter-syllable model which is not of special interest to me, namely, for the exposition of some merely chemical theories about the combinations of a few material elements into multifarious compounds. Plato employs this model in this way in the *Timaeus* (48 B-C), though he says that the analogy is not a good one. Here he is stating what is essentially an Empedoclean theory. Sextus Empiricus says that *stoicheion*, used thus to denote an ultimate material element, was a Pythagorean term.

My interest is in Plato's use of the alphabet model in expounding his logical or semantic views, namely his views about the composition of the thoughts, that is, the truths and falsehoods that we express or can express in sentences (*logoi*).

### I. LETTERS

First, I have to make a dull but necessary distinction. When we run through the alphabet *viva voce* we produce the *names* of letters, that is, made-up words like "Alpha," "Queue," "Double-U," "Ess," "Omega," "Aitch," and so forth. If, on the other hand, we have to write out the alphabet, we write the letters themselves and not their names. We inscribe the character "H"; we do not inscribe the five characters of its English name, "a-i-t-c-h." The word "Double-U" is a trisyllabic name of a letter which is not itself a trisyllable or even a monosyllable. The word "Queue" rhymes with the word "few," but the letter that it is the name of does not rhyme with anything. The American proper name "Zee," the English proper name "Zed," and the Greek

proper name "Zeta" are three names for the same letter. These letter names are just as much words as are the names of people, dogs, or days of the week. Plato discusses the names of letters in the *Cratylus* (393).

Well, then, what *is* the letter of which the proper name "Zed," say, is the English name? Is it (1) the zigzag character that we inscribe at the beginning of the written word "zebra," or (2) the semi-sibilant beginning of the uttered dissyllable "zebra," or (3) both that zigzag character and that semi-sibilant consonant? It will turn out to be crucially important to consider whether, when Plato refers to the particular letter of which the word "Beta," say, is the name, he is thinking primarily of a noise or primarily of a character; whether, for example, he is thinking of the beginning of the noise "Basileus," or thinking of the left-hand-most character in the written word "Basileus." We nowadays naturally think first of a printed or written character. I hope to show that Plato, on the other hand, naturally thought first of the explosive beginning of uttered words like "Basileus," that is, that the letter names like "Beta" and "Sigma" were, for him, names primarily of phonetic elements or phonemes. So when Plato speaks of a child learning the letters called "Beta" and "Sigma," he is not, according to me, thinking first of all, as we should be, of the child being taught to inscribe and decipher characters, but of him learning to recognize by ear, name, and pronounce the consonants and vowels.

Platonic Greek had two words for "letter," namely *gramma* and *stoicheion*. Sextus Empiricus, in *Against the Grammarians* (99), says that *stoicheion* may mean (1) a character; (2) the phonetic element that a character stands for; or (3) the name of the letter, for example, the word "Beta." It is the phonetic element that is accounted by the grammarians the *stoicheion* proper. Sextus Empiricus himself avoids using *gramma* for a phonetic element or *stoicheion* for a character.

The sole philological use of *stoicheion* given by Aristotle in *Metaphysics V* (1014 A) is that of "phonetic element"—as is that given in the *Platonic Definitions* (414 E)—and Aristotle sticks to this in his own practice with only rare exceptions, for example, in *De Soph. Elench.* (177 B) and in *Metaphysics* (1035 A).

Correspondingly, a *gramma* is for Aristotle a character and hardly ever, if ever, a phoneme, though in *Problems* (X 39 and XI 30 and 57) we hear of people who lisp being unable to utter certain *grammata* and of animals that can utter just a few *grammata*, among the other noises they make.

I hope to show (a) that Plato uses *stoicheion* nearly uniformly for "phonetic element," though in the *Theaetetus* (206 A) *stoicheia* are both things uttered and things written; (b) that Plato uses *grammata* quite impartially for phonetic elements and for characters. *Gramma*, despite its etymology, did not for Plato connote writing. *Grammata* are, of course, written characters in the *Republic* (368 and 402) and in the *Phaedrus* (274-275), where Plato also, for once, uses *Typos*. Unlike Sextus Empiricus, he and Aristotle never use the ambiguity-removing word "character." "Syllable" is regularly used as a phonetic term by Plato, Aristotle, and Sextus Empiricus for the minimum pronounceable. Consequently letters, when mentioned as elements of such pronounced syllables, have to be audible consonants and vowels and cannot possibly be characters.

Plato says a good deal in the *Cratylus* (especially 424-427, 434-435) about the phonetics of letters and syllables, but it is especially in the *Theaetetus* and *Sophist*, and more cursorily in the *Politicus*, that he makes philosophical use of the model of letters and their combinations in syllables. He uses it in the *Theaetetus* in order to throw light on the differences between what is said in a sentence (*logos*) and what is named by a separate word, between a truth-or-falsehood and a named thing, between a proposition and a term, and between what we can know or believe and what we can see or touch.

In the *Sophist* he uses the alphabet model for a more abstract task. He emphasizes the differences between vowels and consonants and the necessity for at least one vowel being present to enable consonants to combine together. By means of this analogy he tries to show at least this, that some Forms are unlike the rest in being vowel-like, that is, in being necessary for the combining of terms into truths and falsehoods. I think he has in mind here those notions which are expressed (a) by verbs as distinct from nouns and adjectives and (b) by certain radical

verbs such as the verbs "to be" and "to become," in distinction from all other verbs.

This brings us to the important ambiguity that I have mentioned in all that Plato says about letters and syllables. Is he, as I formerly took for granted and as the commentators whom I have consulted take for granted, referring only or primarily to written characters and written syllables, or is he, as I now think, referring only or primarily to the uttered consonants and vowels in uttered syllables? Or is he referring indiscriminately to both? For example, to take the three letters of the English monosyllabic word "box," is Plato thinking only or primarily of the three characters written left to right, of which the second is nearly circular and the third consists of two straight lines cutting one another at something less than a right angle? Or is he thinking only or primarily of what these three written letters stand for in the realm of pronounced noises, that is, to what the monosyllable "box" sounds like? The reason why it is important to clear this matter up is this. There are some very important differences between what can be said about inscribed characters and what can be said about the phonemes or noise elements that they stand for, and these differences make all the difference to our interpretation of the doctrine which Plato uses the alphabet model to expound. The written word "box" contains three parts or components, namely, the "b" and "o" and "x," any one of which could survive when the other two were deleted. We could write these characters down at different times, on separate bits of paper, and then paste the pieces together in one order, take them apart again, rejoin them in a new order, and so on. Characters are separate inscribables; they can be separately read; and they can be combined in any order or left uncombined. But what, in the phonetic field, the three characters stand for could not be similarly separated or shuffled. We could not make a noise at all answering to the sequence of the three characters "OXB."

More than that; while we could indeed pronounce by itself the vowel-noise answering to the character "o," we could not pronounce by themselves separate noises answering to "b" or "x," though we might do so for a few hissable or hummable consonants like "s," "r," "m," and "l." In short, most separately

in-scribable characters of the written alphabet do not stand for separately pronounceable noises, and these were known to Plato by the technical terms *aphona* and *aphthogga*, that is, "mutes." These are not sounds but only *con*-sonants. The uttered monosyllable "box" is one noise, a monosyllable and not a trisyllable. It is not a sequence of a "b" noise and an "o" noise and an "x" noise. There are no such noises as "b" and "x," and if there were, the sequence of them would not be the monosyllable "box" but a trisyllable. Certainly the uttered monosyllable "cox" differs audibly in one respect from the monosyllable "box," though resembling it in two respects, but the audible difference does not consist in the monosyllables being made up out of different and separately pronounceable component noises. We cannot therefore say that the vowel "o" enables us to co-utter the consonant noises "b" and "x," since there are no consonant noises "b" and "x" to be uttered by themselves at all. We cannot speak of the vowel as linking some components that could exist without that linkage. A spoken monosyllable is not a phonetic molecule of which its consonants and vowels are the atoms. In short, while characters are graphic atoms, phonemes are not phonetic atoms. Chinese writing and "Linear B" do not contain even graphic atoms.

We have to say instead that what the characters "b" and "x," say, stand for are ways or respects in which one monosyllable may resemble other monosyllables, though not resembling them in other respects; they stand for distinguishable aspects or features of integral noises but not for integral noises. Borrowing from Frege, we might say that the phonetic element for which the character "b" stands could and, for certain purposes, should be graphically symbolized not just by "b," but by "b . . ." or ". . . b" or ". . . b . . ." where, with qualifications, the gaps are vacancies to be tenanted by some vowel character or other, no matter which; and ditto for "x" and "q" and any other consonant; and for that matter, *mutatis mutandis*, ditto for vowels too, save that the gaps flanking them could be flagged as optional.

I bring this point out at once, because the phonetic model of letters and syllables would be an almost perfect model by means of which to express Frege's difficult but crucial point that the

unitary something that is *said* in a sentence or the unitary sense that it expresses is not an assemblage of detachable sense atoms, that is, of parts enjoying separate existence and separate thinkability, and yet that one truth or falsehood may have discernible, countable, and classifiable similarities to and dissimilarities from other truths and falsehoods. Word meanings or concepts are not proposition components but propositional differences. They are distinguishables, not detachables; abstractables, not extractables—as are the audible contributions made to the voiced monosyllable “box” by the consonants “b” and “x.”

But did Plato mean us to construe his model in phonetic terms? Prima facie the answer is “no.” If he had meant this, he would surely have told us that he was talking phonetics and not graphology. The few commentators whom I have read have assumed that Plato is talking about characters and collocations of characters and have not even mentioned the alternative possibility. On the other hand, there are things which Plato says which cumulatively point so strongly in the affirmative direction that I think “yes” is the right answer. I also hope that it is, since the semantic view which results is both true and important. So now for the evidence.

1. In the *Theaetetus* (from 202 E) after expounding his “dream” in which simples, that is, elementary or atomic namables, are contrasted with the complexes which entire sentences (*logoi*) express, Socrates goes very thoroughly into two main kinds of complexes, those which are pure pluralities or totalities and those which are organic unities. He suggests that syllables may be of this latter kind. If so, then a syllable cannot have letters for its parts; indeed it cannot be divided up into parts at all. Now this, as we have seen, is perfectly true of monosyllabic noises, but it is totally false of their written symbolizations in Greek or English script. Socrates does not commit himself to this view, but at least Plato was explicitly considering the idea that uttered monosyllables do not have parts. Next, quite shortly before this passage, Theaetetus had been asked how he would break up the first syllable of the word “Socrates,” and he naturally replies “Into ‘s’ and ‘o’.” Then when asked how the “s” can

be broken up, he says " 's' is one of the consonants (*aphonōn*) nothing but a noise, like a hissing of the tongue; while 'b' not only has no articulate sound, but is not even a noise (*oute phonē oute psophos*); and the same is true of most of the letters."

Here, then, Plato is certainly talking phonetics and not graphology; he sees that to most of the consonant characters no separately pronounceable noises correspond and he considers whether a syllable is a plurality of separately utterable parts, or is an organic unity, not divisible into parts. The letters that he is talking about are not characters but elements of voiced syllables. He uses *stoicheion* and *gramma* interchangeably for these phonetic elements.

Two pages later (207 D) Plato, discussing the learning of spelling, says that a child who writes down the correct characters for the first syllable of "Theaetetus," but then writes down incorrect characters for the first syllable of "Theodorus," does not really know (the spelling of) that shared syllable. He got the first one right without knowledge. But Plato does not consider the possibility that the child might, when examined *viva voce*, have sung out "theta epsilon" perfectly correctly for the first two phonemes of both names, while still being muddled about what character to write down for theta. He might, that is, know the spelling without yet knowing his characters. When shown the mark  $\theta$  he might have said first "That is tau," later on "That is theta." The point is only of importance in that it shows that Plato could confuse knowing what phonetic element a given letter name designates with knowing what written character symbolizes a given phonetic element. The ambiguity of "letter" was not fully realized by him.

2. In the *Sophist* (253 A), after some talk about the blendings and nonblendings of Forms, the Eleatic Stranger says "they might be said to be in the same case with the letters of the alphabet (*grammata*). Some of these cannot be conjoined, others will fit together. . . . And the vowels are specially good at combination, a sort of bond (*desmos*) pervading them all, so that without a vowel the others cannot be fitted together." Now so far as this passage by itself goes, Plato might be saying one of two quite different things. (a) The rules of Greek orthography forbid you



to run consonant characters side by side in certain collocations on the page, without some vowel character or other going next to or between them. (b) It is phonetically impossible to pronounce even a monosyllable without pronouncing at least one vowel. Plato unquestionably meant the second.

Later on (261 D), he says "remembering what we said about Forms and letters, let us consider words in the same way." He goes on to distinguish nouns from verbs, and to show that a statement or sentence cannot be a string just of nouns or just of verbs. It must, at the least, marry one verb with one noun. I think Plato means us to think of verbs as the analogon to vowels, and to think of nouns, and so forth, as the analogon to consonants.

What I vainly wish he had said explicitly is this. Vowel characters correspond to verbs, but the vowels that these vowel characters stand for correspond to what verbs mean, that is, to what they contribute to statements. Similarly, consonant characters correspond to nouns, and so forth, but the consonants that these characters stand for correspond to what nouns and so forth mean, that is, to what they contribute to statements. As the atoms of writing do not stand for atoms of noise, so the atoms of speech do not stand for atoms of meaning. Conversely, as an atom of writing—a character—does stand for a respect in which one uttered monosyllable may resemble other monosyllables, while differing from them in other respects; so an atom of speech—a word—does stand for a respect in which one statable truth or falsehood may resemble others, while differing from them in other respects.

To put this point in another idiom: what characters stand for are not noises but noise functions, that is, abstractable noise features or noise differences. We learn what they stand for not by meeting them on their own, since they are not there to meet on their own, but only by comparing partly similar, partly dissimilar integral monosyllables which we do hear and pronounce on their own. Similarly, what isolated words convey are not atomic thoughts, but propositional functions, that is, abstractable thought features or thought differences. We learn what they convey not by apprehending their meanings on their own, but only by comparing partly similar, partly dissimilar, integral

truths and falsehoods. In both cases abstraction is possible, extraction impossible, and the abstracting requires noticing the constancy of something through ranges of variations in its settings.

3. There is an important passage in the *Politicus* (277 E—278 D), in which the Eleatic Stranger discusses the teaching and the learning of letters, in order thereby to formulate a philosophical thesis concerning our knowledge of the elements of reality. He reminds his hearers of the way in which a child, who is just beginning to recognize certain letters in the shortest and easiest syllables, may still be puzzled or muddled about those same letters when incorporated in other syllables. For example—this is my example—the child may recognize and name correctly the letter “r” as this occurs in “roy” and “rat,” and yet fail to identify the letter “r” as this occurs in “cry.” To get him beyond this point, he has to be got to compare the syllables “roy” and “rat,” say, which he has got right, with lots and lots of other syllables, including “cry,” which still baffle him; thus he learns to recognize the letter “r” not just in one or two but in all possible juxtapositions with other letters where it is constant and the rest are varied.

Once more Plato’s vocabulary leaves it quite open whether he is thinking of a child learning to read and write his characters or of a child learning to distinguish and label phonetic similarities and dissimilarities. But here Plato must be thinking of the latter and not of the former, since what he says would be a patent falsehood if he were talking about characters. For a child to master the character “r,” say, he would normally be drilled in writing this character down, by itself, again and again, and in naming the character correctly when it was pointed out to him by itself on paper. The character “r” is a graphic atom which can be produced and encountered by itself. It can therefore be and usually is in fact learned by itself, without the confusing proximity of neighbors. It is just because this is not the case with the phonetic value of the character “r,” that is, the consonant “r,” that the child can master the noise difference that the character “r” stands for only by comparing lots of entire uttered syllables in which what “r” stands for is constant and all the rest

is varied. There is no question here of his first uttering and hearing the noise "r" by itself and then going on to collocate it and recognize collocations of it with other noises. For the character "r" does not stand for a noise but only for a common feature of a range of otherwise different monosyllabic noises. Being incapable of extraction it can be learned only by abstraction. This passage in the *Politicus* is explicitly linked to the passage in the *Theaetetus* in which Plato had discussed the knowability of simples and complexes. This contrast of simples and complexes was connected with the contrast between what is expressed by individual words and what is expressed by complete sentences. So we have in this passage a good warrant for saying that Plato did realize that word meanings stand to sentence meanings not at all as characters stand to written syllables but as phonemes stand to uttered syllables.

It still puzzles me why Plato did not bluntly tell us that he was describing not how the child learns to read and write his characters, but only how he learns to discriminate by ear and with his tongue the phonetic values of the letters of the alphabet, i.e., the audible vowels and consonants. Can it be that Greek children were introduced to writing only quite a long time after they had learned to distinguish and name the phonemes into which spoken syllables are analyzed?

4. In the *Philebus* (17 A-B), we are given another account of the learning of letters. Socrates, in expounding the notions of *Peras* and *Apeiron*, says, "Surely my meaning is made clear in the letters of the alphabet which you were taught as a child; so learn it from them. . . . Sound (*phonê*) which passes out through the mouth of each and all of us is one and yet again it is infinite in number. . . . And one of us is no wiser than the other for knowing that it is infinite or that it is one; but that which makes each of us a grammarian is the knowledge of the number and nature of sounds." Here Socrates equates the learning of letters with the acquisition of phonetic expertness. Nothing whatsoever is said about marks inscribed on papyrus or wax tablets. A little later (18 B-C) Socrates credits the Egyptian wizard Theuth with the systematic discrimination first of the vowels from one another,

and then of the vowels from other vocal noises which were not quite vowels and yet could be sounded, that is, noises like "ssss" and "mmmm," I suppose; and these, too, he discriminated from one another. Both these classes he discriminated from the mutes, that is, from most of the consonants, which he then discriminated from one another. He called each and all of them "letters" (*stoicheia*). Then, "Perceiving, however, that none of us could learn any one of them alone, by itself, without learning them all and considering that this was a common bond which made them in a way all one, he assigned to them all a single science (*Technê*) and called it grammar." Aristotle gives a very similar classification in *Poetics* XX.

Here too nothing is said about letters (*grammata* or *stoicheia*) being things written or read. They are vowels or mutes or else semi-vowels. Theuth had classified pronounceables, not inscribable. So when Socrates says that Theuth perceived "that none of us could learn any one of them alone by itself, without learning them all" he is not saying what would obviously be false, that a child could not learn to write and read six characters of the alphabet without learning to write and read the other twenty. He is saying what is true, that the child does not really know either the consonant "b" or the consonant "d" if he cannot *inter alia* distinguish by ear and tongue "bog" from "dog," "cab" from "cad," and so forth.

5. The *Cratylus* is a thoroughly philological dialogue and in the course of it a good deal is said in several places about letters. On most occasions the letters are described in purely phonetic terms; we hear how the breath is expelled or checked in the pronunciation of them, what the tongue and the lips do. An onomatopoeic theory is built up according to which letters (*grammata* or *stoicheia*) sound like things or happenings and so qualify to function as their names. There is, I think, no passage in this dialogue in which a letter-name like "Alpha" or "Sigma" is the name of a character.

In sum, then, I maintain that Plato regularly thinks of letters not as things written and read, but as things pronounced and heard. "Syllable" is, for Plato, as for Aristotle and Sextus Empir-

icus, a regular phonetic term, and when letters are mentioned in association with syllables, they are in these contexts phonetic elements and not characters, no matter whether they are called *grammata* or *stoicheia*.

## II. VERBS

I shall now take it as established that Plato's model of letters and syllables was the phonetic model. What did Plato intend to explicate by means of this model? I canalize my answers to this question through a discussion of Plato's treatment of live verbs. I mean by "live verbs" expressions like "assassinated," "believes," and "will wake up," not verbal nouns like "assassination," "belief," "waking," or "wakefulness," and not participles like "walking" or "bereaved." Incidentally, it has been maintained that Plato, when he uses the word *rhema*, does not restrict himself to what we call verbs, like "assassinated" and "will wake up," but includes also complete predicating phrases like "assassinated Caesar" or "was a snub-nosed philosopher" or "believed that the earth is flat." I think the evidence points in the other direction; but I do not mind. It will not matter for the points that I wish to make.

Plato, in the *Sophist* (261 D), links what he has to say about verbs and nouns to what he had said about vowels and consonants; and I think, though I may be co-operating here, that Plato means us to liken the role of verbs in sentences to the role of vowels in syllables. A vowel supplies a syllable in which it occurs with its breath and so collects the consonants with itself into a unitary utterance. A verb supplies the sentence in which it occurs with its asserting force and so collects the nouns and other parts of speech with itself into the telling of a unitary truth or falsehood.

For an assertion to occur there must, at the least, be someone or something of whom or which something is asserted, and there must be something which is asserted of that subject. A sentence conveying an assertion must, that is, marry a nominative expression with a live verb—somewhat as in a syllable a consonant must

be married to a vowel. A string of nouns says nothing, nor does a string of verbs, nor a noun by itself or a verb by itself. Plato does not pause to make allowances for one-word sentences like "Badizô." Plato is perfectly clear that a sentence, though consisting of two or more words, says just one thing, true or false. Saying one thing in two words is not to be equated with mentioning-by-name two things. He distinguishes saying from naming in the *Theaetetus* (202) and in the *Sophist* (262). He sees, that is, that the live verb "flies" in the two-word sentence "Theaetetus flies" does not do the sort of thing that the name "Theaetetus" does (for example, mention someone); it does the asserting of something *about* Theaetetus without which we should not have a truth or falsehood about Theaetetus. Further, Plato sees that, given the sentence "Theaetetus flies," we may replace the verb "flies" with some other verb, and another true or false sentence will result—much as the consonant "b" will accept the company of the vowel "a" or "e" or "i" or "o" or "u." It demands vowel-company, but it does not demand the company of this vowel as against that vowel. Nouns and verbs, like consonants and vowels, can vary independently, but they cannot function by themselves. As an integral sentence is the minimum vehicle of a truth or falsehood, it is also the minimum expression of knowledge, belief, and conjecture. A noun by itself or a verb by itself does not convey what I know or think, any more than a consonant-character stands for something that I can pronounce. What I know or think is something sayable and not something merely mentionable-by-name. This is brought out in, *inter alia*, Socrates' "dream" in the *Theaetetus* (202). So a live verb is an indispensable element in the expression of knowledge or opinion.

I am going, somewhat arbitrarily, to split up my account of Plato's treatment of verbs into five heads.

1. *Etymology*. In the *Cratylus* Plato proffers, surely with his tongue in his cheek, a great number of etymological derivations of Greek words. It has not, I think, been noticed that, especially from 411 B, nearly all of the suggested root words are verbs. Socrates does not, unless by a hint or two (for example, in 411 C), avow that this is the principle of his etymologizing, though he

does avow that he is doing his best for the Heracleiteans. So Plato was toying with the idea that the original seeds of language were expressions for happenings, undergoings, doings, havings, gettings, startings, stoppings—that is, verbs. He was perhaps pretending that what the Heracleitean flux theory amounted to is that what is real is wholly expressible by tensed verbs of happening, doing, and so forth.

2. *Tenses.* Plato attends to the time indications of tensed verbs in many places (for example, *Timaeus* 37-38; *Philebus* 39-40, 59; *Cratylus* 439 D; *Theaetetus* 178; *Sophist* 262 D). In the *Parmenides* (141 D-E) he actually distinguishes eight or nine tenses in place of the hackneyed trinity of past, present, and future. Plato is now taking time very seriously. Not only the timeless is real (*Sophist* 248-249, 262 D). Not only the timeless is knowable (*Philebus* 61 D, 62 B; *Theaetetus* 201 B-C). It is worth noticing, too, that about a third of the dialectical operations in Part II of the *Parmenides* are or include operations upon temporal concepts. Pardonably, Plato is not alive to the fact that there could be languages in which time indications were not given by inflections of verbs. He did not know Chinese or the stories of Damon Runyon. Nor does he notice that time indications can be given by the participles of verbs.

3. *Active and passive voices.* Plato frequently, from the *Euthyphro* (10) on, contrasts *poiein* with *paschein*, acting with being acted on. I suspect, but do not pause to argue, that when he draws this distinction he often has one eye on the grammatical distinction between a verb in the active voice and the same verb in the passive voice. Loving and being loved are not the same thing though the verbal noun "love" is the same for both.

4. *Saying.* Unlike Protagoras, who had apparently distinguished asserting from inquiring, commanding, beseeching, and the like, Plato attends only to those sentences in which we assert or deny that something is the case, that is, to those which convey truths and falsehoods. A sentence expresses the termination of an inquiry. When we have something to state, we have terminated a stretch

of wondering (*Theaetetus* 190 A; *Sophist* 262 D, 264 A). In stating something we combine, at the least, a verb with a noun. By the noun we mention some subject by name; by the verb we assert something about that subject. So the sentence is not just a list of two mentioned subjects. Statements are either assertions or denials, that is, either affirmative or negative (“*Phasis* or *Apo-phasis*,” *Sophist* 263 E; cf. *Theaetetus* 190 A). The notion of the verb as a copula seems to be at least nascent in *Parmenides* (162 A) where the use of *desmos* (bond) for the verb “to be so and so” echoes, I guess, the use of *desmos* in the *Sophist* (253 A) for the linking function of vowels in syllables. Plato saw that there begin with saying, as distinct from naming, both asserting and denying and truth and falsehood, though in the *Cratylus* (385 B-C) Socrates pretends that the parts of a true sentence must themselves be true. Moreover, only things said can contradict or be contradicted. A word could not be the contradictory of another word, though it might be its opposite. If I say that Socrates is not tall, I contradict the assertion that he is tall, but I do not assert that Socrates is short (*Sophist* 257 B). Consequently, I think, though I am co-operating here, that Plato realized that “not” operates only where live verbs are functioning. It makes its particular contribution to the *saying-about* that the verb in a sentence does, not to the *mentioning-of-the-subject* that the nominative of the sentence does. “Not” cannot appear, either by itself or in harness with another word, in a list of things. In the *Sophist* (237-239) Plato emphasizes the queer-seeming but important point that we cannot speak about the nonexistent, since the expression “the nonexistent” is debarred from being either singular or plural. We cannot say “it is so and so” or “they are so and so,” for “it” and “they” refer to what is and are there to be referred to, not to what is and are not there. There cannot be many or even one of what there is none of.

In the *Theaetetus* Socrates’ puzzle was, How can we think what is not, when what we see or hear are things that are? The source of the trouble is this. We see and hear *things*, for example people. But what we believe are propositions *about* people, that is, sayables and not namables. Now among things, for example visible things, there are indeed no non-things, but among believables and



sayables there are things which are the right and the wrong things to believe and say *about* a given subject term. The work that “not” does it can do only in collusion with a live verb or, more generally, with a live predicative expression that is doing its work in a full sentence. In the *Sophist* (243) Plato sees clearly that his perplexities about “. . . is not . . .” and “. . . does not exist” are just as much perplexities about “. . . is . . .” and “. . . exists.” Of course “not” is not itself a verb. But what it means is somehow internal to what is meant by the live verb with which it goes. Parmenides’ trouble with “not” derived, I suggest, from his assumption that “not” would, if admitted at all, have to be a component of subject-denoting expressions like “the not-real” or “the not-existent.” Plato, on my interpretation, rightly transfers the locus of “not” to the asserting side of sentences, that is, roughly, to their verbs. There are no negative things to make true or false assertions about, but about anything you please there are true or false denials to make. What I declare can be negative. What I mention cannot be negative or, of course, affirmative either. It must be singular or plural; it cannot be zero.

This suggests a line of interpretation of the baffling doctrine of the “Greatest Kinds” in the *Sophist* (254 *et seq.*). The explicit object of the inquiry is to find a home for “not.” The concepts collected as “Greatest Kinds” are those of *kinesis*, *stasis*, *being*, *identity*, and *otherness*. Now what are these supposed to be supreme kinds of? They are not, I suggest, adduced as *summa genera* of namable things, that is, of the subject terms about which true and false assertions can be made. Instead, I suggest, they are *summa genera* of what is assertible about subject terms, that is, very crudely, they are basic *verb forms*. *Kinesis* (which Plato, like Aristotle, explicitly uses for any kind of change, not only motion) is the generic verbal noun for all live verbs and verb inflections of happening, doing, beginning, stopping, and the like. *Stasis* is the verbal noun for all verbs and verb inflections of continuing and remaining. “Being” is the verbal noun for existing and for being so and so. “Identity” is the abstract noun for “is,” where this is the “is” of identity. “Otherness” is the abstract noun for the verb phrase “is not” where this is the “is not” of nonidentity.

Plato's aim is, I suggest, to show that the notion of "not" is, via the "is not" of nonidentity, internally constitutive of, without being equivalent to, what is asserted in assertions of all the various types. "Not" is not an external appendage which just happens now and again to attach to this or that verb. It is, in different ways, an internal part of the force of any verb. For example, if Socrates is now waking up (*kinesis*) it follows that he is not still remaining asleep (*stasis*) and vice versa. To say something is to deny some other things.

Plato's intricate argumentation about the Greatest Kinds is followed immediately by his treatment of nouns and verbs. Having satisfied Theaetetus that any truth or falsehood must be about someone or something, the Stranger finds falsehood to consist in something being asserted about the subject other than what is the right thing to assert about him; that is, the crucial notion of otherness is brought in to mark off one assertible from another assertible, for example, the right one from a wrong one. The otherness that we heard so much of among the Greatest Kinds is here controlling assertibles, for example, the senses of different live verbs. If it is false to assert about Theaetetus that he is flying, then it is true to assert about him that he is not flying; and if it happens also to be true to assert of him that he is sitting, *part* of the force of "is sitting" is "not flying." If we discover that he is sitting, then we do not have to make a second discovery, that he is not flying. "Is not flying" is part of what "is sitting" says. However, I do not want to thrash out this very conjectural line of elucidation. But if this or something like this was in Plato's mind, then he was aiming at the right target, though I think that he was not aiming at its bull's-eye.

It is worth while now to consider briefly a point which worried the young Russell in his *Principles of Mathematics* (at the end of Chapter IV). Russell realized, rather reluctantly, that between the statement "Brutus assassinated Caesar" and the list "Brutus, assassination, Caesar" there was some vital difference. The first tells a truth or falsehood; the second tells nothing at all, though it mentions three things. Yet surely the verbal noun "assassination" expresses the same concept as the verb "assassinated" and, if so, it ought to be able to replace the live verb in a sentence

*salvo sensu*—which it patently cannot do. This little crux is of great importance. For if asked “what does ‘assassinated’ mean?” or “what does ‘will prosecute’ mean?” we see automatically that we are being asked for the elucidation of the common core of all full sentences of the pattern “Blank assassinated Blank,” or “A will prosecute B.” Live verbs unmistakably advertise themselves as being cores cut out of full sentences. To ask what a given live verb means is to ask what a speaker would be saying if he said something with it. Live verbs are snatches from speech, that is, from the *using* of words. Live verbs could not feature in lists. They occur only in contexts; indeed they are the life breath of those contexts. This is even more obvious in Greek than in English, since a Greek verb indicates not only time, but also the singular-ness, dual-ness, or plural-ness of the subject, and the subject’s being the first person, second person, or third person. Very often a Greek verb is by itself an entire sentence. What we automatically see to hold of the meanings of live verbs, we can then without difficulty see to hold also of “and,” “if,” “therefore,” “not,” “some,” “any,” “a,” and “the.” It would be as vain an enterprise to try to examine the meanings of these words out of any sentence context as to try to examine the noise for which the character “b” stands, out of the phonetic context of any syllable.

Russell was forced by this sort of consideration of the senses of live verbs, as opposed to the meanings of the corresponding verbal nouns, to realize, with Frege, that the notion of the sense of an integral sentence, that is, what it says, is prior to the notion of the senses of at least some of the words in it. To ask after the meaning of a live verb or of a conjunction or of “not” is to ask what *would* be being said with it, if someone did put it to work. It is to ask what the word contributes to the senses of the integral sentences in which it occurs. The sense of the sentence is not an amalgam of separately thinkable word meanings. The meanings of its live verbs and so forth are abstractable features, not detachable parts of the senses of the sentences in which they occur. To paraphrase Frege, a live verb or, more generally, a predicative expression, flourishes gaps or lacunae around it, namely, lacunae for such other expressions as would, with it, constitute an integral statement. These lacunae are, of course,

hospitable. Any expression of the right sort would be welcome. We could fill the lacuna in “. . . flies” or “Blank flies” with “Theaetetus” or “Plato” or “Bucephalus,” and so forth, and each time a significant though usually false sentence will result. The alternative fillings of the lacuna are, in this way, substitutable for one another; and the lacuna can be called, therefore, a “substitution-place.” What the verb contributes to the sentence “Plato flies” it contributes to the sentence “Bucephalus flies”—but “Blank flies” says, as yet, nothing, and a fortiori just “flies” says nothing. Nor, of course, does it name anything or anyone.

Now Plato, though he is, I maintain, very clear about the saying function of verbs and clear that this function is quite different from the naming function of nouns, says not a word about Russell’s special problem: just how is the sense of a live verb different from the meaning of the corresponding verbal noun, for example, how is the sense of “Blank assassinated Blank” different from the meaning of “assassination”? There is, however, one fact, besides the a priori probabilities, which makes me think that Plato had seriously considered this question or part of it. The second part of the *Parmenides* is an entirely abstract discussion in which hardly a single concrete or even specific word is used. About a third of the dialectical operations are operations upon temporal concepts. Yet, with the exception of *ousia*, hardly a single verbal noun is employed. Abstract nouns in general are also pretty rare, but there are three or four stretches of the discussion in which Plato is quite lavish with such terms as “equality,” “similarity,” “smallness,” and so on. But verbal nouns like “motion,” “rest,” “alteration,” “termination,” “becoming,” and “cessation” virtually do not occur. This is refreshingly unlike the discussion of the Greatest Kinds in the *Sophist*, in which the reader is presented with a stodgy pudding of verbal and other abstract nouns, together with opaque metaphors like “participate,” “merge,” “blend,” and “pervade,” with nothing to indicate whether we are to translate these culinary metaphors (1) in terms of “ingredient” and “compound” or (2) in terms of “if” and “therefore,” that is, whether they stand for (1) relations between what can be named or (2) connections between what can be said. In the second part of the *Parmenides* we get

instead of verbal nouns, such as "motion," "continuance," "alteration," "cessation," and so forth, integral sentences and clauses the live verbs of which are such verbs as "moves," "alters," "began," "will cease," and the like. Apparently Plato was now, for some reason, deliberately abstaining from using verbal nouns, as if he thought, as he would have been right to think, that there are important things which operations with live verbs display which verbal nouns would conceal. But what?

5. *Implications*. Implications hold only between assertibles. "If" and "therefore" link sentences, not names. Where "if" or "therefore" occurs, there at least two verbs occur. Old Parmenides in the *Parmenides* (136 A-C), repeatedly states the program of looking to see what must be the case, if something else is the case, or what has got to go with what, or what follows from what. All the subsequent dialectical operations are derivations, legitimate or illegitimate, of consequents from antecedents. Now it is an obvious point that the formulation of antecedents and consequents involves the production of integral sentences or clauses incorporating, necessarily, live verbs. But there is a further point, not so obvious, and presumably not noticed at all by Plato. Take the implication "If Plato is the uncle of Speusippus, then Plato is the brother of one of Speusippus' parents." Clearly this implication holds good if for "Plato" we substitute "Robinson" or "Voltaire" and if for "Speusippus" we substitute "Brutus" or "Trotsky." The implication is quite indifferent to whom in particular the antecedent and the consequent are about. But it is not at all indifferent to what is said about them. We cannot *salva implicatione* substitute "is the employer of" for "is the uncle of," or substitute "is the neighbor of" for "is the brother of." Implications are the gift not of the subject terms of sentences, but of their asserting or denying bits, namely their verbs or more generally their predicative expressions. Hence, when formal logic begins, expressions like "Plato" and "Speusippus" are algebraized away, that is, they are replaced by "*a*" and "*b*." But the verbs or predicate expressions are not algebraized away, nor are the words "not," "all," "some," "if," "and," and so forth. I think Plato realized that implication, like negation and contradiction,

lives only where *saying* lives, and therefore where live verbs live. I do not think that he had any idea how to detach what implications are indifferent to from what they are not indifferent to. Algebra did not yet exist.

6. *Conclusion.* Plato in his late dialogues was concerned with some of the same cardinal problems as those which exercised Frege and the young Russell, problems, namely, about the relations between naming and saying; between the meanings of words and the senses of sentences; about the composition of truths and falsehoods; about the role of "not"; about the difference between contradictories and opposites; and in the end, I think, about what is expressed by "if" and "therefore." His admirable model, which Frege lacked, of the phonetic elements in syllables enabled Plato to explain more lucidly than Frege the notion of the independent-variability-without-separability of the meanings of the parts of sentences. On the other hand, lacking the apparatus of algebra, he was nowhere near abreast of Frege's and Russell's symbolization of substitution places. Plato could not extract implications from their particular contexts or therefore codify implication patterns. A blackboard would have been of no use to him.

Plato says nothing about the bearings of the alphabet model on the Theory of Forms, or of the Theory of Forms on the alphabet model. So I shall not say much. If the Theory of Forms had maintained or entailed that Forms are just subject terms of a superior sort, that is, just eminent namables, then this theory could contribute nothing to Plato's new question, What does a sentence convey besides what its subject name mentions? But if the theory of Forms had been meant or half-meant to explain the contributions of live predicates, including tensed verbs, to truths and falsehoods about mentioned subjects, then in his operations with the model of letters and syllables, Plato has raised to maturity things which, in his Theory of Forms, had been only embryonic. To his terminal questions about the composition of *logoi* and, therewith, about the roles of live, tensed verbs, the Theory of Forms was either quite irrelevant, or else quite inadequate.

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